The relation between spatial definition and place-making: architectural and urban interiors

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ABSTRACT
Traditionally, interiors are associated with rooms as spaces inside buildings. Spaces for human habitation and interaction are found throughout the built environment and include urban space. Space is a product of social practices and Lefebvre (1991) argues that this process allows for ‘space’ to be transformed into ‘place’. The appropriation of space adds personal meaning to place that Lefebvre refers to as differential space. The study is based on the premise of Augé’s (1995) argument of place and non-place. Place allows for meaning and enrichment with the connotations of identity, history, urban relationships and social life within spatial dimensions and manifestations.

Place and space are central to this investigation, as the study aims to determine the relation between spatial definition and place-making. Anthropological, economic, cultural, sociological, geographical, economic, ecological and political aspects that are influences, are accepted and acknowledged, but fall outside the scope of this study.

This investigation focuses on the static, physical spatial dimension. A search into the criteria that can be applied to research, describe and define space and create place is conducted. The terminology that constitutes these criteria is identified
according to the elements and modulation variables for architectural interiors. The study explores the possibility of developing a general set of criteria that could be collectively applied to all places for human habitation, regardless of the location. Human need for shelter is universal. Can the criteria to achieve this therefore also be collective? Furthermore, if generalities in spatial dimensions and manifestations do exist, can the term ‘interior’ be used collectively for both architectural and urban places?

The existing situation of the Donkin Reserve in Central Hill, Port Elizabeth, is examined according to the criteria established in order to determine whether the space is adequately defined and meaningful to the community it serves. Recommendations are made according to the guidelines to improve the sense of place.

The research consists of a literature study to establish a theoretical basis and is supplemented with precedent analyses to interpret and demonstrate theoretical concepts. The descriptive survey method as qualitative research methodology is used to collect data.

**Keywords**
Space, place, non-place, spatial definition, place-making, interior, quality, modulation, elements, variables
Chapter 1: THE PROBLEM AND ITS SETTING

1.1 Statement of the problem for research
The study proposes to investigate the relation between spatial definition and place-making within architectural and urban interiors. This is made possible by identifying a theoretical terminology, derived from interior elements and variables (principles), as the collective vocabulary that serves as criteria or guidelines to define space and create place. The focus is on the static physical model of creating space and place for human habitation.

The research evaluates the existing situation of the Donkin Reserve in Central Hill, Port Elizabeth, as urban interior. The study investigates the possibility of applying the collective set of criteria as guidelines to make recommendations for improving the Donkin Reserve as place.

![Figure 1-1: Donkin Reserve location](Nelson Mandela Metropolitan Municipality 2000)

![Figure 1-2: Donkin Reserve aerial view](Nelson Mandela Metropolitan Municipality 2000)

1.2 The importance of the study
If one looks at the city as becoming an extension of the human living environment, does the urban interior provide the necessary elements for a positive spatial experience? The question can be asked if these spaces add value to the experience of the users. The importance of the study is to investigate whether spaces are sufficiently defined. In addition, the quality of a space has the potential to add meaning to the space experience. Urban interiors, as communal rooms in the urban environment, need to
reflect the identity of the surroundings and the community to be embraced and for people to be proud of. The use of a space is directly linked to the physical condition, but also to the social and history of a setting. When these are in balance and well composed, improved use and community participation can be expected.

Undefined open spaces have the potential to become the heart of urban environments. The Donkin Reserve is an example of an urban interior that can benefit from a spatial definition and place-making strategy. It is one of four public open spaces in Central Hill, Port Elizabeth, that has the inherent capacity to form an active network of public interiors. The redevelopment of these areas can add to the rejuvenation and upliftment of Central Hill as one of the significant destinations in Port Elizabeth.

The study aims to develop criteria that can serve as guidelines to ensure positive spatial definition and a sense of place. This can contribute to the work underway by the Mandela Bay Development Agency and local planners in conjunction with GAPP Architects and Urban Designers in Johannesburg, developing a vision for the redevelopment of the city. The Donkin Reserve is one of nine precinct areas that have been identified and form part of the redevelopment plan. This study aims to contribute to the vision and rejuvenation of public open spaces for this proposal, in establishing criteria for spatial frameworks to define meaningful space.

Figure 1.3: Donkin Reserve: view west to east
(Grobler 2004)
1.3 Sub-problems

1.3.1 Sub-problem 1
The first sub-problem is to identify and to establish criteria for spatial definition for interiors.

1.3.2 Sub-problem 2
The second sub-problem is to establish the variables used to modulate meaningful interior place.

1.3.3 Sub-problem 3
The third sub-problem makes use of the first and second sub-problems, establishing the relation between spatial definition and modulation of interiors and establishing guidelines to create a sense of place.
1.4 Hypotheses

1.4.1 Hypothesis 1
The first hypothesis is that criteria for interior spatial definition within architectural and urban space indicate similarities in the use of a descriptive vocabulary.

1.4.2 Hypothesis 2
The second hypothesis states that the combination of variables in architectural and urban spatial modulation will add to the meaning of enriching a place.

1.4.3 Hypothesis 3
The third hypothesis states that a sense of place is created with the sum total of the criteria for spatial definition and variables for spatial modulation, applied and integrated within a whole.

1.5 Delimitations
The study is limited to the selection of a collective theoretical vocabulary to describe spatial definition and place-making.
The study focuses on the identification of concrete elements and principles to produce space and place.
The static physical environment that can be observed through the senses is central to the investigation.
The study is limited to the analysis of contemporary places in gaining data for interpretation.
The study is limited to theoretical and observational explorations in spatial definition and quality.

The study acknowledges, but excludes historical investigations of space and place.
The study excludes external factors that influence spatial definition and space use, such as climate, gradient and vegetation.
The study excludes a vernacular interpretation of spatial definition and place-making.
Aspects related to politics and power are excluded from the study (Foucault). The study excludes a philosophical approach to the investigation that includes the meaning of words in the use of language (Lefebvre). The study excludes the influence of social, economic and cultural aspects in the production of space and place. Aspects related to space use through the application of tactics and strategy are excluded from the study (De Certeau). The process of producing space, socially or mentally is excluded. Space syntax and the dynamic model of space are excluded from the study (Hillier).

1.6 Definition of terms

**Appropriate**: The shaping of a place by a group or individual to add meaning to an environment, using the elements and variables (principles) to define space and create place.

**Dynamic model**: A spatial model that deals with the changeable aspects within a space, movement and circulation.

**Furnishing**: The combination of elements and aspects within interiors that add to the overall perception and use.

**Habitation**: Time spent and activities performed in a person’s daily environment.

**Historicality**: The content of a place that has been developed over time within a specific context and culture.

**Interior**: A spatial enclosure that is defined on horizontal and / or vertical plane that articulates or implies a volume which is suitable for human habitation according to specific influences. Interior can be interchangeable with “room”, “space”, “container”
and “enclosure”, but for this investigation the term is selected due to the implicit reference that is traditionally known as shelter.

Differences in terminology that indicates the flow between architectural and urban interiors:

<table>
<thead>
<tr>
<th>Architectural</th>
<th>Urban</th>
</tr>
</thead>
<tbody>
<tr>
<td>interior</td>
<td>space</td>
</tr>
<tr>
<td>positive</td>
<td>negative</td>
</tr>
<tr>
<td>solid volume</td>
<td>open volume</td>
</tr>
<tr>
<td>solid (building)</td>
<td>void (in-between space)</td>
</tr>
<tr>
<td>overhead plane</td>
<td>base plane</td>
</tr>
<tr>
<td>flexible</td>
<td>non-flexible</td>
</tr>
</tbody>
</table>

**Modulation:** The shaping of an enclosure or interior that adds physical enrichment.

**Non-place:** A space that has poor spatial definition and lacks spatial quality (negative space).

**Place:** A space that is well defined and has distinct characteristics that add value to a person’s life and experience (positive space).

**Public open space:** Open space with limited structures that are available for all to use.

**Relation** The association between elements, spaces and people.

**Room:** A spatial enclosure for human habitation (synonym: interior).

**Significant meaning:** The value-adding qualities in an environment that address function, form, definition and context.

**Sociality:** The daily social interaction and processes that occur between people within environments for human habitation.
**Space**: An enclosure created by means of planes and lines in various orientations (spatial definition).

**Spatiality**: The static, physical spatial frameworks in which daily activities take place.

**Static model**: The concrete aspects that create the physical enclosure or containment.

**Terminology**: The collection of words used to describe a specific subject.

**Variables**: Elements and principles that influence and enrich the quality of spaces, i.e. texture, colour, shape, scale, etc.

**Vocabulary**: The collection of terms related to a specific discipline.

### 1.7 Assumptions

#### 1.7.1 Assumption 1
The first assumption is that the criteria (elements and principles) in the definition of architectural interiors are largely similar to those of urban interiors.

#### 1.7.2 Assumption 2
The second assumption is that spatial definition is enriched with the application of variables that modulate meaningful interior space.

#### 1.7.3 Assumption 3
The third assumption states that the sum total of the aspects combined allows for place-making.

#### 1.7.4 Assumption 4
The fourth assumption states that the Donkin Reserve could be the heart of Central Hill through redeveloping the quality of it as public place.
1.8 Research methodology

The qualitative methodology of the descriptive survey reference method (normative survey method) is utilized as the research methodology and provides an operational framework for the gathering and interpretation of data (Leedy 1993:140-141 & 186). Data are gathered through direct observations, interviews and questionnaires of the selected population using the public open spaces identified in Central Hill.

The historical reference method provides an overview and understanding of the past of the spaces and the subsequent changes that have taken place over time (Leedy 1993:223). The research looks at the reasons for the possible changes that have had an influence on the spatial definition and use.

By using the descriptive survey and historical methods combined, a comprehensive understanding of the spaces involved can be developed. This will aid in the appropriate and meaningful interpretation of the data to develop guidelines for the creation of well-defined public open place. By understanding the transformation of a place by means of the spatial articulation and use, an appropriate sense of place can be created to add value to the surrounding environment and the users.

1.9 Document structure

Chapter 1 orientates the reader as to the direction and approach of the research investigations. The focus of the study is indicated, as well as the exclusions that form part of recommendations for further study to supplement this search into the static, physical model of space and place.

Chapter 2 reveals the Review of Related Literature as sources that are considered for the investigation as set out in Chapter 1. The importance of each source is related to the sub-problems respectively. The chapter is concluded with a summary of the major sources for the investigation in this study.
Chapter 3 deals with the analysis of the elements that can be used to define static physical space. Elements are taken from the interior spatial definition strategy and are used as the structure for this chapter.

Chapter 4 investigates the variables (principles) that are ever-changing in combination and effect and that enrich spatial enclosures. The focus remains on the aspects that enhance the static physical model of space and place.

Chapter 5 sets out the guidelines that have been derived from the criteria that have been investigated in Chapters 3 and 4 that can be applied to define space and create place.

Chapter 6 analyses and evaluates the Donkin Reserve as a case study according to the criteria that have been developed. Recommendations are made to improve the sense of place.

Chapter 7 concludes the study by summarising the findings and making recommendations for further study.
Introduction
Space and place have been important concepts in architectural and urban histories, from ancient to present times. Since the 1990s, issues of space and place have influenced interest and development in the field of social sciences and anthropology. The shift in approach now focuses on the location and construction of space that gives a foundation to social behaviour and practices of culture. Space is acknowledged as an essential component that encapsulates socio-cultural theory. “…rethinking and reconceptualising understandings of culture in specialised ways…” (Low & Lawrence-Zúñiga 2003:1).

It is important to acknowledge the anthropological viewpoint regarding spatial aspects and social practices, but this falls on the fringe of the investigation of this study.

Lefebvre argues in The Production of Space (1991) that social practices produce space (social space). “Everyone knows what is meant when we speak of a ‘room’ in an apartment, the ‘corner’ of the street, a ‘marketplace, a shopping or cultural ‘centre’, a public ‘place’ and so on. These terms of everyday discourse serve to distinguish, but not to isolate, particular spaces, and in general to describe a social space.” (Lefebvre 1991:16). The interconnectedness of spaces is enhanced by the social activities and interaction. The descriptive words are derived from the spatial function: ‘room’, ‘corner’, ‘marketplace’, ‘centre’ and ‘place’. The words contain meaning according to the use of language to describe place. This study accepts the value in the meaning of words and utilises terminology in the investigation. The aim, however, is to use words as elements or principles that, once combined, will create spatial meaning by being associated with one another.

Place and non-place are used as terminology based on Augé’s (1995:77-78) argument that place contains spatial dimensions and spatial manifestations. Place is defined as “relational, historical, and concerned with identity”. It allows
for urban relationships and social life. Non-place, on the other hand, generates no identity, history or urban relationships, but forms spaces that are temporarily used for passing through, communication and consumption.

This study investigates the criteria to define space and create place. The use of terminology is based on the premise of Augé’s (1995) argument that is interpreted: place = positive space and non-place = negative space. The words are used in a broad sense that encompasses aspects related to space and place combined.

Lefebvre indicates the importance of ‘differential spaces’ that allow for appropriation by the user. This process facilitates space in becoming place. Elements are unified, according to specific social practices within the daily routine (Lefebvre 1991:38, 52). Spatial codes, verbal and non-verbal, are described that are used to make space. Verbal implies connection to words and meaning which are not addressed in this investigation. Non-verbal codes, on the other hand, include physical aspects, such as architectural constructions (Lefebvre 1991:47-48). This study focuses on the static, physical environment as the spatial framework, which can be appropriated by combining elements of spatial definition and the application of spatial variables (principles) to create place.

The study acknowledges the multitude of options for organising space and the vast number of meanings related to any give place. Additional factors that influence the production of space and the creation of place also cannot be ignored: “…people form meaningful relationships with the locales they occupy, how they attach meaning to space and transform ‘space’ into ‘place’…” Philosopher Edward Casey also explains the process of transforming ‘space’ into meaningful ‘place’ (Low & Lawrence-Zúñiga 2003:13, 17).
Social construction of space further allows for spatial experience through which people have social exchange and memories in daily activities. This relates to Michel De Certeau’s *Practice of Everyday Life* (1984), concerning how people spatially act out space in daily operations. The term tactics is used to demonstrate how spatial domination is contested by means of use and manipulation (Low & Lawrence-Zúñiga 2003:31-32). Tactics within spatial environments are necessary, as external, uncontrollable factors influence the process and product of place through spatial production. Foucault argues that power structures control space use and behaviour and that this is driven by the political power over enclosure and the organisation of space (Low & Lawrence-Zúñiga 2003:30). The investigation accepts this influence, together with “…geographical, economic, demographic, sociological, ecological, political, commercial, national, continental and global influences…” (Lefebvre 1991:8). These influences determine the nature of spatial definition and the meaning associated with place.

Soja (1996) brings everything together in the trialectic approach to human life: spatiality, historicality and sociality. Trialectic thought is captured in Soja’s *Thirdspace* (1996) that indicates the relation to Lefebvre’s trialectics and include spatiality (physical), spatial thinking (mental) and spatial imagination (social). Soja (1996:74) argues that “…each term appropriately contains the other two although each is distinguishable and can be studied in splendidly specialised isolation...” The study focuses on the physical spatial environment that is static and produced to facilitate social and mental activities and interaction.

In Low & Lawrence-Zúñiga (2003:4) the viewpoint of Edward Hall is argued: “…universally shared phenomenological experiences…people not only structure spaces differently, but experience them differently and inhabit distinct sensory worlds.” Lefebvre (1991:48) argues in support that generalities cover societies within a global mode of production of space. If modes of production can be generalised and universally shared, then collective elements and methods to
physically produce and appropriate place need to exist. The question then arises: what are the elements and variables (principles) that can be applied to define space and create place?

The aim of the study is to determine the relationship between spatial definition and place-making. This integration is supported by the identification of theoretical terminology based on interior place. The focus is not on anthropological space or socio-political, economic or cultural aspects, but on the geometrical space that can serve as a spatial facilitator for social practices. The aim is to establish general guidelines that can be used to produce space and place to be appropriated by any society, combined in various ways according to the context and purpose of the space. The appropriateness and meaning related to place are aspects for further study.

The following diagram, Figure a, positions the direction and approach of this investigation, highlighting the focus of the study within the broad scope of spatial definition and place-making within architectural and urban interiors. The physical static model of space or ‘spatiality’ is of importance. The other two aspects of this trialectic interaction are excluded.
Figure a: Trialectic context (Adapted from Soja 1996:74)

In order to understand the physical static model of space or 'spatiality' this trialectic aspect is analysed in terms of various components. The effect of external influences on space and place creation falls on the fringe of this investigation, but it is noted that these influences will largely determine the selection of elements that can be used to define space, and the variables (principles) with which place is enriched.

The external influences as listed, determine the selection of elements and variables (principles) according to a specific context, use and location. A combined application, results in the creation of the interior according to the specific situation.
Figure b identifies, Spatial Vocabulary (elements), and Enriching the Spatial Quality (variables / principles), as the two major components. With these combined, interiors are produced.
The combination of architectural and urban interiors in both diagrams is a strategic decision, illustrating the compatibility of terminology as communal vocabulary for the definition of space and the creation of place. The selection of the same words indicates the compatibility in the use of the terms. Alternatives can possibly be found, but this investigation places emphasis on an unambiguous comprehension in the interpretation of the vocabulary. In this manner a gradual shift form architectural and urban interiors could be noted. However, the aim of the study is to find commonalities that can make possible the use and application of ‘interior’, describing the elements and variables (principles) with the same words.

The search focuses on the possibility of utilising the same criteria for urban places. The question remains whether a collective use of vocabulary can be established to define space and create place, regardless of the location. Does a universal set of criteria exist to create a relationship between spatial definition and place-making?
Chapter 2: REVIEW OF RELATED LITERATURE

2.1 Understanding the role of the review

The review of related literature provides an opportunity to investigate theoretical sources to achieve a broader understanding in the field of creating ‘space’ and ‘place’ within architectural and urban interiors. The elements for spatial definition are investigated together with the variables (principles) to modulate and create place. In addition, the role of the review is to comprehend the terminology that is used within a specific context in order to make appropriate interpretations.

A theoretical search is conducted and is supplemented with the analyses of a selection of precedents to identify the vocabulary used to describe and analyse place. Investigations allow for an exploration into the various interpretations of terminology within specific contexts and situations. The precedents are of an architectural and urban nature, including local and international examples. This selection aims to explore and illustrate the universal terminology with the use of a common vocabulary to define space and create place.

2.2 The purpose of the review

Within the review of related literature, theoretical and precedent sources are selected that form the basis for examination in this study. The purpose of the review is to introduce sources, indicating the data essential to the investigation related to specific chapters. A starting point is provided for anyone who wishes to investigate the aims set out by the sub-problems and hypotheses.

The review includes the opportunity to identify a spatial vocabulary that will be interpreted in later chapters as criteria or guidelines to define space and create place. These criteria may or may not turn out to be collective when applied to architectural and urban interiors.
Main sources are identified that serve an integral role in the investigation and that deal with the central aspects of the study. Additional sources are indicated to provide anyone with an overview and background to the topic at large that is meant to inform the researcher of aspects that are outside the scope of this study, but that are important to acknowledge within this investigation, to comprehend the totality of the context of the problem.

2.3 Relatedness of literature to research
The data and sources for investigation for every chapter are set out clearly. Precedent analyses and theoretical investigations are undertaken in order to obtain data regarding the various chapters in the study.

Chapter 2, Review of Related Literature, is divided into sections according to the sub-problems, where sources are introduced and the relatedness of that particular source is indicated. The sections are discussed according to the chapters in which the data are investigated.

Analyses into the terminology (spatial elements) that are used to describe spatial definition, are conducted to establish criteria that can be used for spatial definition. This sets out the aim for Chapter 3, Spatial Vocabulary, indicating the data relevant to this investigation for both architectural and urban interiors. The integration of precedent analyses aids in the application and translation of theoretical data, visually explaining the explorations of the elements.

Chapter 4, Enriching the Spatial Quality, contains data that can be applied to the creation of a sense of place and that once applied, enrich and add meaning to a space. The aim is to identify the variables (principles) that can enrich spatial structures. The term variables is used, as the contexts and applications of every space are determined by the nature of the articulation and will vary accordingly. The emphasis falls on creating a sense of place as a result of the spatial
modulation. An understanding of place-making or a sense of place is established to comprehend the full spectrum of static physical aspects of what constitutes place.

Chapter 5, Spatial Criteria / Guidelines, deals with a search in finding the relation between the previous two chapters to establish a set of criteria determined from the analyses of spatial definition and place-making. The terminologies are grouped together as guidelines and the interpretation or combination of the vocabulary is meant to guide in the design of both architectural and urban interiors.

Chapter 6, Case Study – Donkin Reserve, deals with the evaluation of an existing urban interior, the spatial definition and sense of place. This chapter sets out to determine the success of it as ‘space’ and ‘place’. The guidelines established in the previous chapter are utilised as a framework to conduct the evaluation. The aim is to determine the current situation through a process of observing and describing the space. As case study of the urban interior, the Donkin Reserve in Central Hill, Port Elizabeth, has been specifically selected for evaluation

2.4 Background orientation
The following sources are selected to orientate the researcher in terms of a wider understanding of the production of space and place but have been excluded from the investigation of this study. The importance of mentioning these sources here is to provide the researcher with knowledge of aspects that could have had an influence on the production of space. But within the scope of the present study it can only be considered as areas for further investigation and recommendations can be made in that regard.
Social, political, economic, cultural and historical aspects are addressed, together with the philosophy behind the use of words and the meaning these contain. The dynamic model of the production of space is mentioned, as well as the influence of perception on space within the scope of environmental psychology. Methods of obtaining data are suggested.

2.4.1 Literature analysis: Literary sources for background data


The concept of place and non-place of Augé is used as premise in this investigation. However, the anthropological aspects regarding the creation of place are excluded from the study.


*The Psychology of place* deals with environmental perception and cognition of spatial surroundings and the stimuli that distinguish between various places. Layout patterns, organisational principles, arrangement of furniture and circulation all have an influence on the environmental aspects that deal with the dynamic spatial model which is excluded from the focus of this study.


Environmental psychology deals with the interaction and relationships between people and the spatial environment. This interaction can be improved with the creation of appropriate environments that accommodate human needs (Canter et al 1975:2). The spatial definition and character have an influence on human behaviour and interaction with a place. Environmental qualities enrich the perception of individuals and either encourage or prevent interaction between
people and the spatial environment. The influence of the physical environment and spatial character of this interaction is recommended as a further area of investigation and is not addressed in this study.

The philosophical approach to the production of space according to the arguments of various philosophers is excluded from this investigation. Casey (1998) discusses the philosophies of Bachelard, Foucault, Deleuze and Geattari, Derrida and Irigaray. The historical production of space and the transition from place to place are further acknowledged, but not addressed in this investigation.

The use of charrettes has been investigated and considered in the data gathering process, but is excluded from the study. Sufficient data were retrieved with the use of interviews and questionnaires in the Case Study of Chapter 6. The use of charrettes would create unrealistic expectations in the participants, as the study does not aim to make design proposals regarding the problem under investigation. This is an important step within the charrette process, as the community is encouraged to participate in the data gathering and processing phase, as well as in the design development. The idea of charrettes is to facilitate an informed inclusive process of all relevant parties, from municipality level to the daily users of the space. This is a process that needs to be followed by the Madiba Bay Development Agency, the local designers and GAPP Architects and Urban Designers that are involved in the redevelopment of Port Elizabeth.

Space syntax has been developed as an analytical tool, using computer software in graphic representation and output of spaces in architecture and urban design. Configurational analysis is central in investigating patterns within the dynamic model of space in the urban context. Hillier (1996) uses a machine as a metaphor for space. It contains form, function and a system of differentiated parts, and moves in a sequential method in order to manufacture a product. Space Syntax has specifically been excluded, as this method of spatial formation is a dynamic system. The terminology has been considered, but the study addresses the static physical containment and not the processes that can be used to produce space.

g) Hillier, B. [s.a.] The Common language of space: a way of looking at the social, economic and environmental functioning of cities on a common basis. *Internet:*


Space syntax illustrates physical and spatial complexities in the built environment and urban design, and is a tool in analyzing the dynamic systems of space, patterns and configurations. “Movement and land use patterns, social and economic performance, crime patterns, and many other aspects of function have all been investigated using this method…” (Hillier [s.a.]:2). Movement studies with the use of axial maps inform movement flow patterns in the urban grid, but are not addressed in this investigation.


“The spatial practice of a society secretes that society’s space: it propounds and presupposes it, in a dialectical interaction; it produces it slowly and surely as it masters and appropriates it.” (Lefebvre 1991:38) Spatial practices of a society shape the space that is used, within the daily routine and the existing networks and routes. *The Production of space* provides an opportunity to understand the
appropriation of space and place within social interaction and participation. This discussion falls outside the scope of this study, as this particular approach addresses the dynamic model of spatiality.

i) Low, S.M. & Lawrence-Zúñiga, D. 2003. *The Anthropology of space and place: locating culture*. Oxford: Blackwell Publishing. The anthropological perspective on the production of space provides an overview of the philosophy behind the study of human-beings of various societies and cultures. The human body, spatial perception and the language used to describe these are explained. Various influences that shape the way space is produced are argued, including social-political aspects, power and tactics (Foucault) and manipulations within everyday life (De Certeau). This approach is excluded as this study focuses on the static, physical model of space and place.

j) Megill, A. 1985. *Prophets of extremity: Nietzsche, Heidegger, Foucault, Derrida*. Berkeley: University of California Press. Foucault’s ideas of power are discussed according to the production of space, as control over space, spatial organisation and enclosures is politically determined and as a result influences the behaviour of people in places. Foucault’s arguments are noted, but the political aspects are not for discussion in this study.

k) Proshansky, H.M, Ittelson, W.H. & Rivlin, L.G. 1970. *Environmental psychology: man and his physical setting*. New York: Holt, Rinehart and Winston, Inc. Space use and the nature of activities influence the proximity and adjacency of spaces to one another. The organisational planning and layout considerations of spatial environments relate to the dynamic aspect of activity and the appropriation of place. This is extended by the psychological implications of spatial definition and space-use that are not addressed in this investigation. Note is taken of the implications of space and place on the perception and understanding, but the study focuses on the static spatial enclosure.

Soja discusses the socio-spatial relationship in the production of place and includes the philosophies of Foucault and Lefebvre. The philosophical approach to spatial definition and place-making is recommended for further study.


Soja’s trialectic thinking includes spatiality, sociality and historicality which are integrated within human life. Sociality and historicality have a dynamic character as these aspects involve social practices and interaction and are therefore excluded from this investigation. Spatiality is the aspect that is addressed in this study, as the static spatial model of place is under investigation.


The psychological aspects deal with the conception and perception of spaces and environments which are aspects that are recommended for further study.

### 2.5 Introduction to Chapter 3

The sources selected for Chapter 3 (Sub-problem 1) provide information to identify criteria that can be used to determine a vocabulary for spatial definition. An investigation into the elements for spatial definition regarding architectural and urban interiors is discussed. Aspects under discussion include: design elements and principles, spatial organisations, ordering principles and proximities. The aim is to establish the criteria and determine whether the vocabulary is applicable to both types of interiors.
2.5.1 Sub-problem 1
The first sub-problem is to identity and to establish criteria for spatial definition in interiors.

2.5.2 Literature analysis: Literary sources for data

“What is needed is a framework which is just enough defined so that people naturally tend to stop there; and so that curiosity naturally takes people there, and invites them to stay.” (Alexander et al 1977:350). *A Pattern Language* provides data regarding spatial definition strategies. The discussions on nodes, paths and concentration of people, and the concept of accessibility are important for spatial definition and legibility of spaces. Hierarchy of open space and activity pockets or nodes are considered in terms of legibility of spatial structures. These aspects are integrated into the study.

The Urban Problems Research Unit (UPRU) of the University of Cape Town undertook research into layout planning guidelines which are appropriate to the developing of urban areas in South Africa, with emphasis on environmental quality that will “enrich the lives of the people who live in, and experience, those environments” (Behrens & Watson 1996:1)

Important aspects in layout planning include: place-making, space, access, opportunity, efficiency and choice. Planning principles facilitate the creation of spatial definition and place. The organising structure of the city relies on a hierarchical system and public open space is a mechanism in layout planning (Behrens and Watson 1996:68-69). The spatial definition approach is investigated, looking at scale, nodes and hierarchy.

Bell (1993:9, 13-27) lists the elements of spatial definition as point, line, plane, solid volume and open volume. These elements relate to the information provided by Ching (1979), Ching & Bingelli (2005) and Lynch (1960). These elements are investigated, individually and in combination. The data support the discussion on spatial definition for Chapter 3.


*Architecture: form, space and order* is relevant to Chapter 3 as the criteria for interior spatial definition are discussed and consist of primary elements for spatial definition: point, line, plane and volume (Ching 1979:18-47). These elements are examined on the basis of the static spatial articulation opportunities that exist in the creation of interior space. The spatial elements are examined individually and combined to determine the opportunities for the delineation of space. The investigation includes the form and shape of spaces, as well as the degree and type of enclosure (Ching 1979:175-190).

The use of organising principles as ordering devices is examined (Ching 1979:332-382). These principles are explored with an understanding of the application of elements that can be used to define space to create various organisational patterns for interior planning and layout. This approach is integrated with the discussions of Lynch in *The Image of the City* (1960).


Ching & Binggeli (2005:3-9) explain the elements that produce interior space; floors, walls, ceilings and interior elements. The elements are related back to point, line, plane and volume and the process of defining space with architectural
elements. Linear and planar elements and a combination thereof are translated into floor, wall and ceiling planes or surfaces and the creation of spatial form (Ching & Binggeli 2005:10-27). Congruencies between the above mentioned authors are established.


*Architecture and the urban experience* investigates criteria of spatial definition in the urban environment. The possibility of similarities between architectural and urban interior spatial definition is explored. The visual components of public space are shaped by the physical building form and perceived collectively by the users (Curran 1983:24).

Curran (1983:107-110, 145-150) discusses the visual components that assist in organising of defining surfaces with the application of principles of organisation: focal point, hierarchy and towers (verticality) in the urban environment. Two types of spaces in the city are investigated: elements of linear spaces and clustered spaces. These categories form a basis for discussion of linearity and nodal areas (Curran 1983:70-74). These discussions are supported by the work of Ching (1979) and Lynch (1960).


The basic elements of structuring space such as point, line, cross-over and grids are discussed. The information adds to the investigation identifying the elements that make possible spatial definition (Dewar & Uyttenbogaardt 1995:22-44). This is integrated with the information from sources that deal with architectural, as well as urban space. Planning and ordering to achieve structure in the definition of space are investigated and related to elements of spatial definition to establish “outdoor rooms” in the urban environment (Dewar & Uyttenbogaardt1995:18).
Aspects of space, choice, convenience and opportunity are integrated with the ideas of Bentley et al (1993).


“Architecture has a great tradition of bringing magnificent order out of manifold complexities, of putting great quantities of highly variable members and elements together in such a way as to give the result a new and special entity, greater than the mere accumulation of parts.” (Eckbo 1969:75). The argument that space is created by the sum total of the parts combined forms the important aspect of this source. Aspects that shape architectural and landscape space are investigated: material use, scale, and continuity can be noted as the “measures of difference between two space-organizing processes.” (Eckbo 1969:78)


Gehl (1987:131-159) discusses the importance of spaces to sit, walk, stand and to be able to see, hear and talk in public environments. This is integrated with the spatial aspects of enclosures and the definition that takes place in interiors. The quality of space is integrated with sensory experiences.


Hedman and Jaszweski (1984:57-69, 78) discuss the linearity and effective definition of street spaces. Capturing and defining plaza space and the importance of floor configuration on an urban scale are investigated in relation to the information provided on interior spatial definition and organisations. The definition of planes, as freestanding elements and level variations, is included in this investigation (Hedman and Jaszweski 1984:53, 60,70-79).
Kilmer & Kilmer (1992:98 -101) explore space in terms of spatial relationships for successful design by means of defining spatial boundaries, physical and non-physical concepts. This is related to the defining planes of interior structures that are necessary for spatial delineation. The discussion includes the provision of functional areas by means of spatial arrangements. The data are considered in conjunction with Ching (1979) and Ching & Bingelli (2005).

Lynch discusses five types of elements in the urban landscape which are used to improve the legibility and imageability of a place: paths, edges, districts, nodes and landmarks (Lynch 1960:46-90).

Paths are related to the spatial element, line and organising principle, axis. Edges are read as boundaries and barriers in the urban landscape and are used as an organisational element. Districts have a strong character and users “enter inside of” these medium-to-large sections of the city. Nodes create gathering areas in the city, a point of concentration. Nodal points are found at the convergence of paths at strategic spots (Lynch 1960:46-90). The study examines the possibility of finding similarities between these elements for architectural and urban applications.

Line as a visual element of design is described as a space defining element. Motloch (1991:76) argues that linear elements are useful in the organisation of landscape spaces utilizing plants. Various plant forms and the character of the plants determine the quality of definition and enclosure. The advantages of spatial enclosure, spatial type and spatial depth are discussed. This is extended by the enframenment opportunities in landscape design (Motloch 1991:82-83).
The use of figure-ground principles is discussed with the use of line that strengthens the ideas for delineation found earlier.


The structure of place deals with spatial organisations and space defining elements. Norberg-Schulz (1980:11-13) discusses the figure-ground relationship of activities in spatial surroundings, and the properties of concrete space. The boundaries in terms of spatial enclosure are established as floor, wall and ceiling in the built-environment, and ground, horizon and sky in landscape. These similarities are investigated according to the appropriateness for architectural and urban interior spatial definition.

The influence of openings on enclosing structures has an impact on the perception of the space, as the density and degree of enclosure will be manipulated. The nature of extension, direction and rhythm in the enclosing structure is investigated to identify similarities with linkages and spatial articulation and the influence on character of place (Norberg-Schulz 1980:13).


The idea of line as axis that connects areas or nodes in the urban environment is explored (Trancik 1986:157-158) and is related back to the architectural application. The idea of containment of urban space is investigated, by focusing on the various types of spaces, cluster and linear, and also looking at the application of solid and void characteristics. These data are integrated with Ching (1979) and Ching & Bingelli (2005).

Von Meiss (1990) and Ching (1979) reflect a comparative view regarding the elements of spatial definition. Design elements and principles are ingredients for creating comprehensible order. Composition of objects, surface articulation, as well as spatiality of objects as the relationship between objects and elements defines a spatial field. Elements of spatial definition and the creation of edges and boundaries necessary for spatial comprehension are discussed. Spatial criteria that add richness to a space are explored (Von Meiss 1990:102-110).

2.6 Introduction to Chapter 4

The sources identified for Sub-problem 2, deal with aspects that are useful in the modulation of interior space. These are seen as variables, as the nature and result of the application are related to the type of spatial definition provided and are changeable in the application and spatial effect. The variables are selected by the potential for creating meaningful place. The aim here is to identify the variables and ways of combining these to achieve meaningful place in both architectural and urban interiors that will add value to any environment.

The understanding of the theories and data for place-making is important before variables to achieve it can be identified. The integration of aspects needs to be considered to create meaning in any spatially defined area seeking to create ‘place’.

2.6.1 Sub-problem 2

The second sub-problem is to identify the variables used to modulate meaningful interior place.

2.6.2 Literature analysis: Literary sources for data

“Awareness of space...engages a full range of senses and feelings, requiring involvement of the whole self to make a full response to be possible.” (Bacon 1992:15). This illustrates the importance of a sensory experience in the creation of ‘place’. Richness and variety add to the realisation of place and are important for spatial definition and character. Rhythm, texture and other elements contribute to achieving this (Bacon 1992:17-18). Space-time in the experience of place is strengthened by the sequencing of spaces and the relationship between it that influences the emotional response to the harmony of the space (Bacon 1992:19).


Relationships between the sources discussing “sense of place” are analysed to identify similarities in the application of space defining elements on different levels: architectural and urban interiors. Place-making in urban environments seeks uniqueness in the characteristics of place. These characteristics need to enrich human needs and accommodate a collective interpretation and experience. The development of a “spatial structural language of place” increases legibility and user orientation (Behrens and Watson 1996:67).


Bell (1993:9) lists variables in the creation of a sense of place that are investigated: size and shape, texture, colour, time and light. Size and the effects that can be created in landscape spaces are investigated. Shape and form continue this discussion of the effect on spatial quality. The tangible and visual qualities of texture are integrated with the aspects of the use of texture in interior spaces (Bell 1993:47-68). This is supplemented by the discussions by Ching & Binggeli (2005) and Kilmer & Kilmer (1992). The effect of light and shade on spatial qualities is investigated (Bell 1993:77-82).
    Architecture.

This source lists various aspects that can influence the visual appearance and
sense of a place. Visual appropriateness is determined by the general
appearance and detail of place. Public open spaces have a need for visual
appropriateness as a variety of people will have divergent responses in obtaining
meaning for that place (Bentley et al 1993:76).

Richness is the quality that increases sense-experiences and is achieved
through appropriate materials and construction techniques. Richness adds
quality and character, and is comparable to the place theory by Trancik (1986).

e) Broto, C.  [s.a.]  *New urban design.*  Barcelona: Arian Mostaedi.
The design approach of Kathryn Gustafson is investigated, the idea of integration
and multi-layered qualities in the creation of place. The integration of old and
new within a holistic design, even if in the landscape is considered (Broto
[(s.a.):47].

    Van Nostrand Reinhold Company.
The properties of form and shape and the relation to space are examined (Ching
1979:50-54, 112-113). Proportion and scale are defined according to the human
dimension of anthropometrics and ergonomic requirements. The importance
here is essential in creating meaningful places for people in which to dwell
comfortably (Ching 1979:324-329). Investigations regarding the sensory
experience are supplemented with data obtained from Trancik (1986) and Von

    Jersey: John Wiley and Sons.
Form and shape are further defined to add to the discussion of Ching (1979). Other elements that have influences on spatial qualities are investigated in this source: texture, colour, scale and proportion, lighting and surface materials. The investigation explores the influence of these on the sense of place and the spatial experience. Texture and the qualities achieved spatially, visual and tactile characteristics are all explored. Colour and the effects on space and space perception are investigated in the application of colour in interior spaces. Scale and proportion add information to earlier investigations and define the use of these elements in creating appropriate scaled spaces for human habitation (Ching & Binggeli 2005:97-127).

Data regarding illumination and lighting of interior spaces are considered. The effect on interiors is examined as well as the subsequent spatial qualities that are achieved through intensity, diffusion, reflection and contrast of light. The effect of light is clearly visible in the application of surface materials and finishes for interior planes, surfaces and elements (Ching & Binggeli (2005:234-245, 274-275).

Framing of the view is an interesting tool in the focus of attention onto a specific space or element. Ching & Binggeli (2005:180-181) list size, shape and placement of openings as important aspects in the effective channelling of vistas. The result of integrating these aspects is assessed in the successful creation of meaningful place, with strong enriched qualities for spatial experience.


The use of scale and positioning of openings creates character and also establishes links between adjacent areas, both visual and functional. Expressive and supportive qualities of the public domain are further enhanced through the choice of materials, textures and patterns in ground treatment and furnishing. Furnishing of public places encourages social interaction and
participation in these spaces in the sense that it creates a sense of place (Curran 1983:173). The data listed here are integrated with those provided by other authors listed.


A sense of place according to Day (2002:155-159) constitutes components from a physical environment that add to the spatial quality. This argument is integrated with the physical aspects of place theories by other authors.


The discussions on spatial aspects in the urban environment, in particular human scale, are integrated with other sources that deal with data of both an architectural and urban nature (Dewar & Uyttenbogaardt 1995:17)


The variables, shape and size, are addressed together with the investigations of the scale of buildings that articulate urban space. The subsequent proportions in terms of height to width ratios are explored (Hedman & Jaszweski 1984:60, 76). These variables of spatial modulation are considered in conjunction with Dewar & Uyttenbogaardt (1995), Ching & Bingelli (2005) and Kilmer & Kilmer (1992).


Landscape cognition is possible through visualization of place. The composition of visual elements gives place meaning and influences the perception. The content of these spaces and the ingredients in articulation fuse character and a sense of place (Jakle 1987:18) and are integrated in the discussions on ‘place’
The variables (principles) for the creation of spatial qualities are investigated in this source. Form and shape, texture, scale and proportion, colour, lighting and material selection are examined (Kilmer & Kilmer 1992:102-147). The effect of these on interior space is investigated according to the data provided by Ching (1979) and Ching & Binggeli (2005).

Dewar in Le Roux & De Villiers (2003:66-69) makes clear the approach of non-pragmatic planning for urban design. The creation of successful “urban living rooms” is emphasised in the creation of “special places”. Access, movement and green spaces, and a strategy for creating place are discussed and will be integrated in the discussions on place-making.

Motloch (1991:127-135) mentions visual elements that shape spatial quality: colour as spatial contrast or harmony, texture as visual or tactile element of experience, and scale and proportion as the relation of spatial form to human size (Motloch 1991:150-153). Aspects of importance to create a sense of place are listed as spatial feeling, appropriateness, spatial development and functions of physical concepts (Motloch 1991:188-195). These are integrated with aspects discussed by various other authors.

“Man dwells when he can orientate himself within and identifies himself with an environment, or, in short, when he experiences the environment as meaningful.”
(Norberg-Schulz 1980:5). This quotation illustrates the importance of the nature of the physical environment in which people dwell. This source identifies the complementary terms which describes the environment: space and character, and orientation and identification. Norberg-Schulz (1980:5) emphasises the fact that dwelling provides more than shelter, as life occurs in space, thereby making it a place with distinct characteristics.

*Genius loci* or “spirit of place” is the term that Norberg-Schulz assigns to the concept of creating meaningful places. The structure of place can also be divided into the two complementary terms: space as the “three-dimensional organisations of elements”, and character as the “general atmosphere” (Norberg-Schulz 1980:11). These aspects form an essential part of the description of place-making for Chapter 4.

Porter’s (1997:27-38) perspective on sensory experience with the use of distance and immediate receptors is considered for Chapter 4.

Data on variables for spatial modulation are provided by Reekie (1972:18-29) that add to the investigation by looking at colour and the spatial effects it contains, together with the use of texture to create unity in urban places.

Rudofsky (1969:118) points out the importance of creating “communal living rooms” in the urban environment as places that add value to the spatial experience. This discussion is integrated with data provided by other sources regarding place-making.

Schwartz (2003:16) explores the concept of place and the components that constitute spatial character. Personality, character, structure, community, appropriateness and identity are concepts mentioned and considered in this study.


Place theory is the third theory that Trancik (1986:112) defines: place theory deals with “the cultural and human characteristics of physical space.” This theory is important for the understanding of a sense of place in the urban environment. The contextual meaning, unique characteristics and social aspects of the space all add to the creation of place. Elements such as shape, texture and colour are listed as ingredients to achieve this on a physical level. These are meant to enhance the natural qualities on both a physical and an emotional level (Trancik 1986:112-120). The information links with the aspects illustrated by Bentley et al (1993) and Lynch (1990). The articulation of ground plane through the use of colour, texture and materials again shows correlation with the theories of Curran (1983).


Sensory experience of spaces should involve all the sense modalities: smell, touch, hearing, vision and movement of the body as kinaesthesia (Von Meiss 1990:15-22). Spaces change in quality during the day as the movement of the sun and people alters the spatial qualities of density, activity and atmosphere (Von Meiss 1990:135). These are subtle variables in the shaping of place and are possible through spatial manipulation, visual connections and place identity.
2.7 Introduction to Chapter 5
Sources for Sub-problem 3 bring together the investigations of Chapters 2 and 3. The aim is to determine the relation between the elements for spatial definition and variables to modulate space. This is dealt with at an architectural and urban interior level so as to find whether the relation exposes congruencies in the application of terminology to create meaning in a specific interior environment.

The guidelines identified in Chapter 5 are applied to an urban interior, the Donkin Reserve in Central Hill, Port Elizabeth, in Chapter 6 to evaluate the compatibility of criteria to define space and create place.

2.7.1 Sub-problem 3
The third sub-problem makes use of the first and second sub-problems, investigating the relation between spatial definition and modulation of interiors, and establishing guidelines to create as sense of place.

2.7.2 Literature analysis: Literary sources for data
Chapter 5 (Sub-problem 3) utilises the sources from Sub-problems 1 and 2n combination to determine the relation between the criteria that have been developed. This is supplemented by the analyses of selected precedents that have been included in the investigation of Chapters 3 and 4. The application of terminology is explored in this manner.

2.8 Precedent analysis: Sources for data
The aim of precedent analysis is to identify the application of theoretical concepts and principles that are investigated in Chapter 3 and 4 respectively. The investigation will further determine the terminology and vocabulary used in describing the existing places, focusing on local and international architectural and urban interiors that vary in scale, context and location, and user group. This process of analysis can bring forth the successful translation of theoretical
concepts, and also indicate the shortcomings if not adequately or appropriately applied.

Data for Chapter 3 (Spatial Vocabulary) and Chapter 4 (Enriching the Spatial Quality) are examined concurrently in each precedent analysis. The data within this chapter solely focus on a literature investigation, as the process of interpretation is integrated within the following two chapters. The Constitutional Court is selected as the precedent according to which visual analyses are conducted to illustrate the interpretation of elements and variables.

The review of selected precedents allows for the identification of terminology and understanding of the application within a specific environment. Precedents have been selected for a number of reasons; firstly architectural and urban spaces are included, as the study is concerned with both, determining similarities, differences and overlapping aspects. Secondly, international and local examples are identified that add to the study by examining the collective understanding and importance of spatial definition and place-making. Thirdly, various levels of scale are addressed in architectural and urban environments. The investigation explores the nature of the elements, principles of spatial definition and variables for spatial modulation on varying scales, as the use of these aspects is clearly analysed and explained. Fourthly, the examples include various functions, in order to explore the nature of spatial definition and to determine the universality of these aspects within spaces for human habitation, regardless of the use.

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<th>Criteria</th>
<th>Constitutional Court</th>
<th>Philipp’s Public Places</th>
<th>Glass Shutter House</th>
<th>Whitechurch Cross</th>
<th>Castelvecchio</th>
<th>Sendero del Pinar</th>
<th>Garden Pavilion</th>
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*Figure 2-1: Spatial Vocabulary Criteria and Precedent Table (Chapter 3)*
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<th>Whiteinch Cross</th>
<th>Castlevecchio</th>
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Figure 2-2: Enriching the Spatial Quality Criteria and Precedent Table (Chapter 4)

a) **Constitutional Court, Johannesburg (OMM Design Workshop and Urban Solutions)**


The Constitutional Court sets an important precedent in the South African context in terms of spatial definition and place-making. The Court has been selected as precedent to visually illustrate the translation and interpretation of the criteria for discussion. The other precedents are referenced to supplement the investigation. The analysis focuses on the principles and elements for
articulation and the variables in spatial modulation of the court foyer and 
exhibition stairs as architectural interiors, and the courtyard and Great African 
Steps as urban interiors. The choice of materials, light qualities and spatial 
organisation are all important in this investigation, the components that create a 
place to gather.

b) Philippi public spaces, Cape Town
The open public spaces in Philippi communicate the urban design solutions to 
urban interiors within a spatial framework. The spaces form part of a series of 
urban interiors on the Cape Flats and are integrated with principles and elements 
of spatial articulation and components that creates place, point, line, plane and 
volume. These are investigated against the context and content of the area, 
including the integration of variables to modulate place.

Philippi Lansdowne public space project (Du Toit and Perrin, in association 
with Jacques Theron Architects)
Philippi Lansdowne public space project, Cape Town. 2003. Digest of 

Joe Gqabi station square (ARG Design and Lucien le Grange Urban 
Designers and Architects)
Klitzner, T. 2005. An urban square – Joe Gqabi Station, Philippi, Cape 

c) Glass Shutter House, Tokyo (Shigeru Ban)
no. 1296, February 2005, pp. 82-85.
The Glass Shutter House is an example of blurring the boundaries between 
inside and outside within spatial definition. The elements and principles of spatial
definition are investigated, together with the principle of spatial transformation. The sense of place is examined within a contemporary Japanese language.

d) **Whiteinch Cross, Glasgow (Gross Max)**


Spens, M. 2003. *Modern landscape*. London: Phaidon Press Limited. Whiteinch Cross has been selected as precedent, due to the design approach of Gross Max and the integration of old and new within the fabric of a city. The elements and principles for spatial definition, together with the variables used in creating place are investigated. The interpretation of materials is another aspect of importance.

e) **Castelvecchio, Verona (Carlo Scarpa)**


Carlo Scarpa’s work at the Castelvecchio in Verona deals with the delicate interplay of old and new. The material use and design approach in this regard are important as a precedent, as the spirit of the place is enhanced with this juxtaposition. Line and plane as elements of spatial definition are analysed in the spatial application of the sculpture gallery and the Cangrande space.

f) **Sendero del Pinar de la Algaida, Spain (Ramón Pico and Javier López)**

Mostaed, A. [s.a.]. *Landscape design today*. Spain: Carles Broto & Josep Maria Minguet.

The reclamation of Sendero del Pinar de la Algaida in Spain is selected as precedent, as the space addresses the aspects of rejuvenating a derelict area by
the inclusion of nature in a design solution. The elements for spatial definition are explored, in conjunction with the ingredients that create the spirit of the place. The strong environmental and sustainability aspects inform this study further.

g) Garden Pavilion, Pretoria (Comrie & Wilkinson Architects and Urban Designers)


The Garden Pavilion in Pretoria has been selected as an example of contextual design, with the application of spatial definition elements and principles, whilst the choice of materials and relation to the site and existing structures form the spirit of place. These aspects are all investigated in the precedent study.

h) Melrose Arch, Johannesburg (Urban Solutions, with Osmond Lange partnership in collaboration with Paul Murrain)


Melrose Arch, a landmark in Johannesburg, illustrates the application of elements and principles of spatial definition within an urban interior. The aspects that make this articulation possible and the subsequent place-making are investigated within this mixed-use development.
2.9 Summary
The sources introduced in this chapter provide an overview of the data considered for this study. The sources for background orientation give a broad understanding of the entire scope of the production of space and place. Data for this purpose are acknowledged, but are excluded from this investigation.

Discussions on spatial definition in Chapter 3 are mainly informed by a selection of sources that have been introduced. The aim of this chapter is to determine the elements that can be applied to create space. Ching (1979), Ching & Bingelli (2005) and Kilmer & Kilmer (1992) are the major sources for investigation of architectural interior definition. Curran (1983) and Hedman & Jaszweski (1984) are considered for the urban spatial definition approach, together with the landscape perspective from Motloch (1991). The architectural and urban elements for spatial definition are integrated in Chapter 3 in a search for a collective set of terminology that can be used as criteria for spatial definition.

The five elements that Lynch (1960) describes for legible space are combined with the above investigation. Trancik (1986), Von Meiss (1990) and Dewar & Uyttenbogaardt (1995) add to the arguments to define space with static physical elements.

The sources that are considered for Chapter 4 deal with the enrichment of spatial quality. The variables (principles) are investigated to determine the criteria that can be used collectively for architectural and urban interiors, to create place. Norberg-Schulz (1980), Trancik (1986) and Day (2002) are important sources to define place. The investigations focus on the physical elements that influence a sense of place. Ching (1979), Ching & Bingelli (2005) and Kilmer & Kilmer (1992) are investigated to identify variables to enrich place from an architectural interior point of view. This is complemented with the urban approach with the use of Curran (1983), Hedman & Jaszweski (1984) together with Motloch (1991) that
argues the landscape viewpoint. Variables that are investigated include: shape and size, colour, texture, scale and proportion, finish materials, light and views. The concept of richness by Bentley et al (1993) is explored to determine the effect of the variables on a static physical model of space to create place.

Precedent analyses are synthesised throughout Chapters 3 and 4 to identify and interpret the terminology that has been selected as criteria. The Constitutional Court is selected as precedent to visually illustrate the elements and variables (principles) on both an architectural and an urban level and these are complemented with reference the other precedents in support of the explanation.

Chapter 5 focuses on the sources of Chapters 3 and 4 combined to determine the relation between the criteria to produce space and place. This is then applied to the Case Study of the Donkin Reserve in Central Hill, Port Elizabeth, in Chapter 6 to determine whether the criteria can serve as guidelines for the evaluation of spatial definition and place-making.

2.10 Conclusion
The Review of Related Literature has been structured according to the various chapters and the related sub-problems that provide the content for investigation. All the sources for investigation have been introduced. The major sources and precedents that are considered for this exploration have been identified. The search for collective criteria for spatial definition and place-making in Chapters 3 and 4, aims to achieve an integrated approach in the discussion of data. The perception and approach of the researcher should be independent and objective to the investigation and focus on the aims that have been described in Chapter 1 and 2.
Chapter 3: SPATIAL VOCABULARY

3.1 Introduction

“What is needed is a framework which is just enough defined so that people naturally tend to stop there; and so that curiosity naturally takes people there, and invites them to stay.” (Alexander et al 1977:350). This chapter sets out to determine the vocabulary for spatial definition to create static physical containment within architectural and urban interiors. The elements for architectural interiors are used as a framework in order to determine whether the terminology can be used collectively for architectural and urban environments.

The elements used to achieve spatial definition, point, line, plane and volume, are used as the criteria for this investigation and are enhanced with discussions on ordering principles. The ordering principles that are integrated are: hierarchy, axis, symmetry, datum, repetition and transformation (Ching 1979:333).

The theoretical investigations are explained by means of visual illustration to clarify the interpretation of precedent analyses related to the discussion of a particular criterion. The chapter is concluded with an understanding of the strategic integration of the elements, principles and theories as collective criteria that make spatial definition possible.

3.2 Definition of space

The sources contributing to this explanation have been specifically selected to indicate the terminology used in a vocabulary to define space. Architectural and urban viewpoints are integrated to determine the congruencies in the selection of terms.

The strongest form of spatial definition is described by Ching (1979:168) as the enclosure of four vertical planes that create a field of space. An architectural interior consists of form and space where the boundaries are made possible through the defining structure that forms an enclosure. Ching (1979:14-15) lists the systems of
building elements for this definition as spatial, structural, enclosure and circulation. All of these bring an added quality to a room in terms of how it is used. The word ‘plane’ as defining term is supported by Von Meiss (1990:102): “The limit of the principal space is then defined by the edges of the walls which between them produce an implicit plane.” Edge is added to the vocabulary for enclosure. In addition, Norberg-Schulz (1980:13) argues the link between interior and exterior spatial definition saying that floor, wall and ceiling are the components that constitute built space; similarly ground, horizon and sky are what makes space in the landscape. The structural basics are the same for the spatial definition.

The classic form of static outdoor space is identified as vertically enclosing surfaces that face inwards onto a central element: “…transparencies, overlappings, light modulation, perspective, surface gradients, closure, articulation, patterns of motion and sound…” make possible this definition (Lynch 1960:102, 103). The importance of vertical and horizontal organisation of planes is emphasised by Curran (1983:81) as devices to manipulate man-made and natural elements. Two types of spaces for definition are identified for the urban environment, linear and cluster. Successful urban spatial definition is compared to architectural qualities: “…like a room inside a building, the existence of cluster spaces absolutely relies on the defining surfaces, and when these are lacking or incomplete, the form loses its definition…the cluster does not take place” (Curran 1983:104). This argument strengthens the importance of creating spatial form.

Von Meiss (1990:97) relates spatial form to the shaping of volume and the connection of freestanding elements within this volume. Von Meiss continues by arguing that “there is no empty space; everything has its position, its location, its place…to create a hollow for this activity is to create the hollow in order to contain” (Von Meiss 1991:101). Spatial form within the urban environment is articulated by means of architectural mass. This spatial entity has a strong spatial containment and is said to create the quality of a “well composed room” or an “outdoor room” (Hedman & Jaszewski 1984:60, 71). It can also be pointed out that “…people like rooms. They relate to them daily in their homes and at work…” Trancik (1986:18-19) illustrates here that the way in which space is enclosed influences the reaction of the user. The exterior space formed by the architectural
boundaries is again compared to an interior entity, or an outdoor room in the structured urban framework. Landscaped spaces are delineated by means of the vertical plane and the vertical edge that is responsible for the spatial enclosure and the subsequent character of the space. Spatial definition is possible with both architectural and natural enclosures (Motloch 1991: 199, 206). “A boundary is not that at which something stops but...the boundary is that, from which something begins its presencing.” (Norberg-Schulz 1980:13).

The investigation into the identification of terminology used to define space indicated similarities in the choice of words for architectural and urban interiors. This sets the platform in the search for further congruencies between the two environments.

3.3 Elements for spatial definition
The geometric elements for spatial definition of architectural interiors according to Ching (1979:19) are point, line, plane and volume and these are used as the structure for this investigation. The aim is to determine whether the vocabulary for urban spaces matches and if the terms can be used to describe the definition of space. The influence of organising principles identified by Ching (1979:333): axis, symmetry, hierarchy, rhythm and repetition, datum and transformation is integrated, together with the application of precedent analyses to support the theoretical data visually. The principles are visual devices to order interiors within a unified whole.

3.3.1 Point
Point, as defining element, has no length, width or depth and is used to mark a position in space. When placed in a visual field, a point creates a presence and changes spatial character (Ching 1979:20). This is evident on a two-dimensional plane, i.e. point represented on plan. However, when point is given height a linear element is created that visually attracts attention. Lynch (1990:48) lists landmarks as one of five elements of physical form for the urban environment. When positioned in a spatial field, visual orientation is made possible because of the focal point created in the space.
The tower of the Constitutional Court serves as a landmark that is illuminated at night, identifying the location of the new Court. The concept of orientation within a space is extended by the courtyard outside the Court that allows visitors to orientate themselves on the site; this is made possible with the distance of elements from another. Similarly, vertical articulation of point in Whiteinch Cross establishes a landmark in the city grid. A white tower with a blue vertical light defines the space.

Fig 3-1: Point (architectural and urban) (Grobler 2005)

Fig 3-2: Constitutional Court city landmark
(Constitutional Court2004:84)

Fig 3-3: Constitutional Court landmarks
(Constitutional Court 2004:84)

Fig 3-4: Whiteinch Cross tower (Holden 2003:67)
This concept is supported by Bell (1993:13) indicating that a point needs dimension to attract attention and to indicate territory, ownership or to serve as a landmark. The aim is to establish a point of focus and reference in an environment or spatial field whether it is interior space or landscape. Curran (1983:145) and Hedman & Jazewski (1984:53) support the emphasis on freestanding elements and verticality that is used as focal point to visually organise spaces. Emphasis or hierarchy is created within an interior layout because of the contrast in the size, shape, placement or orientation relative to adjoining spaces (Ching 1979:333,350).

![Fig 3-5: Emphasis and hierarchy](Grobler 2005)

Similarly Behrens and Watson (1996:68-69) describe the advantage of a hierarchical system as organising structure in the layout and planning of urban areas. Nodes are created as gathering places or points in the urban environment connected with a network of circulation spaces. Open public spaces need to relate to a human scale in the definition of space. Lynch (1990:47) argues that nodes are strategic points that define a transition in space or movement due to crossing paths, but also the definition of the physical character of a place that allows for concentration and gathering.

The square at Melrose Arch serves as a node within the urban fabric. The building facades define the edges of the square that is centrally located. Restaurants spill into the square and strengthen the nodal function of human interaction and activity.
Dewar & Uytenbogaardt (1995:25) support the idea that various nodes are linked with circulation systems as points of reference and orientation.

Both the Constitutional Court and the Philippi public spaces are located on major traffic routes. The intensification of people creates strong interaction and forms spaces to gather. The Constitutional Court has the foyer located on this intersection that serves as an architectural interior for gathering and an urban counterpart in the courtyard adjoining it as an urban interior creating “...an accessible public open space at the centre of Constitution Hill that celebrated the right to gather...” (Makin & Masojada 2004:11). In addition, on an interior level, the Court foyer is positioned at the crossing of circulation routes from the exhibition steps and the entrance to the Court chamber. The foyer serves as a public space for interaction. The public squares of Melrose Arch and Philippi Lansdowne are located centrally to the developments that are connected with routes and serve the function of public interaction.
Point as abstract component is found in various scales according to Dewar & Uytenbogaardt (1995:23). One can thus say that both architectural, on an intimate scale, and urban spaces, on a large scale, allow for the formation of nodes as points to gather.

A point becomes an element when it is extended into a vertical linear element such as a column that mark points in space, but as soon as columns are positioned in a row, a line is implied that forms a spatial membrane (Ching & Binggeli 2005:3).

This is illustrated in the plan of the Garden Pavilion. The repetition of point reads as a line, and implies a plane when the points are vertically extended to function as columns.

Point, becoming line and transforming into plane, indicates the importance of the integration of the elements for spatial definition.
3.3.2 Line
According to Ching (1979:333,334), axis is the connecting line between two points or spaces about which elements and spaces are organised. Line, implied or physical, has to terminate at both ends for effective definition to create a balanced order. Similarly Trancik (1986:103, 97) indicates by means of the linkage theory that movement systems make clear the infrastructure of the urban environment with connecting lines that link elements and spaces. Streets, as linear elements or lines, become axes creating spatial order in urban interiors. Axis, as organising element, is used in conjunction with focal points, creating a link between different functional areas (Trancik 1986:157-158). The collective use of the word, axis, is observed to describe lines within interiors of both an architectural and an urban nature.
Circulation is related to linear channels of movement that are defined by edges or boundaries (Lynch 1960:47).

Fig 3-12: Axis and focal point (architectural and urban)
(Grobler 2005)

The major axes at the Constitutional Court are contained vertically for both architectural and urban interiors. The Great African Steps are defined by the boundaries of the Old Section Four and Five Prison and the new Court Building. The exhibition steps adjacent and parallel to the defining surfaces reflect the same material qualities, solid and transparent.
Fig 3-13: Constitutional Court – exhibition steps
Adapted from (Noble 2004:21)

Fig 3-14: Constitutional Court – Great African Steps
Adapted from (Makin & Masojada 2004:11)

Dewar & Uyttenbogaardt (1995:27) and Ching (1979:270) accentuate movement from point to point along an axis. The configuration of the path is determined by the adjacent spaces and intersections that provide an opportunity for choice and orientation. Curran (1983:151) describes the linear arrangement of elements as unifying in creating a sense of movement along an axis.

Edges are not only movement paths as Gehl (1987:151) explains the “edge effect”. The edges of spaces are occupied as zones for staying. People want to observe from the side and not be the centre of attention and therefore position themselves on the edge.

Paths in the landscape are represented by lines, while axis is created between two points. The paths of Sendero del Pinar de la Algaida gently direct one through the landscape. Line is defined by contrast in the edges, gravel and vegetation, bridge and railing. Line is further used to define space, as vertical posts are positioned in a row that creates a permeable boundary for seating that overlooks the lake. Again, point becomes line that defines a plane to create a space.
Line, being one of the primary generators of form, is created when the properties of length, direction and position are added to a point (Ching 1979:19). On a physical level, contrast between the junction of various colours, textures and surface materials articulates lines (Bell 1993:16, 17) and (Curran 1983:140-141).

This is illustrated in the flooring solutions of the courtyard of the Constitutional Court, the covered pathways at the Philippi public spaces, as well as the Sculpture Gallery of Carlo Scarpa. Line as a device for delineation between different functional and circulation areas is applied strategically in every design. Line as edge is explored by Carlo Scarpa in the Castelvecchio in the same manner. The contrast in old and new indicates the relation between the new additions and the historic layers of the structure (Murphy 1990:15).
Line further describes shape and articulates the boundaries of spatial form of volumes. A line is created by the repetition of columns and perceived as a boundary or line that defines an edge as would a solid plane (Von Meiss 1990:102).

The defined frame created by the structure at the Philippi Lansdowne public space consists of a linear structural system with the use of the column and beam. Edges and lines create vertical and horizontal articulation.

The grid that is established on plan allows for flexibility in the interior layout and distribution of elements and planes (Ching & Binggeli 2005:10, 11). This flexibility present opportunities for the community to freely appropriate the volume defined independent from the structure.

Level variation on surfaces creates additional defining lines (Hedman & Jaszewski 1984:79).

Level differences at Whiteinch Cross, steps and transition platforms at the Constitutional Court and levels in the Glass Shutter house illustrate the use of line in a three-dimensional application. Datum, as ordering principle, groups
together elements and spaces with edges and levels that outline the interior articulation.

Fig 3-22: Whiteinch Cross levels
(Spens 2003:195)

Fig 3-23: Glass Shutter House linearity
(Webb 2005:85)

Fig 3-24: Constitutional Court foyer lines
Adapted from (Lipman 2004:17)

Line is used in the articulation of volume through the definition of planes and edges (Ching & Binggeli 2005:89).

The volume of the Garden Pavilion is defined by structural lines. Verticality is achieved by the structural elements that are repeated on the façade. In the interior, the space is modulated by diagonal lines that create spatial layers. A combination of diagonal, vertical and horizontal lines is composed in a harmonious volumetric composition.
The transformation of line as one-dimensional element can be extended in creating a two-dimensional plane.

### 3.3.3 Plane

“Planes in architecture define three-dimensional volumes of form and space.” (Ching 1979:35). The types of planes used to define interior space are classified as overhead plane, wall plane and base plane. The overhead plane is used to determine the volume of the interior space at ceiling level. The wall plane becomes the vertical boundaries of the room as enclosure and the base plane the floor level. Overhead planes in urban environments vary from open skies, canopies to trees. This definition provides shelter from the elements and gives a sense of “being under” and “…the overhead plane is the spatial ceiling…” (Motloch 1991:183). Overhead definition strengthens the sense of enclosure in public open areas.

![Fig 3-25: Garden Pavilion lines](image)

(Grobler 2005)
The degree of enclosure determines the quality of a space. The planes at the Constitutional Court foyer contain qualities of separation with solid boundaries to private spaces and connection with transparent edges to public areas. The overhead plane is punctured with linear slots; vertical planes vary in density and quality, transparent and solid and the base plane is depressed and as a result the seating area is defined.

![Constitutional Court](image)

*Fig 3-28: Constitutional Court*
*Adapted from (Lipman 2004:17)*

The spatial edge encloses landscape space at eye level, terminates the sightline and determines the view and the form and size by means of the closure (Motloch 1991:185). In the urban environment building edges are seen as vertical planes of enclosure, emphasised by the ground and overhead plane, as well as the spatial edge. Motloch (1991:181) describes the ground plane as the spatial floor for functional purposes articulating datum without creating physical boundaries. The word 'plane' is used collectively for spaces of architectural and urban nature.

At Sendero del Pinar de la Algaida, the landscape is the base level that stretches through this natural environment. Planes are used to create an enclosure in the vast open landscape. Base plane, vertical and overhead planes are configured to contain a space for shelter. A place for contemplation is created that defines place.
The interiors that have been identified for interpretation are all defined by planes that modulate the volumes. It is because of the nature of the defining plane that the interior character is achieved. Ching (1979:175) lists the properties of enclosure for architectural interiors as dimensions, shape, configuration, surface, edge and opening. These properties shape the nature of the definition, the treatment of planes, as well as the relationship between various surfaces that determine the spatial quality. Von Meiss (1990:107-108) argues that the nature of an enclosure is subject to the distribution of openings and the relation to surrounding spaces. A reduced sense of definition is maintained if the opening is greater in size than the wall surface that allows for a stronger link between adjacent spaces.

The Glass Shutter House demonstrates a reduced sense of definition in the use of transparent boundaries on planes facing public spaces, whether architectural or urban. The space is transformed because of the movable screens that have the capacity to enclose or reveal the spaces inside.

The planar structural system of a building, load bearing wall and horizontal slab, create structural enclosure for interior space, floor, wall and ceiling as the building envelope
(Ching & Binggeli 2005:12, 13). The design of interior spaces provides the opportunity for planes to be manipulated spatially, according to a desired aesthetic or function. Urban spaces are defined by the adjoining building facades, like the urban spatial definition at Melrose Arch.

![Fig 3-32: Melrose Arch building facades (Krige 2002:27)](image)

Line groups elements or spaces together along the length of the line, plane defines the elements and spaces above, below or against, and volume articulates elements or areas within the three-dimensional frame of the boundaries as datum applied as an ordering device (Ching 1979:358, 359).

Independent planes and structures have the capacity to define spaces within a volumetric field. The freestanding walls at Whiteinch Cross define an urban room between the compositions of planes. The spatial edge is articulated by vertical planes, the ground by a level difference and a steel frame defines the overhead plane. The planes are independent from a building and imply a place because of the spatial arrangement.

![Fig 3-33: Whiteinch Cross planes (Holden 2003:70)](image)  
![Fig 3-34: Whiteinch Cross spatial arrangement (Spens 2003:195)](image)
Spaces at Whiteinch Cross are grouped together with the use of lines and planes. The boundary edge of the site defines the ground plane which is divided into two levels. Vertical planes, walls, steel frame and tower imply a volume between that articulates the space. The varying heights of verticality create interest and the observation of the place.

Areas and elements are grouped together under the overhead plane or onto the base plane (Ching 1979:359).

The raised platforms at the sculpture gallery of the Castelvecchio group objects together for display, or are enhanced by being isolated to create emphasis. The height of each display is determined by the size of the object.

Spatial reference is provided through the application of visual continuity and regularity in size and closure of the volume.

3.3.4 Volume

The combination of planes, vertical and horizontal, defines volume that provides the added properties of length, width and depth in the creation of space (Ching 1979:19). The volumetric structural system constitutes three-dimensional mass that encloses the interior void that is defined by lines and planes (Ching & Binggeli 2005:14).

Building forms in the urban environment define spaces such as squares, piazzas and markets by the adjoining building facades with vertical boundaries that make possible the enclosure (Ching 1979:38, 47). Urban cluster spaces provide areas for social interaction. Curran (1983:103) argues that the room is the basic containing space and
further, Trancik (1986:100) “…in order to achieve form on the exterior, the perimeter of spaces and blocks must be well articulated to establish outdoor rooms containing corners, niches, pockets and corridors.” Public urban spaces (voids) are identified as place when integrated with solids (built form). Positive voids are created when these voids add meaning to the environment as gathering places, paths of transition and platforms for interaction. These add value to the experience of the city in the clarity in layout and configuration of city blocks (Trancik 1986:100).

![Urban spatial definition](image1)

**Fig 3-36: Urban spatial definition** (Grobler 2005)

The square at Melrose Arch is articulate and contained by the building facades that are positioned on the building lines. These edges define the solid built form that contains the urban void.

![Melrose Arch edge](image2)

**Fig 3-37: Melrose Arch edge** (Melrose Arch 1999:31)

Trancik (1986:97) explains that the figure-ground theory is the pattern of solids and voids in the urban environment that aims to establish order, creating points of hierarchy. Centralisation, direction, rhythm and proximity are listed as properties of space and elements in the Gestalt theor[that deals with positive and negative, or solid and void.**
General guidelines here are proximity, continuity and closure, creating relationships and patterns (Curran 1983:67).

Streets as urban space are described as follows: “…for the street is not an area, but a volume…” (Rudofsky 1969:20). Streets are defined as harmonious spaces of continuity and rhythm. Urban spaces are the left over areas between buildings and are shaped accordingly by walls, fences, building facades, colonnades and trees (Curran 1983:105,106).

Areas are defined as functional volumes by the placement of objects and elements. Furniture in interior space delineates various areas, creating a sense of enclosure; spatial patterns are defined and movement patterns indicated. The function of the room dictates the organisation and use through the required activity, communication and movement (Ching & Binggeli 2005:16, 17). Curran (1983:145) supports this stating that “in our public spaces, the elements we provide, like the furnishing inside rooms, are critical in our use of them.” This is explained further indicating the importance of the functional and symbolic effects of furnishings in the organisation and subdivision of spaces, as well as supporting the specific activities that need to be performed. Dewar & Uytenbogaardt (1995:41) echo this, arguing that grids allow for the placement of elements and activities within a network or structure.

The placement of furniture in the Constitutional Court foyer demarcates seating from circulation. The grid systems at the Philippi public projects provide a structure for the community to organise.

Fig 3-38: Constitutional Court foyer seating  
Adapted from (Lipman 2004:17)  
Fig 3-39: Philippi Lansdowne public space grid  
(Philippi Lansdowne public space project, Cape Town 2003:58)
The grid as structuring element is useful in the layout and organisation in urban design that is flexible in the form and orientation determined by the location and context (Dewar & Uyttenbogaardt 1995:37-38).

With the grid extended, a linear structural system defines the edges of the spatial enclosure at the Philippi Lansdowne public place. Similarly, the structural system of the Glass Shutter House defines the volume. A combination of vertical linear and horizontal planar elements is composed into a functional space. The planes of the Garden Pavilion, diagonal, horizontal and vertical define a dynamic space, with the angle of the roof visible to the interior. Integration between solid and void is achieved with the application of materials that separate or link areas. Repetition, rhythm and order are used to compose the architectural skin.

![Glass Shutter House volume](image1) ![Garden Pavilion volume](image2)

Grids further function as datum as the reference points and lines that are provides in a space. Elements can be positioned or spatially located in the field of reference according to the network of points and lines. These spaces are all nodal due to the central location and thus attract people.

Volume as spatial entity is used to describe architectural and urban interiors, within the static, physical model of space.
3.4 Holistic approach to spatial definition

A holistic approach to spatial definition includes the strategic relation between the collective elements for spatial definition: point, line, plane and volume and “…outdoor rooms” are created in urban environments where “spaces are clearly defined and have a sense of enclosure.” Dewar & Uytenbogaardt (1995:18-19) indicate here the importance of articulation on an urban level, the human need for enclosure. The vocabulary indicates the collective use of terminology to define the interior or room. The emphasis in urban spaces is “…to be on groups and sequence of outdoor rooms as a whole and not individual space as isolated identity.” (Trancik 1986:19). The establishing of a spatial framework is to create a unity in the elements and principles of spatial definition and organisation. The integration of enclosure and placement of objects are integrated in this common vocabulary for both architectural and urban interiors.

Curran (1983:140) explains the necessity of a holistic approach when it comes to built and spatial forms: the expressive and supportive qualities need to be considered in conjunction with the defining surfaces, including the overall use of the space, the location and movement patterns. All these are interrelated in the design of architectural and urban interiors. The holistic approach is inclusive, taking into consideration functional and circulatory requirements, from layout, furnishing and space defining elements and principles.

3.5 Summary

Chapter 3, Spatial Vocabulary, set out to determine a collective vocabulary used to define space on an architectural and urban level. The elements and principles of spatial definition and organisation of spaces proved to serve as tools or devices in spatial articulation for the respective interior types. The compatibility of words made easy the integration within a unified framework for investigation.

The investigation illustrated that people require a spatial enclosure to inhabit. This is not only based on the fact that all need shelter, but the argument that spatial definition enriches experiences. Spatial delineation identifies places and spaces of importance, to
gather, to move and find our way. It defines a space that allows for appropriation and use within the needs and requirements of the user and the function.

3.6 Conclusion
Spatial form that defines enclosure makes possible the habitation of architectural and urban interiors that are comfortable for people to appropriate. The layout and organisation of interiors provide structure and order to the functioning and spatial experience. This investigation illustrated the relation between interior vocabulary on an architectural and urban level. The fact that the integration was possible strengthens the compatibility of data to support a collective use of vocabulary. It is possible to apply point, line, plane and volume to architectural and urban interiors related to the specific function and context of the place. The factor that changes the application of these elements and principles is the scale of the environments that will determine the nature and quality of the space as the precedents illustrated. The use of a holistic design approach with the use of collective criteria is important in the creation of meaningful spatial definition.

The surfaces of defining planes provide opportunities for modulation with the application of variables that have the capacity to influence and create a sense of place. The investigation hence aims to determine whether the inclusion of variables that can enrich a space can be used in the furnishing of meaningful place.
Abstract

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Chapter 4: ENRICHING THE SPATIAL QUALITY

4.1 Introduction
This chapter investigates aspects that form a sense of place to ensure meaningful qualities and experiences. In order to understand the meaning of ‘sense of place’, definitions by selected sources are examined to determine the aspects that constitute place. This understanding is then extended by the subdivision of these variables in a discussion that integrates theoretical data with precedent applications.

The variables include: shape and size, scale and proportion, colour, texture, finish materials, light and shade, and views and vistas. Once again the framework for the discussion of variables has been determined according to the terminology for architectural interiors. The investigation explains the congruencies of the terminology within urban spaces.

The aim of this chapter is to establish whether the application of the variables listed can be used to ‘furnish’ a defined space. The relation between spatial definition and spatial modulation is explored for architectural and urban interiors. The precedents from Chapter 2 are now integrated with theoretical data, interpreting the concepts with visual explanations. Once again, the Constitutional Court is visually analysed and the other precedents are referred to in support of the explanations of every criterion.

4.2 Definition of place
“We lack a city sense. There is nothing to awaken love, affection, interest…” (Rudofsky 1969:16).

Norberg-Schultz (1980:5, 6) indicates in Genius Loci that it is the totality of the textures, shapes and colours of materials that add to environmental character. The environment becomes meaningful when one can orientate and identify the self in an environment or place with both physical components and intangible feelings. Bell (1993:106) points out that supplementary to this explanation of Genius Loci, or the spirit of place, are the
special characteristics of a place that are often intangible and difficult to identify. The understanding of a sense of place often has an emotional connection in the place perception.

Trancik (1986:112) argues that “…if in abstract, physical terms, space is a bounded, purposeful void with the potential of physically linking things, it only becomes place when it is given contextual meaning derived from cultural or regional content.” The emotional content of place is fuelled by the social lives of people, the cultural content and the nature of the defining edges and planes of the environment. The identity of the place is enhanced by physical aspects of material substance, shape, texture, colour, and intangible elements, such as human habitation and the qualities place acquires over time (Trancik 1986:113). The place experience is shaped by the articulation of the surfaces, the local history of the environment, the feelings, needs and traditions of the people, the indigenous materials and natural features and the political and economic environment (Trancik 1986:114).

“Places speak to us. What they say affects us and influences our behaviour. Their messages stem from the underlying attitudes with which places are planned, made, used and maintained.” (Day 2002:155). The appearance and underlying spirit of a place is influenced by the following: atmosphere, smells and light, materials, colour and the physical form, as well as the people and the physical surroundings. Day (2002:158) then confirms the discussion: “Forms and spaces, colours and light; sounds and smells, work on us, as we know.” These are the ingredients of what places communicate to the users. It important that these variables be integrated and brought together as a “oneness”; the experience is made possible by the movement and “journey of arrival” through a space. The physical “body of the place” and the “life of the place”, the activities, movement and change are mutually responsible for the creation of place (Day 2002:158-159). The integration of the variables for spatial modulation is supported by Motloch (1991:188), indicating that an integrated spatial edge, strong perceptual qualities of this edge, a relation between the visual elements and principles of visual form shape the quality of a spatial environment.
Visual appropriateness is a quality that adds to the meaning of a place that deals with the visual appearance. This is essential in public spaces, as these are frequented by a variety of people. A responsive design that acknowledges legibility, variety, robustness (flexibility), and the detail content of the space becomes meaningful to the users (Bentley et al 1985:76). A responsive design is developed with the incorporation of three components: firstly, the contextual content that makes place legible to the user, secondly, the possibilities in use and the variety offered therein, and thirdly, the experience and motivation for using the space (Bentley et al 1985:78). These environmental cues establish the meaning that contributes to the experience.

Richness is another quality creating meaningful place and includes sensory experience. “We must make the remaining decisions in ways which increase the choice of sense-experiences which users can enjoy...” (Bentley et al 1985:89).

Behrens & Watson (1996:v) explain that place-making involves the structuring of public places in a system of hierarchy and legibility. There should exist a response to the cultural context and the local landscape, as well as symbolic content of communities. The natural characteristics of the environment add to the form and qualities of the land and add to the spirit of the place.

A place needs to have the capacity to develop and change over time. Richness is added to the content of a place in the layers of experience and history created in the modifications demanded by the community (Trancik 1986:114). People feel comfort and familiarity where the environment can be controlled in guaranteeing continuity in daily living patterns. Order is an added advantage in the creation of meaningful place, as structured order provides clarity and legibility of places that are easy to understand. Spatial definition makes possible this legibility, as nodes, paths, landmarks, edges and connecting elements are identifiable in the urban environment (Trancik 1986:115, 116).

An environment is enriched when the unique forms and details of the setting, the history and context are integrated with human needs and cultural aspects. It is argued that the creation of place includes the social and cultural values. The visual perception of the place and the control of the environment are as important as the sense of enclosure and
degree of linkage through the space (Trancik 1986:97). Spatiality, one of the three aspects of Soja’s (1996:71) trialectics of spatial thinking, emphasises the importance of static physical space that creates the container in which human life occurs.

Rudofsky (1969:118) makes clear the importance of a sense of place, the creation of a special atmosphere in urban environments: “…a communal living room, so to speak – not a decorative empty lot or a barren ‘civic center’, but a lively, populated historical setting. And not for parades, rallies, but for the daily assertion of solidarity on their ritual stroll.” This approach points out the emphasis on contextual content, historical significance and the meaning created by occupying the space.

Jacobs (1993:11) supports this in the search for what adds to the essence of public spaces. The existing community, the history of the place, access and entertainment are mentioned as qualities that encourage people to use a place. These elements carry a public memory that is shared collectively. Motloch (1991:188) lists aspects of importance for a successful sense of place: an integrated spatial edge, strong perceptual qualities of this edge, a relation between the edge and elements within, creating a harmonious unity. The response to place is a mental process that is fed by perceptual and direct messages. These messages shape the spatial feeling that is created and is emphasised through the spatial edge (Motloch 1991:188).

The character and quality of the static physical model of space are investigated. The influence of variables that shape the experience of place as observed with the senses is investigated.

4.3 **Variables for enriching the spatial quality**

The variables that have been explored have been identified from a range of sources. These aspects suggested the strongest influence on spatial modulation in architectural interiors. The aim here is to determine whether the vocabulary is applicable to urban interiors and if this terminology could be collective in describing and interpreting urban spatial qualities.
The search further indicates the link between these variables and the creation of richness to achieve a sense of place. To establish an understanding of a 'sense of place', definitions by selected authors are explored. Only then can the different variables for discussion be addressed. These visual properties are not constant and change according to variants in contextual conditions as variables in a space (Ching 1979:51). The framework for this chapter constitutes: shape and size, proportion and scale, colour, texture, finish material, light and shade, views and vistas, and sensory experience.

4.3.1 Shape and size

Shape is the vehicle by which forms are identified. Forms are created by contour lines as the outlines of planes and boundaries of three-dimensional volumes. In each application the surface articulation of the lines or planes distinguishes forms from the surrounding background (Ching & Bingelli 2005:93). Interior spaces are concerned with the shape of defining elements: planes, openings and silhouettes as shapes are made visible by the edge contour of the plane that defines the volume (Ching 1979:52). Similarly, Cheatham et al (1983:48) state that shape is defined as boundaries or outlines of two-dimensional components, and form as three-dimensional mass or volume.

Form in urban space is made possible when surrounding building facades define the edge (Curran 1983:104) and (Hedman & Jaszweski 1984:76-77). Both architectural and urban interiors use the word 'edge' to define the boundary of the spatial form. Krier (1988:72-73) and Hedman & Jaszweski (1984:77) argue that simple forms elicit the most comprehension in a space with the use of most recognisable shapes to articulate a unified whole.

Simple recognisable forms are identified as linear and cluster spaces. Curran (1983:71, 103) indicates that shape, scale and the organising of the defining surfaces as variables affect the spatial quality of urban space. The form of the space suggests the use message the space projects. Linear spaces, due to the linkage of various areas and
spaces created are associated with access and movement. Cluster spaces, in turn, are related to activities and interaction of people, because of the containment and nodal qualities of the size and shape provided as public space (Curran 1983:103). Cluster spaces function as containers: “…while the basic containing space of the room can be described as the most elementary extension of the human body…” (Curran 1983:103).

Fig 4-1: Cluster and nodal spaces
(Grobler 2005)

The spatial form at the Constitutional Court combines both linear and clustered spaces. Movement and circulation of the Great African steps outside and the exhibition steps on the interior illustrate the composition of planes in a linear fashion. The courtyard and foyer, in turn, are examples of centralised spaces that allow for nodal interaction and the gathering of people. Both these architectural and urban interiors are located on the axis of the linear spaces and thus strategically positioned to best create interaction.

Fig 4-2: Constitutional Court plan – architectural and urban linear and clustered spaces
Adapted from (Makin & Masojada 2004:10)
The integration of “planar shapes with three-dimensional forms can produce interesting results.” (Bell 1993:55). This interaction between two and three-dimensional forms allows for added richness to the spatial experience. The compatibility of shape and form is important in establishing design unity in landscape spaces. Shape is identified as the lines and edges of surface planes defining volume or form; form is the three-dimensional equivalent of shape. Contrast in the application of form and shape can however be used to create emphasis in a composition. (Bell 1993:50).

Size can be described as “the real dimensions of form.” (Ching 1979:50). The dimensions of length, width and depth determine the size and scale of an object or space, as well as the proportion of the form created. The contrast achieved by a significantly larger or smaller size draws attention and dominates a composition. This principle is useful in the organising of spaces, as well as creating focal points, points of emphasis in a room. Ching (1979:351) points out that size, together with shape and placement is used to create emphasis amongst elements or spaces within an environment. According to Hedman & Jaszweski (1984:72), the creation of a three-dimensional effect is more difficult within a large space. The width-height ratio is essential in the establishment of scale and proportion.

The contemplation space at Sendero del Pinar de la Agaida becomes a focal point in the landscape because of the contrast in shape, size and position. The angular qualities contrast with the natural lines, but remain sensitive to the environment. The size is small in relation to the context, but at the same time stands out as it is isolated. The location and placement are angled to the natural flow of the river for one to admire the view. Even though this structure is within a vast landscape, the size and scale of the enclosure relate to human scale and create a place that allows for shelter.
Monumental spaces encourage public activity on a large scale, as compared with intimate spaces that invite personal social interaction (Curran 1983:84). The scale and proportion of the space will determine the user interaction and the type of use that is established.

The public spaces at the Constitutional Court encourage interaction because of the size. By contrast, the Garden Pavilion is intimate and modest due to the size of the spatial definition.
4.3.2 Proportion and scale

It has been asserted that “…a proportioning system establishes a consistent set of visual relationships between the parts of a building, as well as between the parts and their whole.” It is also explained as the mathematical relationship between real dimensions of form and space (Ching 1979:297, 326). The aim of applying principles of proportion is to create order in elements constituting a visual composition. Kilmer & Kilmer (1992:119) add to the definition: “Proportion can be expressed as matters of width in relation to length with which designers seek to balance or relate the parts to one another to create an aesthetic composition.” The emphasis here lies on the application of a system of proportion in achieving aesthetic harmony.

Various theories of proportion have been developed. This investigation focuses on anthropomorphic proportions, as architectural and urban interior are inhabited by humans. Anthropomorphic proportioning systems are concerned with the dimensions and proportions of the human body. “They are predicated on the theory that forms and spaces in architecture are either containers or extensions of the human body and should, therefore, be determined by its dimensions.” (Ching 1979:324). The dimensions and size of the human body influence the design of elements and spaces for use across all functional areas. The aim of utilizing this theory is to create comfort and add value to the daily functions that need to be performed (Ching 1979:325).

Scale is “a fixed proportion used in determining measurements and dimensions.” (Ching 1979:299). Kilmer & Kilmer (1992:120) define scale as “a relative standard or measure outside of an object and related to the size of an object or an environment to man.”

Scale can further be divided in two types: generic and human. Generic scale is concerned with the size of building elements in relation to other elements in the surrounding context. Human scale is the relation between the dimensions and proportions of the human body to elements and spaces surrounding it (Ching 1979:326). It can be said that human scale has a strong link with architectural interior spaces, as these spaces are designed with the human body in mind. Urban spaces however, consist of generic space, as the majority of spaces have various purposes.
ranging from vehicular transport to sites for skyscrapers. The human face is also incorporated in urban areas by means of public open space. The definition of these spaces poses a challenge in the appropriate selection of scale application.

The appropriate size and proportion for creating comfortable urban spaces should relate to the human body in order to be effective. “Defined spaces are capable of having strong emotional connotations, based on their perceived size, scale, or proportion. The scale of a space consists of two components: the size of the space in relation to the size of its context, and its size in relation to the observer.” (Motloch 1991:110).

The urban interiors of the Philippi public spaces are designed with the human body as reference. Within the urban environment, spaces have been kept to a human scale with the linear structural system that is single storey in height. The urban framework defines space that is meaningful to the community. The scale of public space supports the intended activities.

Dewar & Uyttenbogaardt (1995:17) emphasise the importance of humanly scaled public spaces for place-making. Scale in the urban environment is determined by the height of the defining facades. The height to width ratio in the definition of street space is critical in the creation of an appropriate scale and “…a relatively uniform height of street space must be defined to give the street cross section the strong unifying proportions of a well composed room…” (Hedman & Jaszweski 1984:60). The viewer should be able to visually determine the height and length, vertical and horizontal properties, of a space.
Inadequate vertical definition results in an unsuccessfully defined space and loses the sense of closure.

The proportion and scale of the Garden Pavilion addresses human scale that allows for comfort within an intimate space. In contrast, the Melrose Arch square relates to urban scale. The urban interiors that are created provide meaning due to the fact that the containment, hierarchy (of space) and axes are clear and legible.

The scale of public spaces further establishes the hierarchy of the space in the urban fabric (Curran 1983:112).
This has been identified in the scale of the Constitutional Court foyer and courtyard, as well as the Philippi public spaces. Hedman & Jaszweski (1984:58-59) state that the ratio of 1:2 provides adequate spatial definition for street space. The linear spaces of the Constitutional Court, the Great African Steps and the exhibition steps, have been designed with appropriate vertical enclosure as ‘streets’ with relation to the height-width ratio. This spatial containment enriches spatial quality when the articulation of the space is also enhanced with other design elements.

![Fig 4-12: Constitutional Court scale and proportion](The Constitutional Court, Johannesburg 2004/2005:20)

4.3.3 Colour

Light reveals colour as a visual property of form. The three dimensions of colour, hue, value and saturation are interrelated and influence the environment in which these are applied (Ching & Binggeli 2005:105, 107).

![Fig 4-13: Ratio 1:2](Grobler 2005)
Colour has a strong influence on how interior spaces are perceived. Warm and dark hues have the capacity of visually shortening the size and scale of a room. Contrasting this, cool, light colours tend to increase the visually perceived space in size and scale (Ching & Binggeli 2005:115).

The use of colour in the Glass Shutter house is kept light and monochrome according to Japanese tradition. It can be argued that the social practices and inclusion of people and food add to the colour and character.

The “spatial effect of colour” is enhanced when spatial boundaries are defined with the use of colour creating lines on surface planes and within enclosed interior spaces (Reekie 1972:22).

The spatial boundaries at the Philippi Lansdowne public space are accentuated by the application of a rich warm earth colour.

The application of chromatic and tonal distribution creates emphasis and points of attention in architectural interiors as light values recede and dark values advance (Ching & Binggeli 2005:119).
The application of colour as emphasis is illustrated in the Constitutional Court architectural and urban interiors. A neutral backdrop is provided to highlight vibrant colour applications in the form of surface materials in the foyer and artwork in the exhibition steps space. The use of strong colour strategically applied creates emphasis. This is visible in the colourful furniture in the foyer and the bright mosaics applied to sections of the slanted columns. Warm earth-like colours are found closer to the base plane and lighter, colder colours to the upper sections. The same principle is applied on the exhibition steps as artworks form accents with colour in a space that serves as a blank canvas.

![Constitutional Court foyer colour](Lipman 2004:17)

The effect of light on colour is important in the design of interiors. Lighting intensities affect the apparent value of a surface in the rendering of light (Ching & Binggeli 2005:111). The visual qualities of surfaces are altered, modulating the planes and the overall visual character. Kilmer & Kilmer (1992:122) mention space, light and colour as three effective tools to shape interior space visually. The application of colour is important to the success of an interior, as the surface finish and materials and colours used will set the mood and influence a response by the user of the space (Kilmer & Kilmer 1992:122).

The colour qualities in the Court foyer are continuously changing intensities due to the natural light that streams into the building. This influences the spatial character and consequently the changing emotions of the space.
Bell (1993:72) describes colour in the landscape as it relates to a particular local identity and is mostly limited to the surrounding hues. Natural colours often represent colour combinations for man-made structures within urban environments. Environmental design deals with colours holistically where colour selections are selected from the adjacent colours in the surrounding background.

The colour use at Sendero del Pinar de la Algaida is purely derived from nature. As this is a natural landscape setting, the addition of manmade elements blends into the surroundings. Natural colours, inherent in the materials, add to the sense of place, timber, rusted metal and gravel.

The colour combinations for the urban interiors of the Constitutional Court represent the colours found in the surrounding landscape with natural colours that blend into the site. Accent once again is created with the bright colours that announce the entrance to the court with ‘Constitutional Court’ in all eleven official languages applied in red, green, yellow and blue text. The Great African Steps include colour in the form of coloured metal sections that serve as interactive louvres on the exhibition steps wall. Artworks have been included in the design of these elements, as the metal is etched with works of various artists.
Harmony and contrast are effective tools in the creation of unity and interest within a space. Appropriate and compatible colour choices within the urban are important with urban applications (Reekie 1972:18, 22).

A similar strategy is followed at Melrose Arch. Colour as accent and emphasis creates interest in the courtyard with the application of coloured mosaics on vertical edges and the horizontal base plane. The architectural and urban interiors of the Castelvecchio relate to the urban colour approach. This historical background of the environment has been strengthened by the application of colours that are in harmony with the existing structures. The unity creates visual continuity in the raw and natural use of finish materials. The urban interior of Whiteinch Cross utilises the material integrity of materials for colour application on planes that imply the space and is contrasted with the bright blue light of the vertical tower.
4.3.4 Texture

Texture can be described as the relative roughness or smoothness, and the characteristics of surface qualities of materials. Ching & Binggeli (2005:97) and Motloch (1991:132) list visual texture as the texture that is observed by the eye utilising value and pattern on a two-dimensional plane, while tactile texture in turn, is made up of the three dimensional surface qualities that are experienced by touch.

The three-dimensional structure of a surface affects the perceived quality and character of a plane or object. The finer the texture, the smoother the surface appears and vice versa (Ching & Binggeli 2005:98). The modulation of textured surfaces is enhanced by direct light horizontally across the three-dimensional surface plane. This method is effective in architectural interior applications creating accents with rough surface treatments (Ching & Binggeli 2005:99). Textural qualities are emphasised by the incorporation of strategic lighting. Shadows and contrasts are achieved with concentrated, directional light and smooth reflecting surfaces are created as focal points and accent (Kilmer & Kilmer 1992:110). The combination of lighting, texture and finish materials can be utilized effectively in shaping the perception of a space.

Natural light falling into the sculpture gallery of the Castelvecchio modulates the rough texture of the enclosing walls. This is contrasted by the smooth shiny surfaces of the exhibition platforms that define the position of sculptures. Pattern is created by the geometric patterns of the metal grills. A strong contrast of texture is found in the Cangrande space, offsetting old and new. Additions have a tactile and visual texture, but that of the historical wall is coarser and rough due to the exposed stone and brick construction.
The Constitutional Court foyer illustrates a combination of contrasting textures. Textural qualities are applied onto various linear and planar elements, emphasised by the incorporation of strategic lighting to create depth in the shadows on the planes. Natural lighting from above shapes the textural and spatial qualities of the interior and creates visual interest and variety. Contrast in textural applications causes the eye to move around the space and experience visually, until the viewer can touch to completely experience the richness of the space.

Fig 4-28: Constitutional Court foyer texture
(Lipman 2004:17)

Kilmer & Kilmer (1992:112) further explain that the repetition of texture can produce repetitive form in the application of materials with an inherent texture or grain. The challenge within interior applications is to utilise the natural integrity of a material to the benefit and advantage of a space. However, the selection always needs to remain appropriate to the application, function and conceptual approach of the space. Textures within interiors elicit a reaction of “wanting to feel” (Kilmer & Kilmer 1992:110); this encourages people participation and heightens the experience of the space.

The use of texture in urban environments allows for unity and harmony with the use of a dominant texture that determines the character (Reekie 1972:25). Texture and grain in the landscape are achieved by landforms and the density and size of plant foliage (Bell 1993:61). Coarse and fine textures are observed and the perception is determined by the distance of the plane or element from the viewer (Motloch 1993:78).
Natural vegetation, gravel, stone and water provide the texture and grain in the landscape of Sendero del Pinar de la Algaida. The contrast in textures, smooth and rough, defines edges for circulation and contemplation, with a harmonious effect.

Contrast in the use of texture creates lines where different applications of finish materials meet or overlap. “Texture is an intrinsic characteristic of the materials we use to define, furnish, and embellish interior space.” (Ching & Binggeli 2005:102). The combination of colour, texture and finishing materials must be closely considered in the selection of elements of spatial definition.

The application of texture in the Garden Pavilion becomes the ornament in the space. Textured wall finishes, the grain of the timber and pattern created by the tiling all add to the character of the enclosure. The simplicity of the design emphasises the textural effects overall.

Bell (1993:61) defines texture as the size of elements and the interval between these that will determine the texture as coarse or fine. The variation and combination of textural application are essential to ensure interest and variety. The scale of the texture
applied to a space should relate and be sensitive to the scale and proportion of that space (Ching & Binggeli 2005:102).

The surface treatments at the Joe Gqabi station square in Philippi have been designed to combine various scale applications that as a result create pattern. A grid is developed that defines spaces for gathering and serves as a reference for the square. Patterns intersect and overlap between the various surface treatments that define areas for sport, circulation, and seating spaces.

Fig 4-31: Joe Gqabi station square plan
(Klitzner 2005:26)

Fig 4-32: Joe Gqabi station square view
(Klitzner 2005:27)

Texture in general provides an added quality to spaces of various natures and has the capacity to influence the appearance and perception of spaces through the application of specific finish materials on surfaces.

4.3.5 Finish material

“Materials are the basic building substances architects and interior designers use to create built environments and to give form, shape, variety, and distinction to interior spaces.” (Kilmer & Kilmer 1992:358). The physical form of spaces is determined by the selection and use of materials, whether surface treatments, elements or components within a space. The intrinsic qualities of materials add to the quality and the experience of the space. Pattern, texture and colour are included with the application of materials onto surfaces. The composition of floor, wall and ceiling materials, as well as the materials found in the elements, fixtures and furnishings combined to create the final quality (Ching & Binggeli 2005:274).

Curran (1983:52, 140) explains the importance of the treatment in defining surfaces for urban interiors. The appropriate selecting of surface treatments enhances the overall
use from a holistic design approach. Areas are delineated by varying surface treatments, different materials, textures, patterns and level changes, and these imply a change in function. The application of materials needs to support the function of the space, whether activity or circulation, and add to the sensory experience.

The application of materials at Whiteinch Cross acknowledges the industrial heritage of shipbuilding and steel-making of Glasgow (Holden 2003:68). Two parallel walls define the space, one in raw concrete and the other clad in steel. A corner is defined by the right angle created between the concrete wall and a steel frame. The frame is overgrown with wisteria that adds another ‘material’. A sheet of water runs off the steel clad wall and becomes yet another ‘material’ that modulates the space. Polished black reinforced concrete seats and rusted metal grills for water drainage are located on the ground plane paved in sandstone slabs. The greenery of the trees contrasts with the rusted red and orange colours of the metal applications. The sense of place is retained, true to the original character of the space.

The perception of finish materials is made possible through light that reveals the qualities. “The result is ‘an ambience’…about the character of place…” (Von Meiss

![Fig 4-33: Whiteinch Cross](Holden 2003:70)

![Fig 4-34: Whiteinch Cross seats](Spens 2003:197)

![Fig 4-35: Whiteinch Cross water](Holden 2003:68)
1990:180). Richness and visual interest are achieved with the selection of finish materials.

The main materials in the Constitutional Court are visually observed: concrete, steel, timber, glass and stone. Makin & Masojada (2004:13) confirm the choice of materials and add that light is another important material utilised. Light transforms the visual qualities of the materials: colour and texture. A section of the historical building has been kept in conjunction with the new addition; the varied brown colour and rough texture of the existing brickwork of the original building are offset with bright mosaic sections on the columns. The matt, black floor tiles create a horizontal datum for the Court foyer. The off-shutter concrete structural elements, columns and roof, set a neutral backdrop for the variety in coloured mosaics and furniture. The sensitivity to the site and the reuse of materials from the historical buildings address the quality and sense of place that link old and new with a creative interplay and juxtaposition of materials.

Similarly, the approach to material use at the Castelvecchio indicates enhancement in the spirit of place by means of juxtaposition. The co-existence of old and new is integrated into the restoration. “His (Carlo Scarpa’s) ability to weave his new architecture onto the old was accomplished without disrupting the feeling of these buildings and one is virtually unable to articulate the edge between them.” (Cal Co & Mazzariol 19986:259). The subdued use of materials adds to the sense of place; slaked lime plaster, rough hewn concrete, stone tiles and steel gratings harmoniously integrated with the historical content.
The approach to material use at the Constitutional Court and the Castelvecchio is similar, juxtaposition, but the result varies in the aesthetic and symbolic character.

Fig 4-38 and Fig 4-39: Castelvecchio – old and new materials
(Los 2002:85, 89)

The criteria for the selection of finish materials are functional, aesthetic and economic (Ching & Binggeli 2005:274). This investigation places emphasis on the aesthetic criteria, as these contain the visual qualities of colour, texture and pattern (Ching & Binggeli 2005:274). Another aspect in the selection of materials is ecological consideration that deals with environmental impact, recyclability and sustainability of materials as renewable resources (Kilmer & Kilmer 1992:360).

Public spaces in the natural environment, especially Sendero del Pinar de la Algaida in Spain, address sustainability, using recycled materials to aid in the restoration of the previous salt works. The subdued use of materials and colours adds to the “ruggedness and ambiguity of the landscape” which then invites people to visit and contemplate (Mostaedi [s.a.]:168).

Fig 4-40 and fig 4-41: Sendero del Pinar de la Algaida
(Mostaedi [s.a.]:171, 175)
Architectural and urban interiors are all enriched with the use of varying finish materials with added colour and texture that are modulated by light.

4.3.6 Light and shade

“Architectural space exists by the illumination of objects and enclosing surfaces…” (Von Meiss 1990:121). Lighting is the essential element that shapes the character and quality of spaces. Lighting design includes ambient lighting for a general level of illumination purposes, effective task lighting (Ching & Binggeli 2005:260) and accent lighting that establishes focal points, emphasis and variety within interiors. The importance of a successful lighting design is reflected in the organisation of light fixtures that have the capacity to enhance the spatial features of a space (Ching & Binggeli 2005:261, 265).

Light is radiant energy that illuminates in all directions equally. The quality diminishes according to the distance from the source as it moves through a space. The selection of finish materials affects the behaviour of light: opaque surfaces block the transmission of light and create strong shadows. Translucent materials diffuse light to adjacent areas. Transparent materials allow for non-diffuse transmissions according to Ching & Binggeli (2005:234) and shiny surfaces reflect light off the surface plane.

Brightness, contrast, glare, diffusion and colour are factors that influence the way spaces are perceived and shaped by the quality of the light, natural or artificial (Ching & Binggeli 2005:235).

Finish materials have specifically been selected for the Constitutional Court buildings and urban spaces and are enhanced by lighting qualities. Makin and Masojada describe (2004:13): “…surfaces onto which light would fall and reflect in colour, coolness and warmth, and would show scale, volume, silhouette, relief, sort whiteness and smooth undulating shininess.” The effect of light and shade within the Court foyer modulates the space continually throughout the day with the movement of the sun. The interior transforms with the transition of shadows and changing light intensities. Light shining through
the clerestory windows and roof openings transforms the space as shadows from the columns dance on the adjoining planes of the contained volume. Alternating views change the perspectives and depth that alternate between planes, voids, elements, colour and texture. The experience relates to the concept of a tree, as the sun casts shadows onto the ground and filters through the branches.

Visual interest and richness are added to a space with the patterns of light and shade that are created throughout the day. Three-dimensional qualities are enhanced in the changing modulation of the interior planes and elements (Ching & Binggeli 2005:266).

Similar effects are achieved in the Philippi Lansdowne public space. The linear structural system creates vertical and horizontal lines that define the spaces. Linear elements in the overhead plane are spaced apart. This allows for a rhythm of shadows to move between the linear grids throughout the day. The interplay of light and shade transforms the space and adds to the richness of the experience.
The lighting application at the Castelvecchio includes the arrangement of planes in composition. “With light sources and diffusing surfaces at right angles to each other, as with corner windows, the walls become illumination systems which colour the light through their own material texture.” (Los 2002:40). The water and white reflective walls and coloured surfaces are employed here as diffusers. In addition, the use of the corner window dissolves the edge or angle created at a corner. “The capacity of architecture to take root in places, and thereby bring out the genius loci and make it speak…the role of light is of paramount importance.” (Los 2002:44). The illumination conditions, light-space, light as an object, light from a series of objects and light from surfaces as listed by Von Meiss (1990:121,126) all contribute to the approach illustrated in the Castelvecchio.

The changing qualities of light, natural or artificial (Von Meiss 1990:121) and daytime and night time add visual interest and richness. The difference between daytime and night time lighting qualities has the potential to change the character or sense of place. During the day, all elements are equally visible at Whiteinch Cross, exposing the effect of colour, texture and placement. At night time, however, certain elements are emphasised, the tower, steel frame and the water wall become elements of emphasis, as the other objects recede into the darkness. The spatial definition and modulation are transformed between night and day.
Material applications physically modulate the static spatial container. The intangible material, light, creates dynamic transformations. All are observed with the senses combined.

### 4.3.7 Views and vistas

Views and vistas provide more opportunities for sensory observations, as spaces are linked physically and visually. “As we move, our perspective (view) of the place physically changes.” (Motloch 1991:119). Interior spaces allow for multiple views in the organisation of architectural and interior elements and components. The size, shape and location of openings or voids affect the enclosure quality of a room. This has an influence on the degree of enclosure, the amount of light emitted into a space, as well as the vista onto which the view is focused. Windows and doors are architectural measures to create physical and visual links between interior and exterior. Doors allow for movement into a room and determine the movement patterns in a space. Similarly, windows are openings for light, ventilation and emphasise the view onto the surrounding areas establishing the visual relation between interior and exterior spaces (Ching 1979:176).

The transparent plane of the Constitutional Court, between the exhibition stairs and the Great African Steps allows for visual links as viewed from one interior to the other. This visual link is also found between the Court foyer and the courtyard.
The degree of enclosure is determined by the configurations that define the space. The pattern and placement of openings determine the spatial quality of the experience. On the other hand, the spatial quality is diminished with the increase in size of windows in enclosing walls. The emphasis is not on the enclosing planes, but may extend beyond the boundaries of the room (Ching 1979:178).

The linear structural framework that defines Philippi Lansdowne public space, frames views in various directions, linking adjacent areas physically, but also visually.

Landscape spaces deal with the same aspect to enhance views. The incorporation of enframement with the use of planting material creates focal points with emphasis directed onto (Motloch 1991:83).
At Sendero del Pinar de la Algaida the absence of a framing device allows the eye to roam freely over the landscape. Different areas and spatial qualities are revealed.

The Glass Shutter House has strong interior-exterior connections. The interplay of solid and void, transparency and translucency is all important in this design that addresses a “duality of the layers.” A translucent screen allows for visual contact between inside and outside when the shutters are drawn, but once opened, the quality speaks of lightness, permeability and of “…varying degrees of exposure and enclosure” with the curtains that wave in the wind (Webb 2005:84). The physical transformation of the architectural interior allows for the volume to open up completely to the urban surroundings. The space contains the capacity in this regard to invite physical links and movement, and in turn, if the shutters should be closed, a visual link or view onto the street is maintained.

Curran (1983:104) states that public cluster spaces in the urban environment allow for “the movement of the eye, unlike with linear spaces, is not directed away from the
viewer, but around.” Openings between defined areas are created as “visual leaks” where the “eye is allowed to move out of the space” (Curran 1983:104). Vistas are established in this regard and allow for visual links between spaces in the city. The experience is on a visual level, but also on a multi-sensory level.

4.4 Sensory experience
“Aesthetic experiencing of the environment is a matter of all our senses and there are even some situations where hearing, smell and tactility are more important than vision; they are experienced with extraordinary intensity.” (Von Meiss 1990:15). The experience of the physical environment is heightened by the sensory action of feeling: look, touch, feel, smell, hear and the movement through place.

Bentley et al (1985:89) support that richness is added to spatial environments through sense and kinetic experiences. In addition, Porter (1997:26) argues that the sequential movement from one space to another triggers various spatial impressions on a sensory level. The use of a multi-sensory approach in architectural interiors is advised that allows for a complete kinaesthetic experience in the perception of spaces with the movement of the body through space and time. Porter (1997:38) describes the Gallery Tom by architect Hiroshi Naito to illustrate this point: “...They experience the building by the number of steps, by feeling the light on their skin; they touch the volume of space by sound.”

Distance receptors, hearing and smell, help to orientate and direct in terms of auditory and olfactory space respectively. Immediate receptors aid in the sensory inputs that are perceived by the skin, muscles and membranes, i.e. temperature and humidity (Porter 1997:27-30).

Hedman & Jaszweski (1984:71) confirm that the variables that are applied in the spatial definition contribute to the spatial quality. Shape and size, scale and proportion, colour, texture, finish material, light and shade, and views and vistas are all variables that can physically influence the quality and character of spatial enclosures. The analysis of
variables for spatial modulation illustrated the application opportunities in both architectural and urban interior applications.

4.5 Integrated approach to place-making
The process of integration for place-making includes the variables that have been discussed. The analyses of both architectural and urban interiors combine these aspects holistically in an integrated design as a collective set of criteria.

Martha Schwartz, adjunct professor of landscape architecture at the Harvard University Graduate School of Design, describes place-making as the primary goal. This approach includes identity of place in the visual environment, a place with a strong character (Schwartz et al 2003:16). Landscape designer, Kathryn Gustafson, emphasises the integration of old and new, creating a multi-layered intervention through integration and synthesis. Broto ([s.a]:47) adds that spaces can elicit aesthetic enjoyment with the combination of quality spaces that show respect for the environment, imagination and creativity, sustainability and a vision for the future.

Integration is an ongoing process that develops and grows as people daily appropriate spaces within a local identity. Trancik (1986:219-220) further says that inclusion and integration of the spatial environment, the connections and the sense of place are all important for interiors for human habitation.

The aim with any approach for appropriate design and the creation of identity and place is to ultimately acknowledge the static, physical components of place, together with the people, the context, and the local ingredients.

4.5 Summary
Chapter 4, Enriching the Spatial Quality, explored the terminology that can serve as criteria to modulate spatial enclosures to create place. Shape, size, scale and
proportion, colour, texture, finish material, light and shade and views and vistas, proved all to be variables that are applicable to produce architectural and urban place.

The successful combination of terminology illustrated the appropriate application of a collective vocabulary. The combination of these, however, should be integrated and combined to assure interest and enriched spatial environments. Variables to modulate place must be applied to elements of spatial definition. The relationship has been successfully established as follows: the application and association of elements and variables, combined to define space and create place.

4.6 Conclusion

The nature and modulation of spatial boundaries give meaning to the place and the place experience. The success for place-making lies in the combination and integration of the variables that have been identified and discussed and not in it being isolated.

The compatibility of the terminology to describe the spatial qualities strengthened the investigation with a collective vocabulary. This result provides evidence that the criteria for place-making can be commonly used for both architectural and urban interiors to furnish meaningful places for people to dwell in
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Chapter 5: SPATIAL GUIDELINES

5.1 Introduction
Chapter 5 sets out to develop the criteria that can be used as guidelines to create space and place with positive spatial definition and spatial quality. The aim of the guidelines is to be applicable to both architectural and urban interiors. The theoretical terminology set out in Chapter 3, Spatial Vocabulary, and Chapter 4, Enriching the Spatial Quality, is used as a collective set of criteria. These criteria are used in Chapter 6 to analyse and evaluate the current situation of the Donkin Reserve and to make recommendations to improve the space and place. In this chapter interior is referred to generally and includes both architectural and urban interiors.

The tables included visually summarise the elements and variables (principles) as each are discussed. The Constitutional Court is used as a reference with the use of photographs and is supplemented with sketches and diagrams.

5.2 Elements for spatial definition
In order to achieve successful spatial definition, the elements of point, line, plane and volume need to be applied and integrated with another. Organising principles are included when appropriate to the specific criterion. The approach proposes positive definition with emphasis on human comfort and meaningful spatial experiences that allows for interaction and transformation to create place. The essence of every element is pointed out as guidelines for practical application.

5.2.1 Point
The application of point in spatial situations adds to the structure and order as it serves as a reference. To achieve meaning and legibility, point can be applied as focal point or emphasis in a space. This denotes importance and hierarchy within a spatial environment and people are able to orientate themselves.

Point can be applied as a two-dimensional element, but becomes meaningful then it contains a spatial quality. Nodes as points in an environment invite people to gather.
When gathering nodes are positioned where circulation routes intersect, social contact and interaction is encouraged. The placement, size, shape and orientation of nodes should relate to the surrounding context, the function and the existing spatial relationships should be kept in mind. Any node or point needs to relate to human scale, for people to be able to appropriate it.

<table>
<thead>
<tr>
<th>Term: Point within architectural interiors</th>
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</thead>
<tbody>
<tr>
<td>Location</td>
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<tr>
<td>Found as node or point of hierarchy</td>
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</table>

Adapted from (Makin & Masojada 2004:10)

(Grobler 2005)

Figure 5-1: Point within architectural interiors (Grobler 2006)

<table>
<thead>
<tr>
<th>Term: Point within urban interiors</th>
</tr>
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<tbody>
<tr>
<td>Location</td>
</tr>
<tr>
<td>Found as node or point of hierarchy</td>
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</tbody>
</table>

Adapted from (Constitutional Court 2004:84)

(Grobler 2005)

Figure 5-2: Point within urban interiors (Grobler 2006)
5.2.2 Line

The application of line has various possibilities. Firstly line is used to delineate space or areas on a plane or surface. This can be achieved with the contrasting use of surface materials and the subsequent colour and texture. Delineation between functional and circulation areas can be achieved or implied with a line creating a visual separation between different functional areas. Line can also be used to manipulate the flow of movement and the behaviour of users.

Secondly, line as axis links spaces or elements together. Axis as an ordering device can be used to plan and organise interiors. The distribution of spaces on this axis or axes should be relevant to the context, function and type of interior. It is important to have termination at both sides for effective definition of the line. Movement paths find useful applications with lines due to the linear qualities. The provision of permeability between or through spaces can improve legibility to the users. Interest and variety can allow for an enriched spatial experience.

The nature of the edges and boundaries of structures for spatial definition and circulation need to be considered; the connection between planes is critical in the design of interiors. The legibility of the edge allows people to comprehend the shape of the interior. In addition, line can be used as datum to group elements or spaces together.

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<thead>
<tr>
<th>Term: Line within architectural interiors</th>
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<tr>
<td><strong>Location</strong></td>
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<tr>
<td>Found as axis or connecting element</td>
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</table>

Figure 5-3: Line within architectural interiors (Grobler 2006)
### Term: Line within urban interiors

<table>
<thead>
<tr>
<th>Location</th>
<th>Photo</th>
<th>Sketch</th>
<th>Diagram</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serve as axis or connecting element</td>
<td><img src="image1.png" alt="Photo" /> (Adapted from <a href="#">Makin &amp; Masojada 2004:11</a>)</td>
<td><img src="image2.png" alt="Sketch" /> (Grobler 2005)</td>
<td><img src="image3.png" alt="Diagram" /> (Grobler 2005)</td>
</tr>
</tbody>
</table>

**Figure 5-4:** Line within urban interiors (Grobler 2006)

### 5.2.3 Plane

The composition of planes can be used in various orientations to create spatial enclosures. The purpose and function of an interior should be known before the position and location of planes are determined. The degree of enclosure should be established as a confined space and an open space will have different effects on the users. The finish material needs to relate the function of the plane, i.e. solid or transparent. An interior should be clearly defined in order to create a comfortable containment and shelter for the inhabitant.

The relationship between solid and void and the application in a space will influence the functioning and use of the interior. The position of openings in planes can be used to create physical and visual relationships between the adjoining interiors, both architectural and urban to improve space use and circulation effectively.
5.2.4 Volume

The volumetric enclosure that defines the interior void is created with the use of horizontal and vertical planes and should remain simple for comprehension. It is important that the enclosure is made up of various elements such as lines and planes. These then can be used to create interest and add meaning to the place. The nature of the defining surfaces can determine the perception of the volume and should be considered in relation to the function and aim of the interior.

The placement of objects or elements within the volume can influence the interaction and circulation in and through a space. The positioning of elements or objects should
acknowledge the communication and activities holistically and improve the function and use.

An interior environment should be structured to allow for order and legibility. People places must relate to human scale to achieve a positive spatial experience.

<table>
<thead>
<tr>
<th>Term: Volume within architectural interiors</th>
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</thead>
<tbody>
<tr>
<td><strong>Location</strong></td>
</tr>
<tr>
<td>Point, line and plane defining space in combination</td>
</tr>
</tbody>
</table>

Figure 5-7: Volume within architectural interiors (Grobler 2006)

<table>
<thead>
<tr>
<th>Term: Volume within urban interiors</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Location</strong></td>
</tr>
<tr>
<td>Found as node or point of hierarchy</td>
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</tbody>
</table>

Figure 5-8: Volume within urban interiors (Grobler 2006)

5.3 Variables for enriching the spatial quality

The creation of a sense of place is made possible by the integration of variables to modulate the space. These are used as guidelines to improve or totally transform space to become place. The context, function and people should be considered with the application of the criteria on an architectural and urban level.
The critical aspects of every criterion are highlighted for place-making: shape and size, proportion and scale, colour, texture, finish material, light and shade and views and vistas.

5.3.1 Shape and size

The use of shapes in interiors can become form when applied within three-dimensional space. This can be achieved with the composition of defining planes. Spatial form should relate to the adjoining spaces or spaces with which it is grouped. Contrast in shape and size can be used to accentuate importance and establish hierarchy within an environment. The size and shape should support the function(s) it proposes: linear spaces can be a vehicle for circulation or transition, and clustered spaces can become points to gather.

The interaction between two and three-dimensional aspects can add richness and variety to a place. Unity and harmony are important in the creation of a unified composition.

**Term: Shape and size within architectural interiors**

<table>
<thead>
<tr>
<th>Location</th>
<th>Photo</th>
<th>Sketch</th>
<th>Diagram</th>
</tr>
</thead>
<tbody>
<tr>
<td>Determined by type of space and function</td>
<td>![Photo](Constitutional Court 2004:81)</td>
<td>![Sketch](Adapted from Makin &amp; Masojada 2004:10)</td>
<td>![Diagram](Grobler 2005)</td>
</tr>
</tbody>
</table>

*Figure 5-9: Shape and size within architectural interiors (Grobler 2006)*
5.3.2 Proportion and scale

The fact that architectural and urban interiors are occupied by people means that the application of proportion should relate to the dimensions of the human body. By applying anthropomorphic proportioning systems, a comfortable space can be achieved.

Humanly scaled interiors become an extension of the body and the challenge lies in always addressing the proportion and scale of spatial structures. When this is applied, the use of spaces increase, as people should feel a sense of belonging within the enclosure.

Figure 5-11: Proportion and scale within architectural interiors (Grobler 2006)
Term: Proportion and scale within urban interiors

<table>
<thead>
<tr>
<th>Location</th>
<th>Photo</th>
<th>Sketch</th>
<th>Diagram</th>
</tr>
</thead>
<tbody>
<tr>
<td>Related to the dimensions of the urban surrounding</td>
<td>![Photo](Constitutional Court 2004:81)</td>
<td>![Sketch](Adapted from (The Constitutional Court, Johannesburg 2004/5:20))</td>
<td>![Diagram](Grobler 2005)</td>
</tr>
</tbody>
</table>

Figure 5-12: Proportion and scale within urban interiors (Grobler 2006)

5.3.3 Colour

The emotive use of colour applications has far reaching influences on the perception of spaces. Colour selections should be made selectively and strategically for interiors as the effect can be unexpected. The use of a neutral background can provide opportunities for accent and focus with the use of contrast that could be functional or purely aesthetic.

Colour animates space and the visual characteristics need to be planned, as warm colours advance and cool colours recede. These effects on interiors should complement the function, concept and need to inspire the users, without becoming overpowering.

The surrounding qualities and character can be incorporated for a harmonious quality. The effect of light on colour should be considered as the perception of colours is changed in different light qualities. Colours react to light depending on the finish material used. The application of a selected colour should be appropriate and sensitive to the existing environment.
### Term: Colour within architectural interiors

<table>
<thead>
<tr>
<th>Location</th>
<th>Photo</th>
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<tbody>
<tr>
<td>Colour introduced with the application of materials and finishes</td>
<td><img src="Lipman_2004_17" alt="Image" /></td>
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</tbody>
</table>

*(Figure 5-13: Colour within architectural interiors)* (Grobler 2006)

### Term: Colour within urban interiors

<table>
<thead>
<tr>
<th>Location</th>
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<tr>
<td>Introduced with the application of materials and finishes.</td>
<td><img src="Makin_Masojada_2004_9" alt="Image" /></td>
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*(Figure 5-14: Colour within urban interiors)* (Grobler 2006)

#### 5.3.4 Texture

The application of texture adds richness on a visual and tactile level of experience. The senses are put to work in the comprehension and effect of an interior. A contrasting selection of textures can affect the spatial quality and is enhanced with the variety in application.

Lighting should be used as an effective tool to modulate and accentuate textures. Strategic lighting from the side strengthens the three-dimensional quality of the surface. This can be implemented to maximum effect. The challenge is to maintain unity and harmony within all textural applications. The use of a dominant texture can be strengthened with a combination of contrasting and similar surface qualities.
Depending on the space and spacing of the texture, patterns and lines can be created. These again serve as tools to delineate and define different functional areas. The use of finish materials for the intrinsic qualities can add to the textural experience.

<table>
<thead>
<tr>
<th>Term: Texture within architectural interiors</th>
<th>Location</th>
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<tbody>
<tr>
<td>Photo</td>
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</tr>
<tr>
<td>Included with the intrinsic qualities of materials and finishes</td>
<td>(Lipman 2004:17)</td>
</tr>
</tbody>
</table>

Figure 5-15: Texture within architectural interiors (Grobler 2006)

<table>
<thead>
<tr>
<th>Term: Texture within urban interiors</th>
<th>Location</th>
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</thead>
<tbody>
<tr>
<td>Photo</td>
<td></td>
</tr>
<tr>
<td>Included with the intrinsic qualities of materials and finishes</td>
<td>(Constitutional Court 2004:84)</td>
</tr>
</tbody>
</table>

Figure 5-16: Texture within urban interiors (Grobler 2006)

5.3.5 Finish material

The selection of finish materials can provide variety and character to interiors on a physical level. The inclusion of colour, texture and special qualities into spaces can be achieved with the application of different materials. Finish materials can be used to define areas to indicate different functions, but it remains important for the selected material to support the function of the space.
Finish materials can add to the experience and the sense of place. When materials are selected, the combination should acknowledge the existing surface treatments in a space and be sensitive to the application. The colour, texture and material selections should blend into a unified whole, but still allow for emphasis to ensure variety in the unity. The selection of materials can be made to promote sustainability.

The effect of light on finish materials should be worked into the equation when surfaces are concerned. The reflection, glare, diffusion or transmission of light can add to the qualities and the spirit of the place.

| Term: Finish material within architectural interiors |
|---|---|
| Location | Photo |
| Determined by the function and purpose of the space | ![Image](lipman200417.jpg) |

(Lipman 2004:17)

**Figure 5-17:** Finish material within architectural interiors (Grobler 2006)

| Term: Finish material within urban interiors |
|---|---|
| Location | Photo |
| Determined by the function and purpose of the space | ![Image](constitutionalcourt200481.jpg) |

(Constitutional Court 2004:81)

**Figure 5-18:** Finish material within urban interiors (Grobler 2006)
5.3.6 Light and shade

Lighting design for interiors firstly needs to address the function of the space and sufficient light should be provided. Lighting can be strategically applied to create emphasis and focus onto an element, object or space.

The application of light onto surfaces should be determined carefully in order to achieve the right response of the finish material to the light quality or intensity. A balance must be obtained between natural and artificial light. These applications have the potential to modulate spaces during the day, transforming the interior with changing light intensities and shadows. This can be strategically planned to ensure maximum effect in day and night time of the three-dimensional surface and volume.

Lighting as visual interest can add richness and continual transformation within interior environments.

| Term: Light and shade within architectural interiors |
|---------------------------------|---------------------------------|---------------------------------|
| **Location** | **Photo (space)** | **Sketch (clerestory window)** |
| Natural and artificial light modulating enclosed space | ![Photo](Grobler2005) | ![Sketch](Grobler2005) |

Figure 5-19: Light and shade within architectural interiors (Grobler 2006)
**Term: Light and shade within urban interiors**

<table>
<thead>
<tr>
<th>Location</th>
<th>Photo</th>
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<tbody>
<tr>
<td>Natural and artificial light modulating open and partially defined space</td>
<td>![Photo](Constitutional Court 2004:84)</td>
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</tbody>
</table>

**Figure 5-20: Light and shade within urban interiors** (Grobler 2006)

### 5.3.7 Views and vistas

Visual and physical connections remain important for effective circulation and relations between spaces. The opportunities in achieving this should be sourced appropriately for every interior and links created. The placement of doors, windows and openings should acknowledge the views onto the landscape or vistas from one space to another.

Enframement can be used as an effective tool in the articulation of the view to enhance the place experience. Interiors could be extended beyond the physical boundaries which add richness to the experience and spatial content. The eye is allowed to roam the space and distance, giving added meaning to the interior quality.

**Term: Views and vistas within architectural interiors**

<table>
<thead>
<tr>
<th>Location</th>
<th>Photo</th>
<th>Sketch</th>
<th>Diagram</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visual and physical connections between adjacent spaces</td>
<td>![Photo](Adapted from Noble 2004:21)</td>
<td>![Sketch](Adapted from Noble 2004:21)</td>
<td>![Diagram](Grobler 2005)</td>
</tr>
</tbody>
</table>

**Figure 5-21: Views and vistas within architectural interiors** (Grobler 2006)
### Term: Views and vistas within urban interiors

<table>
<thead>
<tr>
<th>Location</th>
<th>Photo</th>
<th>Sketch</th>
<th>Diagram</th>
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</thead>
<tbody>
<tr>
<td>Visual and physical connections between adjacent spaces</td>
<td><img src="image1" alt="Photo" /></td>
<td><img src="image2" alt="Sketch" /></td>
<td><img src="image3" alt="Diagram" /></td>
</tr>
<tr>
<td>Adapted from (Makin &amp; Masojada 2004:11)</td>
<td>Adapted from (Makin &amp; Masojada 2004:11)</td>
<td>(Grobler 2005)</td>
<td></td>
</tr>
</tbody>
</table>

**Figure 5-22:** Views and vistas within urban interiors (Grobler 2006)

### 5.4 Sensory experience

The sensory experiences of people in spaces can be heightened by including the senses: look, touch, feel, smell, hearing and the movement of the body combined within the static, physical space of interiors. The implementation is possible on various levels, with the use of physical aspects. The application of variables of shape and size, scale and proportion, colour, texture, finish material, light and shade and views and vistas, can enrich the physical enclosure. These are observed with the senses and influence the place experience. The sense of place can be enhanced also by the people and activities that reflect social interaction and wellbeing.

### 5.5 Sense of place

All of the above aspects have to be integrated for the successful creation of place. The variables should be applied in combination in order to achieve the best effect. It is always important to remember that where people are concerned, spaces must respond to the physical needs, but also to needs on different levels of experience. The aim is to create a character or identity for a place that is relevant to the people and the space. Once this has been achieved, only then can one speak of meaningful place.
5.6 Summary
The criteria have been developed for the analysis and evaluation of spatial definition and the sense of place. These can be utilised as guidelines to make recommendations for the improvement of space and place. The guidelines consist of a collective set of terminology that is applicable to all interiors.

The study proposes that these criteria be applied in combination to achieve a positive spatial definition and meaningful spatial quality that can be applied to any interior environment that is meant for human occupation. The degree of application and integration are related to the specific appropriation process within the location, function and user group. The elements and variables are all universal in the application and production of space and place and the composition and arrangement may vary from place to place.

5.7 Conclusion
These guidelines can be utilised to evaluate the nature of spatial definition and also determine whether the spatial quality adds meaning to the specific environment. These are useful criteria that can serve as a checklist to provide all aspects regarding space and place-making that has been considered to be used by designers of architectural and urban interior design.

The following chapter utilises the criteria to analyse and evaluate the existing situation of the Donkin Reserve for effective spatial definition and place-making.
Chapter 6: CASE STUDY – DONKIN RESERVE

6.1 Introduction
Chapter 6 analyses the current situation of the Donkin Reserve as space and place. The analysis sets out to determine whether an integrated application of the guidelines established in the previous chapter would improve the spatial articulation and quality and improve the space to become a meaningful place that encourages people to gather. The aim of this analysis is to make recommendations for creating a sense of place.

This case study includes the contextual, historical and use investigations to provide an understanding of the Donkin Reserve in general. This is conducted to assure that appropriate recommendations regarding the static physical production of space and place are made. The space is investigated graphically to determine the spatial definition and qualities according to the criteria in Chapter 5 and includes the elements for spatial definition: point, line, plane and volume; as well as the variables to modulate place: shape and size, scale and proportion, colour, texture, finish material, light and shade, and views and vistas.

A short overview of the history of the Donkin Reserve provides background knowledge. This understanding is combined with an observational analysis in the form of a descriptive survey, conducted over time to grasp the context and content. The use of interviews and questionnaires allowed for additional data from the perspective of the user. The use of charrettes for the investigation was unnecessary, as adequate data for the purpose of the study was obtained with the use of the descriptive survey method.

6.2 Historical overview of the public open spaces in Central Hill
An investigation into the historical development and growth of Central Hill, in particular the Donkin Reserve, is important for understanding the transformations that appear over time. The social, spatial and historical aspects are all integral to the creation of place.
6.2.1 Historical analysis

Sir Rufane Donkin (1773-1841), acting Governor of the Cape from 1819-1821, identified the hill above Port Elizabeth as the site for a memorial in honour of his wife, Elizabeth who died in India in 1818. Today the grounds are known as the Donkin Reserve. Sir Rufane Donkin selected the setting for the pyramid monument due to the elevated and remote nature of the site above the city; the inscription on the monument indicates: “…the town below…” (O’Brien, Curtis & Harradine 1998:25). The map dated 1849 documents the majority of the city development below the Donkin Reserve, the area between the ocean and the ridge. A view of Port Elizabeth by J.F. Cornfield (1823) supports this visually. Observations of old photographs indicate that the current pathways were determined in the 1880s already. It was never officially proclaimed, but it was noted on a diagram of the site that it could never be built upon or be intruded and was set aside as a public open space in the early 1800s. The land has been zoned as passive public open space, as park type (Mercer 2004). Since then, the Donkin Reserve has been used for sports, for recreation, and as a parade ground (O’Brien et al 1998:25).

Fig 6-1: 1849 Map of Port Elizabeth
(Harradine 2002:36)

Fig 6-2: View by J.F Cornfield (1823)
(Harradine 2002:20)

The Donkin Reserve has been shaped through the adjoining roads that form the boundaries of the park, Donkin Street to the north, Chapel Street to the east, Whites Road to the south and Belmont Terrace to the west. The Reserve has a panoramic view over the sea and the city that has been preserved with height restrictions to the buildings of the city below (O’Brien et al 1998:25). This public park is dedicated to the Light
House that was built in 1861; today it serves as a beacon for passing ships. The natural routes across the site still remain as existing operational routes. The palm trees that flank sections of the paths were planted early in the 1960s and today stand tall in defining the upper pathways.

Fig 6-3: Donkin Reserve location (no. 126)  
(Oberholzer 1972:132)

Fig 6-4: Donkin Reserve section  
(Grobler 2005)

Fig 6-5: Donkin Reserve view 1897  
(Port Elizabeth Main Library [s.a.])

Fig 6-6: Donkin Reserve aerial view 1940s  
(Port Elizabeth Main Library [s.a.])

Fig 6-7: Donkin Reserve view 1965  
(Port Elizabeth Main Library [s.a.])
The Port Elizabeth Opera House is situated on the south-east corner of the Donkin Reserve. It is the only Victorian Theatre in South Africa with grey marble steps, elegant staircase, wine coloured carpets, wrought iron railings, shantung draped curtains, gilt mouldings and a crystal and brass chandelier which are all elements that speak of this style that has survived (Atwell [s.a]:103).

The Grand Hotel is located on the southern side of the Donkin Reserve surrounded by Victorian styled houses, restaurants that serve African cuisine and jazz music. The historical quality of yesterday is combined here with a new cultural quality that adds richness to the environment. African music and food are served within the historical context of Central Hill.
The Edward Hotel and Grey Institute are found on Belmont Terrace, west of the Donkin Reserve. The Edward Hotel, originally built 1821, serves as a backdrop to the Donkin Reserve in ‘old English’ style (O’Brien et al 1998:23). The Edwardian building sits on the street and faces the ocean in the distance. The Grey Institute, designed in a secular gothic style, was completed in 1859 and the clock tower added in 1875 (O’Brien et al 1998:22). Today it has been renovated and restored.

6.3 Data gathering

The qualitative research methodology, which is field focused with the observer as the instrument in obtaining information is implemented in this investigation. The observations aim to produce an account of what has been observed and from that the interpretation of significant aspects will be derived. The interpretation of the character and the understanding of the behaviour of the users of the space provide further comprehension of the current situation; an expressive language that pays attention to the description of particulars and detail. A rational approach in the investigation for both
the descriptive survey methodology and historical study is achieved with the use of an articulate writing style that expresses thoughts and ideas clearly (Leedy 1993: 141-142).

The descriptive survey method is applied in this analysis and focuses on the description on events (people, space and place) observed at a specific location and time of day. The information obtained from the descriptive survey method is ever-changing and the recording of observations is important in this process. Narrative observations form part of this method and are structured systematically by the use of questionnaires and interviews (Leedy 1993: 186,188). Although this research is structured, interviews are kept informal with the daily users of the Donkin Reserve. The completed questionnaires are included in Addendum B.

Canter (1977:122) argues the link between descriptions and actions. The descriptive survey method is performed communicating the attitudes of the users, and the actions that illustrate the behaviour. The experiences of place are complex: “…it is because there is a network of descriptions available to a person that he can use one part of this network to draw upon or represent the rest…” (Canter 1977:123). Place is evaluated by the system of interrelated aspects that affect the value judgements of the users; the degree of differentiation, the physical characteristics, the spatial organisation, the links between place and activity and the expectations and reaction of the users. These aspects influence space as “…it becomes place…” (Canter 1977:123,125).

6.4 Space and place description
The cognitive system, observance and perception, allows for understanding of information on what constitutes place, in terms of the recognisable characteristics and the feelings that are elicited when the space is used. The following are listed for this purpose: what a space is for, what is there, the type of activities that take place and who are represented in the place. The aim of spaces is to create meaning in the quality of experience: “…there is a large wardrobe in the corner and when the sun comes in through the bay windows it is a very relaxing and pleasant place to be…” (Canter
1977:105, 106). This illustrates the importance of the elements and variables that are examined in Chapters 3 and 4 for both architectural and urban interiors.

When these qualities are outlined, place descriptions bring forth various responses in the variety of adjectives that can be used in the analyses. “The unit describes, with some precision, how a statement by a person of his degree of satisfaction with a place relates to his purpose for being in that place…” (Canter 1977:106). Individual satisfaction created by a space is determined by the performance of a space in response to the day-to-day goals and use of an individual. The generalisation of responses within the analysis of a group of people can indicate collective attitudes and feelings. As a result responses are compiled in a comprehensive understanding including various components, as well as the daily experiences of the place (Canter 1977:106). This approach is followed in a data gathering process by means of interviews and the use of questionnaires.

6.4.1 Place description of the Donkin Reserve: interviews of random population
Canter (1977:107) emphasises the importance of including a variety of people in the population for questioning. It is suggested that age, sex, gender, occupation, education and residential background should vary when selecting the population in order to achieve a broad understanding. The experience expressed by each individual will most likely vary and to be representative of the types of people and backgrounds. Leedy (1993: 199) supports this viewpoint by noting the opportunities for information that exist in including a random population.

For this investigation people have been randomly selected: users of the Donkin Reserve in the natural state of activity. The profile of the population is inclusive and represents the community at large. The variety can briefly be described as follows: a group of pre-primary school children with a guardian, teenagers in transit after school, adults on a lunch break, an elderly man with his dog, lovers in the park, business people in a rush to the next destination and children playing soccer. People were informally questioned and were encouraged to be descriptive when responding. Twelve interviews were conducted, scattered over a four-week period, between 9:00 and 17:00. Additionally,
documentations were continuously made within these times to add data to an observational level.

The result of interviews with structured questions reveals two categories of users. The first category concerns users that frequent the place due to the close proximity of the working and living spaces, and usually make visits in the lunch hour or some time during the day. The second category consists of users in transit through the Donkin Reserve as a transition space, between Central Hill above and the city with transport nodes below. The frequency of space use ranges between daily, weekly and monthly, with a higher use within the daily and weekly option.

The interviews revealed that users find the Donkin Reserve appealing due to the natural aspect of the reserve within the urban environment. The panoramic view over the city and the ocean proved to be an important aspect for users: an open space on a sunshine day surrounded by nature in the form of a ‘park’. However, people expressed no need or want to stay and spend time, as there is no informal activity, entertainment or reason to linger otherwise. Users that spend time seated were taking a break from work, or conveniently resting on the way home, but had not specifically chosen the spot for the quality of the place. The location in the heart of the city makes it accessible. It was further noted that the site is barren and featureless and does not provide variety for the users.

The Pyramid and Light House, the major landmarks of this site, serve as a tourist attraction due to the historical background, but the majority of daily users have no or little knowledge about the historical heritage. There exists no awareness of the Donkin...
Reserve as historical site, which should be rectified. Once the view and the monument have been contemplated, the group or individual on tour has to find refreshments elsewhere, as none are provided.

The paths follow natural circulation routes across the Donkin Reserve and link the city above with the transportation nodes in the city below. This is a convenient route for users, as it forms a shortcut on the way to the transport intersection; this is seen as an advantage. The staircase providing access to the Donkin Reserve from the east via Chapel Street has an uncomfortable steep gradient and the edges to the space and routes should be improved.

The positioning and placement of seating benches are random and do not encourage conversation. People want to interact and meet new people, whilst having a view of the surroundings from a scenic vantage point.
Fig 6-19: Donkin Reserve benches (Grobler 2005)
Safety during the day is not perceived to be a problem as movement and visibility assure users, but night-time use is problematic due to inadequate lighting.

In general the Donkin Reserve is perceived as reasonable or average as a public space, due to the cleanliness and maintenance of the area. The potential of the space is identified within already historically rich surroundings in terms of architecture in Central Hill. People identified the need for a communal space, a place that could become a real attraction for all residents, and not only tourists.

6.4.1 Place description of the Donkin Reserve: personal analysis

In describing the Donkin Reserve, various aspects regarding spatial definition and spatial quality are observed. The first impression concludes a clean, open space on a large scale that is shaped by the adjoining roads. The elevated west side is modulated geographically by the steep gradient and allows for a commanding view over the city with the ocean to the east. Unsightly buildings, making undesirable noises on this edge, spoil the 180 degree view and experience of the ocean.

Limited elements of spatial definition are observed. The circulation routes from Belmont Terrace (west) are articulated with large palm trees that flank the tarred pathways. The paths toward the city below have no vertical definition, nor detail in the defining edges. The routes appear to be strategic in the sense that they following natural circulation routes diagonally across the space, as established in the historical investigation. Nodes created by the intersections of the routes have no special quality: it is purely a crossing of pathways. Garden lamps are positioned along sections of only two of the circulation
routes and also in other random positions on the site. The orientation of the benches does not acknowledge the view; some face the ocean, some face the road, but all are isolated. No interaction is suggested through this arrangement.

Fig 6-22 to Fig 6-24: Donkin Reserve lamps, nodes and pathways
(Grobler 2005)

The Pyramid and Lighthouse are strong vertical elements, but no context is created around these landmarks. The natural vegetation of the reserve has long been removed and the site does not speak of reserve, but rather park. Opportunities in bringing back indigenous plants for spatial definition could create places for human use, improve the spatial quality and encourage more visitors to the Reserve.

The Donkin Reserve is centrally located in Central Hill, but does not speak or illustrate it as a place for the community to gather. Limited informal activities are performed in the space and no interaction between the neighbouring buildings and the site are observed.

The use of materials does not convey an identity of the context, nor interest and variety; it is limited and encourages no sensory experience. The place does however have potential of being a true destination in the city for residents and the workforce in the area, but also for Port Elizabeth at large.

6.5 Analyses of elements for spatial definition

The analyses that will make clear the aspects that shape the spatial containment of the Donkin Reserve are conducted indicating valuable information to understand the spatial definition. The analyses are conducted according to the elements that form the criteria,
determined in the previous chapters: point, line, plane and volume. The observations
are visually documented by illustrating the findings.
6.5.1 Analysis: Point

Five nodes are identified as points where pedestrian circulation routes intersect. This has the potential for providing opportunities for social interaction. The challenge exists to improve the spatial quality with the existing elements and surface treatments. There are no focal elements to accentuate the nodes as places of importance and participation. The primary node is planted, but that does not add to the quality of the place, as it is isolated and limited in size and character in relation to the rest of the site.
The Memorial Pyramid and Lighthouse are the two points that are located centrally towards the southern boundary of the site, but not central to the site as a whole. These landmarks serve as focal points to the area and are accessible through the vehicular and also pedestrian routes. Movement around the monuments is accessible to pedestrians only. The landmarks form the implied boundary between flat surface and steep gradient that divides the site between usable and unusable surface areas.

Activities can create nodes, regardless of the location as people are grouped together in a space. Passive and active activities are occasionally performed on the site. Active activities are identified on the level western side and it serves as playing field for games, such as soccer. Passive activities are identified as sitting, reading and observing the area which is made possible through the lawns and scattered benches. These benches are not grouped with garden lamps; the orientation is random and does not necessarily face any particular view. Social interaction is not encouraged, as the benches are positioned in isolation and no groupings are provided.
6.5.2 Analysis: Line

Edges are identified as line at the Donkin Reserve. The entire western edge and sections of the northern and eastern edges are accessible to pedestrians. This is due to the level gradient of the site in these locations and allows for pathway access onto the site with pedestrians. A no-access boundary is formed by the steep gradient on the southern side and certain sections north and east.

Pedestrian movement paths or axes have been defined across the site as tarred walkways. Circulation opportunities are provided diagonally across the site from all street corners. Intermediate routes are also provided from the straight edges on eastern and western sides, as is vehicular access from the corner of Whites Road and Belmont Terrace. This leads straight to the Memorial Pyramid and Lighthouse and tourism office, where it terminates. Garden lights have been located primarily on the south-western side of the reserve with selected pedestrian walkways, as well as the vehicular path. Inadequate lighting qualities exist at night as only a section of the reserve has appropriate illumination, positioned on the circulation paths. Garden lights are of different designs and no unity is achieved through this element. Palm trees are positioned along three circulation routes emphasizing the path.

Figure 6-30: Donkin Reserve axes
Adapted from aerial view (Nelson Mandela Metropolitan Municipality 2000)

The Donkin Street houses are located on the northern edge of the Donkin Reserve and were built between 1860 and 1880. The houses follow the natural gradient of the road
and form a row of terraces, with “...each one lower than the preceding one...” (O'Brien et al 1998:20). The natural kloof was filled in and forms the land on which the houses are situated.

![Fig 6-31: Donkin Street Houses](Grobler 2005)

On the eastern edge, back facades of industries and factories face the Donkin Reserve. Height restrictions in this area prevent these buildings from blocking the views from the Donkin Reserve onto the sea and city below. Ventilation shafts, fans and noisy components disturb this area, together with the unsightly back facades of these industrial buildings.

Victorian houses are found on the southern edge together with African jazz clubs and restaurants. The eastern edge houses the Edward Hotel and the Grey Institute that has recently been renovated.

The buildings discussed each carry a particular piece of history, aesthetic quality and contribute to the urban fabric surrounding the Donkin Reserve. Past, present and future all live together in enriching the environment and activities that take place there.

### 6.5.3 Analysis: Plane

The spatial enclosure of the Donkin Reserve is difficult to ascertain, as the vertical edges are shaped according to the gradient of the base plane of the site. The western edge has the most vertical containment with the Edward Hotel and the Grey Institute building as physical boundaries. The northern and southern edges gradually slope down, which results in the disappearance of these vertical enclosures. This is even
more observed on the southern side as the gradient down to Whites Road is extremely steep. To the north, the Donkin houses give a degree of definition. The eastern edge below is not visible from the level section of the Donkin Reserve. As a result, the horizon in the distance becomes the visual edge to the site. This edge is therefore undefined in terms of physical elements. The overhead plane is the sky above, and no physical enclosure is created on this level.

![Diagram of Donkin Reserve section (containment)](Grobler 2005)

### 6.5.4 Analysis: Volume

The spatial volume becomes difficult to define because of the absence of vertical planes. However, the space is defined on ground level with the use of lines as edges that outline the shape of the site. Volumetrically, if one were to vertically construct these edges upwards, an invisible spatial enclosure could be articulated. The location of the monuments as landmarks also creates a relationship between object, space and object in space. A resonance is created with the focus on these elements.
6.6 Analyses of variables for the enrichment of the spatial quality

The variables as criteria to create place are evaluated: shape and size, proportion and scale, colour, texture, colour, finish material, light and shade and views and vistas. The criteria have been determined in the previous chapters and are now applied to the existing situation of the Donkin Reserve. The aim is to determine whether the reserve complies with criteria for place-making for it to be able to add meaning to the community and city at large.
6.6.1 Analysis: Shape and size

The Donkin Reserve site is trapezoidal in shape and has been created by the adjoining roads on four sides, Donkin Street to the north, Chapel Street to the east, Whites Road to the south and Belmont Terrace to the west. The south east corner of the city block is occupied by the Port Elizabeth Opera House that shows no relation to the Donkin Reserve behind. The trapezoid shape links with the city streets within the urban grid. As open public space in the urban grid, the size and scale contrast with that of the rest of the city fabric.
The gradient of the site slopes down 24 metres from west to east. On the western side, the gradient is level and forms a small plateau, becoming increasingly steeper towards the east and south, until it is totally unusable for human activities.

![Image](71x494 to 269x658)

**Fig 6-36: Donkin Reserve shape and size**
Adapted from (Nelson Mandela Metropolitan Municipality 2000)

### 6.6.2 Analysis: Proportion and scale

Due to the large size and scale of the site, the proportion of the reserve relates to that of the urban environment. Due to the difficulty of physically containing the space, the proportion does not address a human scale in the public context. The space becomes vast and does not create places for people to dwell in.

![Image](269x149 to 386x333)

**Fig 6-37: Donkin Reserve – lack of containment** (Grobler 2005)
6.6.3 Analysis: Colour
The colour combinations of the reserve are derived from nature. Trees, plants and the grass are complemented by subdued colours that blend into the surroundings, especially the stone finish of the Pyramid and the white colour of the Lighthouse. Additional colour is added by the people who frequent the reserve. Accent colour and interest are lacking, due to the limited colour use.

6.6.4 Analysis: Texture
Texture is provided by the natural elements on the site, but a contrast and wider use of different grains, texture and pattern could be applied.
6.6.5 Analysis: Finish material
The finish materials applied to the spatial elements of the reserve are limited as only a few materials are used. No variety and interest are created that could contribute to the richness of it as place. Tarred walkways with undefined edges do not add to the spatial quality. No harmony or integration of materials, colours and textures were observed in the area.

Fig 6-40: Donkin Reserve finish material (Grobler 2005)

6.6.6 Analysis: Light and shade
Light and shade are provided by the movement of the sun. Interest is created, but no deliberate attempt is made to enhance these qualities for maximum spatial quality.

Fig 6-41: Donkin Reserve light and shade (Grobler 2005)

6.6.7 Analysis: Views and vistas
A 180 degree view is created towards the east over the sea and city below with an enhanced experience whilst moving revealing various views. This is made possible through the 24 metre level difference, because of the gradient down to the city, as well
as height restrictions that prevent buildings from reaching up into the sky in the section along the Donkin Reserve.

Fig 6-42: Donkin Reserve views and vistas (Grobler 2005)
6.7 Recommendations and guidelines for spatial definition

The framework that has been used in the investigations for spatial definition serves as the criteria or guidelines to improve the spatial definition. This proved to be useful in the application for architectural and urban interiors and will be suggested for an improvement strategy for the Donkin Reserve.

The elements point, line, plane and volume serve as guideline criteria. The approach that is advised is one of creating people places within the static, physical model of space in the urban fabric that encourages social contact and interaction and allows for flexibility to grow over time.

6.7.1 Recommendation: Point

The Pyramid and Lighthouse on the Donkin Reserve can be identified as landmarks, due to the vertical emphasis and scale as point on the site. The position of these is not strategically incorporated in a holistic layout and planning. The opportunity exists to integrate these into an overall design of good organising principles.

Hierarchy is an ordering principle and should be applied as such. A stronger emphasis on the layout, focusing on these structures individually should be obtained. One can question the position of the support structure, the building that accompanies the landmarks and currently serves as tourist office. The function and value adding quality is not optimum and an additional location therefore could be identified.

Fig 6-43: Improving point (Grobler 2005)
The intersections on the circulation routes have potential to become points, or nodes, on the routes and to allow for social interaction. The location of furniture should be strategically decided in order to create points of conversation on the site and add value to the social dimension of the life on the Donkin Reserve.
6.7.2 Recommendation: Line

The strong linear elements on the site are the pathways that serve as circulation routes and seem to answer the directional movement requirements on and over the site. The physical quality of the paths and the choice of material can be improved to enhance an identity of place, instead of the tarred surfaces. This is further discussed under ‘finish material’ in this chapter.

The articulation of the routes could be further enhanced by the inclusion of vertical elements that follow the journey of the path. These elements can vary in height to create interest and vary in material, i.e. planting or low stone walls. Planting will include texture, colour, and a play on density. In creating an edge along the path, opportunities for seating are improved and the low walls could serve a dual function.

![Diagram](image)

**Fig 6-46: Improving line**
(Grobler 2005)

6.7.3 Recommendation: Plane

The Donkin Reserve site offers opportunities to work with the gradient in achieving surfaces that are useful to human activities. This can be created in allowing the gradient to be terraced into various platforms for informal activities. In addition, the existing staircases are quite steep, and a more relaxed and comfortable climb could be achieved
by creating deeper treads that gradually reach to the top of the gradient. Again by doing this, extra seating space is produced. Vertical planes can be introduced to provide a ‘backrest’ to a seat when it is positioned on an edge.

The surface treatment is important in providing comfort and a ‘sense of place’ that will be discussed later in this chapter.

6.7.4 Recommendation: Volume
The creation of enclosures on the Donkin Reserve should be sensitive to the open space quality that exists, as the provision of protected edges can have a strong social impact on the space. With the addition of vertical boundaries, a volume can be implied, even when it is open to the sky or to the sides. These boundaries could serve the purpose of protecting the user of the space’s back from the rest of the area, as well as giving a sense of privacy, an own space to use for the duration of the stay within the large scale of the Donkin Reserve as a whole. Visibility should be provided in view of the need for self-surveillance and security.

Vertical boundaries, as discussed earlier, have the potential to change character in the degree of density, the height and the finish material applied. The aim here is to create smaller defined spaces within the site that establish a sense of place, almost like different rooms within a building. The furnishing of these spaces should be appropriate and in harmony with the site. These articulations must blend in with the site and not dominate.
6.8 Recommendations and guidelines for enriching the spatial quality

With the articulation of a spatial framework, spatial modulation becomes possible with the application of variables to modulate the surfaces. Again, the criteria for this purpose are found in the framework that has been identified in the search for guidelines for the interpretation of spatial qualities. The variables are: shape and size, proportion and scale, colour, texture, finish material, light and shade, views and vistas that result in a sensory experience. In addition, sensory experience, activities and additional opportunities for the Donkin Reserve are discussed and suggested. The guidelines aim to combine all these aspects for the criteria to successfully create place-making.
6.8.1 Recommendation: Shape and size
The size and scale of the trapezoid shaped Donkin Reserve are vast compared with the surrounding grid of the city. This is true because of the “breathing” function of a public open space, the green zone in the city. The result is that the user of the space is overwhelmed by the size and does not relate to the space on a personal level.

The creation of smaller containments with lines and planes can allow for people to remain longer, because a defined or implied space is provided. This approach can further allow for the delineation of informal activity spaces that groups of people can use.

These containments are not enclosed as such, but the definition is sensitive or even implied by the use and application other appropriate criteria.

6.8.2 Recommendation: Proportion and scale
Proportion and scale link with shape and size due to the dimensions of the site. The scale of the Donkin Reserve does not relate to human size, because of the vastness. The only way to create spaces that are more appropriate for individual or even group use is to delineate areas of smaller scale within the larger site. The aim is to produce human scaled areas, intimate enclosures, where one can feel comfortable and protected.
6.8.3 Recommendation: Colour
At present the site has limited differentiation in colour use that can be observed. The re-introduction of indigenous plants to the site can once again add to the richness and interest that is found in the colours of plants and flowers. As the name, Donkin Reserve suggests, there should be a degree of natural vegetation to justify such a name. The lawns do not provide variety and interest in the visual environment of the site.

In addition, the introduction of finish materials that are found in the Port Elizabeth area can add to the variety and interest. The materials in the pathways, low enclosing walls and furniture could add richness to the identity of the place.

6.8.4 Recommendation: Texture
Texture plays an important role in the visual and physical perception of spaces. The current situation is limited in the application of texture; planting and finish materials can surely add to the richness. A contrast between smooth and rough surfaces can become an effective tool in the creation of place if applied to the elements of spatial definition and made possible with the use of specific finish materials to delineate edges and lines.

6.8.5 Recommendation: Finish material
The site offers a great opportunity to combine materials local to the area. The combination of materials and finishes that have the appropriate qualities in being sensitive to the environment can be affectively applied. Durability and sustainability are
important in the longevity of materials and its performance in the public urban environment. A combination of stone, timber, pebbles and mosaics will have the capacity to enrich the environment with the intrinsic colours and textures it contains.

Previous investigations illustrated that communities have designed and made beautiful mosaics to surface planes. The inclusion of the community and the users of the space can be invaluable in the content and meaning that is added to the environment. The changing demographics of Central Hill allow for the integration of the once Victorian past with a strong African language in the aesthetics. This is illustrated by the surrounding buildings: the Edward Hotel is today situated next to a vibrant African restaurant.

A sense of place reflective of the current qualities and content of the area, the people, and the atmosphere can strongly determine the identity, experience and description of the place.

6.8.6 Recommendation: Light and shade
The modulation of the experience of the day has many possibilities in the movement through the Donkin Reserve. Existing trees cast shadows onto the lawn and pathways, but this goes unnoticed. This idea can be enhanced by the strategic placement of space defining elements or framed structures defining functional areas that can cast changing shadows as the day progresses. This creates an awareness of the movement of time and shapes the quality of the space with the intangible elements, light and shade. The inclusion of planting can further extend this idea from a natural application perspective.

6.8.7 Recommendation: View and vistas
Views and vistas on the Donkin Reserve are plentiful. These can further be enhanced if selected views are framed or elements as focal points are isolated. The Pyramid and Lighthouse are objects to view from all sides; once onto the site, the ocean and the horizon become the 180 degree view. This is a natural vista because of the location and gradient of the site in relation to the context and should be strengthened. Noisy and
unsightly back facades of adjacent buildings on the bottom end of the Donkin Reserve must be addressed in creating a positive experience.

The definition of areas for social containment can have the capacity to also frame strategic views onto the surrounding environment.

![Diagram](image)

**Fig 6-52: Framing the view**

(Grobler 2005)

### 6.9 Sensory experience

The sensory experience is currently lacking on the Donkin Reserve; if one analyses the effect on the senses when using the space, only a limited observation is made. In terms of touch, the body feels the breeze of the climatic conditions on any specific day, however, tactility in terms of finish materials is lacking in the physical experience of the place.
The visual sense is represented by the natural state of the Donkin Reserve, but no interest or variety is created in the elements or selection of materials.

The only smells come from the surrounding areas and are sometimes unpleasant odours. The site has the potential in bringing forth plants and flowers that can add to the aromas and pleasant fragrances produced by nature. The space does not provide opportunities for the selling of food and therefore no enticing smells of food on-the-go exist. This then links with the sense of taste; if food were to be sold here, this sense can be satisfied.

When natural vegetation is re-introduced, indigenous birds and insects might return to the area. The sounds of birds and insects bring an added quality to any natural space, especially when in the city. The pigeons that are currently visiting the site might then even be joined by more species.

All the above senses combined can be enhanced by the kinaesthetic experience of the body moving through the space. The effect of all the spatial definition devices, together with the variables that modulate the space can add to the enriched experience of a person. The movement through time further strengthens this emotional feeling. The importance is that these aspects should be combined and active in order to have an effective influence.

6.10 Activities
The current situation in activities on the Donkin Reserve has not been strategically planned. At present the existing activities include sitting to admire the view, walking through a space of transit or informally playing soccer on the level section of the site.

The Donkin Reserve has the potential to be the hub of Central Hill and a vibrant place in the city at large, becoming a destination. The space is in the centre of a community, but is not utilised as a community or communal space. The site and location lend themselves to becoming an active part of the neighbouring communities. This could
become a forum for public speaking for members of the community; the space could be utilised as an open air performance and entertainment space if an amphitheatre could be included as part of the spatial framework. This would then provide an active link with the Opera House on the south-east corner of the site. The inclusion of ablution facilities can become the support space required.

In addition, art exhibitions could be facilitated on a monthly basis on the Donkin Reserve; also the permanent exhibition of local artists from the surrounding areas could add to the community function and visual interest.

This can strengthen the tourist attraction, with the relocation of the tourist information centre to a more convenient and strategically placed location. The inclusion of carts or temporary stalls, that sell various items, from food, crafts and products in demand by the users of the space, would also strengthen the tourist attraction.

These new possibilities can be realised if the management structures of the city are serious about the redevelopment and rejuvenation of the city centre and the precinct areas that are under the spotlight. These changes and improvements can lead to the identity of place, the enrichment of the Donkin Reserve by means of physical changes, planning and management, as well as the improvement of social interaction.

6.11 Additional opportunities

Neighbouring links with the surrounding buildings could be expanded as explained with the Opera House sharing an open air theatre, but at the same time there exist opportunities to link with other functions. The Edward Hotel for example could extend catering facilities onto the Donkin Reserve, maximising the urban interior of the hotel. The activities can flow outside as a public event to the benefit of all.

The same can be said about the restaurants, jazz and African music related activities that are present all around the site. Jazz events and music events, and lunch hour concerts will all bring the people of the surrounding areas back to the Donkin Reserve,
because of the wanting to gather, spend time there, interact, observe, be observed, and belong.

The place has the capacity to evolve over time, to transform according to the growth and development that takes place in the neighbourhood and the city at large. The space must be flexible in the manner in which activities can be sustained spatially as well as the longevity of the psychological reactions it elicits in the users of the space. The approach should be inclusive on all levels of activity and experience.

6.12 Sense of place
Integration of the above will ultimately result in a sense of place with physical elements and variables modulating the space, activities and social interaction. The historical content must be combined with current day qualities and events, creating a place that people will want to visit, because of the experience of the place as a whole.

What will make the place even more meaningful is the legibility of the layout and organisation of the physical aspects that the users of the space can comprehend. This organisation must be fed by the requirements that arise from the temporary activities that can be housed. The points of hierarchy, axis and datum achieved here as explained above must inform the planning process.

The inclusion of the community in this process can be valuable in identifying more activity and social interaction needs that may exist.
6.13 Summary

The guidelines presented here were developed from the criteria identified in the previous chapter. The interpretation proved to highlight opportunities for improvements to the Donkin Reserve as a public open space in becoming a meaningful urban interior.

Suggestions were made with an informed understanding of the history, people and use of the space and aimed to address all in an integrated and holistic approach. The data gathered in the description and analysis of the Donkin Reserve established an understanding of the current situation and feelings of the users towards the place. The investigation identified the shortcomings and also strengths of the site in order to become a meaningful place.

The process of investigation indicated the need to integrate the historical past, the current developments of the area in terms of changing demographics and contextual content, with a strategic approach to the challenges of the future. The acknowledgement of all these data is critical in the creation of an appropriate place. The aspects must all be considered holistically.
6.14 Conclusion
The potential of the Donkin Reserve can be re-discovered by means of applying the guidelines to enhance the existing situation for the benefit of the users and the city at large. Improved structures for spatial definition with the inclusion of variables to enrich the space will ensure a place in the city that will encourage people to gather and belong. These recommendations can be used in the actual redevelopment of the urban rejuvenation proposed by the Madiba Bay Development Agency, in conjunction with local planners and GAPP Architects and Urban Designers. These findings are meant to inform the spatial definition strategy on a humanly scaled application, for places that add meaning to the environment and the users, such as the Donkin Reserve.
Chapter 7: CONCLUSIONS AND RECOMMENDATIONS

7.1 Introduction
Chapter 7 concludes the investigation into a collective vocabulary of spatial definition and place-making within architectural and urban spaces. Theoretical terminology has been identified that can be used to verbally describe place. Elements for spatial definition and variables that make possible spatial modulation have been used for this purpose.

This vocabulary has been developed according to the explorations into aspects of space and place individually, but also in an integrated way. The criteria serve the purpose for both architectural and urban interior space and place. These criteria can be taken as common or collective criteria that can be used for all spatial definition and place-making projects. The criteria are practical guidelines that can be applied in the design of static physical space and the creation of place in general. The study indicates the importance of integrating the criteria in a holistic approach to achieve a strong relationship between the definition and the quality of interiors, whether architectural or urban. The importance of integration, indicates the relation that is created between the criteria.

7.2 Collective vocabulary
The investigations in the research set out to determine the relationship between criteria that can serve collectively in the application of architectural and urban interiors. The research pointed out that the sum of the aspects combined is important for meaningful definition and a sense of place. Aspects in isolation do not contribute to place; it is only in combination that the enhancement is produced. In this way enriched environments are created, providing opportunities for personalisation and interpretation. The investigations pointed out key aspects to create the relation between elements and variables to produce space and place.
Firstly, the elements, point, line, plane and volume, that define static physical space are found to be the tools for interior spatial definition of an architectural and urban nature. The composition of these as external shell is determined according to the design and composition of the defining elements. The building or urban structure must create a relationship with the interior space it encloses. The function of the space has a direct influence on the shape, size, and activities that should be provided for. The sense of place is influenced by the orientation of planes and elements in the space. The perception and experience are determined by the individual and are subjective regarding the context and surrounding spaces. The application of spatial elements can be within a three dimensional application or as two-dimensional elements within a spatial enclosure to demarcate and mark a position. The strength of the elements point and line is both in two and three-dimensional application.

Secondly, the character of these defining elements determines the degree of enclosure. The spatial quality is affected that allows for private or public space. Solid boundaries with a high density create separation from one space to another. Transparent boundaries or boundaries with a low density encourage interaction, visual or physical. The modulation and articulation of elements are created by the application of finish materials and the composition of the layout and organisation.

Thirdly, the application of finish materials indicates the relation between space and place. Texture (and colour) is included into a space, because of the characteristics of the specific finish material. The spatial enclosure is enriched with the added surface qualities and enhances the sense of place. The selection of finish materials must address the function and use to ensure an appropriate application.

Fourthly, this aspect has the capacity to change and animate spaces; it affects the quality of the place, as well as the behaviour of its users. Colour is introduced into interiors with the selection of surface materials, as well as in the foliage and flowers of plants. This natural ingredient in both architectural and urban interiors can soften spaces and add to the sense of local identity. Plants contain inherent qualities of colour
transformation throughout the year that add interest to interiors. Colour highlights spatial form and sets the tone and ambiance in combination with lighting qualities.

Fifthly, the boundaries of interior spatial enclosures should relate to human scale. Interiors are primarily concerned with the design and creation of spaces for human habitation. Urban and large architectural interiors, because of the size and scale, very often neglect the human factor and should allow for spaces that are more sensitive in this regard. The comfort and experience of the user are enhanced when human scale is applied and the overall perception of the space becomes positive.

The sixth aspect, the effect of light and shade to enhance the ‘time-space’ experience, is important in the creation of place. This intangible aspect has a direct influence on the spatial quality of the physical containment. The changes in natural light intensities during the day, alter the interior continually. The transition between ray of light and shadows onto surfaces, modulates and enriches space. Due to the location of urban interiors, much is left to the natural sequence of the sun and the result of time changes. Interior space must rely partly and sometimes entirely on artificial light that offers opportunities for drama in the interior. The design, when allowing for the effect of natural light in interiors, has the potential to transform spaces from static containers, to places that come alive with the movement of the sun.

Legibility of boundaries and clarity of layout is the seventh aspect. It is important that the static, physical enclosure is legible and comprehensible to the users. This allows for ease of use, as the containment is fixed. The application of point, line, plane, and volume as the elements that define the enclosure, are the ingredients to achieve the spatial boundaries.

The eighth and universal aspect that can be taken through interiors is the creation of place. Place-making brings together all the above aspects, and the elements and variables that have been discussed in the study. As a result of the integration, a relationship between the elements for spatial definition, and the variables to create place is established. The investigations on the architectural and urban interior level
showed the importance of a sense of place in giving an environment an identity that relates to the context, the use, the people and the meaning people derive from that.

7.3 Summary
The integration of theoretical terminology as criteria to define space and create place indicated a strong relationship. A holistic and integrated approach to design provides opportunities to combine elements that can be used to define the spatial containment, together with the variables that are used to modulate space and to create place. It is important to use the collective vocabulary combined within an integrated network to ensure meaning within architectural and urban interiors. The aim is to maximise the spatial experience and enrichment of the static physical enclosure.

7.4 Conclusion
The investigations and descriptions of space and place were integrated with theoretical terminology to identify the words that could be used in this process. The relationship between spatial definition and place-making has been proved by the explorations in this study. The research confirms the hypotheses that were set out at the beginning, with the fact that terminology could be combined throughout the study. The data investigated and observed pointed out that the elements for spatial definition and variables for place-making are interrelated and should have a relationship for effective spatial definition and place-making. This is strengthened by the compatibility of data from architectural and urban interiors, as the aspects could be discussed and demonstrated simultaneously. This made possible the collective use of terminology that can serve as universal criteria to be applied to achieve spatial definition and to create place.

The words as terminology have the same purpose within the architectural and urban environments and when applied create similar spatial qualities. The selection and combination of aspects therefore determine the overall sense of place. The possibilities are endless, as the function, context, socio-political and economic aspects all influence
how the static physical containment is composed and subsequently influence the spatial modulation and related meaning.

The study aimed to establish criteria that could be used to illustrate the relation between spatial definition and place-making. As a result, a set of guidelines has been developed that can be used to define space and create place within architectural and urban interiors. These criteria can now be taken into any context or anthropological environment and be applied to create enclosures for human habitation to be appropriated for added meaning that is produced by the social practices of the users. The criteria are universal and are applicable to any situation. The ultimate goal still remains, to create place!

7.5 Recommendations

Suggestions for further study include aspects that have been eliminated from this investigation that could serve as further outcomes and allow for an in-depth analysis in these areas.

The first recommendation is to further a study into the anthropological aspects of place. This investigation includes the process of applying the criteria that were developed in this study to a particular location, culture and context with the external factors, socio-political and economic, which influence the production of space and place.

Secondly, an investigation into the philosophy behind the meaning of the words used in the vocabulary can be conducted. Investigations into philosophies can include the work by Lefebvre (the use and meaning of language), Foucault (arguments on power) and Casey (ideas on space).

The third recommendation is to investigate the influence of the external factors of urban interior definition that have been excluded from this study: climate, gradient and vegetation.
Fourthly, an investigation into the pure environmental psychological aspects could demonstrate the influence that place and non-place have on people.

Fifthly, the exploration into the dynamic model of spatial production and the effect thereof on the creation of place can become an extension of this study into the static, physical model of space.

The sixth recommendation crosses the boundaries between creative disciplines and focuses the relation between articulation and definition of interior space with text and/or music. Can the written word and music also be seen as universal languages, in the same way as spatial experience and meaning within spatial and textual expression?
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ADDENDUM A Precedent analyses

a) Constitutional Court, Johannesburg (OMM Design Workshop and Urban Solutions)

OMM Design Workshop and Urban Solutions produced a winning scheme for the Constitutional Court, Constitutional Hill in Johannesburg, that is rooted in the country and its people. It is a design that addresses the regional character in terms of material use and functional relationships, as well as acknowledging the history of the site with symbolism integrated into the spatial design (Lipman 2004:16-17).

According to Makin & Masojada (2004:9), the design was fed by the ideas of heritage, dignity, a better future and “the essence of what it means to be alive and human”. The building represents the values of South Africa’s democratic constitution, without ethnic or colonial references. The Court building has been placed on the crossing of the two major routes across the site: north-south and east-west. The Awaiting Trial Block has been demolished to make way for the new Court building and from an urban design point of view; the site is once again integrated with the city grid. The symbolism in this location is to open the once confined space to “create an accessible public open space at the centre of Constitution Hill that celebrated the right to gather” (Makin & Masojada 2004:11).

The building consists of four components: the Court foyer and chamber, the library and administration, the exhibition space and the judges’ chambers. The Court Foyer that serves the major public function of the architectural interior is the important space for this investigation.

Of particular note are “…housed elements, which might attract communal activity – those, like the Court Foyer and long Exhibition Stairs that call for general access – on the edges of the paths and other open spaces, specifically, the Great African Steps.” (Lipman 2004:18). The concept of a tree as symbol for
communal gathering has been utilised in the Court Foyer. The roof is supported by slanting columns that modulate the space. Thuse of concrete, timber, steel, stone and glass is enhanced by the intangible material, light, that filters through the space. These materials have been selected due to the surface qualities “onto which light would fall and reflect in colour, coolness and warmth, and would show scale, volume, silhouette, relief, soft whiteness and smooth undulating shininess” (Makin & Masojada 2004:13). The movement of the sun during the day changes the character of the interior and the way people feel and experience the space.

The top section of the Court Foyer wall has the following inscribed in all 11 official languages: freedom, dignity and equality; a building that is accessible to all.

b) Philippi public spaces, Cape Town

Philippi Lansdowne public space project (Du Toit and Perrin, in association with Jacques Theron Architects)
The visibility of the site at the corner of Lansdowne Road and Ingulube Drive ensured accessibility to the new public space in Philippi; with the aim of a place that will be appropriated by the community. It addresses the demand for a collective space that can accommodate various functions, and grow and adapt over time with the community (Philippi Lansdowne public space project 2003:56).

The project allowed for the development of a public space within an urban framework that includes various uses. The space is designed around a central court, defined by pedestrian traffic routes between housing areas. The court is framed by a colonnade, 4m x 20m, that defines the forecourt of the open space. This facilitates various mixed uses that are fed by the traffic on the routes to strengthen trade (Philippi Lansdowne public space project 2003:57). The space
is surrounded by housing beyond and therefore centrally located within the community.

Materials have been selected due to durability and robustness; an off-shutter concrete column and beam structure with a gum pole overhead covering defines the public open space. The patterns of light and shade through these structures create a sense of place (Philippi Lansdowne public space project 2003:57).

Joe Gqabi station square (ARG Design and Lucien le Grange Urban Designers and Architects)
The design of the Joe Gqabi station square facilitates the activities of daily commuters using the transport systems within the urban environment of Philippi. The design transformed the environment into a positive space with the application of principles of creating a square. The square forms the forecourt to the station and allows movement between the residential areas behind and the station activities (Klitzner 2005:26).

A multi-function approach is emphasised by the physical elements that define the spaces. Vertical elements define the boundaries of the square that is integrated with surface patterns and a water-feature. Surface treatment, soft landscape elements, illumination, seating and celebratory elements are all integrated into the detail resolution that allows for spatial definition and place-making (Klitzner 2005:26-29).

These aspects will be further investigated in the following chapters with an interpretation of data.

Philippi public transport interchange (Du Toit and Perrin Architects in Association)
The Philippi public transport interchange is a development in a South African informal settlement situated on the Cape Flats. The aim was to establish a
process of transformation in public space, and a legible collection and layout of spaces was necessary in the spatial planning of a combination of diverse trade activities. Connections and links between spaces had to be comprehensive in reinforcing the conception of the place. The article refers to the idea of “urban rooms” defined with edges of colonnades articulating the main areas. This method was aimed at creating a structure related to human scale (Philippi public transport interchange 2002:30). The important activities of the area had to be understood in order to design a space that would add value to the community. These spaces were linked as a cluster of outdoor rooms, with people appropriating it. The design intervention and the legibility of the design still allow for collective interpretation and perception of the spaces.

**Philippi community facility precinct and public plaza (City of Cape Town Design Services, Architectural Division)**

The aim of the Philippi Community Facility Precinct and Plaza addresses the need to create place, to maximise the attributes, upgrade routes and spaces, and ultimately the potential of the area (The Philippi Community Facility Precinct and Public Plaza 2001:145). The importance of a successful public place, is due to the duration the community spend time outside and thus the need to extend the living environment to the outside. “…because of the inability of private spaces to accommodate daily household needs and activities. Accordingly, urban public spaces (streets, squares, promenades and green spaces) should be seen as representing the primary form of social infrastructure in cities” (Dewar 2003:34).

This development forms part of the ‘dignified places programme’ to encourage informal trade and social interaction. Spaces are defined with column and beam structures that frame the view over the playing fields, steps and brick surrounds for the trees that double as seating and placing trees (Dewar 2003:36). Ceramic mosaics add to the spirit of the place with the introduction of colour and texture. The community has been involved in the implementation of the designs.
The Philippi community facility precinct and public plaza have been identified as a development in public place improvement. The criteria applied in the design of this space will be analyzed in gathering information for this sub-problem. Areas of intervention were identified as the following: providing shelter against elements, surface treatment, and strategic areas to accommodate various numbers of people and community activities. The space defining opportunities are important for the study, together with the community involvement not only in planning, but also in execution. The application of theoretical information is analysed and understood in a South African context.

c) Glass Shutter House, Tokyo (Shigeru Ban)
The Glass Shutter House by architect, Shigeru Ban, has been commissioned by the Tokyo television chef, Yoshiharu Doi with his wife and daughter. The house is fitted on a tight site needed to accommodate various functional requirements ranging from public to private (Webb 2005:82).

The spaces have been divided vertically, but also horizontally within the interior. The ground floor contains the restaurant and kitchen exposed to the restaurant space that opens up to the street and the tapering courtyard on the side. The mezzanine floor houses a semi-private space, the studio that is set back from the front façade. The studio is used for the recording of programmes, conducting classes and family dinners. The third level is set back according to local regulations and is barely noticed from the street that allows for improved privacy even though the building has public functions.

According to Webb (2005:82), Ban experimented with the blurring of physical boundaries. This is made possible with the use of aluminium framed glass shutters that slide up into a recessed roof container and open the 4m x 16m x 8m space to the urban surroundings. The interplay of solid and void, transparency and translucency is all important in the design that addresses a “duality of layers”
(Webb 2005:84). The spatial definition works with the concept of transformation in the changing character of the space. A translucent screen allows for visual contact between inside and outside when the shutters are drawn, once opened, the quality speaks of lightness, permeability and of “varying degrees of exposure and enclosure” with the curtains that wave in the wind (Webb 2005:84). In this open state, the vertical and horizontal structure articulates the volume.

Ban experimented with the traditional approach of flexibility and multi-use spaces in Japanese culture with the combination of public and private spaces, as well as technological materials used in the same design strategy as the traditional application (Webb 2005:84).

The three-dimensional quality is strengthened by the strong form and defining lines of the building. The space is modulated in a contemporary Japanese language, monotone in colour and simplicity in the design. The sense of place is achieved in the nature of the definition, the changing nature of the space during all times of the day, as well as the changing light qualities, natural and artificial. The functions of the public and private spaces will allow for varying degrees of activity and directly influence the character of the space; people, music, food, entertainment versus silence, meditation, family. These aspects contribute to creating place.

d) Whiteinch Cross, Glasgow (Gross Max)

Whiteinch Cross, the urban intervention by Gross Max in Glasgow, Scotland, transforms a redundant site in the city into an urban experience. The corner plot has been defined as an urban public place with the use of elements delineating spaces; a white tower with blue vertical light serve as landmark, two freestanding walls clad in steel define the urban interior and a galvanised steel pergola construction articulates a third plane (Holden 2003:68). The square
surface, paved in sandstone, has been divided into two levels onto which seating
is positioned in the shade of the trees that form the overhead canopy.

History has been incorporated into the design by means of the use of materials
that remind one of the industrial nature of Glasgow, as well as the inclusion of
water flowing across one of the freestanding walls, reminding of the “place for
watering horses” for which the site is known (Spens 2003:194).

The design philosophy of Gross Max concludes the concept of layering:
“…unravelling the layers of the landscape…” (Holden 2003:68). The integration
of the city qualities, artificial and organic, with the history allows for the creation

e) Castelvecchio, Verona (Carlo Scarpa)

Carlo Scarpa was requested in 1957 to restore interiors of the Castelvecchio.
The approach to this intervention is one of subtlety and a sense of discernment
for the demolition work to reveal the truth of the building through time. Scarpa,
interested in the historical transparency “…wanted to make history come alive by
a well-ordered juxtaposition of the fragments” (Los 2002:73).

A search for balance in form and material, craft and tradition and memory and
sensuality, had to be obtained in the composition and relationships between
spaces and elements. The co-existence of old and new is integrated into the
restoration. “His ability to weave his new architecture into the old was
accomplished without disrupting the feeling of these buildings and one is virtually
unable to articulate the edge between them.” (Dal Co & Mazzariol 1986:259).

The subdued use of materials adds to the sense of place; slaked lime plaster,
rough hewn concrete, stone tiles, and steel gratings. Rooms are designed
specifically for the particular art piece to be displayed. The use of perspective,
light and view in the interior creates emphasis (Los 2002:81-82).
Juxtaposition of various historical layers in the construction of the building is exposed in the truthful communication of history. “…dialogue between different materials from different historical eras, placed close together yet apart. Hence the breaks: the newly laid floors, like carpets, stop some distance short of the walls, while the walls in turn stop short of the ceilings.” (Los 2002:74). The edges and planes of the Castelvecchio and the integration of the windows and doors are investigated in the spatial definition and spatial modulation approaches.

f) **Sendero del Pinar de la Algaida, Spain (Ramón Pico and Javier López)**

Sendero del Pinar de la Algaida is a previously inaccessible, redundant salt works on the outskirts of El Puerto de Santa Maria, Spain. The site consists of three separate, but dependent ecosystems, swamplands, mudflats and a pine grove draining system. These systems have been integrated with a pedestrian pathway connecting the areas. The aim is to attract people to the area for relaxation, social interaction and contemplation (Mostaedi [s.a.]:168). The many faces of the development allow for the variety of activities; movement and circulation allow for the ever changing experiences.

The development is aimed at sustainability, as recycled materials are used sensitively, permitting restoration of the environment. A sense of place is created by the nature of the surroundings, the “ruggedness and ambiguity of the landscape” that invite contemplation; a specific spirit of place (Mostaedi [s.a.]:168).

g) **Garden Pavilion, Pretoria (Comrie & Wilkinson Architects and Urban Designers)**
The Garden Pavilion in Pretoria, a private space, follows no stylistic references, but speaks of a building that addresses space, place and tectonics as a design strategy (Steenkamp & Van Rensburg 2002:31). The design concept deals with juxtaposition of solid and void, and opacity and transparency in the spatial definition. The solid structure allows for northwest and southwest views onto the site with the use of window and door openings. The northwest elevation opens up to the garden completely with sliding doors and the southwest elevation is articulated with the repetition of columns. The sloped roof strengthens the vistas from within the interior (Garden Pavilion 2000:22).

The position of the pavilion on the site acknowledges the existing pool and house, as well as the site boundary, and is effectively fitted within these parameters. The structure is modest in scale that allows for an intimate scale (An architecture of discovery 2002:37). A sense of place is established with the integration of function, site light, material use, climate and the juxtaposition of these elements. The creation of a regional identity is enhanced by the selection of neutral materials, off-shutter concrete, timber, stone and glass that shape the experience of the interior (Steenkamp & Van Rensburg 2002:31).

h) Melrose Arch, Johannesburg (Urban Solutions, with Osmond Lange partnership in collaboration with Paul Murrain)

Melrose Arch in Johannesburg has been designed according to the concept of ‘new urbanism’. It promotes mixed use connectivity, spaces at human scale, integrated open street system and defined public and private spaces (Schoonraad 2002:44). According to Krige (2002:19), an urban framework is necessary in establishing a unified street language that includes elements of height, volume and materials. Wilson (2004) makes it clear that the development has long-term qualities in the inclusion of mixed use areas that combine residential, retail, hospitality, office and commercial use in a high density application.
Public open spaces have been created by the building edges facing the streets and square (Hermanson 2002:25). Place-making is seen as an important aspect in the creation of a culturally appropriate place. A cultural identity of genuineness, ownership and proudness was created in the material and spatial qualities where buildings meet the ground. Wilson (2004) further says that colour, texture and materials were used in adding quality to the place. Mosaics were used in open public areas as surface treatment and repeated in building detailing.

Social interaction, exchange of information, skills and material goods are all incorporated in this ‘new urbanism’ development, as all services and activities are provided for in the boundaries of the site. Definition of public and private domains is dealt with on vertical levels, public to the ground and private on higher levels. The social quality is emphasised at night, with lights, music, aromas and continuous interaction.
**ADDENDUM B: Questionnaires**

<table>
<thead>
<tr>
<th>Questionnaire: Donkin Reserve</th>
<th>Date: 14/7</th>
<th>Time: 14:50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender: Male</td>
<td>Age: 50</td>
<td></td>
</tr>
<tr>
<td>Race: Black</td>
<td>Occupation: Working</td>
<td></td>
</tr>
<tr>
<td>How often do you use the space?</td>
<td>Daily</td>
<td>Weekly</td>
</tr>
<tr>
<td>Purpose of the visit?</td>
<td>Relax from home</td>
<td>Relax from work</td>
</tr>
<tr>
<td>Live in the area?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Work in the area?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Transport here?</td>
<td>Car</td>
<td>Foot</td>
</tr>
<tr>
<td>Describe the space.</td>
<td>Quiet time</td>
<td>View of the ocean</td>
</tr>
<tr>
<td>What activities are performed here?</td>
<td>Children playing</td>
<td>People sitting</td>
</tr>
<tr>
<td>Is the Donkin a tourist attraction? Why?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>People come to look</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Know anything about the history of the Donkin?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Do you like the area, special qualities? Why?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Community space? Conversation and sense of belonging?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Does it add value to the surroundings? How?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Nature</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do you feel safe here? Why?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Is anything lacking in your opinion? That could change / improve the quality of the space?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Security at night</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Easy accessible? And clear routes?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Recommend for others to visit? Why?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Open + Ocean</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Questionnaire: Donkin Reserve**

**Gender:** Female

**Age:** Teenager

**Occupation:** Scholar

<table>
<thead>
<tr>
<th>How often do you use the space?</th>
<th>Daily</th>
<th>Weekly</th>
<th>Once a month</th>
<th>First time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purpose of the visit?</td>
<td>Relax from home</td>
<td>Relax from work</td>
<td>In the area</td>
<td>Passing through</td>
</tr>
<tr>
<td>Live in the area?</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work in the area?</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transport here?</td>
<td>Car</td>
<td>Foot</td>
<td>Bicycle</td>
<td>Other</td>
</tr>
</tbody>
</table>

Describe the space.

*Nice, nature.*

What activities are performed here?

*People reading, walking.*

Is the Donkin a tourist attraction? Why?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Other</th>
</tr>
</thead>
</table>

Know anything about the history of the Donkin?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Other</th>
</tr>
</thead>
</table>

Do you like the area, special qualities? Why?

*Open, can see around!*

Community space? Conversation and sense of belonging?

*Sea view.*

Does it add value to the surroundings? How?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Other</th>
</tr>
</thead>
</table>

Do you feel safe here? Why?

<table>
<thead>
<tr>
<th>Yes Daily</th>
<th>No Night</th>
<th>Other</th>
</tr>
</thead>
</table>

Is anything lacking in your opinion? That could change/improve the quality of the space?

*Lighting, security.*

Easy accessible? And clear routes?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Other</th>
</tr>
</thead>
</table>

Recommend for others to visit? Why?

*The view.*
**Questionnaire: Donkin Reserve**

**Gender**: Male  
**Age**: 42  
**Race**: Black  
**Occupation**: Manager

<table>
<thead>
<tr>
<th>How often do you use the space?</th>
<th>Daily</th>
<th>Weekly</th>
<th>Once a month</th>
<th>First time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purpose of the visit?</td>
<td>Relax from home</td>
<td>Relax from work</td>
<td>In the area</td>
<td>Passing through</td>
</tr>
<tr>
<td>Live in the area?</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work in the area?</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transport here?</td>
<td>Car</td>
<td>Foot</td>
<td>Bicycle</td>
<td>Other</td>
</tr>
</tbody>
</table>

**Describe the space.**

Big space with lighthouse and monument, trees, and seating.

**What activities are performed here?**
- Tourists: view monuments
- Locals: seating

**Is the Donkin a tourist attraction? Why?**
- Yes  
- No  
- Other

**Know anything about the history of the Donkin?**
- Yes  
- No  
- Other

**Do you like the area, special qualities? Why?**
- Nice place, history significance

**Community space? Conversation and sense of belonging?**
- No activities as such; private individuals only, could be flea markets/attractions
- Yes  
- No  
- Other

**Does it add value to the surroundings? How?**
- Forms part of Central Hill
- Yes  
- No  
- Other

**Do you feel safe here? Why?**
- Not at night
- Yes  
- No  
- Other

**Is anything lacking in your opinion? That could change/improve the quality of the space?**
- Maintenance  
- Activities—arts/crafts/coffee shop

**Easy accessible? And clear routes? Bottom access? No clear street view from surrounding?**
- Yes  
- No  
- Other

**Recommend for others to visit? Why?**
- Cool shade, indigenous plants
- Yes  
- No  
- Other
<table>
<thead>
<tr>
<th>Questionnaire: Donkin Reserve</th>
<th>Date: 12/7</th>
<th>Time: 12:00</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td>Female</td>
<td>Age: 40's</td>
</tr>
<tr>
<td><strong>Race</strong></td>
<td>Black</td>
<td>Occupation: School Teacher</td>
</tr>
<tr>
<td>How often do you use the space?</td>
<td>Daily</td>
<td>Weekly</td>
</tr>
<tr>
<td>Purpose of the visit?</td>
<td>Relax from home</td>
<td>Relax from work</td>
</tr>
<tr>
<td>Live in the area?</td>
<td>Yes ✓</td>
<td>No</td>
</tr>
<tr>
<td>Work in the area?</td>
<td>Yes ✓</td>
<td>No</td>
</tr>
<tr>
<td>Transport here?</td>
<td>Car</td>
<td>Foot ✓</td>
</tr>
</tbody>
</table>

Describe the space.  
children playing in park  open

What activities are performed here?  
children swimming, playing ball + games

Is the Donkin a tourist attraction? Why?  
people come and see space. Yes No Other

Know anything about the history of the Donkin?  
Yes ✓ No Other

Do you like the area, special qualities? Why?  
children learn: plants /shapes Yes ✓ No Other

Community space? Conversation and sense of belonging?  
Yes ✓ No Other

Does it add value to the surroundings? How?  
open /loly Yes ✓ No Other

Do you feel safe here? Why?  
close to school. Yes ✓ No Other

Is anything lacking in your opinion? That could change / improve the quality of the space?  
Yes ✓ No Other

Easy accessible? And clear routes?  
Yes ✓ No Other

Recommend for others to visit? Why?  
fun /play. Yes ✓ No Other
<table>
<thead>
<tr>
<th>Questionnaire: Donkin Reserve</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td>Female</td>
</tr>
<tr>
<td><strong>Race</strong></td>
<td>Coloured</td>
</tr>
<tr>
<td><strong>Occupation</strong></td>
<td>Workday</td>
</tr>
<tr>
<td><strong>How often do you use the space?</strong></td>
<td>Daily, Weekly, Once a month, First time</td>
</tr>
<tr>
<td><strong>Purpose of the visit?</strong></td>
<td>Relax from work, Relax from home, In the area, Passing through</td>
</tr>
<tr>
<td><strong>Live in the area?</strong></td>
<td>Yes, No</td>
</tr>
<tr>
<td><strong>Work in the area?</strong></td>
<td>Yes, No</td>
</tr>
<tr>
<td><strong>Transport here?</strong></td>
<td>Car, Foot, Bicycle, Other</td>
</tr>
<tr>
<td><strong>Describe the space.</strong></td>
<td>Peaceful, View exquisite, See new people</td>
</tr>
<tr>
<td><strong>What activities are performed here?</strong></td>
<td>Sitting, Relaxing</td>
</tr>
<tr>
<td><strong>Is the Donkin a tourist attraction? Why?</strong></td>
<td>Yes, No, Other</td>
</tr>
<tr>
<td><strong>Know anything about the history of the Donkin?</strong></td>
<td>Yes, No, Other</td>
</tr>
<tr>
<td><strong>Do you like the area, special qualities? Why?</strong></td>
<td>Yes, No, Other</td>
</tr>
<tr>
<td><strong>Is anything lacking in your opinion? That could change/improve the quality of the space?</strong></td>
<td>Yes, No, Other</td>
</tr>
<tr>
<td><strong>Easy accessible? And clear routes?</strong></td>
<td>Yes, No, Other</td>
</tr>
<tr>
<td><strong>Recommend for others to visit? Why?</strong></td>
<td>Yes, No, Other</td>
</tr>
</tbody>
</table>

**Date:** 12/17  **Time:** 12:10
<table>
<thead>
<tr>
<th>Questionnaire: Donkin Reserve</th>
<th>Date: 12/4</th>
<th>Time: 12:05</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Male</td>
<td>Age</td>
</tr>
<tr>
<td>How often do you use the space?</td>
<td>Daily</td>
<td>Weekly</td>
</tr>
<tr>
<td>Purpose of the visit?</td>
<td>Relax from work</td>
<td>Relax from home</td>
</tr>
<tr>
<td>Live in the area?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Work in the area?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Transport here?</td>
<td>Car</td>
<td>Foot</td>
</tr>
</tbody>
</table>

Describe the space.
- Night: Dangerous.

What activities are performed here?
- Tourists view.
- People playing soccer on Saturdays.

Is the Donkin a tourist attraction? Why? | Yes | No | Other |

Know anything about the history of the Donkin? | Yes | No | Other |

Do you like the area, special qualities? Why? | Central hill with historical character. | Yes | No | Other |

Community space? Conversation and sense of belonging? | Not as good as can be. | Yes | No | Other |
- Soccer playing
- Children playing

Does it add value to the surroundings? How? | Yes | No | Other |

Do you feel safe here? Why? | Yes | No | Other |
- Not enough light.

Is anything lacking in your opinion? That could change/ improve the quality of the space? Address need for activities for tourism. | Yes | No | Other |

Easy accessible? And clear routes? | Yes | No | Other |

Recommend for others to visit? Why? | Yes | No | Other |
<table>
<thead>
<tr>
<th>Questionnaire: Donkin Reserve</th>
<th>Date: 12/17</th>
<th>Time: 12:30</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Male</td>
<td>Age</td>
</tr>
<tr>
<td>Race</td>
<td>White</td>
<td>Occupation</td>
</tr>
<tr>
<td>How often do you use the space?</td>
<td>Daily</td>
<td>Weekly</td>
</tr>
<tr>
<td>Purpose of the visit?</td>
<td>Relax from home</td>
<td>Relax from work</td>
</tr>
<tr>
<td>Live in the area?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Work in the area?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Transport here?</td>
<td>Car ✔</td>
<td>Foot ✔</td>
</tr>
<tr>
<td>Describe the space.</td>
<td>Open space in heart of city</td>
<td>Not cluttered - not parks, but open.</td>
</tr>
<tr>
<td>What activities are performed here?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Is the Donkin a tourist attraction? Why?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Know anything about the history of the Donkin?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Do you like the area, special qualities? Why?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Community space, Conversation and sense of belonging?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Does it add value to the surroundings? How?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Do you feel safe here? Why?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Is anything lacking in your opinion? That could change / improve the quality of the space?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Easy accessible? And clear routes?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Recommend for others to visit? Why?</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>
**Questionnaire: Donkin Reserve**

<table>
<thead>
<tr>
<th>Gender</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Race</td>
<td>White</td>
</tr>
<tr>
<td>Age</td>
<td>50s</td>
</tr>
<tr>
<td>Occupation</td>
<td>Business</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>How often do you use the space?</th>
<th>Daily</th>
<th>Weekly</th>
<th>Once a month</th>
<th>First time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purpose of the visit?</td>
<td>Relax from home</td>
<td>Relax from work</td>
<td>In the area</td>
<td>Passing through</td>
</tr>
<tr>
<td>Live in the area?</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work in the area?</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transport here?</td>
<td>Car</td>
<td>Foot</td>
<td>Bicycle</td>
<td>Other</td>
</tr>
</tbody>
</table>

Describe the space:
- extraordinarily
- well maintained
- tourists

What activities are performed here?
- Lunch breaks
- playschool children
- bird watching
- loves

Is the Donkin a tourist attraction? Why?
- Yes ☑
- No
- Other

Know anything about the history of the Donkin?
- Yes ☑
- No
- Other

Do you like the area, special qualities? Why?
- aesthetically pleasing
- interesting/historical
- Yes ☑
- No
- Other

Community space? Conversation and sense of belonging?
- Children
- Yes ☑
- No
- Other

Does it add value to the surroundings? How?
- Yes ☑
- No
- Other

Do you feel safe here? Why?
- Yes ☑
- No
- Other

Is anything lacking in your opinion? That could change/improve the quality of the space?
- indigenous plants (on slope)
- Yes ☑
- No
- Other

Easy accessible? And clear routes?
- More information required
- Yes
- No ☑
- Other

Recommend for others to visit? Why?
- Yes ☑
- No
- Other
<table>
<thead>
<tr>
<th>Questionnaire: Donkin Reserve</th>
<th>Date:</th>
<th>Time:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td>Male</td>
<td>Age</td>
</tr>
<tr>
<td><strong>Race</strong></td>
<td>White</td>
<td>Occupation</td>
</tr>
<tr>
<td><strong>How often do you use the space?</strong></td>
<td>Daily</td>
<td>Weekly</td>
</tr>
<tr>
<td><strong>Purpose of the visit?</strong></td>
<td>Relax from home</td>
<td>Relax from work</td>
</tr>
<tr>
<td><strong>Live in the area?</strong></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td><strong>Work in the area?</strong></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td><strong>Transport here?</strong></td>
<td>Car</td>
<td>Foot</td>
</tr>
</tbody>
</table>

Describe the space.

- Barren and featureless
- Required

What activities are performed here?
- People in transit/sitting
- Soccer/painting/tourists

Is the Donkin a tourist attraction? Why?
- Yes | No | Other

Know anything about the history of the Donkin?
- Yes | No | Other

Do you like the area, special qualities? Why?
- History

Community space? Conversation and sense of belonging?
- Could be the same as the town hall interaction

Does it add value to the surroundings? How?
- History

Do you feel safe here? Why?
- Yes | No | Other

Is anything lacking in your opinion? That could change/improve the quality of the space?
- Usable gradient / terraces

Easy accessible? And clear routes?
- Yes | No | Other

Recommend for others to visit? Why?
- Yes | No | Other

---

not enough enclosure on human scale

make something of focal point
edges to be improved.
### Questionnaire: Donkin Reserve

<table>
<thead>
<tr>
<th>Gender</th>
<th>Female</th>
<th>Age</th>
<th>Teenager(s)</th>
</tr>
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<tbody>
<tr>
<td>Race</td>
<td>Coloured</td>
<td>Occupation</td>
<td>Student(s)</td>
</tr>
<tr>
<td>How often do you use the space?</td>
<td>Daily</td>
<td>Weekly</td>
<td>Once a month</td>
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<tr>
<td>Purpose of the visit?</td>
<td>Relax from home</td>
<td>Relax from work</td>
<td>In the area</td>
</tr>
<tr>
<td>Live in the area?</td>
<td>Yes</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Work in the area?</td>
<td>Yes</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Transport here?</td>
<td>Car</td>
<td>Foot</td>
<td>Bicycle</td>
</tr>
</tbody>
</table>

Describe the space:
- Shoot out over park
- Nile view

What activities are performed here?
- People sitting, walking

Is the Donkin a tourist attraction? Why?
- Yes | No | Other

Know anything about the history of the Donkin?
- Yes | No | Other

Do you like the area, special qualities? Why?
- View + park
- Other

Community space? Conversation and sense of belonging?
- Yes | No | Other

Does it add value to the surroundings? How?
- Monument
- Other

Do you feel safe here? Why?
- Yes | Day | Other

Is anything lacking in your opinion? That could change / improve the quality of the space?
- No enough lights
- Other

Easy accessible? And clear routes?
- Yes | No | Other

Recommend for others to visit? Why?
- Park | Other

Date: 2014 | Time: 11:00
<table>
<thead>
<tr>
<th>Questionnaire: Donkin Reserve</th>
<th>Date: 2014</th>
<th>Time: 12:00</th>
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<tbody>
<tr>
<td>Gender</td>
<td>Female</td>
<td>Age</td>
</tr>
<tr>
<td>Race</td>
<td>Black</td>
<td>Occupation</td>
</tr>
<tr>
<td>How often do you use the space?</td>
<td>Daily</td>
<td>Weekly</td>
</tr>
<tr>
<td>Purpose of the visit?</td>
<td>Relax from home</td>
<td>Relax from work</td>
</tr>
<tr>
<td>Live in the area?</td>
<td>Yes</td>
<td>No</td>
</tr>
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<td>No</td>
</tr>
<tr>
<td>Transport here?</td>
<td>Car</td>
<td>Foot</td>
</tr>
</tbody>
</table>

Describe the space.
- Open space
- Beautiful view
- Vantage point

What activities are performed here?
- People sitting/reading

Is the Donkin a tourist attraction? Why?
- Yes | No | Other

Know anything about the history of the Donkin?
- Yes | No | Other

Do you like the area, special qualities? Why?
- View / park
- Yes | No | Other

Community space? Conversation and sense of belonging?
- Not really
- People alone
- Yes | No | Other

Does it add value to the surroundings? How?
- Yes | No | Other

Do you feel safe here? Why?
- Yes | No | Other

Is anything lacking in your opinion? That could change/improve the quality of the space?
- Security
- Yes | No | Other

Easy accessible? And clear routes?
- Yes | No | Other

Recommend for others to visit? Why?
- Yes | No | Other
<table>
<thead>
<tr>
<th>Questionnaire: Donkin Reserve</th>
<th>Date: 26/4</th>
<th>Time: 13:00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
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</tr>
<tr>
<td>Race</td>
<td>Black</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>26</td>
<td></td>
</tr>
<tr>
<td>Occupation</td>
<td>Working</td>
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</tr>
<tr>
<td>How often do you use the space?</td>
<td>Daily</td>
<td>Weekly</td>
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<tr>
<td>Purpose of the visit?</td>
<td>Relax from home</td>
<td>Relax from work</td>
</tr>
<tr>
<td>Live in the area?</td>
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<td>No</td>
</tr>
<tr>
<td>Work in the area?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Transport here?</td>
<td>Car</td>
<td>Foot</td>
</tr>
<tr>
<td>Describe the space.</td>
<td>Park</td>
<td>Enjoy</td>
</tr>
<tr>
<td>What activities are performed here?</td>
<td>Siting</td>
<td>Children playing</td>
</tr>
<tr>
<td>Is the Donkin a tourist attraction? Why?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Know anything about the history of the Donkin?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Do you like the area, special qualities? Why?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Community space? Conversation and sense of belonging?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Does it add value to the surroundings? How?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
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</tr>
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</tr>
<tr>
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</tr>
<tr>
<td>Recommend for others to visit? Why?</td>
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<td>No</td>
</tr>
</tbody>
</table>