

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.

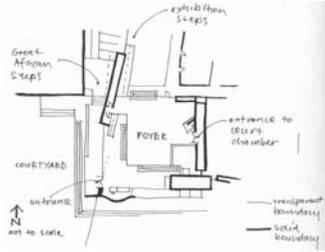
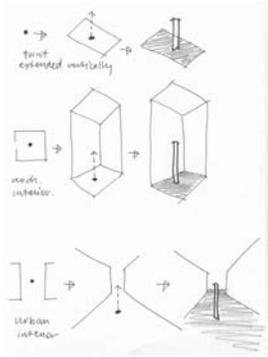
Term: Point within architectural interiors			
Location	Photo	Sketch	Diagram
Found as node or point of hierarchy	 <p>(Lipman 2004:17)</p>	 <p>Adapted from (Makin & Masojada 2004:10)</p>	 <p>(Grobler 2005)</p>

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

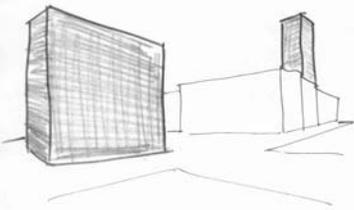
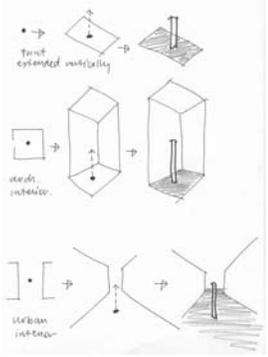
Term: Point within urban interiors			
Location	Photo	Sketch	Diagram
Found as node or point of hierarchy	 <p>(Constitutional Court 2004:84)</p>	 <p>Adapted from (Constitutional Court 2004:84)</p>	 <p>(Grobler 2005)</p>

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.

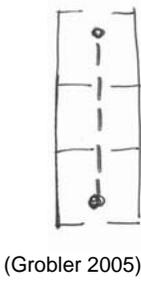
Term: Line within architectural interiors			
Location	Photo	Sketch	Diagram
Found as axis or connecting element	 <p>Adapted from (Noble 2004:21)</p>	 <p>(Grobler 2005)</p>	 <p>(Grobler 2005)</p>

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

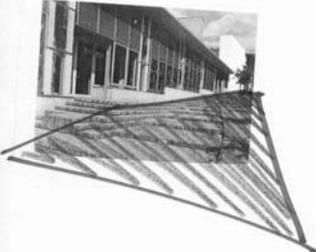
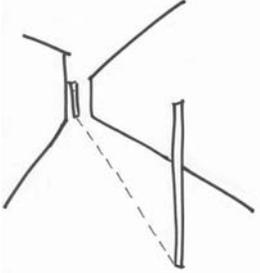
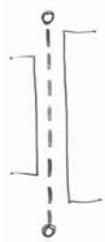
Term: Line within urban interiors			
Location	Photo	Sketch	Diagram
Serve as axis or connecting element	 <p>Adapted from (Makin & Masojada 2004:11)</p>	 <p>(Grobler 2005)</p>	 <p>(Grobler 2005)</p>

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.

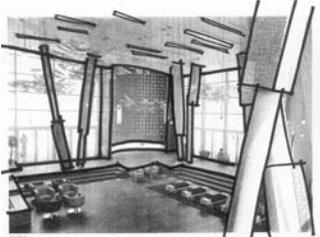
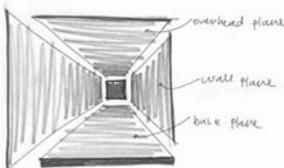
Term: Plane within architectural interiors			
Location	Photo	Sketch	Diagram
Found as vertical or horizontal datum defining space	 <p>Adapted from (Lipman 2004:17)</p>	 <p>Adapted from (Lipman 2004:17)</p>	 <p>Architectural interior -planes (Grobler 2005)</p>

Figure 5-5: Plane within architectural interiors (Grobler 2006)

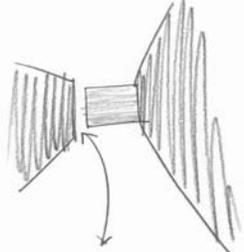
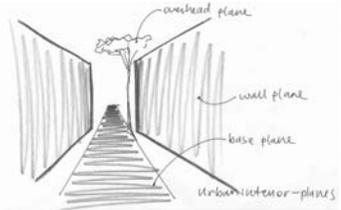
Term: Plane within urban interiors			
Location	Photo	Sketch	Diagram
Found as vertical or horizontal datum defining space	 <p>Adapted from (Makin & Masojada 2004:9)</p>	 <p>(Grobler 2005)</p>	 <p>Urban interior -planes (Grobler 2005)</p>

Figure 5-6: Plane within urban interiors (Grobler 2006)

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.

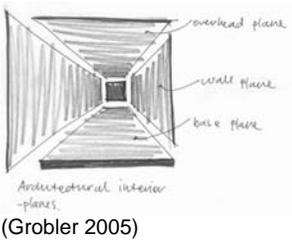
Term: Volume within architectural interiors			
Location	Photo	Sketch	Diagram
Point, line and plane defining space in combination	 <p>(Lipman 2004:17)</p>	 <p>Adapted from (Lipman 2004:17)</p>	 <p>Architectural interior-planes (Grobler 2005)</p>

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

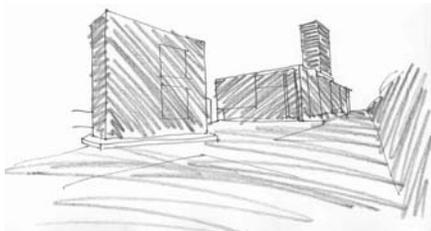
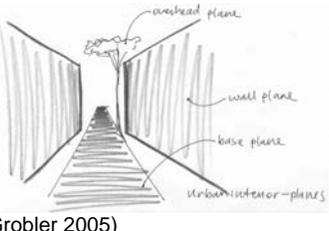
Term: Volume within urban interiors			
Location	Photo	Sketch	Diagram
Found as node or point of hierarchy	 <p>(Constitutional Court 2004:84)</p>	 <p>Adapted from (constitutional Court 2004:84)</p>	 <p>Urban interior-planes (Grobler 2005)</p>

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.

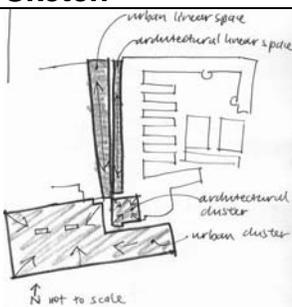
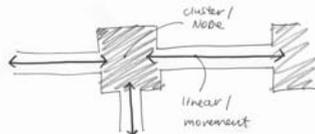
Term: Shape and size within architectural interiors			
Location	Photo	Sketch	Diagram
Determined by type of space and function	 <p>(Constitutional Court 2004:81)</p>	 <p>Adapted from (Makin & Masojada 2004:10)</p>	 <p>(Grobler 2005)</p>

Figure 5-9: Shape and size within architectural interiors (Grobler 2006)

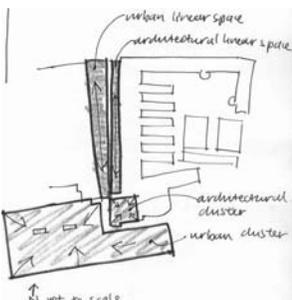
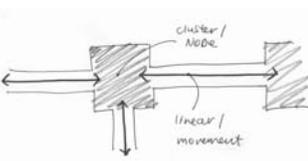
Term: Shape and size within urban interiors			
Location	Photo	Sketch	Diagram
Determined by the urban planning, type of space and function	 <p>(Constitutional Court 2004:84)</p>	 <p>Adapted from (Makin & Masojada 2004:10)</p>	 <p>(Grobler 2005)</p>

Figure 5-10: Shape and size within urban 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.

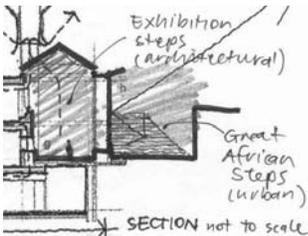
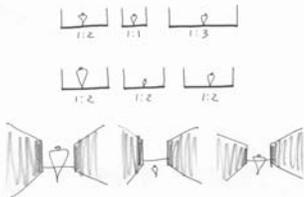
Term: Proportion and scale within architectural interiors			
Location	Photo	Sketch	Diagram
Related to the dimensions of the human body	 <p>(Noble 2004:21)</p>	 <p>Adapted from (The Constitutional Court, Johannesburg 2004/5:20)</p>	 <p>(Grobler 2005)</p>

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

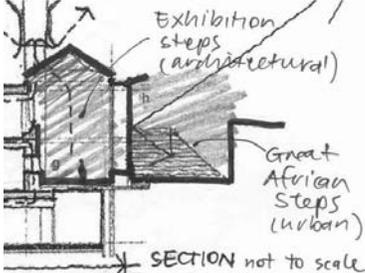
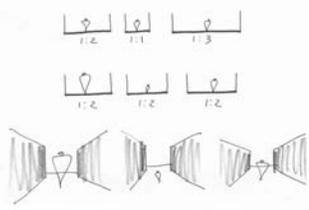
Term: Proportion and scale within urban interiors			
Location	Photo	Sketch	Diagram
Related to the dimensions of the urban surrounding	 <p>(Constitutional Court 2004:81)</p>	 <p>Adapted from (The Constitutional Court, Johannesburg 2004/5:20)</p>	 <p>(Grobler 2005)</p>

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	
Location	Photo
Colour introduced with the application of materials and finishes	 <p>(Lipman 2004:17)</p>

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

Term: Colour within urban interiors	
Location	Photo
Introduced with the application of materials and finishes.	 <p>(Makin & Masojada 2004:9)</p>

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.

Term: Texture within architectural interiors	
Location	Photo
Included with the intrinsic qualities of materials and finishes	 <p>(Lipman 2004:17)</p>

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

Term: Texture within urban interiors	
Location	Photo
Included with the intrinsic qualities of materials and finishes	 <p>(Constitutional Court 2004:84)</p>

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	 <p>(Lipman 2004:17)</p>

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	 <p>(Constitutional Court 2004:81)</p>

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	 <p>(Grobler 2005)</p>	 <p>(Grobler 2005)</p>

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

Term: Light and shade within urban interiors	
Location	Photo
Natural and artificial light modulating open and partially defined space	 <p>(Constitutional Court 2004:84)</p>

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.

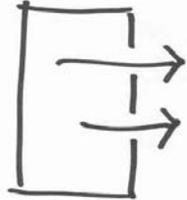
Term: Views and vistas within architectural interiors			
Location	Photo	Sketch	Diagram
Visual and physical connections between adjacent spaces	 <p>Adapted from (Noble 2004:21)</p>	 <p>Adapted from (Noble 2004:21)</p>	 <p>(Grobler 2005)</p>

Figure 5-21: Views and vistas within architectural interiors (Grobler 2006)

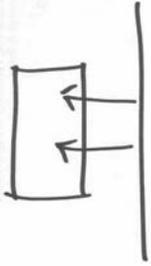
Term: Views and vistas within urban interiors			
Location	Photo	Sketch	Diagram
Visual and physical connections between adjacent spaces	 <p>Adapted from (Makin & Masojada 2004:11)</p>	 <p>Adapted from (Makin & Masojada 2004:11)</p>	 <p>(Grobler 2005)</p>

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.