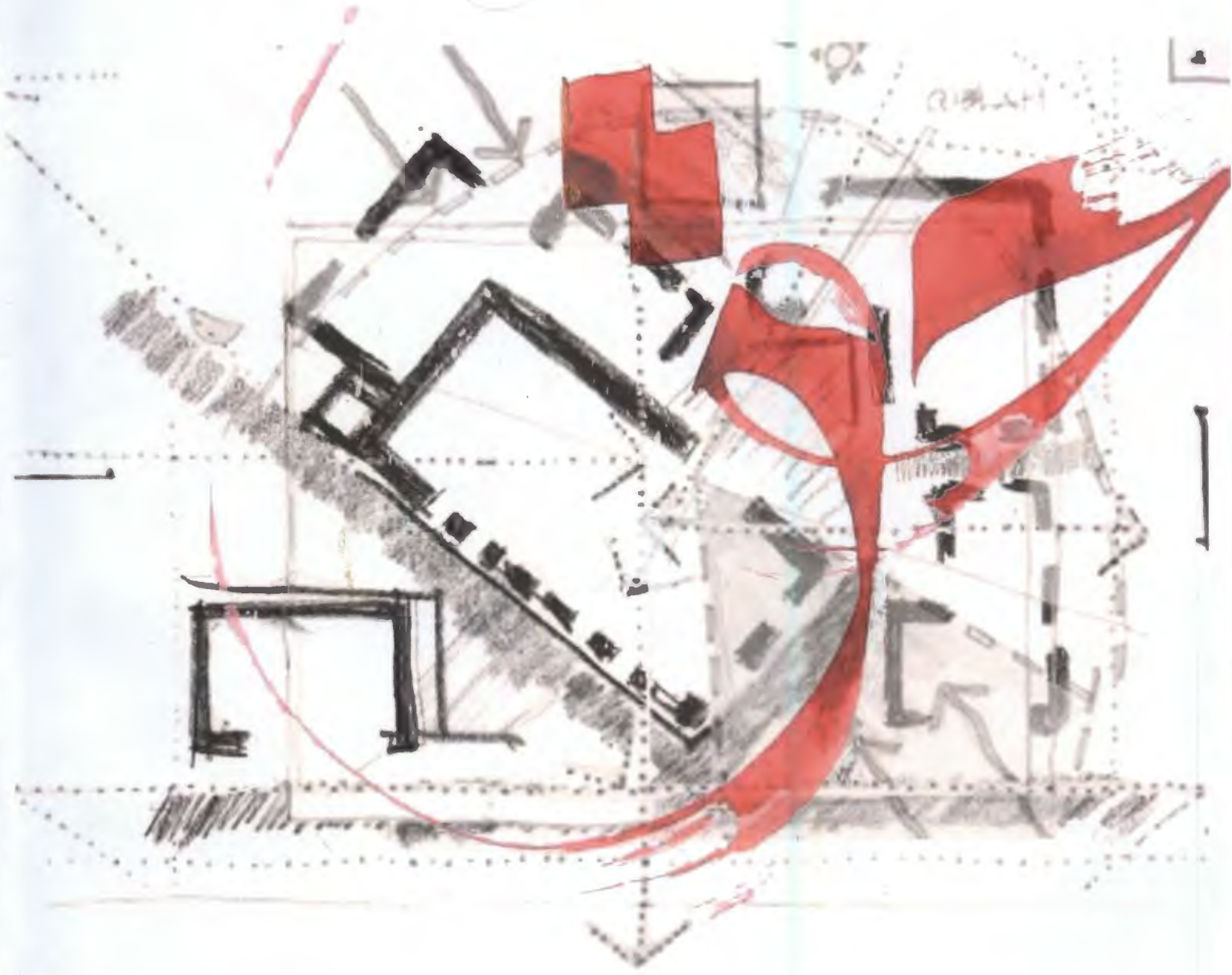


28



QUINTESSENCE OF FAITH
A mosque for Khayelitsha

Shaakira Chohan

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QUINTESSENCE OF FAITH

A mosque for Khavelitsha

Shaakira Chohan
CHHSHA002

submitted in partial fulfillment of the degree
MASTER OF ARCHITECTURE (PROFESSIONAL)



THE INSIDER'S VIEW FROM THE OUTSIDE: ENTRY INTO THE THESIS

Entry into the religious fabric of Islam, the opportunity of prayer has always been regarded within the construction the belief that Islam is more than just a religion, but rather a way of life. led on to the discovery and contemplation of the spaces in which ritual can to God is elevated. Muslims have long always used a certain fascination for the. However, it was only until I actually stepped into the land and experienced the strong spiritual qualities of light, architectural beauty and job through aneously power, that I truly began to understand the role of architecture as a generator of spiritual space. This trip across a journey in architectural world and time and space only continues to show a space between present and ritual. Even though the culture of Islam and mosque are familiar to me, the research over the time was over one of a journey of discovery. Having only recently moved to the city of Cape Town from Johannesburg, I have had to learn about the mosque as it is situated within this new specific context, and have had to understand the cultural dynamics that influence mosques in the city.

This thesis is primarily to find an architectural expression that links references to my life local references of mosques, as well as the comparative gained from an understanding of my new context with its own mosque architecture and culture. It therefore, aims to document my thoughts which was led to my research within the subject of mosque architecture in South Africa.





(part a) **_THEORY & TECHNOLOGY COMPONENT**

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He leaves the lane and into the mosque grounds unaided he walks
To surrender in bliss on cool tiles while sin his soul no longer stalks
Great faith in the right path, he tells me as his prayers fly upward
No matter: good character, good deeds, tis this does Allah reward.

[Max lane, *Walk to the mosque*, 1969]

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(bismilla)_INTRODUCING THE TOPIC



Muhammad sat shivering as he told his wife about the revelation he had received. It was his habit to retreat to the Cave of Hira where he would meditate for days. It was on one of such meditations that the angel Gabriel came to him with Divine Revelation.

This was the beginning of many more revelations which would make up the Holy Quran in its entirety. This was the birth of Islam, a religion, a way of life.

After years of rejection and persecution in Mecca, God instructed Muhammed (PBUH) and his followers to migrate to Medina. It was in Medina that it was decided to build a place of prayer, and so began the "architecture" of the world's first mosque.

أذان

Adhaan – the call to prayer recited in a melodious tone, usually over a loudspeaker or from an elevated position by a nominated person for each of the five daily prayers

Jamaat – congregation of people praying together, usually in a mosque

جماعت

Masjid – Arabic term for a mosque which literally translates into 'place of prostration'

مسجد

Masharabiya – sun shading device usually made from timber patterned grills

مشربيا

Mihrab – niche placed in the wall which faces towards Makkah

Mnaret – tower from which call to prayer is administered

Muqarnas - stalactite-like cell carvings used in mosques to create acoustic and lighting effect

مقرنس

Qiblah – the direction towards the House of God in Makkah which all Muslims are required to face during prayer regardless of location in the world

Salah – prayer performed five times daily as prescribed

Tawhid – The belief, fundamental to Islam, in One God

Ummah – Arabic word meaning 'community' or 'nation'. It is used to describe the entire global community of Muslim believers which conveys a sense of unity and brotherhood

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

شَعَدَهُ وَنُصِّلَ عَلَيَّ رَسُولِي الْكَرِيمِ

عَمَّا بَعْدَ

INTRODUCTION

The architecture of mosques is a sacred one. It acts as a moment of reflection for Muslim believers within the chaos and eclecticism of the city.

However, within the contemporary and plural society in which we find ourselves situated in today, there has been the need to reinvestigate the role of the mosque within our cities. The reflection of this role in an architectural interpretation is one which this paper seeks to explore - more specifically, it seeks to find an appropriate expression for a contextually relative and responsive African mosque which not only reveals itself as a space that serves its community, but also reinstates the poetics of the faith of Islam and its related architecture of mosques.

The investigation includes an understanding of the faith of Islam as a religion, the analysis of the development of mosque architecture and its elements throughout history and globally, and the effect that it has on the contemporary landscape of South Africa.

With Islam being an important part of the heritage of South Africa, and in particular Cape Town, the design of its most revered architectural object needs to be suitably addressed. Mosque architecture is occupied with ethics and principles which, even in a world of new-age information, multiplicity and difference, has, and should never, be compromised. This makes the mosque predetermined in its type.¹ However, cultural influences have led to the stylistic expression of the mosque being varied.²

There have been various discussions regarding contemporaneity and its effect on mosque architecture. Various attempts at redefining, deconstructing and re-imagining the mosque and its related effect have been the topic of discussions at symposiums.³ This paper proposes that iconoclastic solutions to this issue are radical in their search for a new architectural language. Recognisable completely traditional and revivalist designs occupy the other end of the spectrum and the challenge lies in

1. Spatial expressions and articulation such as the orientation towards Meekkah, the separation of praying areas between males and females, distinction of thresholds between praying and non-praying spaces.

2. Fisher, R, Le Roux, S and De Beer, P, *Architecture SA - 500 years of Islam in South Africa* July & August (1994): 16.

3. Symposiums such as the Symposium on Mosque Architecture organised by the College of Architecture and Planning at King Saud University in collaboration with the Ministry of Islamic Affairs, Endowment, Da'wa and Guidance in 1999.

developing an architecture that is situated between these two extremes and that acts as a mirror of the socio-economic, cultural and technological reality of the society that it serves.⁴ Furthermore, Islam is a religion that is strongly based on firm principles that are applicable to all Muslim communities at any point in time and across eras. In an ever-changing world, it is the constant in the life of a Muslim, the reference that keeps man grounded on this earth. It is then appropriate that the fundamental piece of architecture attached to such a religion, be responsive in its commitment and language. For this reason, there is a need for the design of a spiritual space which is ethical in all recognisable mosque architectural ways and which reflects its cultural context; and not to bring innovation that is unjustified into a discipline that embodies tradition. This paper aims to extract the constituents of a contemporary sacred space through extensive literature scoping, understanding the context and its challenges and engagement with the people who would use the building. While most of the association attached to mosques are formally based, the fundamentality of Islam as a social religion needs to be adequately re-addressed so that the mosque performs as the heart of the community that it serves, as a culturally and contextually articulated space while continually evoking a sense of spirituality and sacredness through the human experiential qualities that it embodies.

The structure of this thesis developed along the same method that it advocates for, which reinforces the proposition made:- It began as and continues to be an exciting journey of discovery that reveals the essences of the religion, the culture that it embraces and the resultant articulation in built form.

Refreshing and developing on the knowledge that I did have on Islam as a practicing Muslim, I dissected mosque architecture to highlight the essential elements contained in the typology. An analysis of global mosque architecture and local aspirations provided a comparative illustration of the ambitions within the discourse of mosque architecture as it occurs internationally and within South Africa. Following this analysis, the paper addresses issues and elements of mosques which are essential to the discourse (due to its immutable ethical and religious regulators) and those that have, through contemporaneity, been lost. This paper advocates for the reclamation of such elements. It was also necessary for me to simultaneously familiarise myself with the context of Cape Town and the practice of Islam within the area.

Literature explorations which provided an extensive history into the development of Islam in the city were conjunctively carried out with interviews with academics, religious leaders and Muslims in Cape Town. This process produced a critical layer of the research which began to highlight specific contextual characteristics and historical implications on the mosques. Finally the research culminates into the focused siting of mosques within townships around Cape Town and the responsibility that the mosque holds in such a vibrant, culturally imbued context of high density and many a challenge. Through this process, the role of the mosque within its urban, social and cultural context is understood and a conclusion is able to be drawn.

4. Serageldin, I and Steele J, *Architecture of the Contemporary Mosque*, Academy Editions, 1996

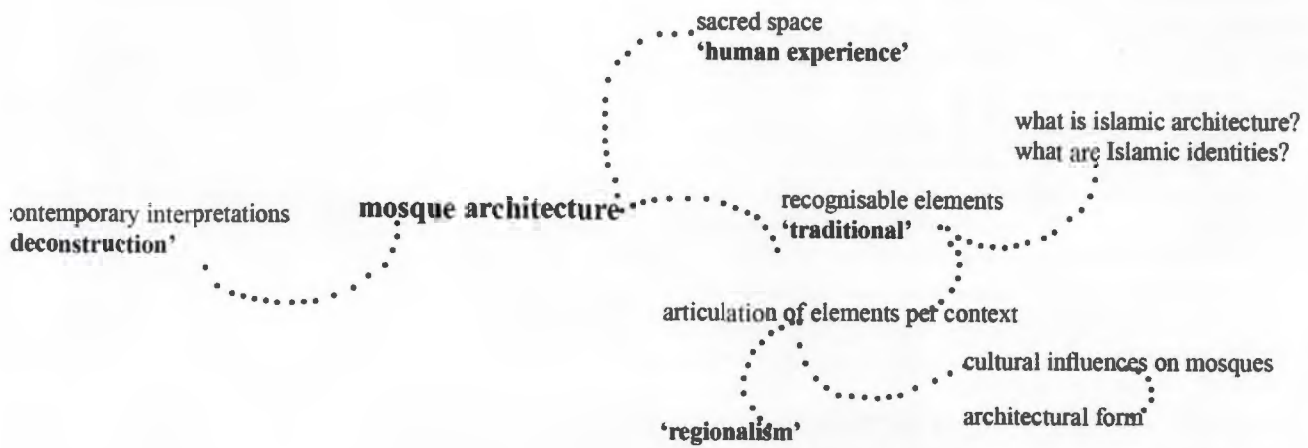


Figure 1: Theory diagram (Chohan, 2010)



(a way of life) **THE FAITH OF ISLAM**

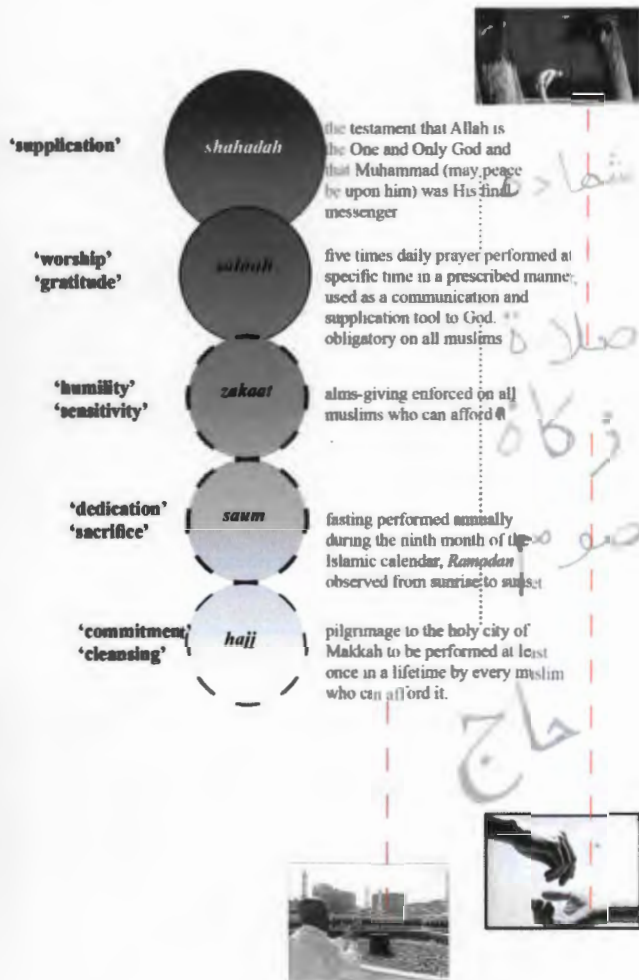


Figure 2: Five pillars of Islam (Chohon, 2010)

Born in the land of Arabia, Islam to its follower is more than just a religion. It is a way of life that brings order, stability, composure and harmony to a Muslim. It is the constant that guides one through the world, no matter the chaos or difficulty. The fundamental belief in the Oneness of God (Allah) and His final Prophet Muhammad (May peace be upon him), is the base of the faith, and sets up the nature of steadfastness coupled with humility that the religion embodies. It produces a strong relationship between the Believer and God and such a relationship can only be built and sustained through supplication and worship. The message of universality which Islam carries is demonstrated by the spread of the religion across the globe.⁵ As a Muslim, there is a constant sense of unity which Islam harnesses – unity through belief, unity through brotherhood, unity through prayers and supplication, unity through binding beliefs. Each of the five pillars of Islam illustrates this concept as all Muslims, regardless of culture, location or tradition ascribe to them.

The hierarchical structure of the five pillars of Islam shows the supreme importance attached to worship and prayer in the religion. It is this fundamentality of prayer that needs to be kept in mind when discussing and examining mosques and their role within the religion and its significant role in the life of a Muslim. It also illustrates the way living as a Muslim means that you must play a part. Islam guides the heart of a Muslim towards kindness and sensitivity to mankind. It is this that places the base of Islam on a strong social order of truth.⁶

5. Islam is the second largest religion in the world, according to Wikipedia and, according to the same sources, it is arguably the fastest growing religion in the world.

6. Abrahams, Z. *The growth and spread of Islam in Lange, Nyanga and Gugulethu in Cape Town, 1981*



**(rediscovering)
THE MOSQUE AS A SACRED SPACE**



RE-DISCOVERING THE MOSQUE AS A SACRED SPACE

Understanding mosque architecture through the faith of Islam

When a Muslim child is born into this world, the very first sound that he hears, is the call to prayer (*adhaan*) recited into his ear by his father or *imam* (religious priest). The conviction, commitment and dedication to the worship of God is, from that moment on, placed into his heart and henceforth, submission to God becomes a central part of his life.

The mosque serves as a testament to this conviction to God and as a reminder of His presence, it acts as a landmark in communities and evokes a sense of refuge and protection. Thus when looking at mosque architecture, we need to assess the people that it serves and their needs as Sabiha Foster advocates for Foster argues that architecture addresses our 'metaphysical, philosophical and cultural identities within a material context'.¹ In this way, mosque architecture needs to be analysed against the backdrop of Islam as a cultural, political and religious phenomenon.

¹ We also need to look at the circumstances that surrounded the creation of Islamic, and in particular, mosque architecture. Islam is a religion of much richness and diversity, yet united by rituals, codes and laws. The interpretation of its architecture can only uncover the depth if looked at as a whole, as well as through its specific parts.



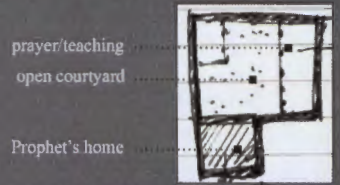
Figure 3: Concepts of Islam (Chohan, 2010)

Extracting the essential elements of mosques

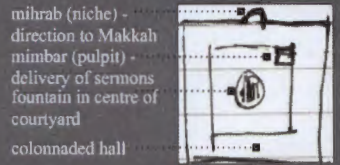
When I undertook this research I realised that the mosques that surrounded me while growing up and that were familiar to me, were all of similar typology. There were strong powerful objects that dominated communities, with strongly articulated Islamic forms. The justification for such elements was at that point unknown to me and I began with historical tracing to try to unravel the social and religious influences on the development of mosques.

The Arabic word for mosque is *masjid* which literally translates into 'place of prostration'. Historically, mosques were developed as places of worship which provided shelter and privacy for the performance of prayer in a *jamaat* (congregation). A sense of spirituality was evoked by introverting the spatial focus and shutting out the 'outside world', articulated by architectural expressions like space enclosed by walls, arcades and vaults. What quickly became a source of inspiration for me was the way in which Islamic architecture adapted and interacted with the different cultures that it encountered as it spread across the globe. Here, ideas of identity began to flower when the typically Arabian or Middle Eastern models were laced with responses appropriate to the historical, natural and cultural landscapes into which the mosque was placed. It is through these kinds of interpretations that the Islamic concept of 'multiplicity in unity' is expressed and continued.

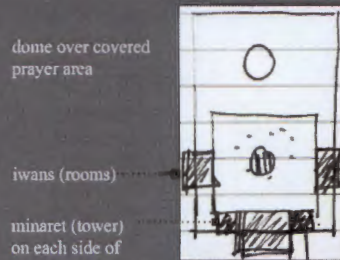
Figure 3 shows the development of mosques through history, dating back from the Prophet Muhammad's (May peace be upon him) mosque in Medina, Saudi Arabia. It epitomized the essence of Islam through its simplicity, practicality and humility. What becomes evident, is that much of the formal elements that have become synonymous with Islamic architecture, such as the dome and minaret, emanated from Iran and Turkey.



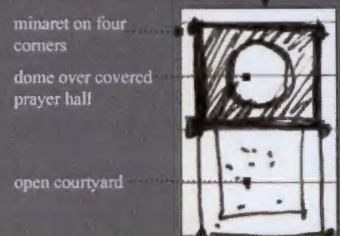
Prophet's mosque



Development of Prophet's mosque



Iranian development - iwan mosque



Turkish development - minareted mosque

Figure 4: Historical mosque development (Chohan, 2010)

Inspired by Nader Ardalan's methodology of analysing mosques, and drawing from the historical development of mosques, I began to catalogue the basic elements associated with mosques in order to create a matrix that informs both ethical and visual characteristics, while constantly remembering that in the design of buildings which encourages communication between worshipper and God, prayer is always greater than the building.

mandatory	aesthetic	identifiable yet adaptable
<ul style="list-style-type: none"> • cleanliness-space for ablutions • centre - a main prayer hall • orientation in space - cosmic alignment of the Kaaba (house of God in Makkah) and the earthly alignment of mosques towards Makkah expressed through the architectural device of the mihrab social directional axis as the focal point which stabilises entire muslim community + liturgical directional axis • mimbar - situated to the right of the mihrab, it is used by the imam when conducting sermons 	<ul style="list-style-type: none"> • evolution of the minaret - development of a tower to project the call to prayer (need for height) • repeated patterns of geometric shape 	<ul style="list-style-type: none"> • principle of introversion expressed architecturally through the courtyard and central dome • the dome instated to define direction externally as well as to provide natural lighting internally. Also noted as a celestial symbol in almost every religion. Within Islam, it symbolically represents a connection to heaven . • the gateway or portico as a positive space • the circle - usually in the form of domes symbolising heaven and eternity • the square - representing the earthly material world around us

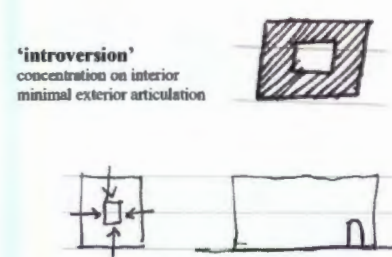
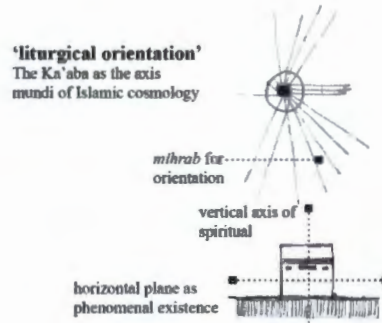
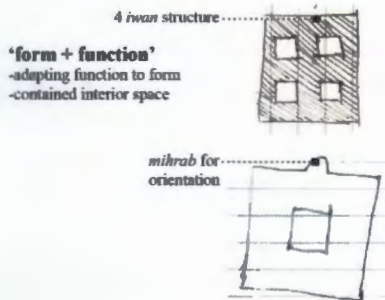
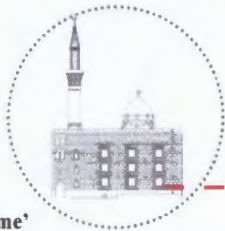


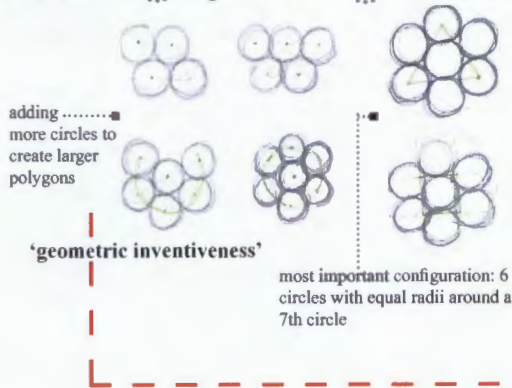
Figure 5: Elements of Mosque Design (Chohan, 2010)



'the frame'

Figure 6: South Elevation of Jumuah Masjid, Kerk Str., Johannesburg, (Mayet, 2001)

cosmos = pattern = wholeness



'geometric inventiveness'



'play of light'

Figure 7: Interior of Houghton Islamic Centre (Author's own:2009)



Figure 8: National Mosque of Malaysia

While these formal elements of recognisable character are strongly associated with mosque design to an 'outsider', it is the qualitative dimensions of mosque buildings which are most intriguing to me. It is the sense of spirituality that is evoked within me as I step into the large volumed areas with delicate light brought in that draws a connection to the heavens; it is the poetics of the way the spaces fluidly flow into each other to create a sense of ritual through procession; it is the way the acoustics reverberate when the prayer is being led while concurrently the sense of silence and meditation is so easily achieved – it is these sensory qualities of a mosque that truly capture the essence of Islam through the poetry of spaces. This spiritual and harmonious environment is realised through surface, pattern and light such as:

- i. The frame – Islamic architectural décor is always controlled by primary and secondary grids which produce frames through which the building's facades are organised.
- ii. Geometry – Since the use of art with human depictions is forbidden in Islam, innovations within geometry as an art were expertly explored within Islamic art. The circle is used as the basis for generating patterns. The art employs strategies of repetition, symmetry and change in scale, producing a mystifying effect. Doctor Keith Critchlow further validates the strong use of geometric patterns in mosques and other Islamic buildings to an idea of a relationship between Islam, cosmology and pattern formation.⁹
- iii. Play of light- Many ways of reflecting and refracting light into the building has been developed in mosque architecture. Developments like the dome, the *muqarnas* stalactitike-like cell carvings, *masharabiya* (delicate sun shading devices that use geometric patterns to diffuse sunlight in to the building. Light is used metaphorically to create an ethereal experience in the mosque.
- iv. Water – Water is seen as an almost sacramental element in Islam. It is associated with cleanliness, fertility, wealth and purity, to list a few, in the religion of Islam, and is thus an essential part of Islamic architecture. The ablution ritual compulsory before praying, solidifies the important roles that water plays in the design of a mosque even further.

These elements will be further discussed in chapter three's 'Reclaiming the Poetry'.

9. Critchlow, K, *The use of geometry in Islamic lands*, 2004



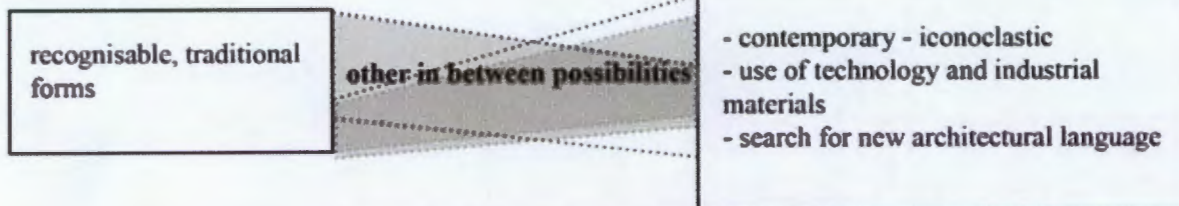
(me, myself and the mosque)
**ADDRESSING THE CONTEMPORARY CITY -
BETWEEN REVIVALISM &
DECONSTRUCTION**



ME, MYSELF AND THE MOSQUE: ADDRESSING THE CONTEMPORARY CITY – BETWEEN REVIVALISM & DECONSTRUCTION

Having been brought up in a community where the mosque was revered as the most consecrated space, there was always a facet of exclusivity (when the mosque was only used by Muslims) which seemed unnatural for an architectural symbol of a religion that is notably welcoming and receptive. Historically, mosques served their communities as more than just a prayer space and acted as the heart of society, the meeting place for discussions, and an educational institute. This role as the socio-cultural symbol of the society needs to be reinstated today. Its architecture should symbolically carry the message of unity inscribed in the Islamic faith, while at the same time reflecting the distinctiveness of that area.

My research into mosques reached a point where the role of the mosque within the contemporary context needed to be assessed and the challenge that presented itself was to produce something which is representative of today's diverse cities and yet conjunctively relativist (by relating to the ethical concerns of mosques). In the same way as I was trying to place myself within a new context through research and cultural explorations, this paper argues that the best way to approach mosque architecture is to understand its role within its society and within its broader urban context – what reference or dialogue does it create with the rest of the city? It advocates for a culture bound place of worship which embodies ideas of identity and authenticity, while at the same time remembering places and practices even when distanced (unity in Islam) and it is the belief of this paper that this is where the complexity to the research arises. This complexity relates to the understanding of the societal context which receives the mosque which is in itself charged with much symbolism with strong architectural conventions. Coupled to this, is the need to address both the spiritual and functional needs of the community which the mosque serves.¹⁰



architecture that acts as a mirror of the socio-economic cultural and technological reality of a society

Figure 9: Situating Mosque architecture (Chohan, 2010)

10. Serageldin, I, A critical methodology for discussing the contemporary mosque, 1996

indian adaptation



Figure 10: Indian Mosque

malaysian adaptation



Figure 11: Malaysian Mosque

african adaptation



Figure 12: African Mosque

Regionalism of mosques – adaptation to local and a product of society

Suha Ozkan correctly, in my opinion, situates the issues of contemporary mosque design within the ideology of regionalism. She defines regionalism as *'an abjuration of Internationalism which leads to the problem of prototyping and fashion following'*¹¹. A mosque can be split into two definitive functions – 'functional', which makes it suitable for prayer, and 'adaptable' which makes it suitable for its users as it provides an invigorating spiritual experience and defining an identity for its community.¹² The symbolism achieved through elements of mosque architecture such as the minaret, dome, gateway, muqarnas transcends time. The challenge, and what the study of this paper seeks to find, is a way to continue these elements and contextualise them without eliminating the deep imagery attached to them. There is a need to approach design in a *'bottom-up'* approach, as proposed by Alexander Tzonis¹³, which recognises the importance of representing the identity of the local cultural, physical and social situation, rather than senselessly importing formulas from *'the top down'*¹⁴. This approach invigorates, and liberates a design so that it is able to evolve within its own space, which in turn enables the people to express their individuality within the globalised world. Form is empty and cold without the life to support it, and there is a serious need to administer authenticity within local buildings.

The strain placed on contemporary mosques could be alleviated if one adopts Norberg-Shulz's ideas of phenomenology of architecture. Phenomenology is concerned with the study of essences and Norberg-Shulz's identification of the *genius loci*, or unique presence that lends itself to a place, is one which if accepted into the design of mosques could begin to start defining the essential purpose of mosque architecture accordingly. These buildings, like all other architecture, need to address a deeper and truer definition, and should present itself as what Wittgenstein describes as *'a way of being'*. Our mosques should communicate itself as a unique response to a particular location.

11. Ozkar, S, *Evolution of the Mosque's role*, 1996

12. Ozkar, S, *Evolution of the Mosque's role*, 1996

13. Tzonis, A, *Introducing an architecture of the present, critical regionalism and the design of identity*, 2003

14. Tzonis, A, *Introducing an architecture of the present, critical regionalism and the design of identity*, 2003



Figure 13: Abdelwahed El Wakil's Halawa House, 1975 (muslimheritage, 2010)

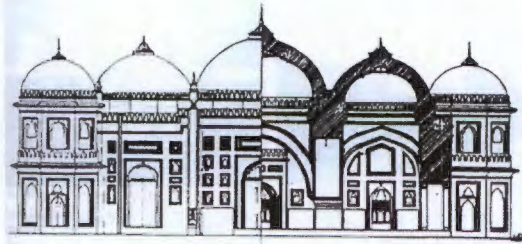


Figure 14: Sat Gumbad Mosque showing characteristics of Mughal Mosque, (Imamuddin, A & Imamuddin, F, 1999)

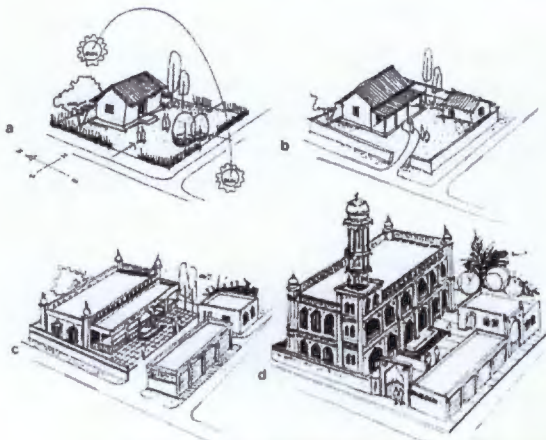


Figure 15: Typical sequence of growth of community mosques (Imamuddin, A & Imamuddin, F, 1999)

The work of Professor Abdelwahed El Wakil in Egypt approaches mosque design from a revivalist perspective in that he aims to bring back to life traditional knowledge and techniques that have been lost. However, his approach is a tolerant interpretation of Islamic design principles rather than just a direct imposition of specific forms. He adapts his buildings to the climate in which they are located and infuses materials that are of a local language. In his Halawa House at Agamy Beach, El Wakil draws upon traditional Islamic and Egyptian architecture while still employing means of contextualising the building through climatic considerations. While he retained all traditional Egyptian architectural elements (courtyard with fountain, loggia, belvedere etc), he also introduced unique insertions like insulation into walls and roof, sunlight filters and intelligent material selection. While using traditional forms, he is able to produce a house which fully satisfies contemporary living. His work is characterised by the careful use of traditional vocabulary to produce contemporary spaces enhanced by traditional craft.

The mosque as a social invigorator

This paper aims to highlight that the formal elements of a mosque should not be the only consideration in the articulation of the building, but that an understanding of the society that produces the mosque is critical, and it is through this method that the role of mosque as a definition of an identity can be justly explored.

As a contribution to one of the Symposium on Mosque architecture conferences held to define and raise issues and concerns and ambitions of mosques in the contemporary world, Abu H. Imamuddin and Fariel Imamuddin discuss the design and development of community mosques in Bangladesh.¹⁵ This piece is valuable as a lesson to be infiltrated across mosque development of the world as it highlights the success of the mosque as a socio-cultural symbol of the society when facilitated and participated in by the community. Since it absorbs and reflects the socio-technical achievements of the community, the mosque stands as a strong representation of identity. This is a notable example of an exercise that exemplifies the message of Muslim unity and brotherhood while at the same time contextualising, and reflecting the area's uniqueness. Mumford has also emphasised importance of the reflection of a community in its architecture when he defined 'community' as a key role player.¹⁶

15. Imamuddin, A.H & Imamuddin, F, *Design and organisational development of community mosques in Bangladesh*, 1999

16. 'We have treated the art (of building) not as a simple means of providing shelter, not as a clumsy kind of scene painting, but as an effort to reflect and enhance the purposes and ideals which characterise a particular age and people' (Mumford, 2003)

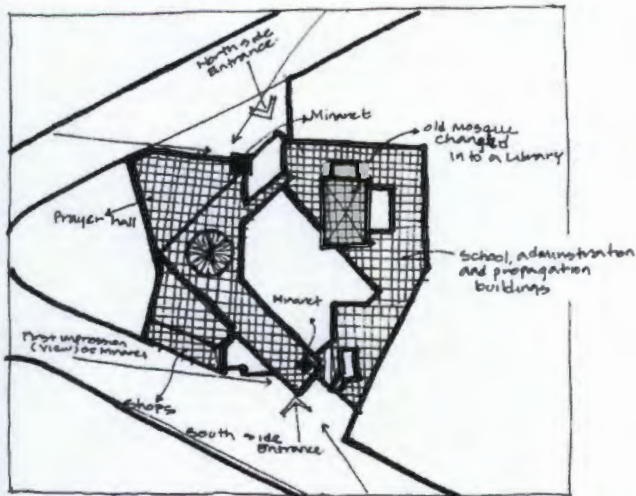


Figure 16: The "Nur" Mosque's site plan showing mosque bounded by shops and a school(Hassen,M, 1999)



Figure 17: Incorporating shops into the mosque's structure(Hassen,M, 1999)



Figure 18: The Grand Anwar mosque with shops along street's side(Hassen,M, 1999)

Following my preconceived ideas of the mosque and my subsequent research into the role of a mosque against the backdrop of its supporting religion, I believe that the idea of a mosque being exclusively for the use of Muslims is not a sustainable one in our contemporary societies. Furthermore, it is through an idea of cross-programming that the mosque (in one way) becomes more than just an exclusive place of worship, but also a contributing social invigorator. A good example of such a treatment of the mosque can be seen in Addis Ababa which was a context presented with the problem of representing an Islamic identity in an urban context of mixed cultures and faiths. The community regarded the role of the mosque within the Information Age as one which needed to be interactive and dynamic as it communicates with the society, regardless of faith, both physically and functionally.¹⁷ Hassen's suggestion of changing the typically introverted idea of building mosques to one which is more dynamic and engaging with 'multi facial activities', is one which this paper strongly advocates for.

Reclaiming the poetry

Salaah (prayer) is a communication tool given to Muslims in order to maintain a relationship between a Believer and his God. In the eclecticism and speed of today's world, it acts as a moment of contemplation which transports one to a world beyond the material world. When one is in doubt, when one is thankful or grateful, when one is troubled or distressed and even when one is content, *salaah* is a means to truly express oneself in a holistic manner to his Creator. It is a metaphysical experience achieved through physical ritual. The space in which one performs *salaah* could essentially be any clean piece of ground. However mosques have been established in order for such prayer to occur in a congregation as one *ummah* (community). I believe that the architectural devices used in the design of a mosque should elevate the celestial relationship that *salaah* sets up. Furthermore, it is the poetic devices that can be found historically within mosques which truly inspires an environment in which a worshipper is bound to his Creator. The qualities evoked through surface, pattern and light (as mentioned in chapter two) all ascribe to this qualitative dimension of mosques. This section of the paper aims to expand on the poetic devices included in mosque design which seem to be lost in contemporary aspirations, and which this paper advocates for a reclamation of.

17. Hassen, M, *Integrating a mosque to its particular context – a case on Addis Ababa*, 1999



Figure 19: The Court of the Lions (Grabar, O & Lane, A, 1978)



Figure 20: fountains at centre of courtyards (Grabar, O & Lane, A, 1978)



Figure 21: The baths at Alhambra (Grabar, O & Lane, A, 1978)

The bath, section and plan

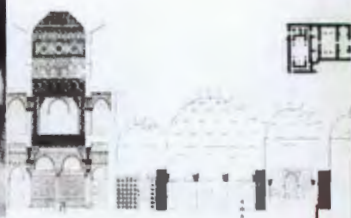


Figure 22: The bath (Grabar, O & Lane, A, 1978)

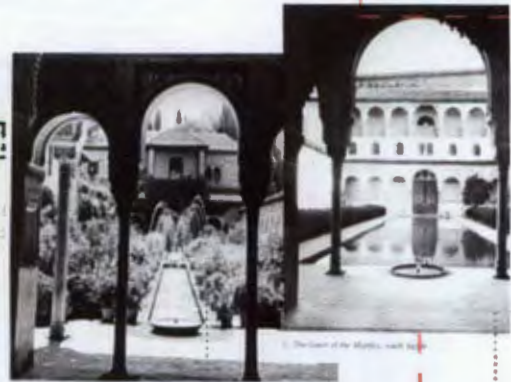


Figure 23: Generalife (Grabar, O & Lane, A, 1978)

Figure 24: The Court of Myrtles showing single rectangular pool establishing main axes (Grabar, O & Lane, A, 1978)



Figure 25: Location of Alhambra (Grabar, O & Lane, A, 1978)

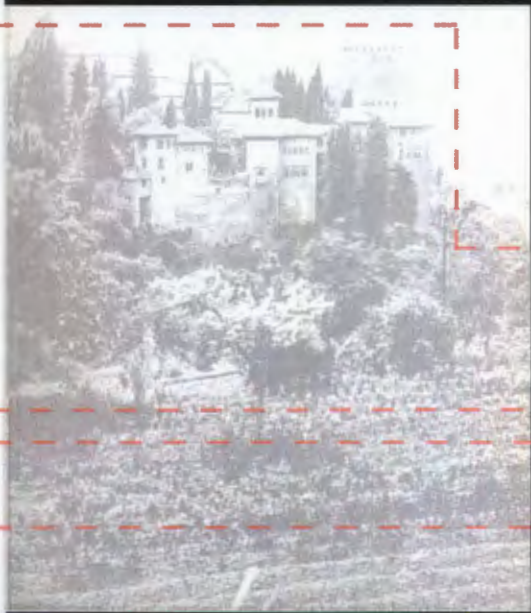


Figure 26: Alhambra (Grabar, O & Lane, A, 1978)

Water

Water is life -
it revives, replenishes, and creates;
Islam is a 'way of life' ...

Approximately sixty percent of the human body is composed of water -
it is the body's most important nutrient and is involved in every bodily
function;
Islam is a religion which brings body and soul together in a spiritual union
which encompasses all your being...

Water fills the shape of any container in which it is placed, it absorbs and
flows around and within;
Islam is a religion which is there to be absorbed by all of mankind, no matter
the cultural, racial, political, social or economic differences,
it becomes a part of a Muslim's life and is his to protect, it is a faith that is
there to be collected and moulded into one's life...

Islam ascribes very sacred qualities to water as a purifying life-giving,
sustaining resource. It is the origin of life and its importance is highlighted in
many a verse in the *Quraan* (Holy Book of Islam). It places water as a central
element in life in the verse, 'We made from water every living thing'¹⁸. Water
in the form of rivers, rain and fountains is in the *Quraan* a symbol of God's
benevolence¹⁹. As a creation, we are also constantly reminded that it is God
who sustains us with water and it is He alone who can take it away at his
will.²⁰

18. Chapter *Al Arbbiya* 21:30

19. 'He sends down saving rain for them when they have lost all hope and spreads abroad his mercy' (*Al Furqaan*, 25:48)

20. 'Consider the water which you drink: Was it you that brought it down from the rain cloud or We? If We had pleased We could make it better' (*Al Waqiah*, 56:68-70)

As the primary element that existed before the Heavens and Earth²¹, man is required to act as guardians of the precious resource²². Closely linked to the symbolism of water is the notion of cleanliness in Islam. Prophet Muhammad (May peace be upon him) is reported to have said, 'Cleanliness is half of faith'. This concept is taught to every Muslim child from a very early age and is a philosophy engraved within the lifestyles and behaviour of Muslims throughout their life. This central role of purity and cleanliness is expressed through the ablutions that are performed before every prayer. Every Muslim is obliged to pray five times a day and thus perform a special ritual of ablution five times a day. The Prophet Muhammad (May peace be upon him) urged moderation when performing these ablutions and a careful use of water so as not to waste was incumbent upon Muslims.

Shariah (Islamic law) goes into great detail regarding the subject of water, and in fact is in itself closely related to water. The word '*shariah*' appeared in the early Arabic dictionary and translated into '*the place from which one descends to water*'²³. Water as it appears in metaphors in the Holy Quraan are used to symbolise Paradise and this is why we see the use of water as a part of design (fountains, water features, pools) in examples like the Alhambra gardens in Spanish Granada and palaces in Morocco, Turkey and Iran.

This paper forms part of an investigation into a thesis which focuses its research on mosque architecture and its social implications. The thesis also calls for a reclamation of poetic elements which were found in mosques historically, one of which is the inclusion of water as a symbolic, poetic and sustainable element. The research culminates into a design of a mosque in the area of Nkhanini in Khayelitsha, Cape Town.

This component of the paper aims to situate water and its symbolisms in Islam and the rituals of the faith, and to invert the negative connotations attached to water by the residents of Khayelitsha. My interest in this topic not only vested in the relationship between water and Islam, but was also further inspired by the project *Reclaim Camissa* initiated by the Cape Town partnership. Cape Town was affectionately called *Comissa* (the place of sweet waters) by the Khoi, but as the city expanded, many rivers and streams that ran from the mountain to the ocean were lost through the development of urban infrastructure. *Reclaim Camissa* aims to reconnect the city with these lost rivers by allowing water to flow through the city to the sea through an invigorating urban design scheme.²⁴ This paper proposes that mosque design be incorporated into such a scheme. Research conducted for this thesis revealed the placement of mosques to be related to the close proximity to flowing streams which further justifies the links addressed in this paper.

This paper advocates that a reconnection of the mosque with its natural water sources not only contextualises the building, but refers back to the sanctity and symbolism of water present in Islam. Sustainable approaches to water not only connects to the essence of the faith of Islam, but addresses a need in Khayelitsha and Cape Town.

21. 'And it is He who created the Heavens and the Earth in six days, and His throne was upon waters' (*Hud*, 11:7)

22. 'Consider the water which you drink. Was it you that brought it down from the rain cloud or We? If We had pleased We could make it better' (*Al Waqiah*, 56:68-70)

23. *Shariah* was first a set of rules related to water use (IslamOnline, 2010)

24. (Creative Cape Town, 2010)

Water, symbolism & culture

Islamic culture and architecture is filled with symbolism containing historical, religious and mystical elements²⁵. Many of these symbolisms originate from nature.

A Muslim proverb personifies this when it says, '*Allah jamily hibu al jamal*' – 'God is beautiful and He loves beauty'²⁶. Water is one such significant symbol with multiple meanings, most of which are derived from the traditions of the Arabs in their desert context. It is regarded as an important resource that should not be wasted or abused. The Prophet Muhamad (May peace be upon him) stressed upon the conscientious use of water, and strongly discouraged extravagant use of the resource, either publicly or privately. Water is associated with life and fertility in any one of its depicted forms – *An Nufta ma* (a drop of water), *mahlu* (fresh water), *ma alah* (salt water) and *ma samat* (Inspid water)²⁷.

Water has been used in Islamic architecture throughout history as a mechanism of evoking symbolism of the ethereal. It acts as the element that transfers one from the profane to the sacred and from the material world to the spiritual.

One can always find a source of running water at the entrance to a mosque for ablutions. The use of fountains or pools in the centre of courtyards is an architectural device used historically in Islamic buildings. Not only does this assist cooling processes for the hot, dry climates from which Islamic architecture originated²⁸, but it is also a provocation of the imagery of flowing water of Paradise.

Islamic architecture has also historically concerned itself with the design of contemplative garden spaces in which water is strongly integrated. The garden (*Riyadh*) is sensitively designed with rows of trees, flowers and water features, creating an imagery and reference to the Gardens of Paradise. Prophet Muhammad (May peace be upon him) said, '*Do not squander water even if you were on a flowing river!*' thus presenting himself as a role model in the conservation of water (even in ablutions and bathing)

25. Rodrigues, A. *Islam and symbolism*

26. Rodrigues, A. *Islam and symbolism*

27. Rodrigues, A. *Islam and symbolism*

28. Arabian Peninsula, Middle East, Asia





Water incorporation into Islamic Architecture

The symbolism and significance of water within the faith of Islam has led to many expressions of the resource within Islamic architecture. Water is seen as a life-sustaining and valuable resource in Arabia, from which Islam and its architecture originates. The nature of this arid landscape meant that the intelligent inclusion of water elements into built structures became more than just a poetic device, but also responded to contextual and climatic requirements, hence producing aesthetic elements as functional solutions to a problem of limited supply of water. Elements such as fountains, small channels of water, pools and baths were sensitively placed inside buildings. Within mosques specifically, the inclusion of water fountains was further necessitated for the ritual of wudhu (ablutions). Soft, gentle slices of water created an atmosphere of trickling and gentle sounds evoking connotations to Paradise. It is this symbolic use of water that has remained a strong element of Islamic architecture.



Figure 27: Water channels establishing and emphasising axes (Hertzberger, 1991)



Figure 28: Mosque at Cordoba with channeled water for irrigation (Hertzberger, 1991)

The common meanings associated with water are attached at the Alhambra with its surrounding gardens representing Paradise. The representation of Paradise is two fold – one being specifically an Islamic notion of Paradise, and the other a sensuous paradise of well-being with mystical connotations.²⁹ This theme of gardens with fountains and the subdivision of space into quadrants is commonly found in Muslim tradition. The evocative sensations in this space from cascading water over steps to the reflection of light on the surfaces creates an extraordinary sensory experience.

Another example of Islamic architecture employing water as a poetic and connecting device is the mosque in Cordoba in Spain. Trees in the circular courtyard are irrigated through an efficient system of channels which also connects the trees and establishes an axis. The beauty of this design lies not only in its simplistic form, but also the way the form clearly shows how it functions. The use of a circle combines with the trees and matches the swirl of the water to create a visually striking yet soothing space. By exposing the function and the use of the water, one becomes aware of the world around them – architecture begins to be explanatory.

Performance of prayer cannot be completed without the ritual of ablutions (*wudhu*) before in order to cleanse and purify oneself. The concept of *tahaarah* (cleanliness/purity) is one which is fundamental to the religion of Islam. In Islam, cleanliness relates to purity which is a definition of the highest possible state while in this life.³⁴ The ritual is meant to be both a physical cleansing of one's body, as well as the spiritual cleansing of one's soul – the transition from the ordinary, materialistic world into the sacred where earth meets heaven. It is in itself an act of worship in which consciousness of God first begins when praying. *Wudhu* relates to the heart referred to by learned scholars as '*nafs-al-nateqa*'- the idea that the heart is the centre of essential exchanges as the place that the ebb and flow from which the body begins with. The heart would then be regarded as the doorway to righteousness which can only be approached through *wudhu*. Professor Tayob describes the rituals within Islam as codes which '*can be compared with technical and functional codes used in everyday life*'³⁰

Ablutions would be one such ritual which performs important psychological and social functions. Being sustainable as well as poetic about the water use and management would thus be a social result of this ritual. The use of water in ablutions hence becomes a metaphorical expression of this shift. The way that it is articulated should convey a sense of sacred transitioning and spiritual cleansing.

29. 'Purity is half of faith' (Prophet Muhammad May peace be upon him)



Figure 29 : Patio of Generalife at Alhambra Palace (Petruccioli, 1984)



Figure 31 : Court of Lions, Alhambra Palace (Petruccioli, 1984)



Figure 30 : Court of Lions, Alhambra Palace (Petruccioli, 1984)

[alhambra] elaborate fountains

enclosed landscape spaces with minimal
water

sprays . interwoven . sounds . reflections
. light patterns

'freshness' . life

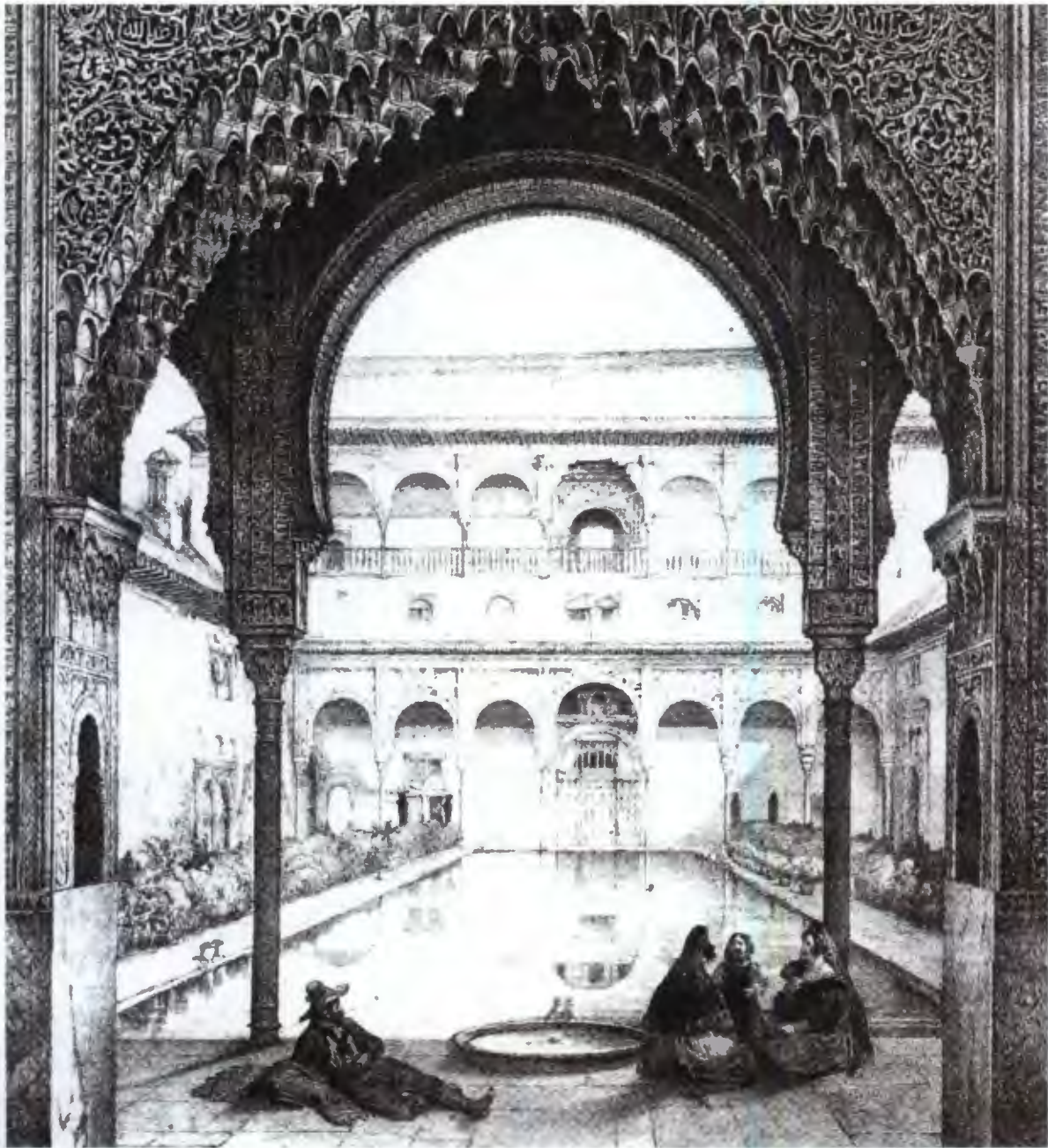


Figure 32 : Patio de la Alberca, Alhambra Palace

(Petruccioli, 1984)



Figure 33 : Fountains and portico of the Dar Batha (former Private palace) (Petruccioli, 1984)

delicacy . sensibility . delight



Figure 34 : Example of a geometric garden layout (Petruccioli, 1984)

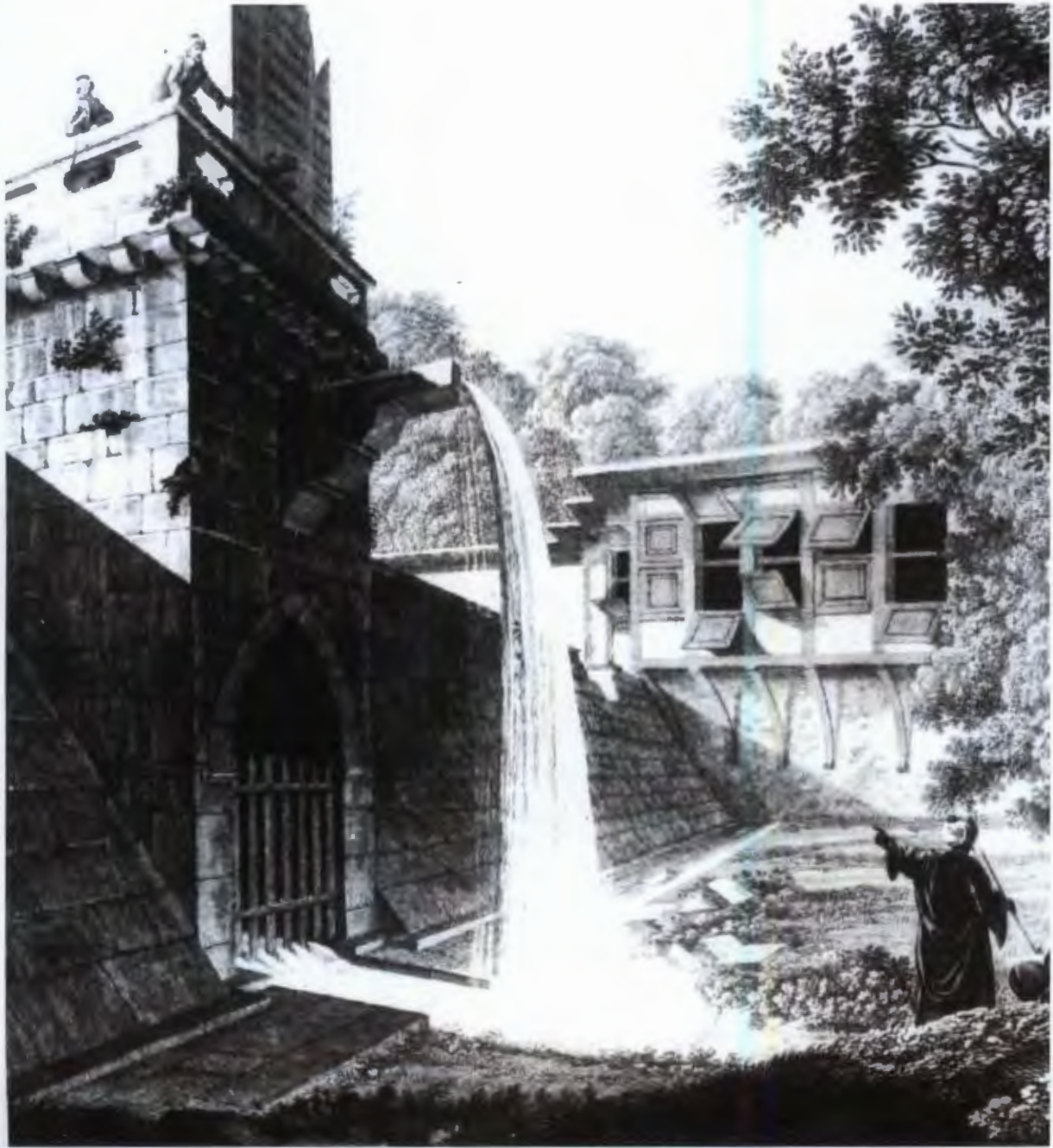


Figure 35 : Water, trees and feeling of the place, The Dams of Istanbul (Petruccioli, 1984)
page 24



Figure 36: Aurangabad, tomb of Rabi'a daurani (Kach, 1991)

symmetry . decoration . procession

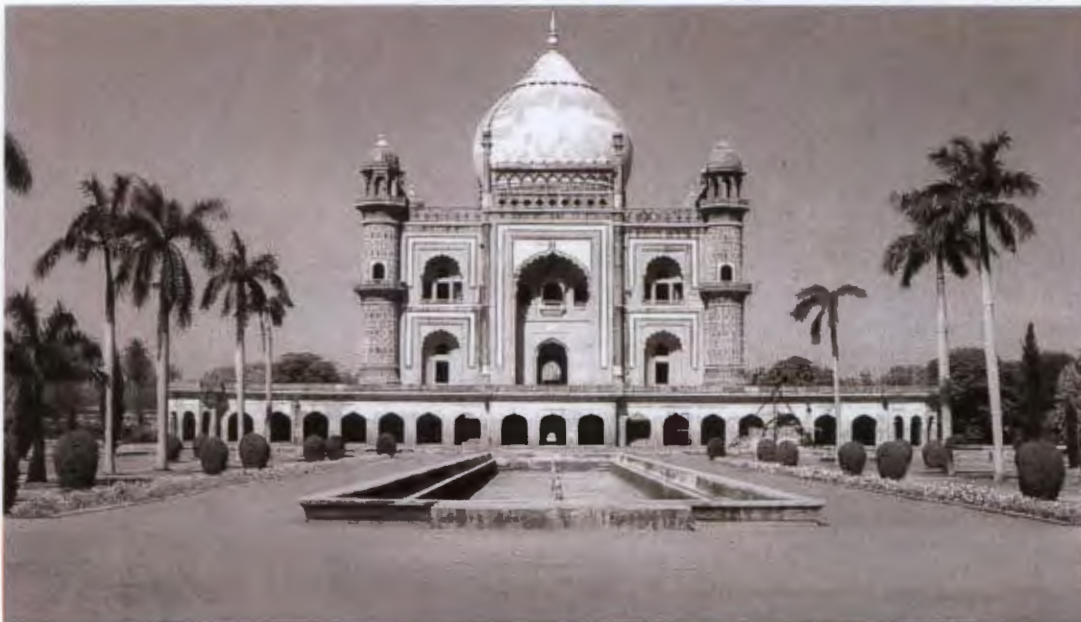


Figure 37: Delhi, tomb of Safdar Jang (Kach, 1991)

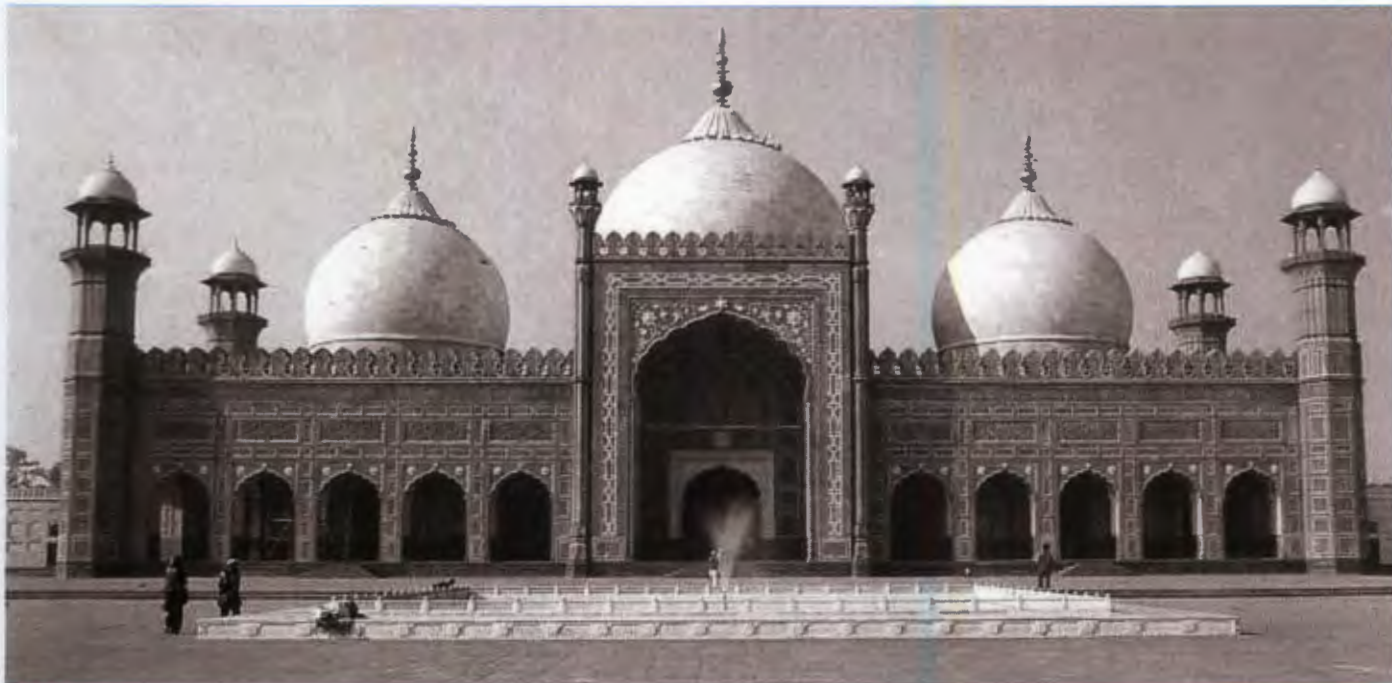


Figure 38: Lahore, Badshahi Masjid (Koch, 1991)



Figure 39: Agra, tomb of I'timad al-Daula (Koch, 1991)

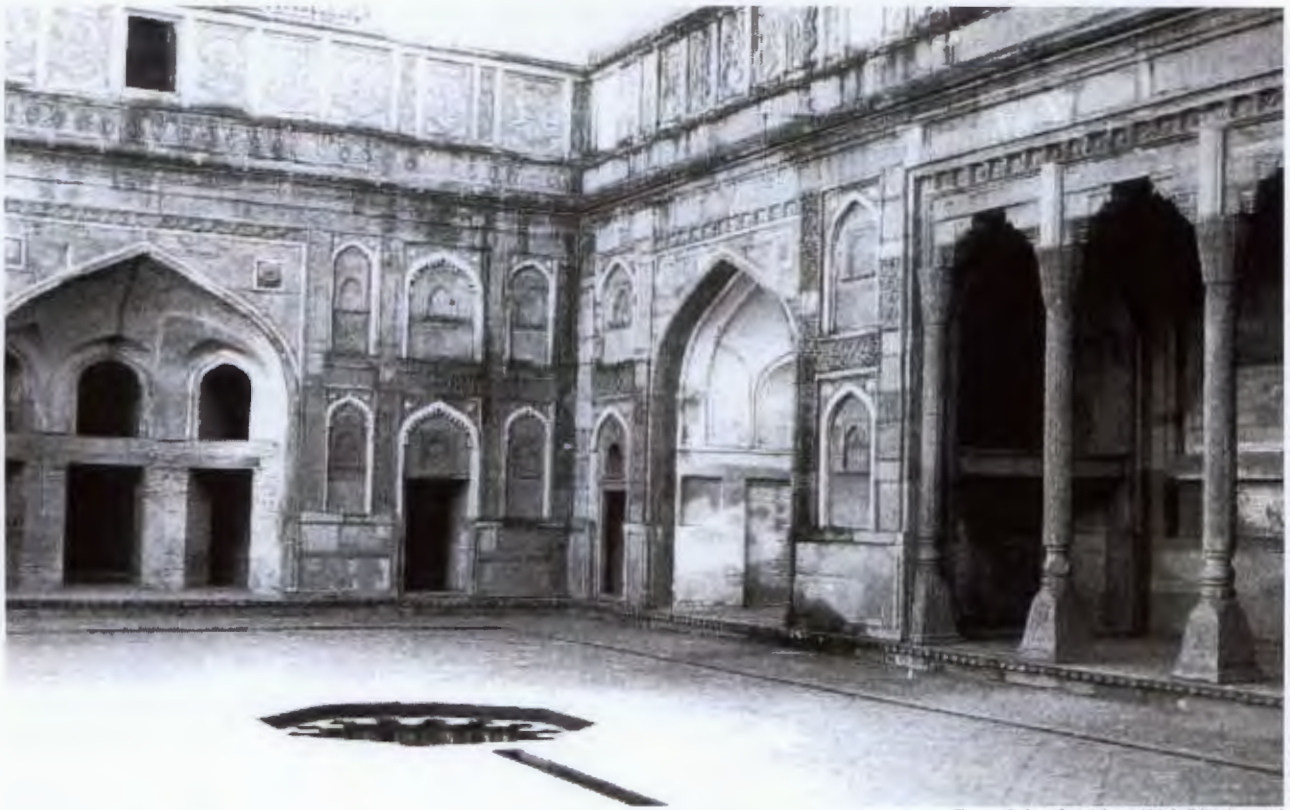


Figure 40: Agra fort, jahangri Mahall (Koch, 1991)

order . paths . axes



Figure 41: Agra, Sikandra Tomb (Koch, 1991)



Figure 42: Kashmir, Shalimar Gardens (Koch, 1991)

garden as paradise

'coolness' - springs . fountains

Incorporation of water into non-Islamic buildings

Tadao Ando's Church on the Water:

Tadao Ando is an architect whose work characterises an inclusion of natural elements such as wind, water and light, creating dramatic juxtapositions and flows between the exterior and interior. By bringing in calming aspects of nature, his work embodies a sense of timelessness and universality. His

Church on the Water shows the importance of water in his works.

Visitors enter through a darkened stairway which elevates the drama of the space when the chapel bursts into unexpected light and surface (of the water) as it opens onto nature.

A sense of spirituality, serenity and connection to nature is subtly yet effectively achieved. A juxtaposition of intimacy and introversion with openness and seamlessness to nature is beautifully created.

Ando uses water in many other of his works as well. Both his Nariwa Museum and Modern Art Museum of Fort Worth are placed in bodies of water. Water is also used in his buildings as a poetic instrument of creating paths.



Figure 43: Church on Water (silhvearquitekonica, 2010)

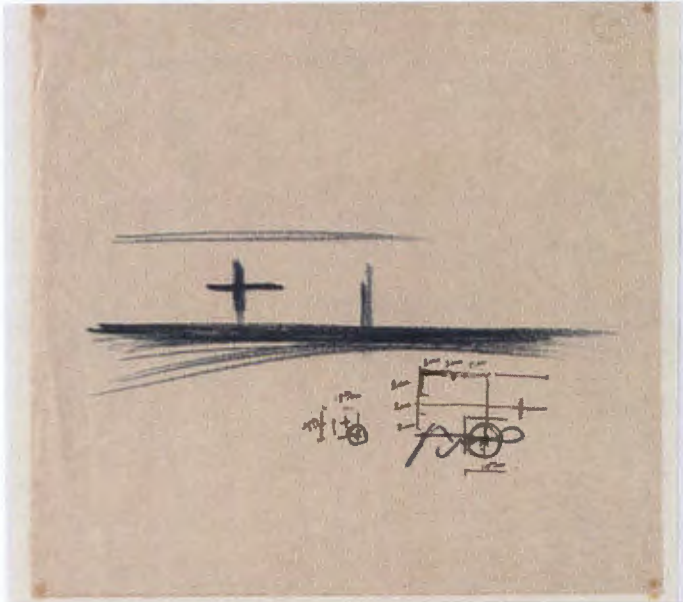


Figure 44: Church on Water concept sketch (momaPS1, 2010)



Figure 45: The museum is a large rectangular box and a smaller rectangular box flanked by a water plaza. (Galinsky, 2010)



Figure 46 :Cylindrical volume that silences the sound of the water and leads the visitor into the interior of the museum (Galinsky,2010).

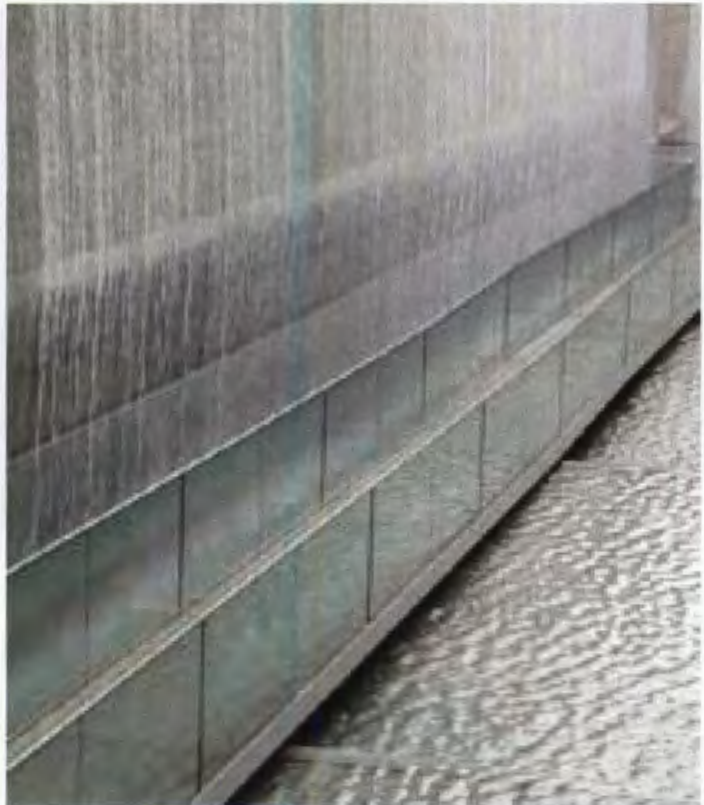


Figure 47 : The flowing sound of water animates recessed walkways, while light sparkles off the water surface (Galinsky,2010).



Figure 48 : Museum of Modern Art, Fort Worth (flickr, 2010)





'Serenity is the great and true antidote against anguish and fear, and today, more than ever, it is the architect's duty to make of it a permanent guest in the home, no matter how sumptuous or how humble. Throughout my work I have always strived to achieve serenity, but one must be on guard not to destroy it by the use of an indiscriminate palette.'

(Louis Barragan)

Figure 49 : The work of Louis Barragan

Wudhu: a state of purity - The philosophy of wudhu (ablutions)

"Wudhu is the key to prayer as prayer is the key to Paradise. Islam lays extreme stress on cleanliness and taharah"

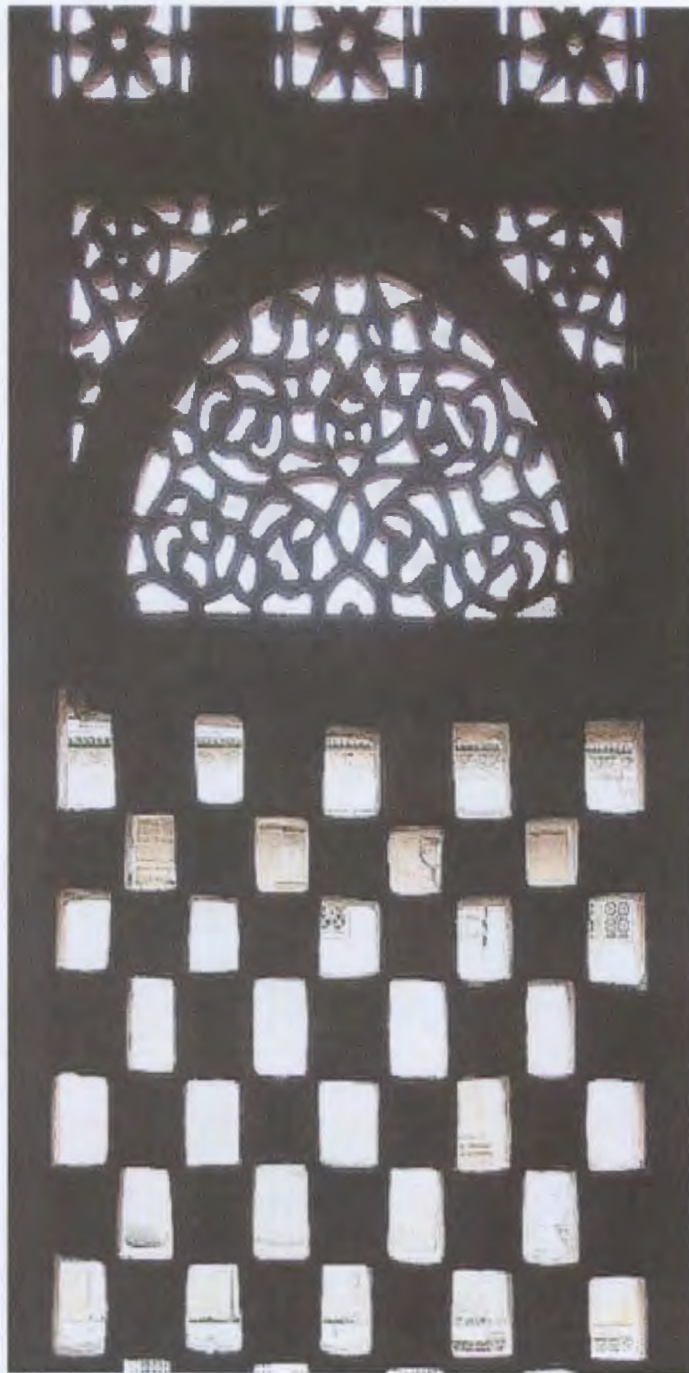
(Prophet Muhammad (May peace be upon him))

A baby is born,
Athoan (call to prayer) is recited in his right ear making the first words that he hears
the word of God and call to submission to his Lord,
His head is shaved and all impure substances removed from his body,
Circumcision is performed with the sole purpose of facilitating cleanliness and
purity...
Such is the manner that a Muslim enters the world.

Islam is a way of life, with guidelines on how to execute even the smallest and
menial of tasks – cleanliness and purity is an essential part of this life.
Cleanliness and faith is an indispensable fundamental of the faith of Islam. A Muslim
is required to be both physically, morally and spiritually clean. When a Muslim sets
out to perform *salaah* (prayer) he begins a process in which he lets go of earthly,
worldly things and enters into relationship with his Creator. Irrespective of your social
status, your race, your culture or your wealth, every Muslim makes a pledge to meet
with God five times a day from sunrise to past sunset.

This spiritual shower which washes away a worshipper's sins, is a way for a Muslim
to cleanse his soul; a transition which begins with cleansing one's body.

The ablution process involves the washing of certain parts of the body in a
prescribed manner and sequence. It is believed that the cleansing of the body
parts in wudhu generates one's concentration due to the sharpening of the body's
five senses. The centre of the sensors of the body are the eyes, ears, nose, mouth,
hands and feet. Tests conducted by neurologists have proven that a person's chain
of thought can be re-routed by cooling the fingers of the hands and feet and that
through the cooling of nerve ends, concentration of thoughts is heightened³¹. In this
state, one takes the first step towards establishing a communication link for worship
to God.



The ritual of wudhu (ablutions)

It starts with rinsing the palms, rinsing the mouth, washing the nose by sniffing, washing the face, washing each arm up to the elbow, wiping the hair with wet hands, rubbing the ears with wet hands, and finally, washing the feet up to the ankle..

'for every ritual, there is reasoning'
begin with hands as the hands are used to wash all other parts of the body



washing the mouth :
cleans one from bacteria and bad smells,
'remove evil and harsh words'



rinsing the nasal cavity :
most dirt is collected in the nose from the air
'clear the air passages for best vocal capabilities through breathing'



washing the face from forehead to below the chin :
'removing all evil from eyes and lips'

washing the hand upto the elbow:
'removing all bad energy from things touched that was impure'

each part of the body is washed in an ordained manner which allows for minimal wastage of water

Figure 50 : The ritual of wudhu(ablutions)

The spatiality of wudhu (ablutions)

Salaah (prayer) is a means of transitioning from the profane to the sacred, from the earthly materialistic world to the celestial heavens where man enters into a conversation with his Lord. *Wudhu* is the key to establishing such a relationship through the practice of cleansing. In this way, a series of thresholds start to emanate which one crosses as a process of prayer.

These moments of transitions have direct spatial implications on the design of mosques. While maintaining practicality and convenience, the separation of these different 'zones' begin to inform a sense of order through the building and instil a sense of procession of ritual as one moves from one space to the other. Awareness is created which heightens the spirituality of the worshipper as he moves further away from the world 'outside'.

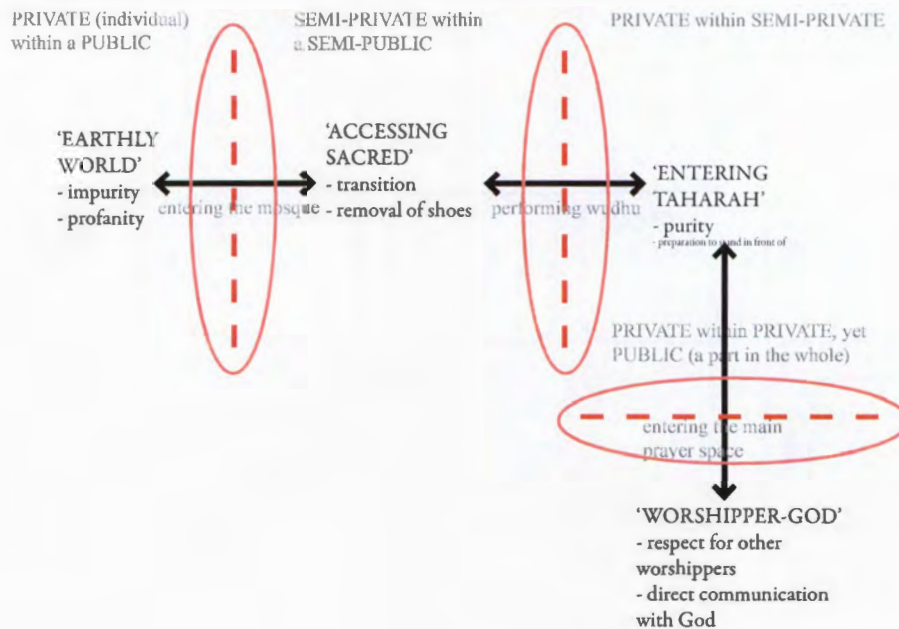


Figure 51 : The thresholds or boundaries crossed during prayer (Chohan, 2010)

Relation to the 'clean zone'

As one enters the mosque from the street beyond, the first requirement is for physical purity before one moves into the spiritual domain. This is initiated by the removal of one's shoes, a part of a person that is seen as physically most impure having traversed many surfaces and substances. This is a tradition found in Japanese culture as well where the removal of shoes is not only associated with cleanliness but respect for space as well. The thresholds that a worshipper crosses as one moves from the street into the mosque creates a separation of zones where the ablution space becomes a 'dirty' zone and the praying space a 'clean' zone. The ablution space would always precede the praying hall and it is through ritual that the circulation of a mosque is established. There are various methods of materialising this separation of thresholds. Physical gestures like a change of material, a change in level and visual separation become symbolic of the process of entering the state of purity. Mokhtar defines this spatiality in three scenarios of space planning between the ablutions and the clean zone:

(Scenario One)

- i. Access to ablutions is from outside the clean zone
- ii. Shoes are removed before entering the clean zone

(Scenario Two)

- i. Access to ablutions is from inside the clean zone
- ii. Shoes are removed at the border of the clean zone already
- iii. Disadvantages:
 - Noise from ablution area can distract worshippers;
 - Humidity from ablutions can damage interior of prayer hall;
 - Reduced distance between the two spaces means that worshippers enter with wet feet into the clean zone.

(Scenario Three)

- i. Access is from inside the clean zone, however a corridor between the two spaces provides a separation.

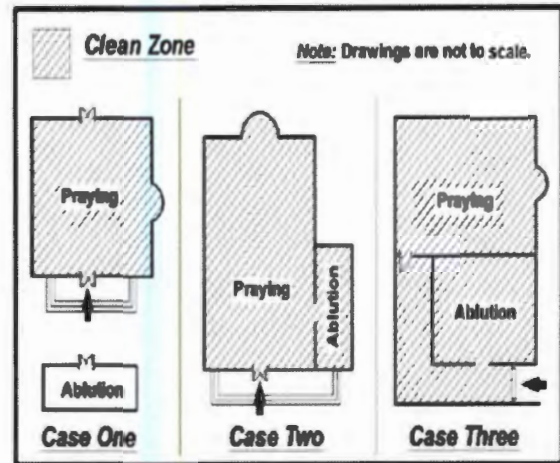


Figure 52 : Scenarios of physical spatial relations between ablution space and clean zone (Mokhtar, 2005)

Other design consideration to be incorporated include:

- Location should not hinder future renovation opportunities;
- Wind directions must be considered in order to prevent the transfer of possible humidity and smells;
- The route from the ablution space to the prayer hall should allow for access into the hall from the back so as not to disturb other worshippers engaged in prayer.³²

The design of wudhu spaces needs to consciously make accommodation for the performance of the ritual by an individual as a personal physical and spiritual cleansing within a communal area, whilst still observing the symbolism attached to water and cleanliness. There are many lessons which occur in the processes that occur in nature from which man can learn. Just as flowing water in rivers is regarded as pure because of its vivacious nature, the water used for *wudhu* needs to be constantly flowing in order for it to be regarded as 'pure' for washing. Balance is also important since both hands are used to wash other parts of the body. The number of allocated ablution units is important in order to avoid people having to wait in line which delays the process of praying, which is important when the prayer is performed in a congregation.

32. Mokhtar, A, *Design Guidelines for Ablution Spaces in Mosques and Islamic Praying Facilities*, 2005

Ibraheem (1979) recommends using a ratio of 1:25 for residential mosques. However this ratio is not fixed and may be adapted in relation the size of the community using the mosque. The ablution space must be easily accessible and consideration for disabled must be incorporated. Materiality used should be non-slippery, durable and prevent the spread of bacteria.

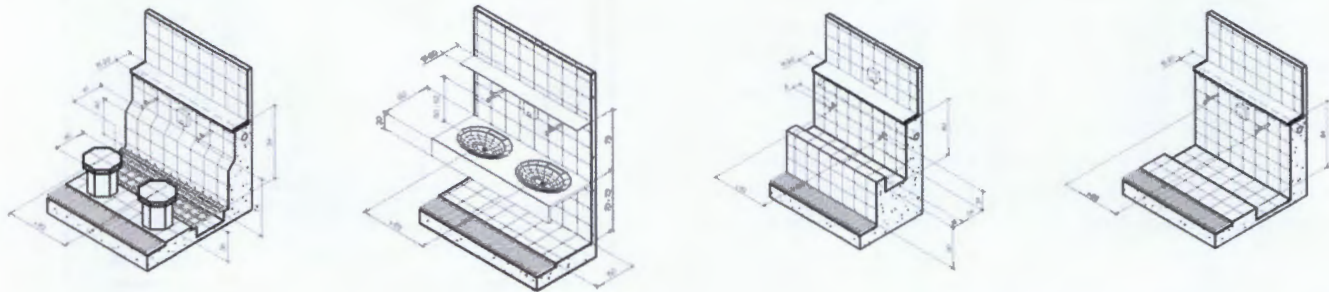


Figure 53 : Various ablution design options (Mokhtar, 2005)

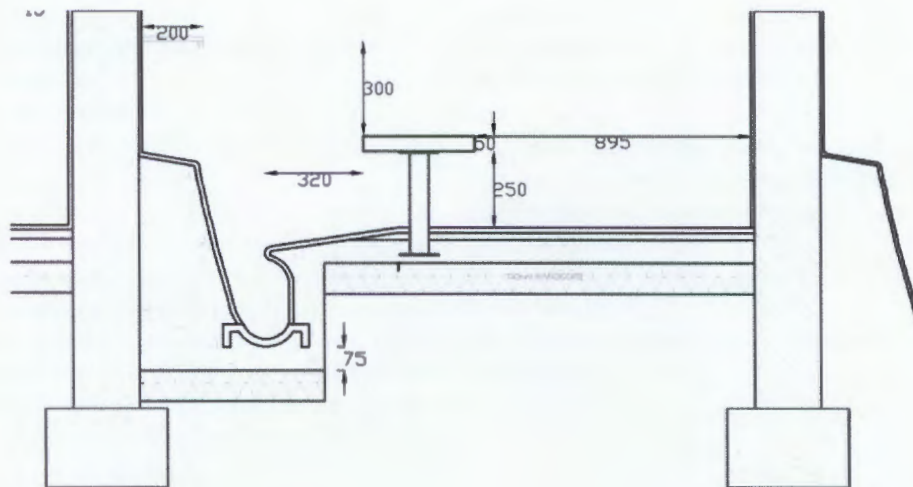


Figure 54 : : Typical design of an ablution facility (Chohan, 2008)

Situating the problem - water issue faced in Khayelitsha

Khayelitsha has been acknowledged as an area with a multitude of problems, both socially and economically. Dayile and Stern have described the area as one, regardless of measures taken, has '...among the worst social and economic problems in Cape Town, and indeed, in the country as a whole.'³³ After spending time in the area and engaging with the community of Khayelitsha, it was apparent that a strong negative connotation was attached to water. This was related to problems faced such as poor sanitation, polluted water, bad drainage and flooding which is a critical problem in the area. This is an issue that I strongly believe needs to be addressed. The poor quality and bad management of water in the area has led to a rapid increase in diseases and infant mortality rates.³⁴ There is a definite need for more sustainable approaches to water catchment, filtering and recycling so that the connotations currently attached to such a pure, life-giving resource can be inverted into positivity, and the potential for a mosque in the area to revitalise symbolisms to water can be realised. The following problems were highlighted as most critical through interviews with residents of the area:

- Lack of basic services such as taps, basins, toilets;
- Poor drainage leads to the standing of water in which bacteria and pests breed;
- Poor drainage results in flooding homes during wet seasons;

Such conditions have led to emotional levels of anger, shame and uncomfotableness, and this project calls for ways of improving such conditions using rainwater harvesting, catchment and filtration techniques. Some residents have responded to the problems of flooding by methods such as raising their floors and foundations, plastic on the floors of dwellings, extra skins of zinc in shacks and make shift drains. However these methods are not accessible for residents with lower incomes and therefore there is a critical need to take a sustainable approach.



Figure 55 : Silt and rubbish accumulation in drain (Bouchard et al., 2007)



Figure 56 : Stormwater infrastructure in the informal settlement (Bouchard et al., 2007)

33. Dayile, N and Stern, R of the University of the Western Cape's (UWC) School of Public Health, (2006)

34. health-e, (accessed 2010)

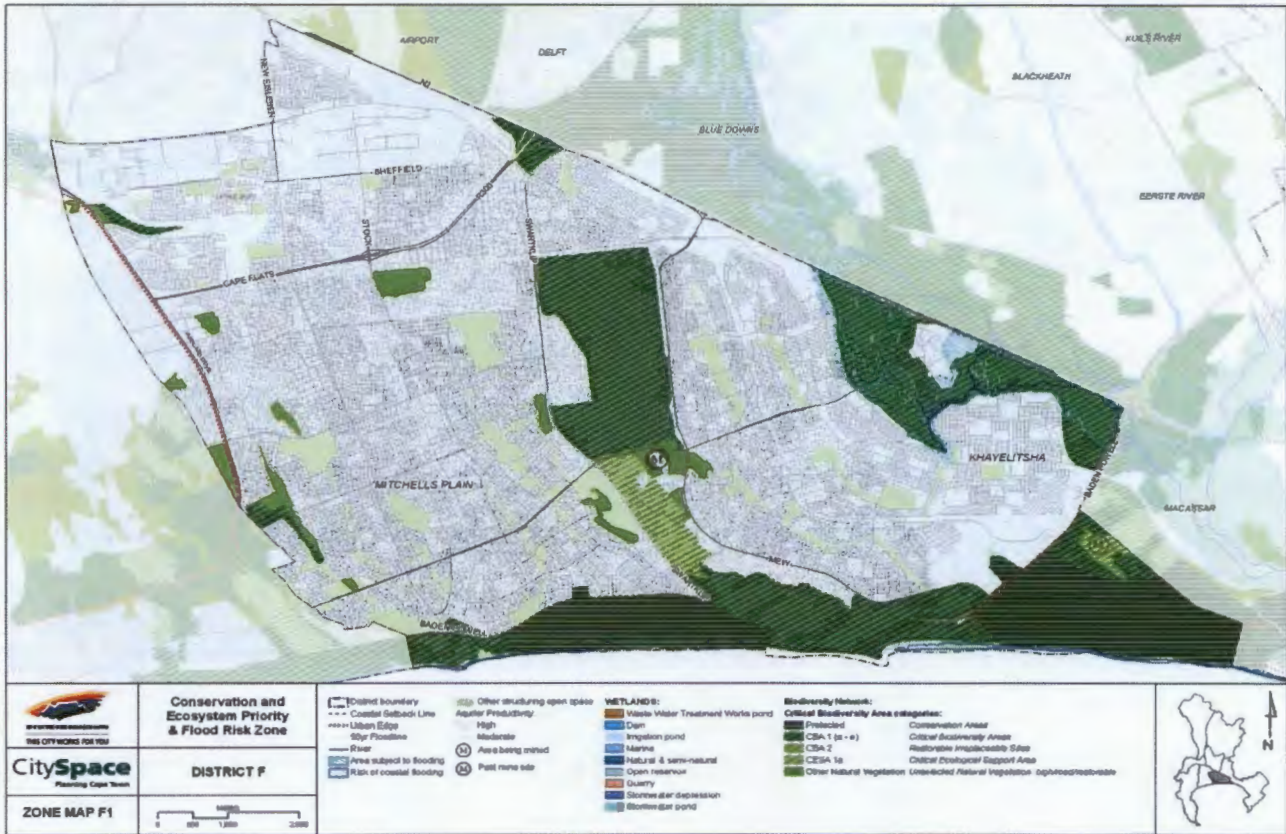


Figure 57 : Zoning map showing flood prone areas in Khayelitsha (capegov, 2010)



Acoustics

Amongst other sensory experiences historically evoked within mosques, acoustics are one that play an important role. Since all musical instruments with the exception of a special drum known as the *Dhaf* are forbidden in Islam, natural acoustics take prevalence. Sounds such as the call to prayer (*adhaan*), recitation of the Quraan in a melodious tone (*Qiraat*) and the voice of the Imam while performing prayer and delivering sermons are sounds which surround the mosque. Architectural devices such as the *mihrab* (niche) were developed in order to project the voice across the space. This in turn relates to ideas of geometry which is expressly articulated in Islamic architecture.

Acoustic qualities and experiences within mosques and Islamic buildings also relate back to water, where in courtyards the flow of water soothingly invites a spiritual ambience suited for contemplation, reflection and meditation

Geometry

The use of humans or any other living being as art is forbidden in Islam.

Mathematics is also regarded as a language of the intellect and its abstraction serves as a reflection of the Divine Order.³⁵ These two factors can be seen as the influencing factors resulting in the development of a tradition of geometry as a sacred art within Islam. Unity is expressed through art expressing the spiritual world using techniques such as calligraphy, arabesque, geometry and rhythm.³⁶ The highly detailed geometric art that is produced in Islam is embodied with much meaning and serves as a mathematical description of 'multiplicity in unity'³⁷. It concentrates on geometric patterns and diverts attention away from the material world to a world of pure form and meaning. Through repetition, patterns are created which explore both the natural and cosmic order. Important art forms found in Islamic art are:

- i. Calligraphy – Regarded as the highest art form because it is used to give visual form to the word of God as found in the Quraan. The theory of numbers played a big role in the development in this and other art as numbers represented the structure of the cosmos. Through numerical symbolisms, patterns are extracted and the reflection of the underlying unity is exposed.³⁸

35. Ally, M.R, *Social Relativism – a critique on mosque architecture*, 2009

36. Le Roux, S & Botes, N, *Number, point and space: The Islamic Tradition*

37. Le Roux, S & Botes, N, *Number, point and space: The Islamic Tradition*

38. Le Roux, S & Botes, N, *Number, point and space: The Islamic Tradition*

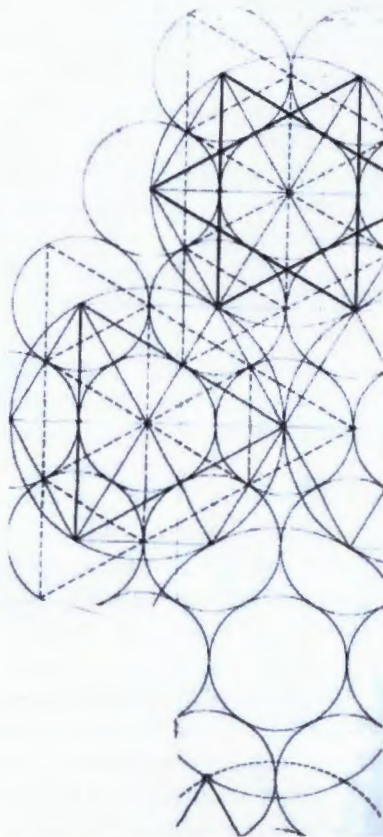


Figure 58: development from the point to an extensive pattern (Le Roux, S & Botes, N)

- ii. The Nordic Square or multiplication – Through mathematical divisions within a grid of nine-by-nine a pattern is extracted of abstract like 'numbers, enclosure, pairs, concentricity, reflecting, symmetry and repeats'³⁹
- iii. The point – Islam embraces the concept of the point as the single, all encompassing source of origin and return. This is also referred to in the orientation towards Makkah during prayer – a point which serves as a reminder of a Believer's location and a representation of a focal event or place. The point is seen as the symbol of unity and origin.⁴⁰ Attached to this, is the importance of the circle which is seen as a representation of eternity with no beginning and no end. All patterning in Islamic art begins with the circle and a point and grows and reveals itself when new centres are created at the points of contact, allowing for a repetition of a pattern. In Islamic art, the artist is to explore multiplicity in unity, and the observer has to 'abstract the unity from the many ways possible to reflect it'.⁴¹ This results in a poetic imagery of interconnectedness of solids and voids, balance and harmony. Islamic architecture, through its knowledge of abstract mathematical symbols and their unifying relation, aimed to relate the material world to 'its basic abstract principle'.⁴²

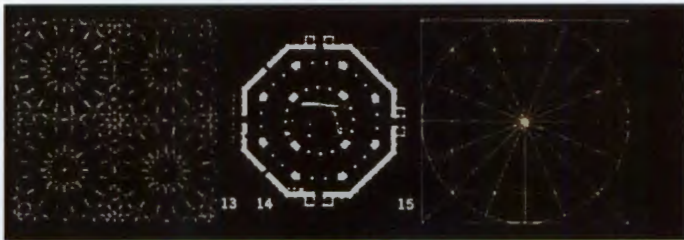


Figure 59: Pattern from the octuple division of a circle, Dome of the Mosque of the Islamic Centre in Rome, Plan of the Dome of the Rack (Le Roux, S & Botes, N)

39. Le Roux, S & Botes, N, *Number, point and space: The Islamic Tradition*

40. Le Roux, S & Botes, N, *Number, point and space: The Islamic Tradition*

41. Le Roux, S & Botes, N, *Number, point and space: The Islamic Tradition*

42. Foster, S, *Multiplicity in Unity*, 2004



**MOSQUE ARCHITECTURE IN SOUTH
AFRICA (precedent studies)**



MOSQUE ARCHITECTURE IN SOUTH AFRICA – PRECEDENT STUDIES



Very soon into my research I realised that my references of mosques were limited to those found in the city of Johannesburg which significantly differed from what I found in Cape Town. This led to me looking at mosques around the country in order to understand the aspirations that shaped the development of varied mosques.

An unsettling observation of the majority of the mosques in South Africa reveals a strong exclusion mannerism. Islam is a religion that is characterised by a warm receptive quality. The reason that the religion spread so rapidly in the country when it was brought to Cape Town, was the appeal of the openness to all that it presented to slaves and its non-discriminatory approach, yet most of the mosques that we find around our cities invert this concept by not being accessible to any member of the public. The nature of the religion of Islam is to engage and propagate, yet by the nature of the architecture of our mosques, this quality of the religion is restricted or suppressed. With the diverse cultural and ethnic spectrum of our country, the mosque should serve as an invitation to non-Muslims thus activating it as part of a public network and allowing it to be more inclusive and open to the outside. This paper advocates that a more public component should be added to our mosques allowing for a cross-fertilisation between cultures, religions, ethnics and beliefs. Islamic architecture should not just be a style, but rather an active manifestation of the Islamic civilisation.

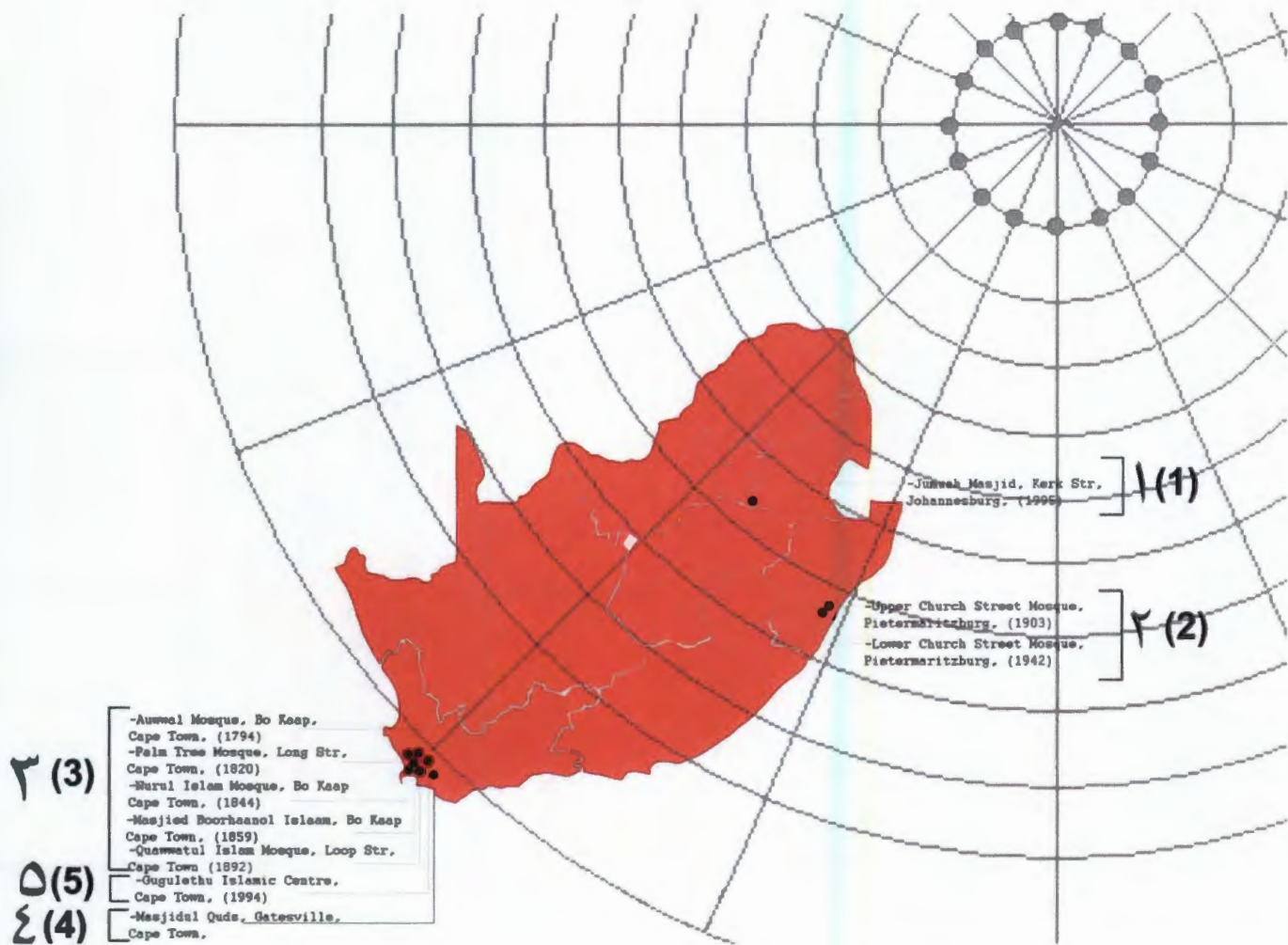


Figure 60: Precedent studies on mosques in South Africa (Chohan, 2010)

Jumiah Masjid, Kerk Str, Johannesburg

Amidst the bustle of Johannesburg's city streets, and surrounded by ominous glass buildings, this mosque strongly distinguishes itself from its surroundings. The structure is powerful yet inviting as one approaches.

The threshold between street and building forecourt is a dramatic one emphasized by architectural devices of double volume doors and mouldings that create a feeling of airiness.

Once in the space there is a feeling of transitional movement from the entrance, to the ablution area and then into the prayer hall.

The burst of space when one enters the prayer space evokes a spatiality that connects one to the sky and heavens. Light floods in at strategic and thoughtful areas enhancing the sacred provocations throughout the building.

The change in volume across spaces makes one conscious not only of the different thresholds and boundaries, but also of the importance of the space and ritual that is performed within that space. The design of this mosque uses a traditional vocabulary which creates an awareness of traditional techniques and their possibilities; while at the same time carefully adapting it to its local context through climatic and site consideration.



traditional

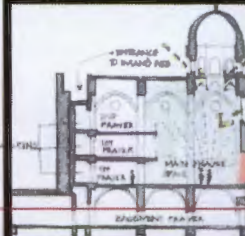
yet responsive



sacred art and architecture



1(1)



unity through forms

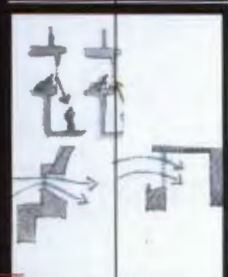
ground / sky
open / closed

relation between ritual and volume



typical islamic building typology - indirect entrance

transition spaces
[inside - outside]



Jumiah Masjid - (see Appendix A)



Upper Church Str. Mosque,
Pietermaritzburg

These mosque complexes are good examples of self-supporting units that grow in an organic manner over time. They illustrate the idea that the mosque is more than just a place of worship, but rather a public building which addresses multiple uses to become a significant contribution to society. Furthermore, as a building often contained within the urban fabric of our cities, it becomes important to relate the mosque to its surrounds whilst conjunctively producing a space of reflection.

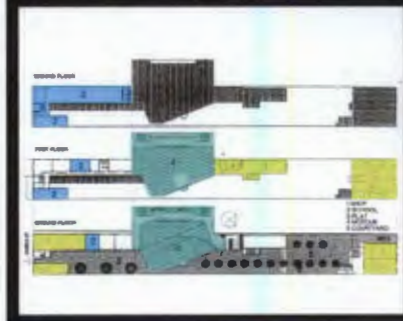


Lower Church Str. Mosque,
Pietermaritzburg



the mosque as part
of the public

self-sustaining



- education
- transport interchange
- mosque
- retail - residential

resembles Persian
typology - mosque
within city block

cross-programming
(additive approach)

۲ (2)

Church Street Mosques - (see Appendix B)

The mosques of Bo Kaap

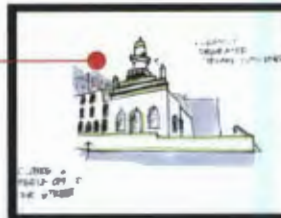


Moving to Cape Town exposed me to a world of **culture** which emanated **warmth and humility**. I was enchanted mostly by the **history and legacy** that made me proud to be a Muslim, but I was somewhat disappointed when visiting these mosques. The attachment that I felt as a Muslim was only because of the legacy that thread through. The spaces, however, lacked a sense of sacredness and felt like any other room with green carpets, but it was the **activities within** these rooms that were inspiring and moving. There was a **passion, commitment and pride** in the worshippers and students of these mosques. I was not sure whether this disappointment was validated - perhaps what I had been exposed to was too glorified?

<p>Masjid Boorhaano Islam</p>	
<p>transition from city bustle (moments of reflection)</p> <p>symbols of struggle</p>	<p>Rural Islam Mosque</p>
<p>ENTRANCE TO PRAYER HALL M. 2000 PER PLAN TO FURNITURE</p> <p>DESIGNER: [unreadable] LECTURE NOTES, [unreadable] FOR THE [unreadable] VISUAL REPRESENTATION TO [unreadable] BY [unreadable] [unreadable] TO [unreadable] [unreadable]</p>	



Mosques of Bo Kaap - (see Appendix C-H)



Either way, the mosques **serve their communities** in the best ways possible. The close proximity of the mosques means that there are **too many mosques in one area** which is not that large- therefore the mosques did not seem to fill to capacity for all prayers. Another disappointment that I felt was the **inaccessibility** of these mosques - when I visited out of prayer times they were locked and it meant that I had to search for a caretaker to try and gain access - a mosque should be open to all at all times, and this restriction for me, made the mosques **too exclusive**, which after interacting with the community, is in conflict with their nature and lifestyle

architecture does not evoke spirituality
 welcoming community
 unwelcoming structures
 commitment of community

۳(3)

subtle forms
 inaccessible structures
 history = legacy = sense of pride = identity



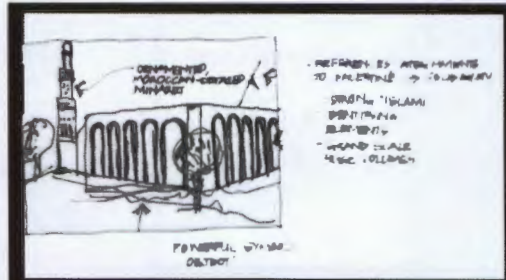
Figure 61: Mapping events surrounding the establishment of mosques in Bo Kaap (Chohan, 2010)

Masjidul Quds, Gatesville, Cape Town

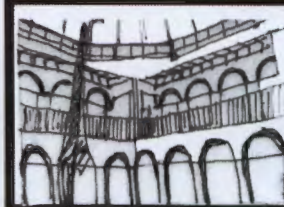
This mosque of Cape Town is one that prides itself on connecting to a global idea of Islamic architectural forms, and in particular is modelled on the Masjidul Aqsa in Jerusalem. It performs as a symbol of solidarity to the people of Palestine as well as the drug affected areas of Cape Town.

The form is overwhelming and occupies a large site closely located to local businesses and medical centres, thus acting as a proud landmark. The architectural devices are traditional and the decoration ornate. When I arrived at the mosque, although it was easy to locate the main entrance (for men), I felt that the women's entrance was slightly confusing. This highlighted the beliefs of the community of the area that the mosque is predominantly for males- which is an idea wrongly perceived. In this way it placed restrictions on me as a user which a mosque, I believe, should not. However, once I was able to find my way through, I was opened to a very different interior of powerful, noble architecture - important spaces were emphasized through light strategically brought in, more personal spaces for individual praying or reading closed down and became more humane. The transition from the praying space into the courtyard created an introverted world that was genuinely calming and serenely beautiful. The flow of water through the courtyard created a melodious atmosphere of contemplation and reflection.

The exterior is adorned and delicately crafted, but introduces the mosque as an object of decoration, while the interior creates a spiritual space of traditional typology.



imported forms
traditional islamic
architecture principles
[open / closed]



Σ (4)



ISLAM (as heritage) IN CAPE TOWN



ISLAM AS HERITAGE IN CAPE TOWN



Figure 62: Map showing the origins of the Cape Muslims (Davids, A, 1980)

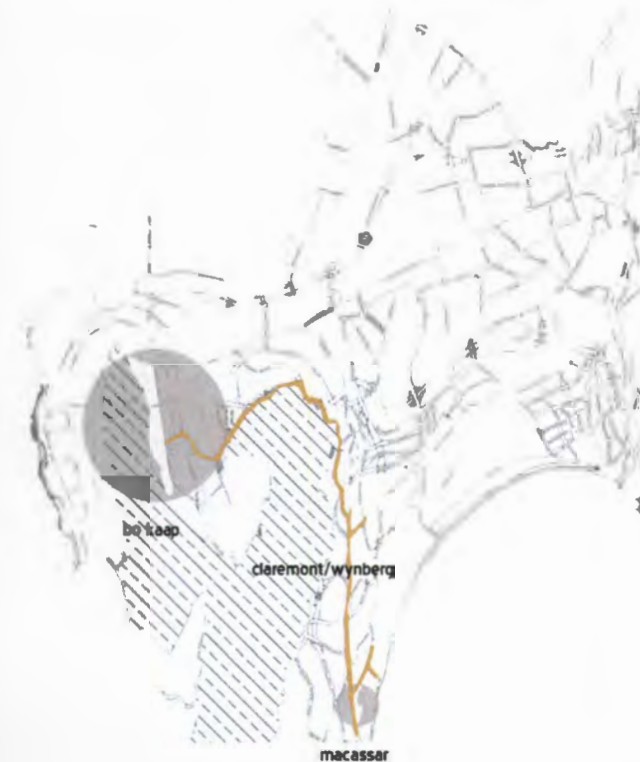


Figure 63: Map showing the journey of Islam through Cape Town (Chohan, 2010)

Many arrived in South Africa at the beginning of the white settlement when they were already arrived on 6 April 1652. Having being infiltrated into the colony through the Cape of Good Hope, Cape Town's Islamic influence and history is not just to essentially intertwined with the city's rich cultural fabric. Historical influences were brought to the then penal settlement of the Cape provided by the Dutch East India Company, together with them the cultural practices of their homelands of India, Ceylon, Indonesia and Arabia, which subsequently also formed the embryo of the Cape Muslim community.

The history of Islam in Cape Town from west to east can be traced from the first established Muslim community in Sandvlei¹⁰ in 1654 to the second and pioneering community in Athlone, "The 'Muslim' City of Athlone", established in the 1850s. Cape Town has a strong and steady Muslim base and its proximity to the Cape of Good Hope and thus plays a pivotal role in the dissemination of the religion and its architecture in the city. With the arrival of Islam into South Africa at such an early point in its history, the religion and its buildings became an integral part of our architectural heritage. The preservation of Islamic architecture in Cape Town was influenced by the history of the religion of the people that brought the religion to the Cape shores, as well as the skills available to the people who made the preservation possible. They brought with them a familiarity of specific construction systems¹¹ and materials, as well as the elements of material availability and climatic conditions to the Islamic architectural language established in the Cape. It is regarded as a "people type construction" that is highly diverse and local in nature¹². The historical characteristics were highlighted through a series of studies by Chohan (2010) and Chohan (2011).

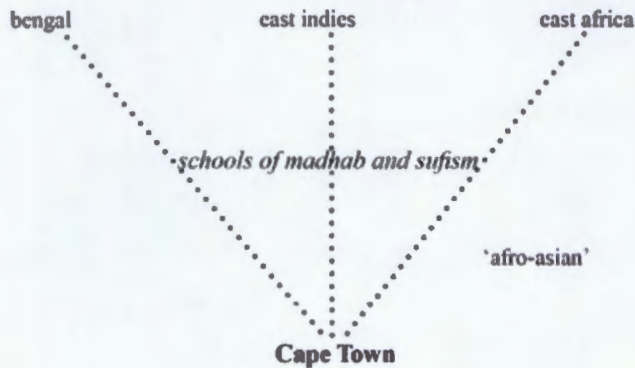


Figure 64: Diagram showing origin of Muslim slaves brought to Cape Town -
(adapted from Da Costa & Davids, 1994)

I believe that in order to understand the architectural aspirations of a community one needs to understand their lifestyle and behaviour. While conducting my research, I chose to live in Bo Kaap (being the centre of Islam in Cape Town historically) so that the essence of Islam as it is practiced in Cape Town could start infiltrating and guiding my discoveries. I was greeted by the most remarkably close-knit community which could probably be better described as a 'family'. There is a vivid sense of brotherhood (*muhabbat*) and an inspiring display of participation - participation in the street, participation with your neighbour, participation in building, craft and handy work, and most importantly, participation in religion. The lifestyles of the people are simple, yet thorough - many homes retain their original character but are still efficiently suited to contemporary living. The mosques of this area have not changed much from their original structures, but still remain a committed and proud symbol of the people.

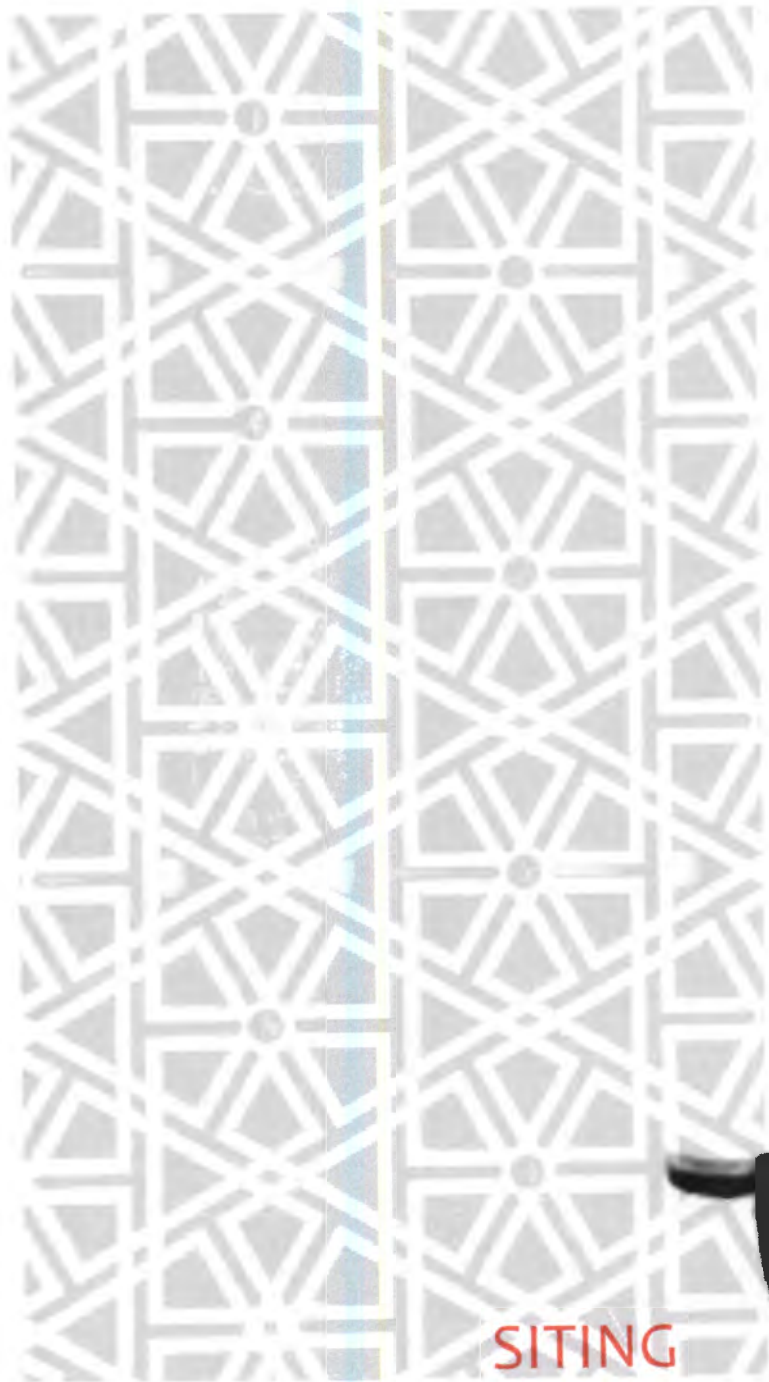
While this was incredibly heart-warming and inspiring, I started to think about the relationship between Muslims in the Bo Kaap with the rest of Cape Town, in the suburbs and even further towards the Cape Flats. What I quickly realised was that the sense of 'brotherhood' (*ummah*) that overflows in Bo Kaap does not extend its arm to the Muslim communities of other areas. Each area seems to have its own distinct circle which dictates the articulation of their practice of Islam and their mosques. There also does not seem to be an overtly express intent to reduce this semi-separation between the areas; except in the case of the townships of Cape Town.

Muslims of the townships of Cape Town are mostly new converts to the religion and thus, constantly looking for an attachment to an identity which does not seem to be facilitated by the current isolation of Muslim communities. Islam is a religion strongly based on social issues, and hence, it is my belief that the barriers that currently exist between the 'township Muslims' and the 'city Muslims' is one that earnestly needs to be broken down. Once I was able to plot the social implications of Islam across Cape Town, my research drew a focus toward mosque architecture and Islam in the townships, where an accentuation for a new identity for mosques is noticeably required and justified.

46. Davids, A, 300 years – *The Cape Muslims and Cape architecture*, 1994

47. Influences from Dutch, German, French and British colonists together with the cultural influences of the slaves brought from India, Ceylon, Malaysia, Madagascar and coastland of Africa (Ross, 1983:130)

48. Davids, A, 300 years – *The Cape Muslims and Cape architecture*, 1994



SITING



Having identified, through my research, an opportunity to vigorously define a particular mosque architecture within Cape Town and South Africa which starts to truly become representative of our context, I began by mapping all existing mosques in Cape Town. This highlighted areas in which interventions were noticeably less. With a strong and fast growing Muslim community, the township of Khayelitsha quickly presented itself as the focused siting for this research. The area of Nkanini, specifically will be the area of interrogation.⁴⁹

Township culture and Islam

The strength of Islam in townships in Cape Town is an illustration of the increasing growth and spread of the religion. This is a result of the extensive propagation work being conducted in Cape Town, which is an important part of the religion. Following apartheid, there was a need for an outreach programme which extinguished the separation of races and brought different communities together. This is what drives the work of the organisation *Discover Islam*.⁵⁰ The organisation embraces the opportunity of presenting Islam to diverse groups and uplifting communities through Islam.

Life in the townships is already a challenge. Coupled to this, people of the area face marginalisation and other societal problems such as unemployment, drug and alcohol abuse etc.⁵¹ Furthermore, the Muslims of this area are people of diverse backgrounds coming into one arena without always appreciating each other. There is also the undertone problem of racism from other Muslims. *Discover Islam* attempts to break down all these barriers and to bring people of different race, ethnicity and culture together.

Their programme focuses on education, counselling, special events (according to need) and mosque tours.⁵²

Mosques in townships

Existing mosques in townships around Cape Town all exist as organic objects that develop over time and as needs arise. They are not defined through formal Islamic elements but rather through activity and culture. Mosques begin as a small congregation that prays in the home of someone in the area who dedicates his home to the cause. As the number of worshipper's and their regularity with praying increases, funding is sought from within the community and outside donations in order to expand. The culture within townships is to build wherever open space is found, and there is no exception when it comes to the building of mosques. When approaching the establishment of a mosque, *Discover Islam* always tries to partner with the locals in order to understand their needs and language. By understanding the dynamics and expectations, one can allow a community to grow independently.⁵³

Whilst the mosque is a sacred space of spirituality, it should also be a social construct, and there are other traditions and cultures inherent in a township which should not be negated, but rather integrated into the programme of the mosque. For example, the role of women is increasingly emphasized – the design of a mosque would need to acknowledge and inculcate this as it tries to be an expression of the community it serves.

The idea of an Islamic centre with multiplicity of uses is one that is suited to the context of townships. There is a general need to keep children grounded, and a desire for peace and stability in what can sometimes be a chaotic environment.⁵⁴ For this reason, existing interventions include programmes such as a soup kitchen and free clinic. This highlights the realisation and reinforces the commitment of this paper to produce a mosque which is more than a prayer space for an exclusive group of people, but an arena of activities that enhances the community. It should not enforce any specific culture or style, but should be allowed to represent itself. This is what the religion of Islam advocates for – it is about addressing social issues and through this understanding of the essence of Islam we can transfer such qualities to the architecture of mosques.

49. Most Muslims in these areas are converts to the religion (according to interviews conducted)

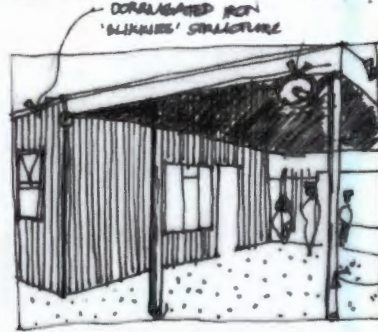
50. The brainchild of Sheikh Nazeem Mohammed Rahimullah, this Cape Town based organisation is now led by Shaykh Abdullah Hakim Quick

51. Interview conducted with Doctor Andrea Brigaglia, Islamic studies department of the University of Cape Town, 2010

52. Discoverislam, 2010

53. Interview conducted with Moulana Zakariya Philander, *Discover Islam*, 2010.

54. As revealed through interviews with *Discover Islam* and communities around townships



- built 2008
- serves N2 gateway
- jumuah prayers held
- madressa classes twice a week
- serves approx. 400 muslim families
- raising funds for hall

CALL TO PRAYER THROUGH

CORRUGATED IRON
'BLIKKIES' STRUCTURE

HEAVILY BUILT
TIMBER SHADING
DEVICE / ENTRANCE
'PORTICO'

TIMBER
GUMPOLES

LIGHT
BRIGHTLY INTO
SPACE WITH
CORRUGATED
ROOFING + POLES

SEPARATION BETWEEN
MALES + FEMALES
THROUGH WOOD
SCREENS

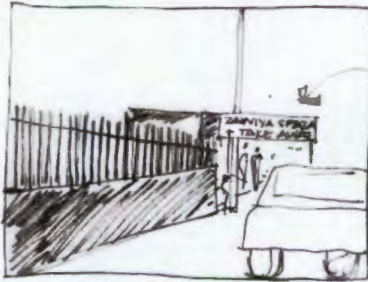
FLOOR WOOD RAISED
SLIGHTLY ABOVE
GROUND



UNANIMOUS EXCEPT
TDR SIGN
- CONVERTED HOUSE
- STRONG ALLIANCE
TO GHETTU



ALIGHTNED,
ORNAMENTED MIHRAB
FORMERLY PLACED INTO
SIMPLE BUILDING



MEDICAL
ACTIVITY ATTACHED
TO CENTRE

zawiya masjid - gugulethu



- built 1994, occupied 1997
- jumuah performed
- functions well, used as centre
- structure deteriorating
- 540 muslims in area

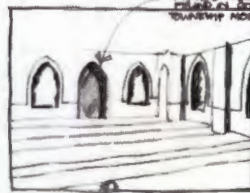
masjidul bilal - khayelitsha



MOQUE CREATED
FORM OF COMMUNITY
ACTIVITY

DISCONTINUITY/
TRANSITION BETWEEN
STREET + MOSQUE

COMMERCIAL ACTIVITY
ATTACHED TO OTHER SIDE
OF MOSQUE

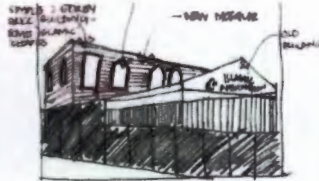


ACCUMULATED
VOLUME - LARGELY
FOUND IN FORM
OF NEWER HOUSING

CORRIDOR ALIGNED FOR
SHELTER + TO GYM
ROOM FOR COMMUNITY



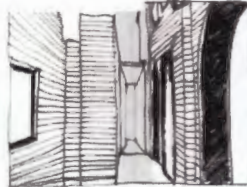
built after a need for a formalised structure arose
funder influenced by indian architecture
acts as islamic centre



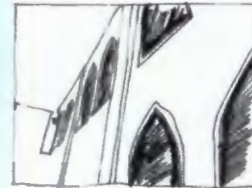
SPACE : OTHER
SIDE BUILDING -
SOME SHADING
WORKS

- NEW MOSQUE

OLD BUILDING

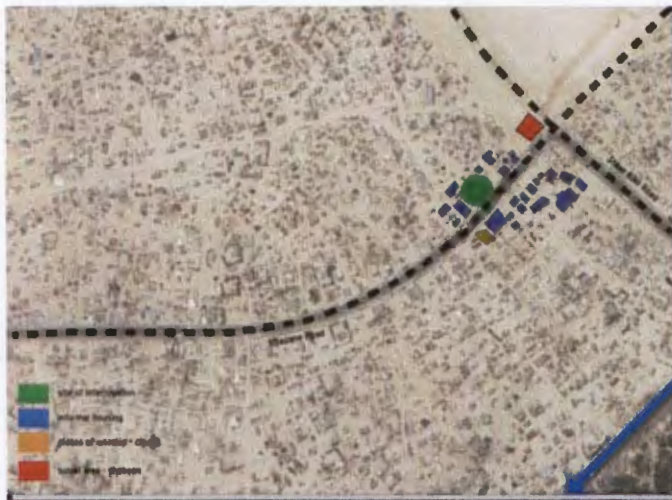


WALLS/ROOF REDESIGNED
TO RELATE TO OLD



TRANSITION BETWEEN
IND + MODERN
ENVIRONMENT - MORE +
UNUSUALISED





(Figure 65: Aerial photograph showing site, transport connectors and surroundings)



Figure 66: Selected site of interrogation in Nkhanini, Khayelitsha (Chohan, 2010)

A visit to mosques around Cape Town revealed the following:

- Lack of infrastructure means spaces used for prayer are usually minimally suited;
- Lack of funds to develop required infrastructure;
- The mosque is seen as the beacon of refuge for its users – they are proud of their mosque and attach themselves closely to it;
- While the mosque is at most times attached to other social programmes, it does not represent itself as a public building (in its articulation);
- Inclusion of formal elements in some mosques are seen as a connection to an identity and embraced.

Site of interrogation

Following this tour, a site was selected as the site of interrogation. It is located in Nkhanini in Khayelitsha on Ntlakazane Street. The site has been used as a space for Muslim prayer but has a history of political contentions, and thus has no real structure or building. The site is one which many Muslims in the area, as well as from other areas in Khayelitsha visit for praying. It also accommodates many foreigners from Somalia who find refuge in the mosque.

Design intervention

The design of a mosque for this site has the opportunity to really start addressing the undertones of contestation inherent in its history so that it becomes a place of relief, identity, warmth and inclusion. In keeping with the culture of township mosques analysed, a new mosque for this site would have to absorb a multiplicity of uses in order to represent the social context in which it is situated and in order to for it to start addressing more than just the need for a place of worship so that it contributes even further to the fabric of its context.

Another consideration that is critical to this design will be the role of water in the mosque. Due to the topography of Cape Town, the city once consisted of rich wetlands. Amongst these various wetlands were seasonally inundated marshes in the low lying area of the Cape Flats Rivers such as the Black, Kuils, Eerste and Lourens.⁵⁵

55. This becomes evident when looking at historical maps which all contain even names with the word 'vlei' in them (Edwards, J, *A landscape in transition - Architecture for an extreme climatic condition: An architectural response to seasonal flooding in Khayelitsha*, 2009)



Figure 67 & 68: Some existing water employments found around the site (Chohan, 2010)

During winter the water table tended to rise above soil level in many of these seasonal vleis. Many of these vleis are now located under Khayelitsha. Due to the construction of infrastructure such as roads, freeways and roads, the surface area of soil which absorbs rainwater has been greatly reduced which has increased run off from the surrounding land. The development on the low-lying areas of the Cape Flats has exaggerated this problem. The rise of the water table is the one of the most critical causes of waterlogged conditions on the Cape flats. It rises above ground level after heavy rains which leads to flooding.⁵⁶

In order to prevent these conditions, a more sustainable approach needs to be taken when managing water in this area so that we begin to create sustainable townships. I believe that a stronger connection to the landscape of Cape Town is critical to any intervention attempted, and through creative, sustainable ways of managing water, there is potential to do this in Khayelitsha too. As discussed, the conscientious use and management of water is also inextricably tied to the religion of Islam which reinforces the role that a mosque in this area would need to play. In addition to the mosque acting as a place of refuge and safety for its users, it could start inverting the negative connotations attached to water by people of Khayelitsha and become an environment which poetically allows water to flow its course while being functional at the same time.

56. This becomes evident when looking at historical maps which all contain even names with the word 'vlei' in them (Edwards, J, *A landscape in transition - Architecture for an extreme climatic condition: An architectural response to seasonal flooding in Khayelitsha*, 2009)

(sadaqallahul atheem) CONCLUDING
REMARKS



CONCLUSION

Islam is a religion that is multi layered, diverse in its followers, incorporative, accepting and social. The architecture of mosque should appropriately respond to these qualities. While the typical associations with mosques present it as an object of monumentality, it is critical that the mosque is representative of what could be construed as 'Islamic'. Following the research this paper advocates that the predominant qualities that make architecture Islamic are:

- one that facilitates and enhances the remembrance and worship of God;
- one which is harmonious and conscientious of its surroundings, which harnesses local resources so that the quality advocated within Islam of being sensitive to all living beings and the world at large is incorporated at an architectural scale too;
- one which is representative of the people that it serves ;
 - one that is beautiful and poetic yet not wasteful ;
- one that creates privacy and modesty for worship while still not being exclusive;

While these ideas could be regarded as 'Islamic' across the globe, the strength of mosques lay in their articulation in relation to their context, and therefore importing unjustified forms is an eclectic approach.

The rituals performed in a mosque, and the behaviour of the people it supports are what should inform design decisions for the building. Using this as a dictator of the spaces within a mosque enables it to become a socially bound product of the community in which it is located thus reinstating the role of the mosque as the heart of a community as it performed in the time of the Prophet Muhammad (May peace be upon him), and as it is spoken about in the *Quraan*.

My journey through life as a practicing Muslim has given me many life skills and enabled me to always stay grounded in what can be quite a chaotic world. Islam has become my way of life, it dictates and infuses into everything that I do. The commandments, lessons, rituals and guidance of Islam are all part of a lifestyle for a Muslim and this is what unites Muslims across the world and formulates a sense of brotherhood. When I moved from Johannesburg to Cape Town, there was much for me to learn and adjust to, but the one thing that I could identify with and that provided a sense of familiarity and comfort was religion. At the same time, I have had to learn about the differences between Islam in my hometown and my host city. This personal journey not only informed this paper but also the approach of understanding the cultural, social, political and economic context together with the religious ethics is what this paper advocates as guiding design informants of a mosque.

C
MASJIED BOORHAANOL ISLAAM, LONGMARKET STREET (1884)

Also known as the Pilgrim mosque, this mosque developed from a dispute at the Jaamia Mosque in Chiappini Street. It carried the first wooden minaret to be constructed on a mosque building in South Africa which was replaced with a concrete one following a bad storm in the late 1930's. This mosque served as an important welfare symbol with attachments like the Boorhaanol Recreation Movement. It was declared a National Monument in 1934.

D
MOSQUE SHAFEE, CHIAPPINI STREET (1859)

This mosque grew from two separate mosques established for the Shafee followers of Islam.

E
NURUL ISLAM MOSQUE, BUITENGRAGT STREET (1844)

Situated in a small lane just off what is now an arterial movement corridor, this mosque is only 100 metres away from the Auwwal Mosque, and was the debut site of a Hanafi-Shafi dispute. Its location was chosen due to the close proximity to a stream that ran down Buitengragt Street, highlighting the important role the use of water plays in mosque which will be dealt further in the Chapter The mosque in contemporary society – between revivalism and deconstruction.

The spatial arrangement is similar to the Auwwal Mosque with a small entrance foyer that leads into the men's prayer hall, with female accommodation on the second floor. The occupiable roof overlooks the city with views to the mountains, and was previously used on special occasions like the festival of Eid.

F
AUWWAL MOSQUE, DORP STREET (1794)

This was the first mosque in Cape Town South Africa, built during the time of the British occupation. It served as the main religious institution for a very long time (1804-1850) and remains as a revered mosque in the area. The mosque served as the symbol of ultimate liberty for the slaves.

The spatial arrangement of the mosque is typical of all mosques built in this area with a main prayer hall off the entrance for male worshippers, with female facilities on a mezzanine floor above. The architecture is simple with little decoration – evidence of the fact that most of the mosques built in this time, started off as gatherings within private homes due to the illegality of the open practice of Islam. Typical, formal Islamic elements like the minaret and dome did not exist in this mosque until later when a minaret was added. The mosque has since been renovated to accommodate more worshippers but retains elements like the original stone wall in certain parts.

G
QUAWWATUL ISLAM MOSQUE, LOOP STREET (1892)

The building of this mosque was a result of the influx of Indian traders into Cape Town, and although it was built to specifically address the Indian culture, it served the entire Bo Kaap area. It thus stands testament to the principle of brotherhood embodied in Islam, and the power of religion to act as a binding agent between different cultures.

H
PALM TREE MOSQUE, LONG STREET (1820)

The mosque was established when the land was acquired in lieu of war services of the Muslims. Its establishment led to animosity between two key figures in early Cape Mosque history – Achmat van Bengalen and Jan van Boughies. The mosque serves as a representation of the search for social status in a community of slavery and is symbolic as a cradle of development of culture and lifestyle.

Located in the heart of a vibrant pedestrian friendly street within the city, the mosque is an interesting study of the way it absorbs itself into an urban fabric of commercial, retail and leisurely activities. It holds no reference to an 'Islamic identity' except for the small signage with Arabic script. It takes its name from the dominating palm tree that stands in front of it which was planted by Jan van Boughies. This acts a tribute to a man who freed many slaves. The mosque still retains the dwelling character that it initially held.

APPENDIX

A

JUMUAH MASJID, KERK STREET, JOHANNESBURG :

- Community:
Serves the Muslim Indian community of inner Johannesburg (residents and business people). The community elects a board of members that form the mosque committee or society who then are trusted to make decisions on behalf of the entire community and see the project to completion.
- Beliefs and traditions:
a mosque is the heart of the Muslim community. It should be a symbol that is immediately and strongly recognisable. Needs of the community override the historical value 'the buildings purpose in Islam is focused on its need or function rather than the aesthetic or historic identity' (Yusuf Torah- caretaker and member of Juma Masjid society)
- Culture:
Togetherness, support, precision, detail, always striving for perfection, traditional, orthodox
- Site:
Cnr Sauer and Kerk Street, Johannesburg in a context of modern glass buildings and hard buildings of Bank City. Disputed site between community and council- council wanted to declare the old building a national monument but the community won because the ground was declared for scared space. Original site of mosque was too small to accommodate all worshippers therefore half of the adjacent site was donated to the mosque.
Design is restricted by site and is therefore site specific.
- Accommodation:
mosque/prayer space + madressa/education + imams residence + multifunctional space for community. Main Friday prayer mosque
- History:
Original mosque was one of the oldest buildings in Inner city Johannesburg therefore a disagreement between users and council arose when council wanted to retain the facades of the building and the mosque committee tried to prove the instability and inefficiency of the structure.
- Typology:
Strongly influenced by traditional Islamic architecture with elements articulated to be contextualised.
Includes recognisable Islamic elements such as the minaret, dome and arched spaces. Arabian typology Imported craftsmen from Morocco
- Influences:
Traditional Islamic architecture
- Methodology:
Masjid committee liaised with council for issues over the history of the old building. They were elected by the community and bestowed with the responsibility of negotiating and carrying out the design of the mosque.

B

UPPER AND LOWER CHURCH STREET MOSQUES, PIETERMARITZBURG

- Community:
Serves the Indian community of Pietermaritzburg who have a strong history of trade amongst them.
- Beliefs and traditions:
A mosque is the heart of the Muslim community. The mosque is seen as an integral part of the urban fabric. It is linked to social, economic and religious aspects of the city.
- Culture:
Unity, strong trade affinities, sense of community.
- Site and history:
Accessed off the main street of the area, Church Street, both mosques are contained within the city fabric. Both developed through a process of growth and expansion around commercial and housing provisions.
The Sunni Mosque at 69a Church Street, popularly known as "Top Mosque" was originally built in 1903 on land that was owned by a local businessman who founded the Natal Indian Congress. . On this site was the retail business of the owner and he allocated a portion to the mosque when he imported Indian craftsmen from India to build his shop. The mosque as it exists today following restorations, is directed towards Makkah at 11 degrees 30 minutes east of north and aligns itself with the city grid at almost 45 degrees. The site is historically significant as it was a victim of the Group Areas Act in the late 50's.
The Islamia Mosque on Lower Church Street, more popularly known as the "Middle Mosque" is located at 487 Church Street. The site was bought due to a need for the establishment of a permanent mosque in that portion of the Street. The site is developed so that it creates a linked walkway between two streets.
- Accommodation :
Upper Church Street Mosque:
mosque + commercial + school + residential + recreation + transport exchange
Lower Church Street Mosque:
mosque + commercial + school + residential
- Typology:
Resembles Persian urban setting where the mosque cannot be seen form the street but rather sits within the urban block.
Typology of cross-programming
Additive approach to planning rather than preconceived.
- Influences:
Persian influence and Social influences of economy and culture
- Methodology:
The developments began with an establishment of a commercial hard edge onto the street front, defining the boundary. Residential components were developed simultaneously above and behind this edge. This led to the mosque positioned inside the urban block.

1. The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that proper record-keeping is essential for the integrity of the financial system and for the ability to detect and prevent fraud.

2. The second part of the document outlines the specific procedures for recording transactions. It details the steps involved in the accounting cycle, from identifying the transaction to posting it to the general ledger and finally to the preparation of financial statements.

3. The third part of the document discusses the role of internal controls in ensuring the accuracy and reliability of financial information. It highlights the importance of segregation of duties, authorization, and independent verification.

4. The fourth part of the document addresses the challenges of managing financial data in a complex and rapidly changing environment. It discusses the need for effective communication and collaboration between different departments and the importance of staying up-to-date on the latest accounting standards and regulations.

5. The fifth part of the document discusses the importance of transparency and accountability in financial reporting. It emphasizes that providing clear and concise information to stakeholders is essential for building trust and confidence in the organization.

6. The sixth part of the document discusses the role of technology in modern accounting. It highlights the benefits of using accounting software and other digital tools to streamline processes and improve efficiency.

7. The seventh part of the document discusses the importance of ethical behavior in the accounting profession. It emphasizes that accountants have a duty to act in the best interests of the public and to maintain the highest standards of integrity and honesty.

8. The eighth part of the document discusses the importance of continuous learning and professional development in the accounting field. It highlights the need for accountants to stay up-to-date on the latest industry trends and to pursue ongoing education and training.

9. The ninth part of the document discusses the importance of risk management in financial reporting. It emphasizes that identifying and assessing potential risks is essential for ensuring the accuracy and reliability of financial information.

10. The tenth part of the document discusses the importance of effective communication in financial reporting. It highlights the need for clear and concise communication and the importance of providing timely and accurate information to stakeholders.

11. The eleventh part of the document discusses the importance of data security in financial reporting. It emphasizes that protecting sensitive financial data from unauthorized access and theft is essential for maintaining the integrity and confidentiality of the information.

12. The twelfth part of the document discusses the importance of compliance with financial reporting regulations. It highlights the need for accountants to stay up-to-date on the latest regulations and to ensure that all reporting is done in accordance with the applicable laws and standards.

13. The thirteenth part of the document discusses the importance of effective internal controls in financial reporting. It emphasizes that strong internal controls are essential for preventing errors and fraud and for ensuring the accuracy and reliability of financial information.

14. The fourteenth part of the document discusses the importance of effective communication in financial reporting. It highlights the need for clear and concise communication and the importance of providing timely and accurate information to stakeholders.

15. The fifteenth part of the document discusses the importance of data security in financial reporting. It emphasizes that protecting sensitive financial data from unauthorized access and theft is essential for maintaining the integrity and confidentiality of the information.

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22. The twenty-second part of the document discusses the importance of effective communication in financial reporting. It highlights the need for clear and concise communication and the importance of providing timely and accurate information to stakeholders.

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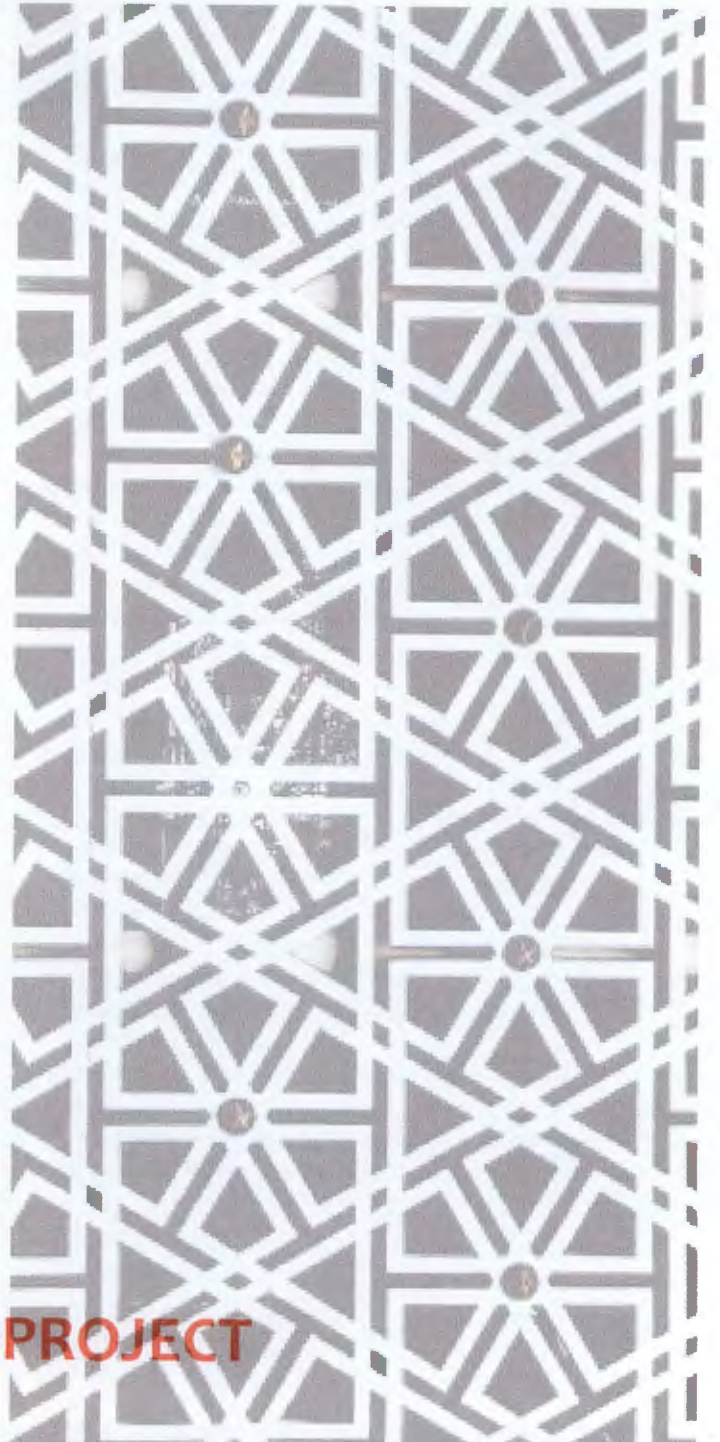
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- Moulana Zakariya Philander, *Discover Islam*
- Sheikh Shaheed, *Allahu Akbar Masjid*, Nkhanini

(part b)_ **DESIGNING THE PROJECT**



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DESIGN PRINCIPLES

DESIGN PRINCIPLES

Knowledge through research

In Part (a) of this document an investigation into the theoretical and technological aspects of mosque architecture and its various related components was undertaken. Part (b) concerns itself with translating this acquired body of knowledge into a foundation for an architectural design which resonates with the research in order to produce a building and intervention that can be said to be *Quintessential* to the research of this thesis, and thereby, *Quintessential to Islam*.

Following my extensive researching and my engagement with the discourse of Islam and mosque architecture, both globally and locally, my position within the discipline was strongly established.

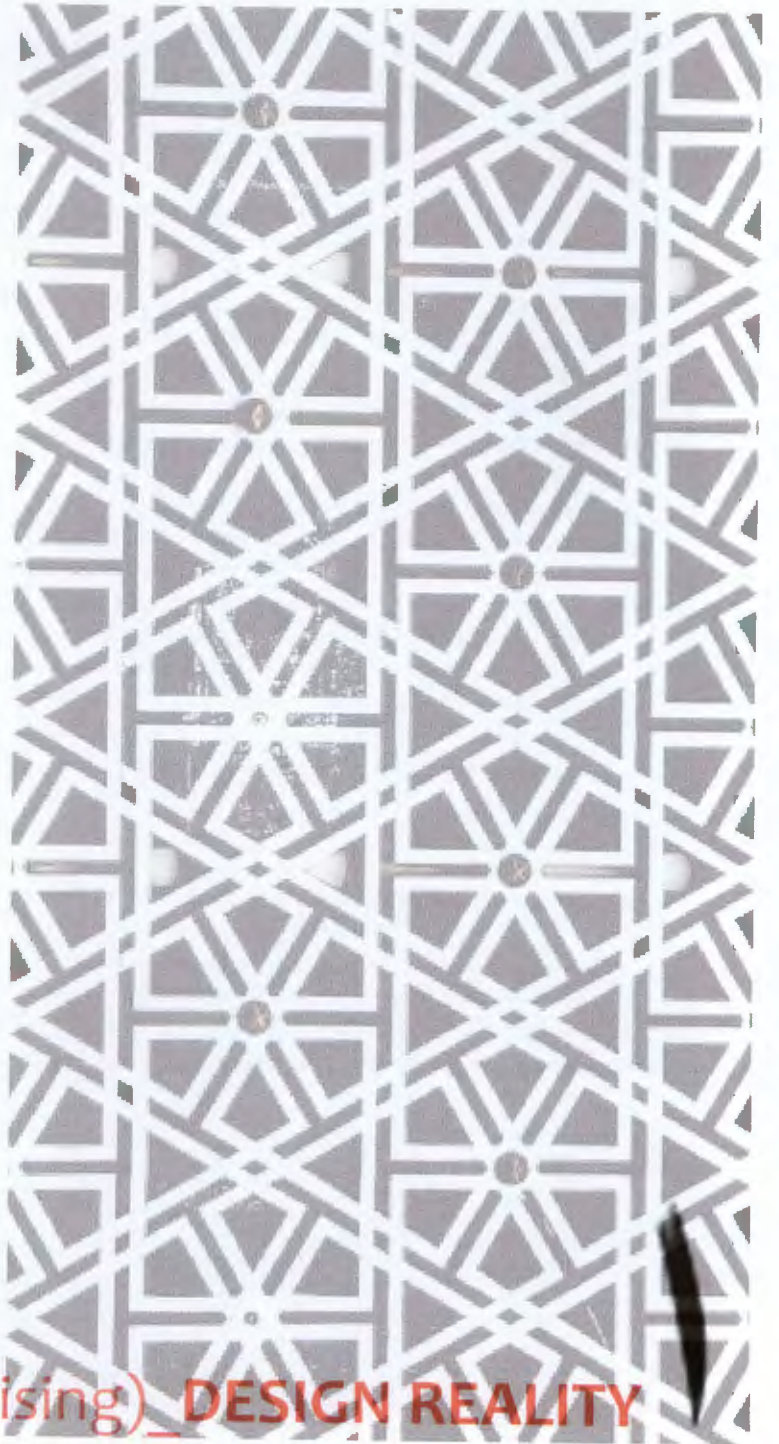
This paper advocates for the mosque to :

- be an integral part of the community within which it establishes itself;
- become more inclusive and accessible to the community;
- through its establishment, start imbuing a sense of order to its community;
- express the poetry inherent in the faith of Islam;
- become a landmark of refuge and contribution to the residents of the community.

This paper calls for the mosque to be more than just a sacred space inviting worship and contemplation, but also for it to be a strong social contributor and invigorator, thereby articulating the essences of the religion of Islam.

The strategy for design thus adopted was to establish a close relationship with the community of Nkhanini. I worked closely with the *Imam* of the existing facility. It was through continuous site visits, understanding the needs of the community and the role that a mosque was to play in this area, that the design reality started to emerge.





(contextualising) **DESIGN REALITY**

MAPPING AN UNCOVERING OF THE SITE

The process of siting the project evolved from the research into mosque architecture in Cape Town. As mentioned in Part (a), the development of Islam was traced throughout South Africa and within Cape Town as well. A plotting of all existing mosques within Cape Town revealed a distinct deficit of facilities within the outlying areas. Furthermore, those that did exist within the Cape Flats area, were not always listed or acknowledged. The explicit disjunction between mosques within the city or suburbs and those within the township areas, heightened my interest in engaging more with the latter. With the help of the *Discover Islam*, I visited all these areas (as shown in Part (a) of this document).

- The site in Nkhanini, Khayelitsha was selected for the following reasons:
- moving away from saturation points so as to establish a mosque where there is a genuine need;
 - to serve a community of both muslims and non-muslims;
 - potential and ambitions for expansion and growth due to the growing number of muslims within Khayelitsha;
 - potential for urban contribution within an area that is establishing itself as a very strong CBD with the little infrastructure that exists;
 - location in relation to other mosques - it is a mosque that is a need and is not in 'competition' with other mosques within too close a proximity.



URBAN SCALE SITE ANALYSIS

existing contours and transport routes

The initial mapping carried out was of the site within a broader urban framework which is bursting with potential to be so much more in order to understand the role an intervention needs to play on such a scale.

A limitation of a 400m radius was used to establish urban strategies within a walking distance of the site.

movement and supporting amenities

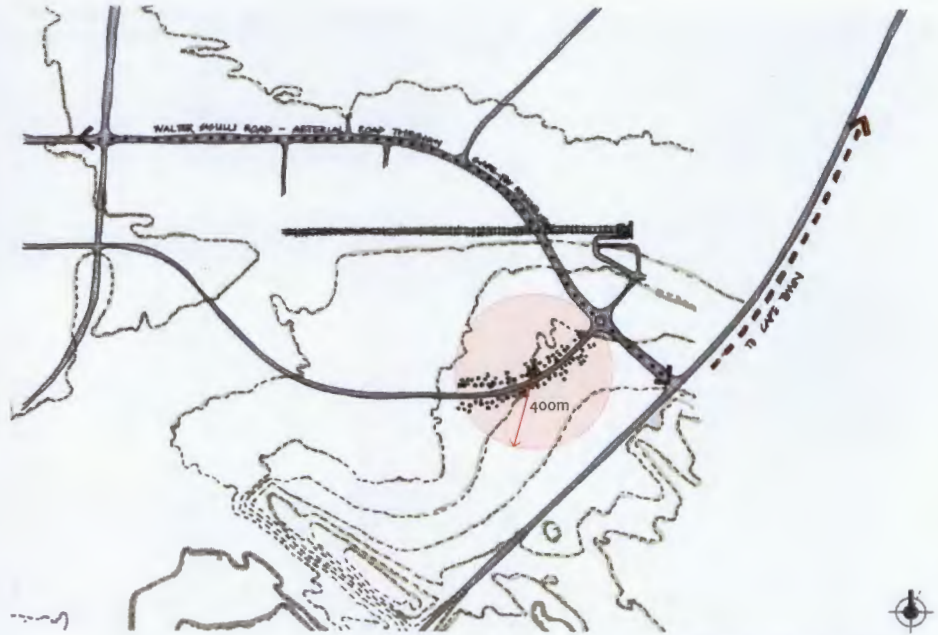


Figure 70: Contours and transport links



Figure 71: Movement and proposed supporting structures (Chohan, 2010)

water as a structuring and invigorating element

The idea of water was established as a critical informant to design from early on into the research. Hence, a mapping of water points and existing site conditions that create opportunity for water to be celebrated and for the formation of green structures was important from the outset of the project.

green structures

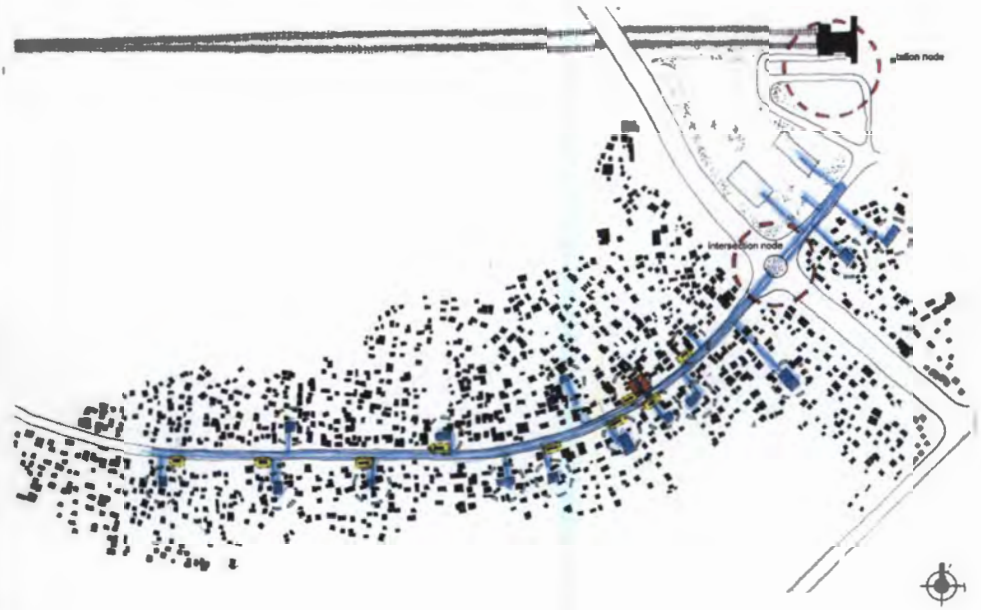


Figure 73: Green Structures (Chohan, 2010)



Figure 74: Conceptual sketch for streetscape (Chohan, 2010)

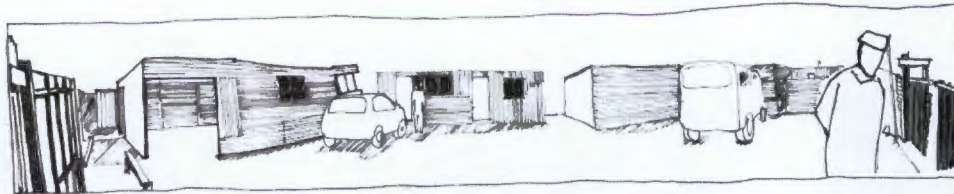


Figure 75: Sketch of existing site (Chohan, 2010)



Figure 76 (Chohan, 2010)

NEIGHBOURHOOD SCALE SITE ANALYSIS



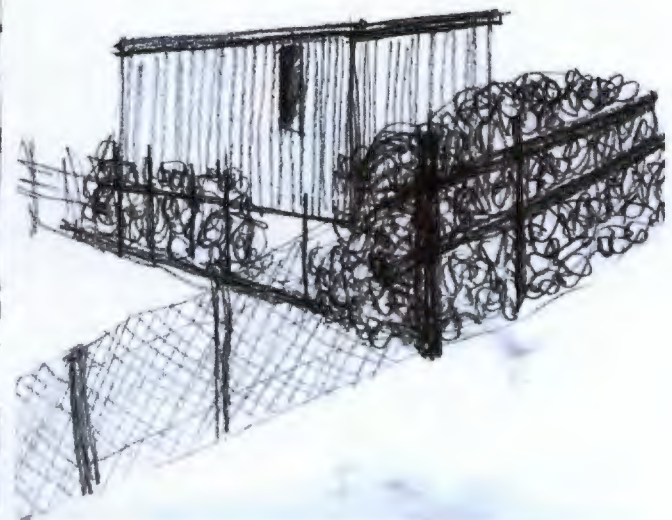
Nkhanini is an area within Khayelitsha which to me was hugely inspiring. The residents are genuinely committed to improving living conditions, and aspire with small gestures like porch spaces, articulated and cleared pathways, planting, seating, painting and personalising their shacks. This active display of participation reinforces a design that engages with this strong community. It highlighted the level of involvement residents were willing to contribute to their community. Another factor which placed the design of a mosque centrally within the social fabric, was the political undertones of the site. This site was amongst the religious buildings that were forcibly demolished by the local Council in an effort to 'legalise' building in townships. What was interesting was the the community came together and defended not only the mosque, but also other churches within the area that was attacked. Regardless of religious affiliation, residents came together to defend an institution tht was seen as a positive contriutor to the urban context - an institution that promoted development rather than degeneration (see appendix A)

This type of involvement and participation of the residents was inspiring for me, and from the very outset of the project, stressed the importance of working closely with the local community and surrounding residents. I worked closely with the local *Imam* from the very beginning of the project and spent many hours with the surrounding community in order to understand their needs, concerns and ambitions. What was revealed was this motivating acceptance of the mosque by the community as a symbol of hope and development, and many were happy to see the mosque expand as long as it respected its neighbours and and accommodated any relocation required. This really started to highlight the role that a mosque in the area could begin to play. It was clear that an inclusive, incorporative and organic mosque design would best be received in such a dynamic and maturing community.

The nature of the context also highlighted the criticality of the community scale, and steered the mapping and consequently, the design of the project, towards an 'on-the-ground' type of approach. An exercise of recording and measuring was carried out on the site in order to establish the social patterns.

For the community site mapping and analysis a limitation radius of 200m was used (200m accommodates all surrounding residents who can walk to the site of the mosque in the time it takes to recite the call to prayer).





'shifting landscape'



accommodate . adapt . evolve . modify . re-condition . regenerate . shift . translate . resolve

Figure 79: Movement and proposed supporting structures (Chohan, 2010)

In addition to the active participatory nature of the community, the revealed change in the landscape from aerial photographs show the existence of a Shifting Landscape. This meant that only through an on-ground fieldwork approach could the accuracies of the context be revealed.

(on the ground) UNCOVERING EXISTING SITE INFO



The seemingly chaotic fabric of Nkhanini revealed a patterned system of order upon further investigation and recording. The community create an atmosphere of sharing and brotherhood, whilst still trying to articulate an identity for their individual spaces through gestures such as the use of vegetation, colour, and fencing. The most exciting part of this exercise was the interest that the community, and especially the children began to show interest in exploring their territory. After many days spent on site, I established friendships with many children who are truly the life of the area, and who became interested in learning even the smallest of things like the length of a metre, the way to draw spaces and how to count.

Again, this highlighted the need for a building that speaks strongly to and resonates with its community. It also made accentuated the importance and value of education within the area with the children being the future of this growing vibrant playground.





Figure 81: Movement and proposed supporting structures (Chohan, 2010)



COLOUR



COMMUNAL SPACES



ARTICULATED PATHWAYS



KIDS' INVOLVEMENT



PLANTING



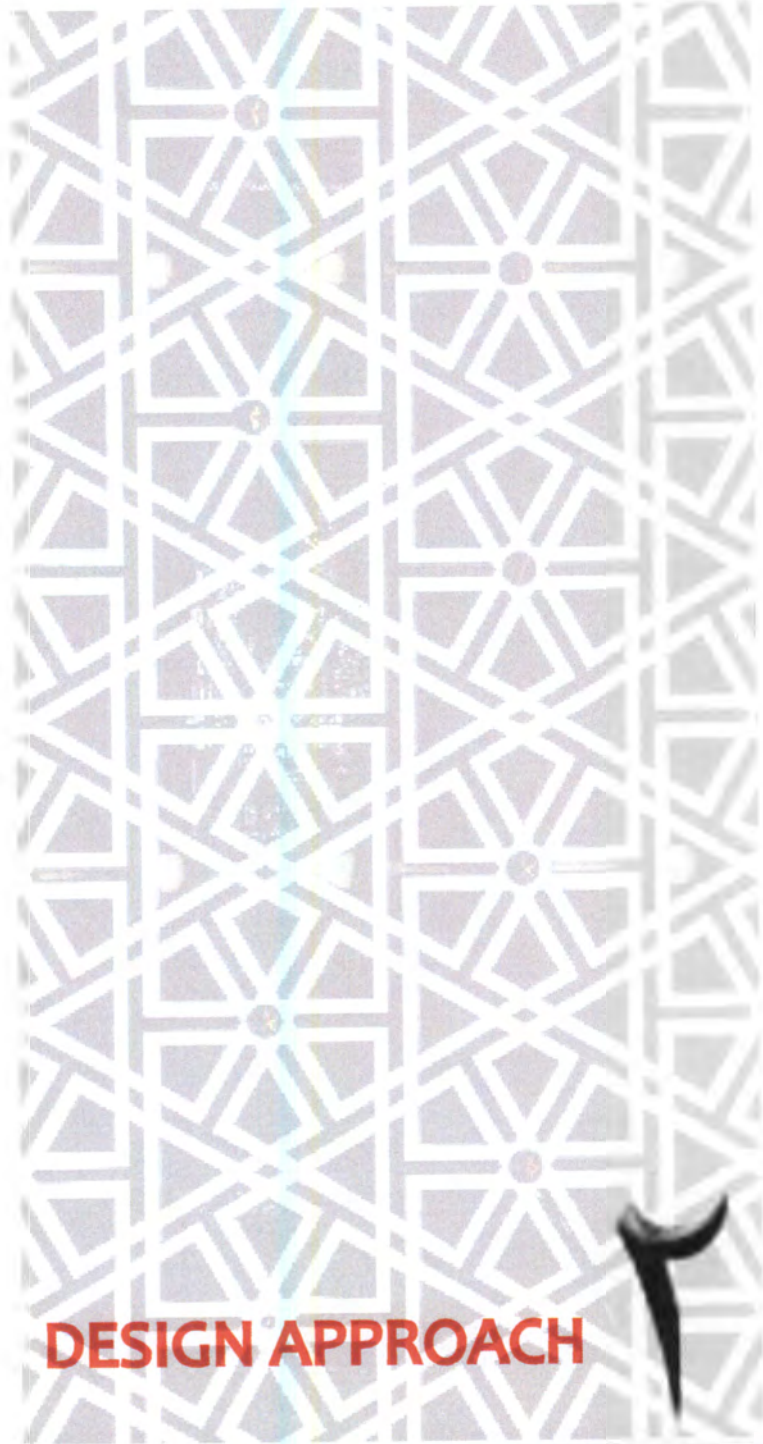
PRIVACY



THRESHOLDS



WATER POINTS



DESIGN APPROACH

PROGRAMMING DESIGN

Synthesizing with the research explored, and theoretical framework developed, in Part (a) of this document, the design of a mosque needed to address more than just a sacred space dedicated to worship and contemplation.

This mosque aims to absorb and reflect the essences of Islam as well as the culture of the area of Nkhanini. Not only should it act as a moment of reflection, but it is critical that is contextually relative and responsive. Through addressing the needs of the community, and mirroring socio-economic, cultural and technical reality of the society, the mosque will become the heart of the community.

After considering the existing ambitions of the local prayer space, and following community interaction, a programme including diverse social and sacred components was developed - an education component, a soup kitchen, residential quarters and recreational facilities all became quickly tied to the sacred space., in an effort to make the building an accessible, inclusive, flexible and organic one which can become a holding landmark in this shifting landscape. It also became important for the mosque to work as a system consisting of many organisms which weave themselves between the existing spaces and thereby integrate with and produce an order.

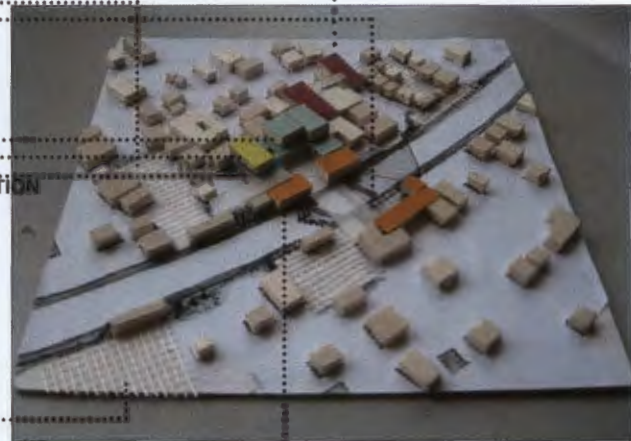
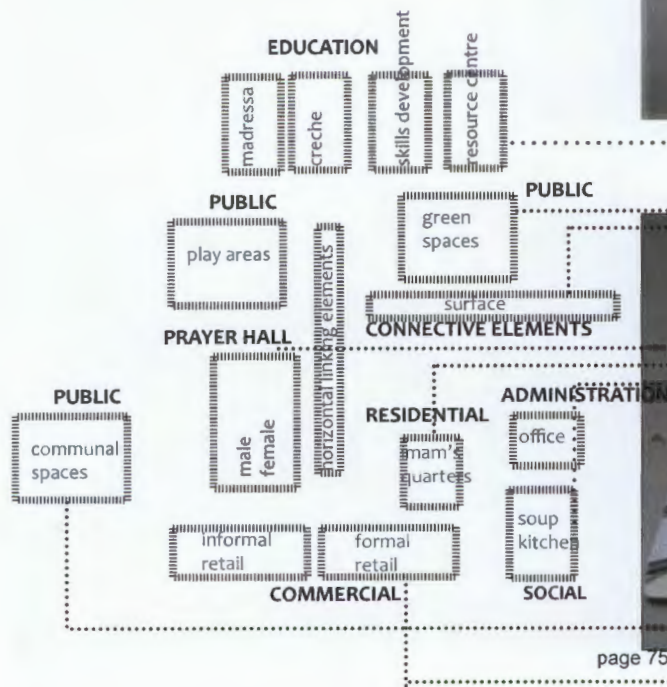
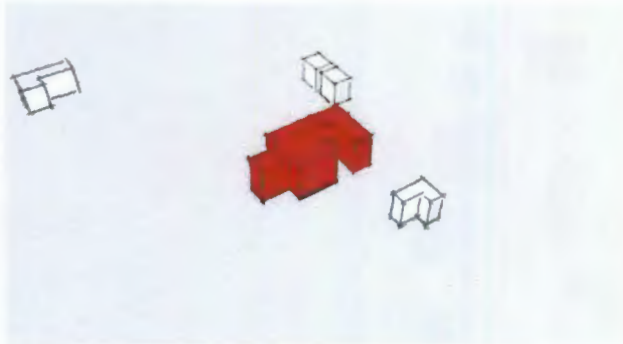


Figure 83: Model exploring massing

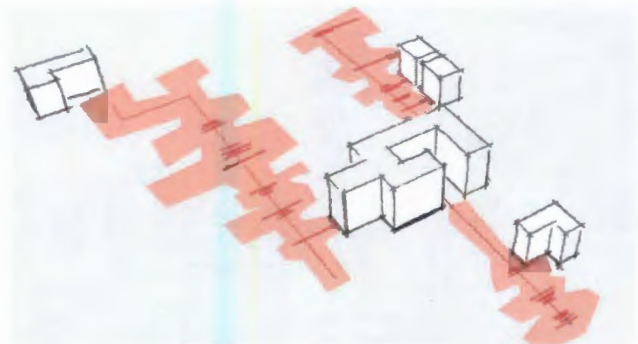
CONCEPTUALISING DESIGN



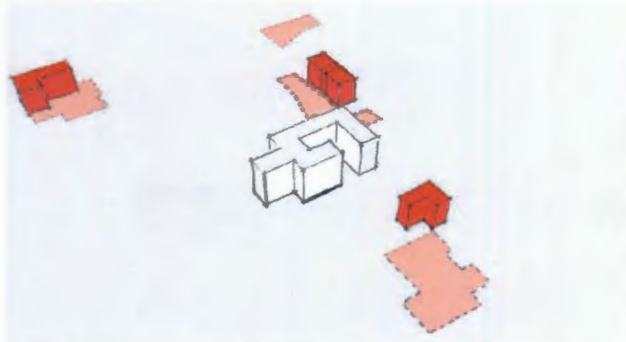
Design Philosophies



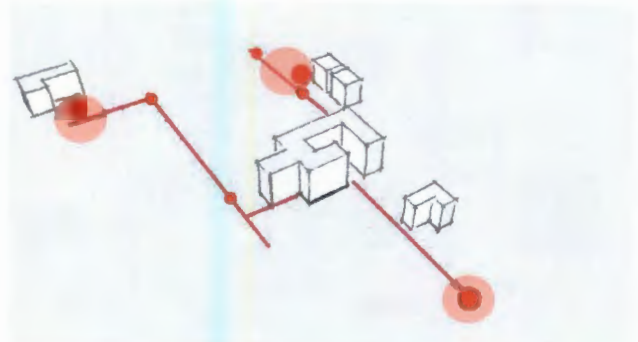
SYMBOLISING THE SACRED



SOCIAL INTERACTION . INCLUSIVITY



SELF SUSTAINABILITY (through organic growth)

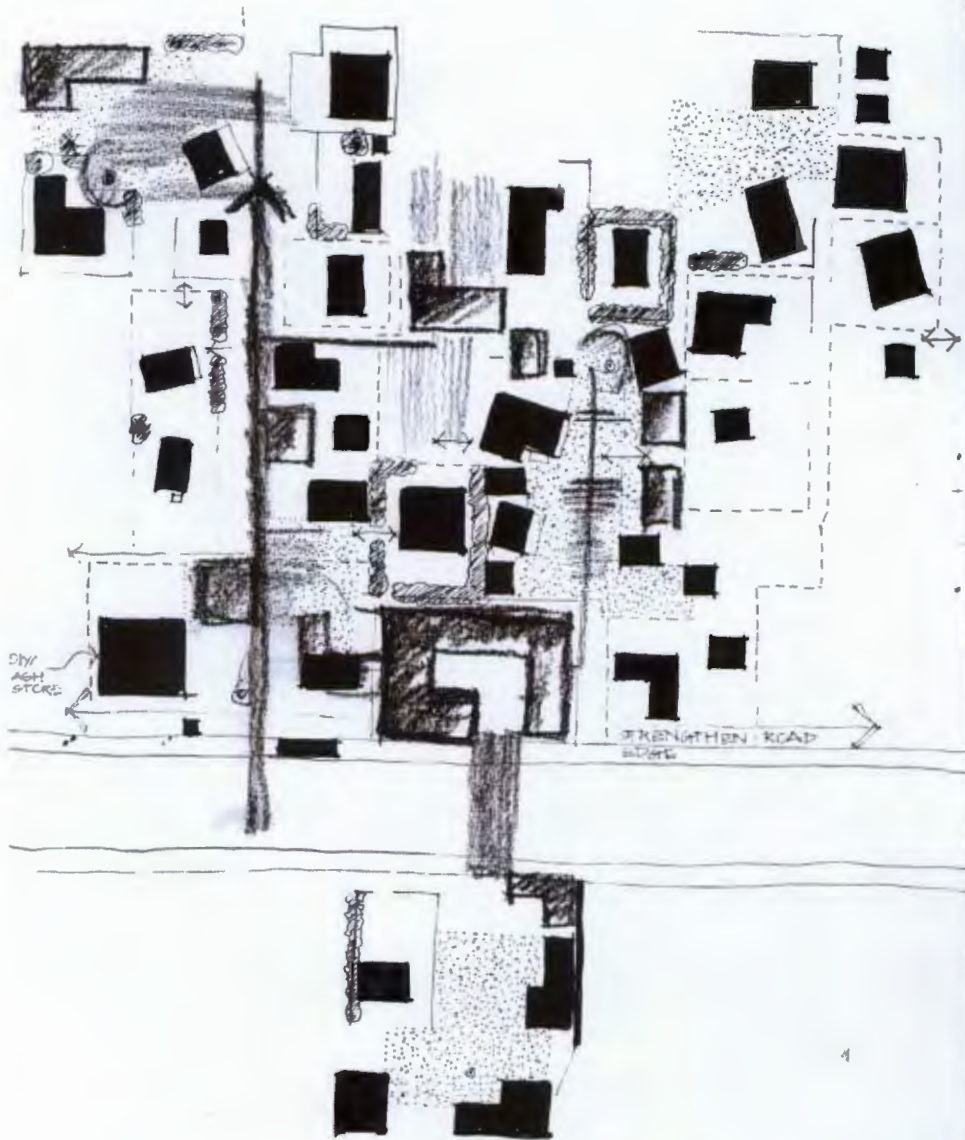


WATER AS A CELEBRATED INVIGORATOR OF SPACE

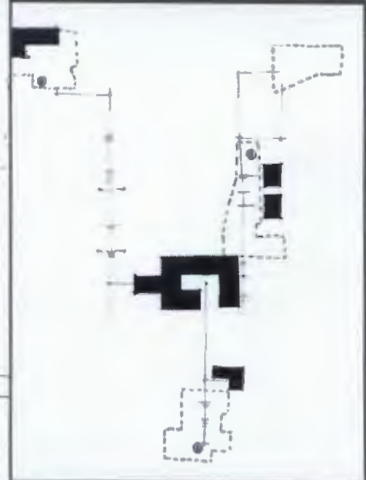
Design Informants

- Direction to Makkah - acknowledging and emphasising the horizontal and vertical axes;
- The derivation of physical spaces through anthropometry;
 - Community requirements and traditions;
- The analysis in urban context from the macro- to micro scale;
- Water and its poetic imagery and ability to create a sense of order, retreat and ritual.

Initial Neighbourhood Conceptual Diagram



The initial architectural development was not only about a single building and its immediate space, but rather concerns itself with the design of the neighbourhood as an activated system which the building sets up and then plugs into.

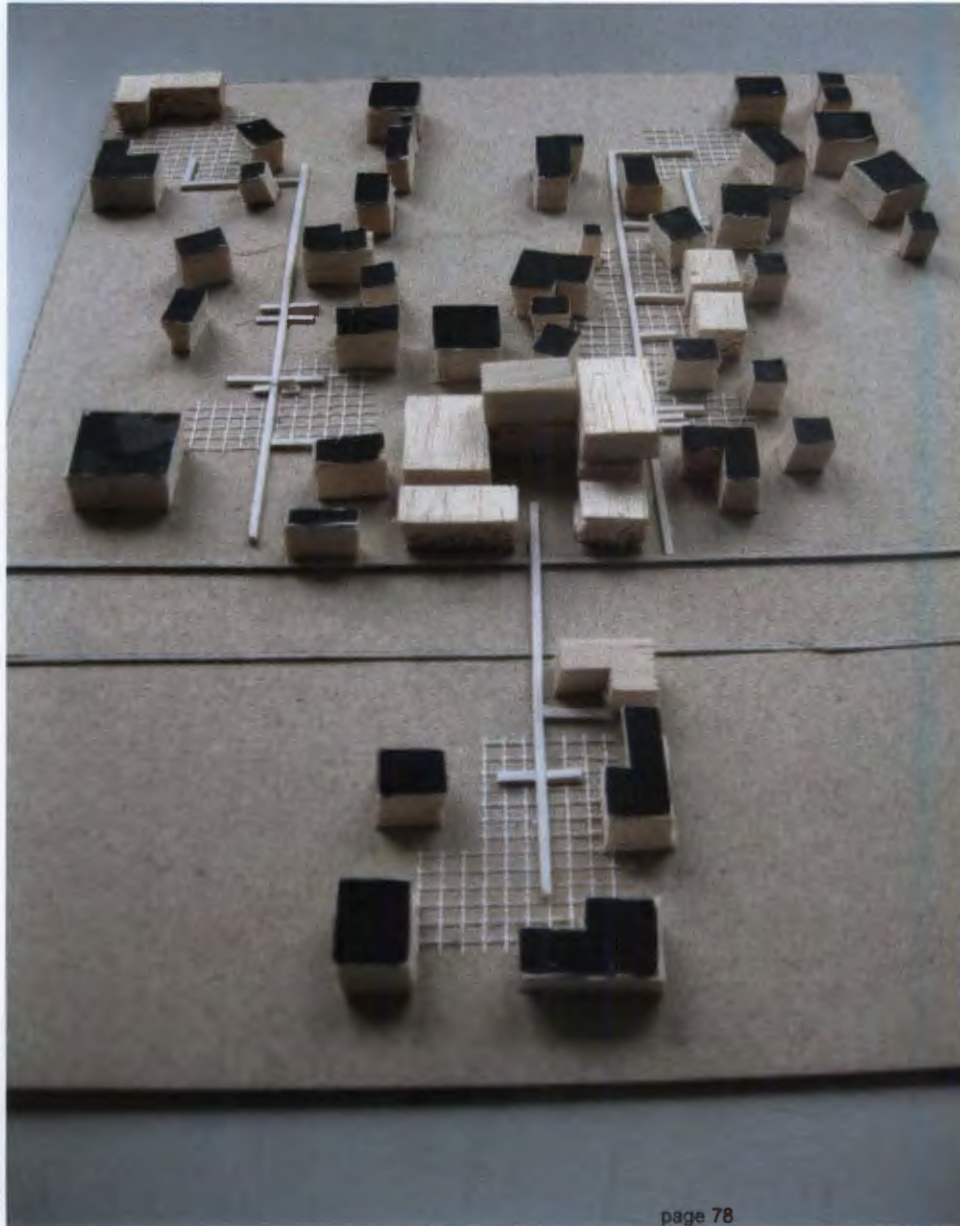


HEAVY . LIGHT

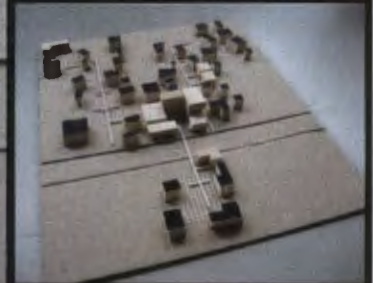
PART . WHOLE

SOLID . VOID

Initial Neighbourhood Conceptual Model



Weaving spaces together using a network of horizontal elements which link spaces of movement and activity, thereby producing new spaces of opportunity.

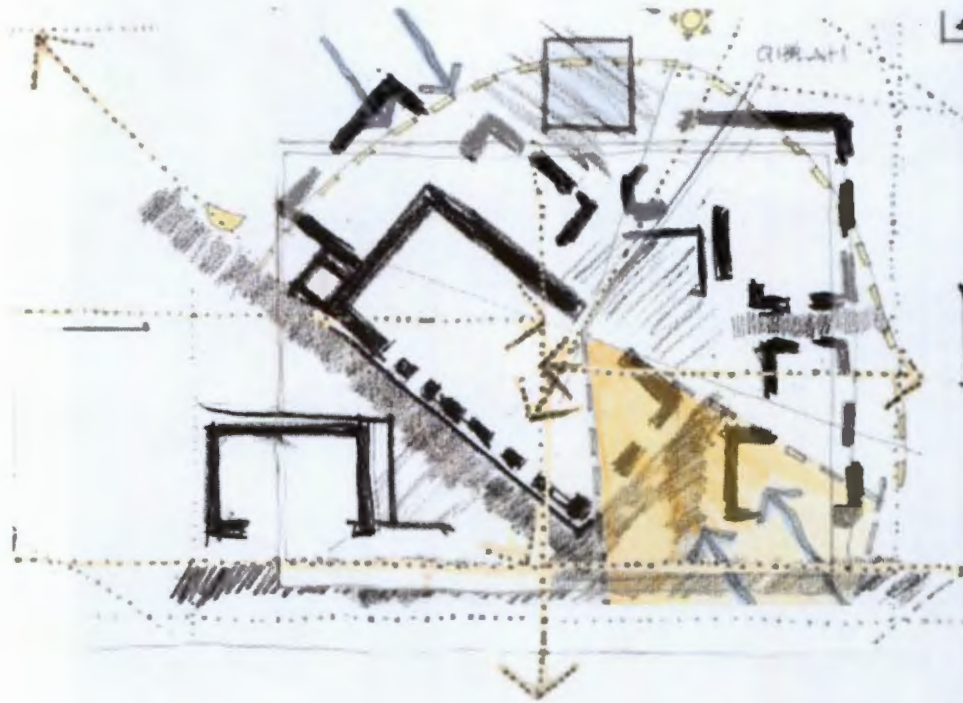


HEAVY . LIGHT

PART . WHOLE

SOLID . VOID

Initial Building Conceptual Diagram



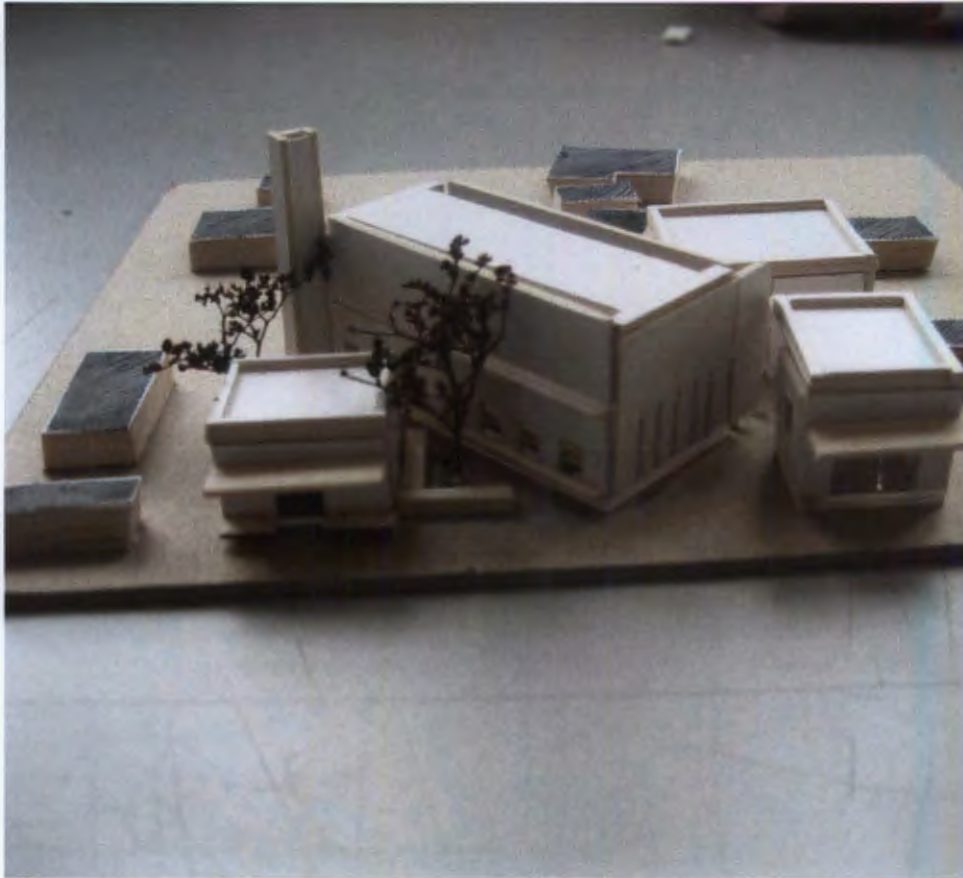
The instinctive concept for the actual mosque building was for it to be a strong grounded landmark that addresses qualities of an Islamic sacred space, while still connecting to a system of a hybrid context. Therefore the mosque becomes wrapped and flanked by lighter, fragmented components

HEAVY . LIGHT

PART . WHOLE

SOLID . VOID

Initial Building Conceptual Model

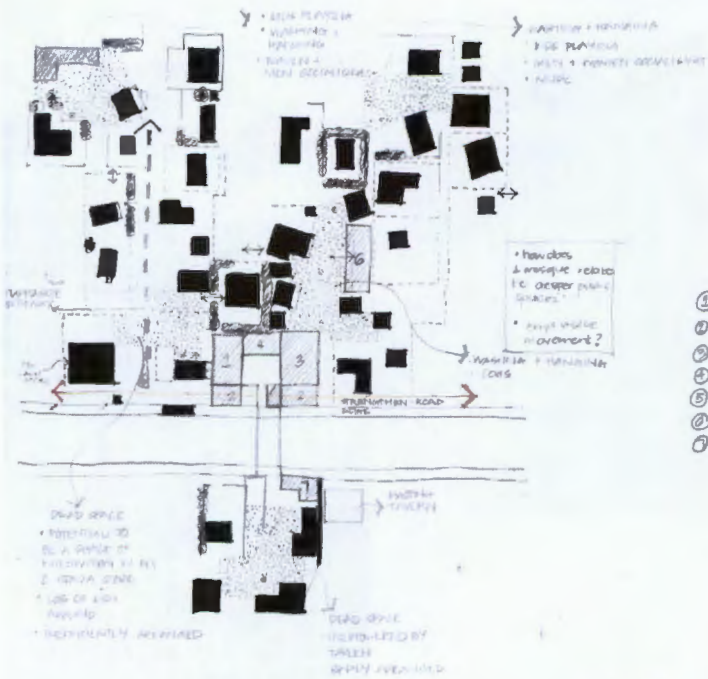


This model explored concepts of light and ground manipulation, animate qualities of the building and composition.

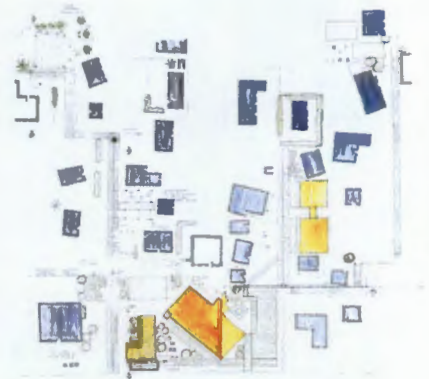


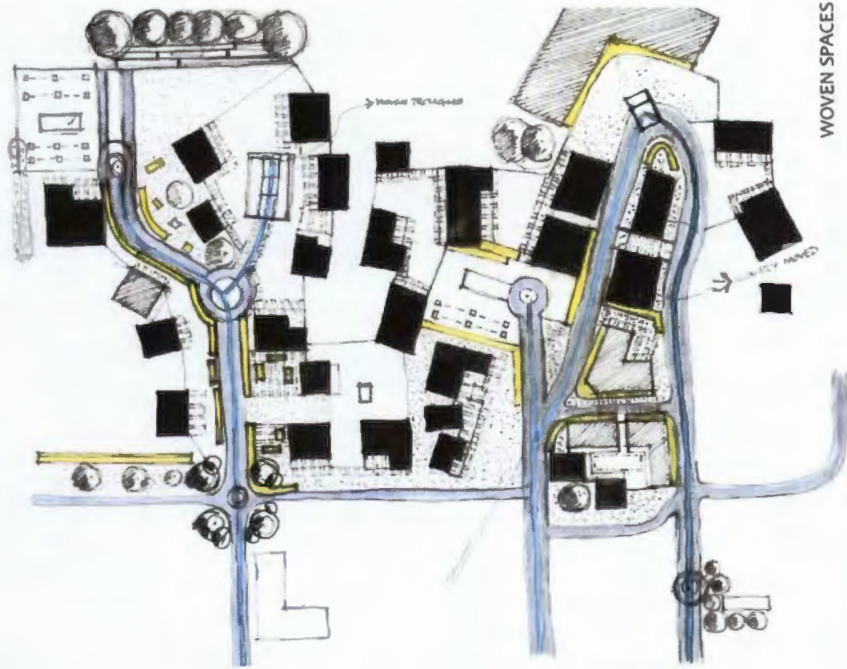
SLIT . PUNCTURE
FLOATING . GROUNDED
EMBRACE . BOUNDARY

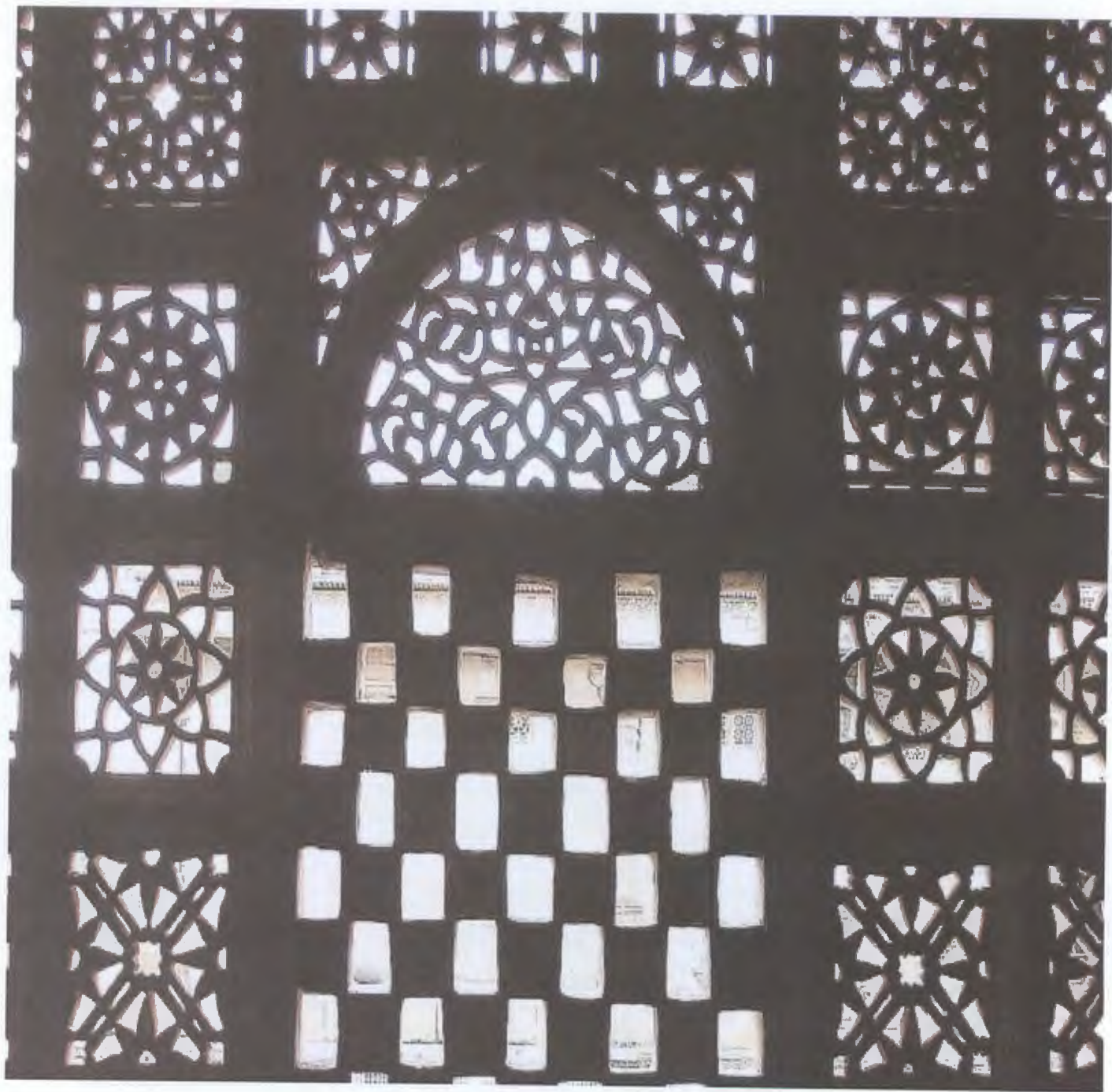
Neighbourhood Scale Conceptual Development



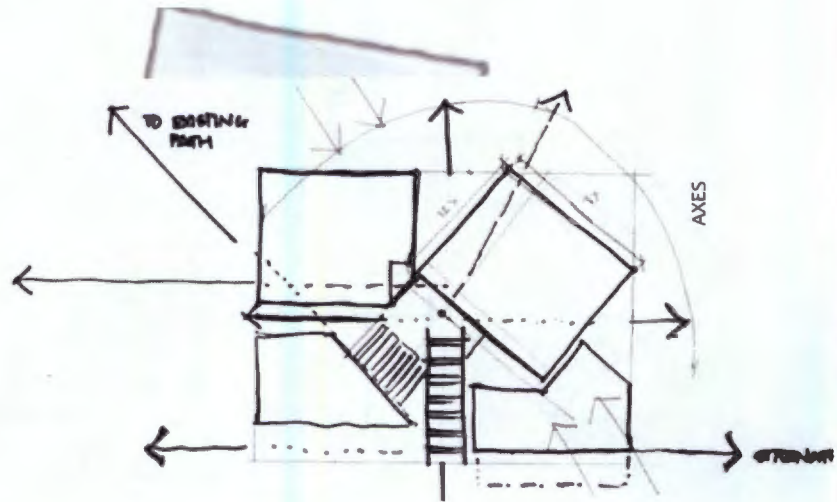
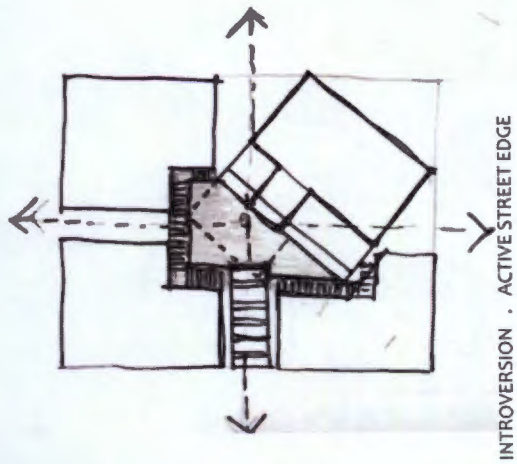
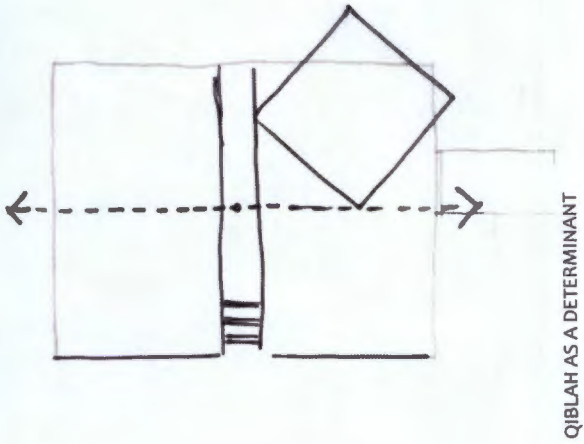
- MOMENTS OF OPPORTUNITY · MOVEMENT · EXPANSION
- ① CHURCH / ORGANIZATION
 - ② RETAIL / GENTRIFICATION CODE
 - ③ PUBLIC HALL
 - ④ OFFICE / WORK
 - ⑤ LIBRARY
 - ⑥
 - ⑦ ART STUDIO

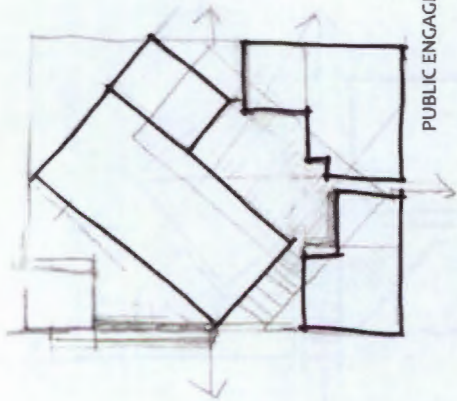




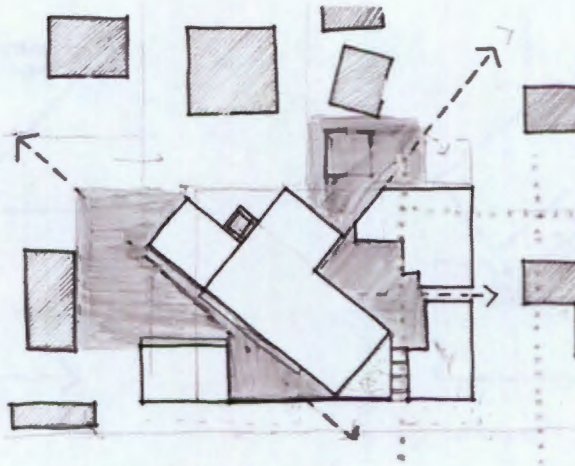


Building Scale Conceptual Development



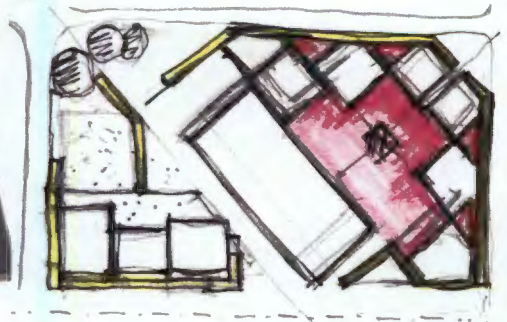


PUBLIC ENGAGEMENT · INCLUSIVE

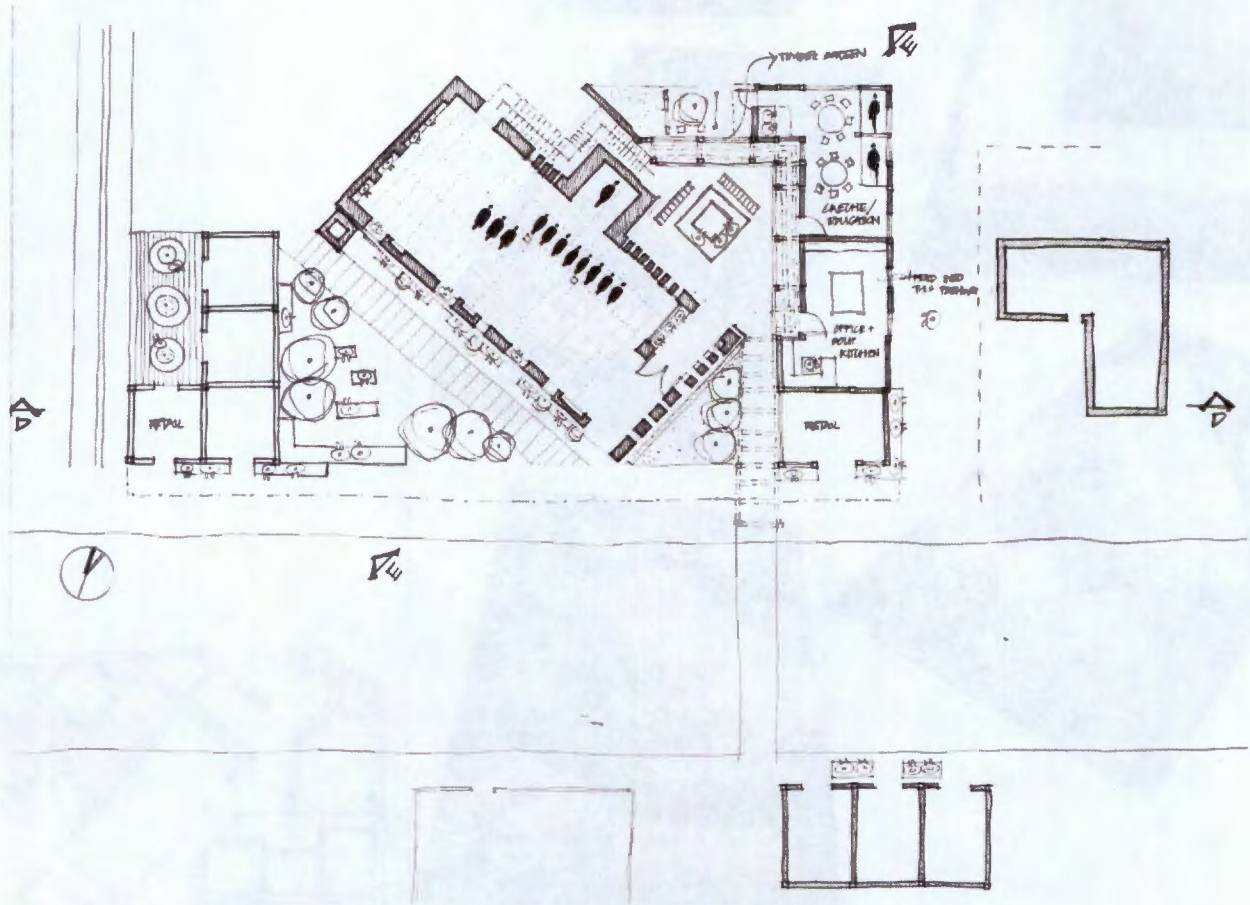


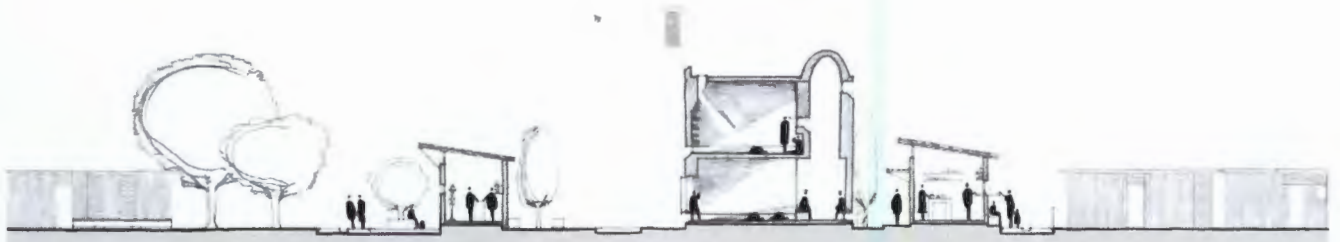


FRAGMENTING · PART TO WHOLE



Site and design development

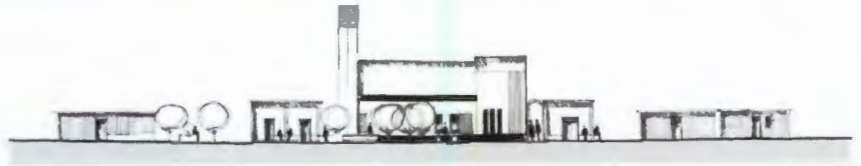




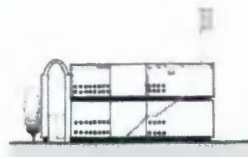
d - d



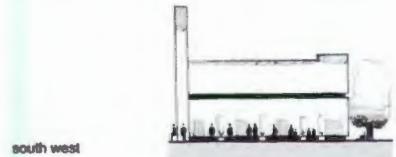
e - e



street



north east



south west



PUBLIC . PRIVATE



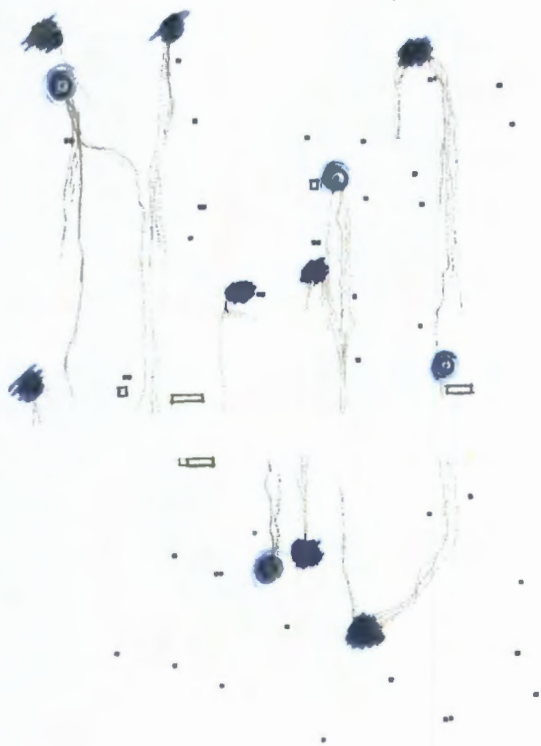
- public
- semi-public
- private

SURFACES & THRESHOLDS



- hard surfaces
- soft surfaces
- thresholds
- entrances

WATER

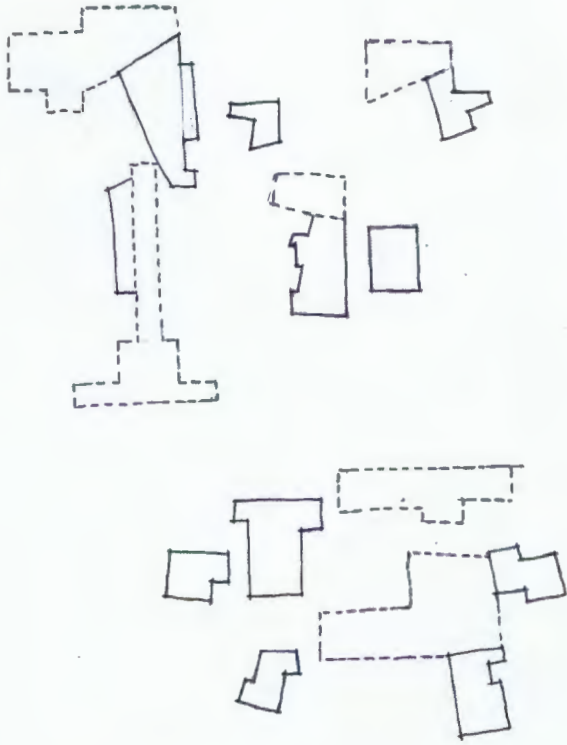


- water storage (bottles)
- water use (toilets)

PROPOSED NEW THRESHOLDS



PROPOSED NEW SURFACES



— semi-public
- - - public

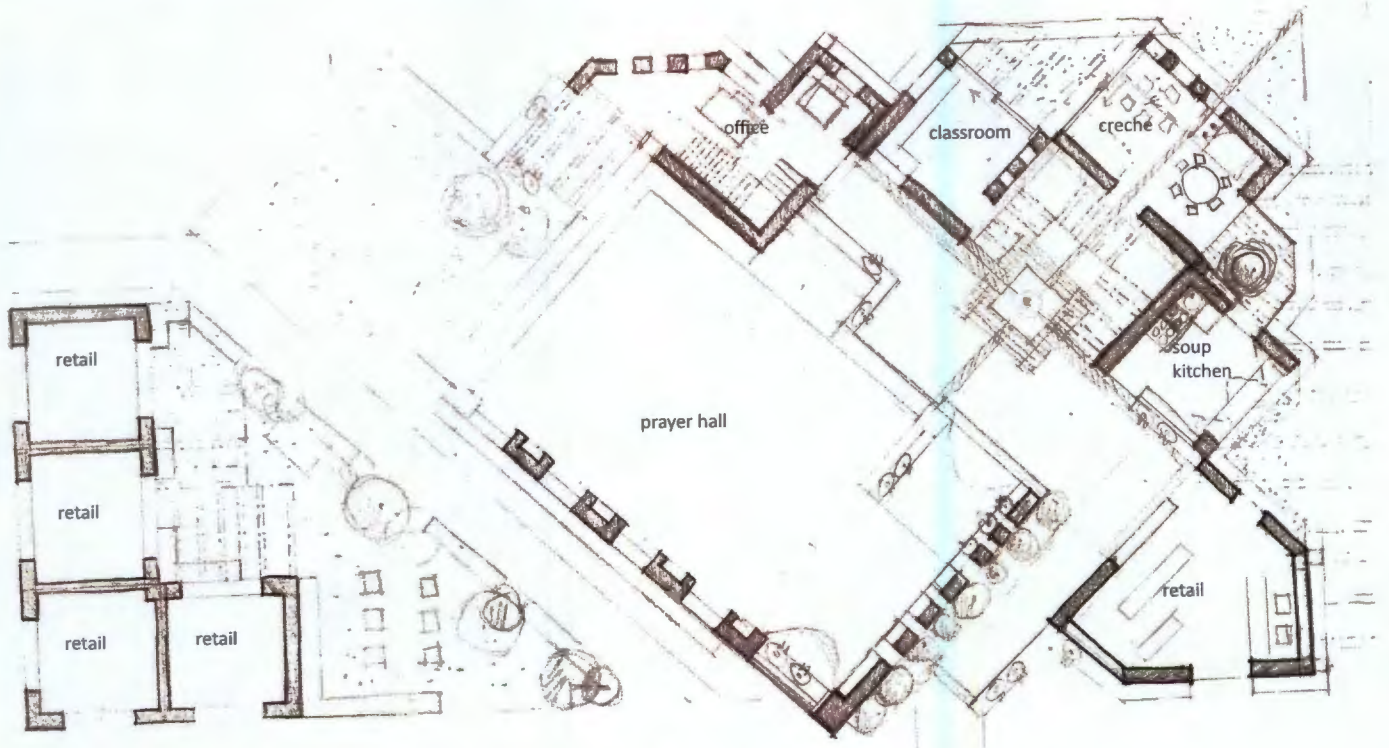
COMPOSITE LAYERS



SCALE . VOLUME . SEQUENCE OF SPACE . SENSE OF DISCOVERY .

INVITING . OVERWHELMING
MEDITATION . INTROSPECTION
INTRIGUING . EXCITING

ARCHITECTURE ORGANISES SPACES & CREATES A MOOD



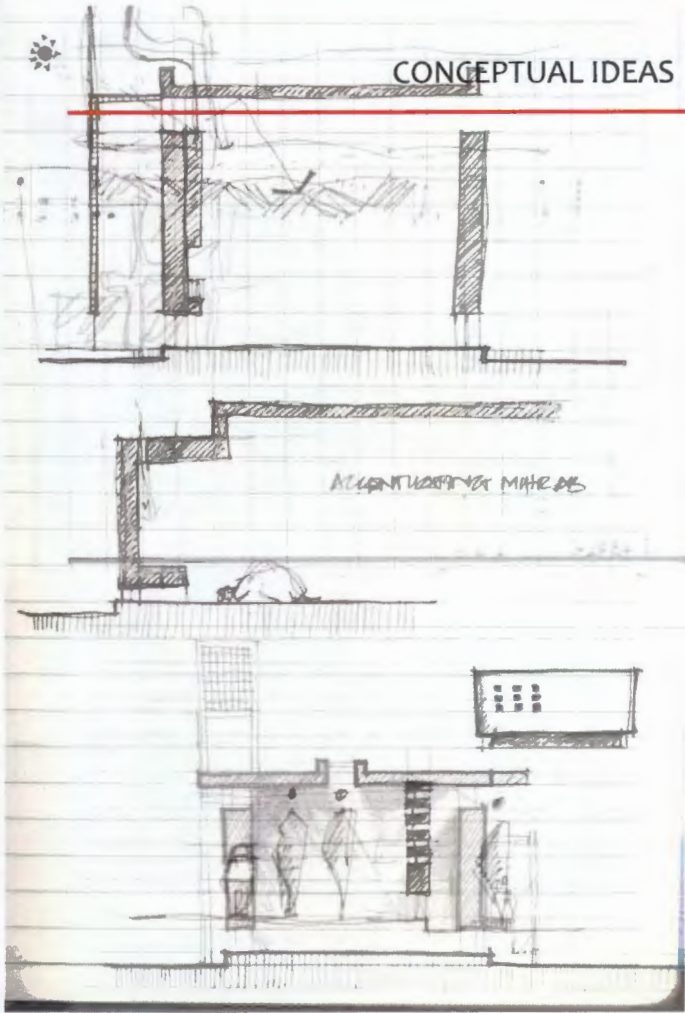
SOCIAL INTERACTION . INTERIORISATION . CONTEMPLATION

BROKEN ENTRANCE . SENSE OF DISCOVERY

SENSE OF PHYSICAL & PSYCHOLOGICAL BOUNDARIES . TRANSITION ZONES

(developing) ARCHITECTURE & TECTONICS

CONCEPTUAL IDEAS



The establishment of a language wove the urban design and architectural designs together. It was important to create a feeling of place to the community.

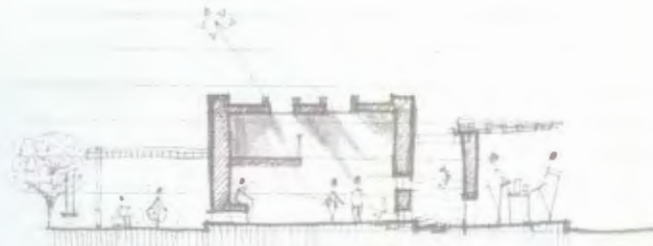
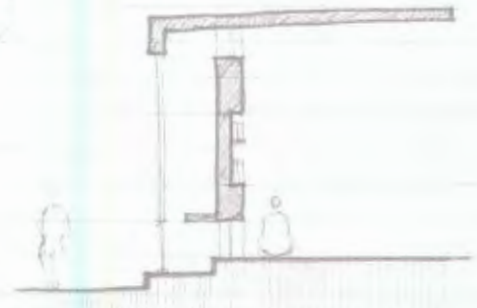
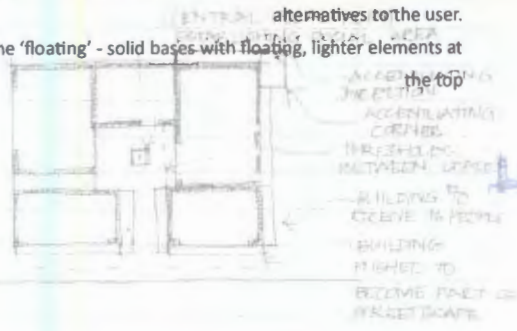
SOLID . VOID

HARD . SOFT

Open-to-sky space surrounded by solid forms generates figure-ground patterns in which the open spaces can act as areas of visual rest between enclosed volumes.

Creating a combination of concentration and relaxation and offers alternatives to the user.

Idea of the 'floating' - solid bases with floating, lighter elements at the top



ESTABLISHING A LANGUAGE

Following a layering of the elements on site, an urban strategy was able to be extracted. This involved a series of placemaking elements that bring a sense of order, cohesion and strengthened community to the area. Developing on Charles Correa's strategy in designing for a localised community, the approach was addressed through various scales:

- PRINCIPLE URBAN AREA
open space used by everyone

- NEIGHBOURHOOD PLACES
spaces where the individual becomes part of the community (tap)

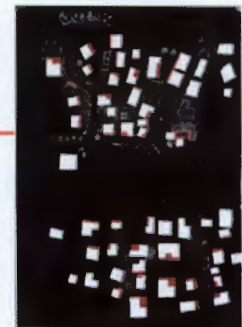
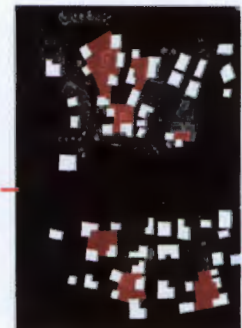
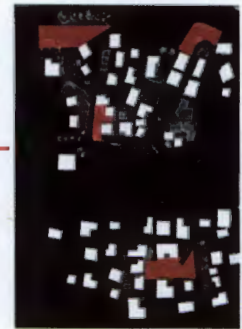
- AREAS OF INTIMATE CONTACT
the doorstep

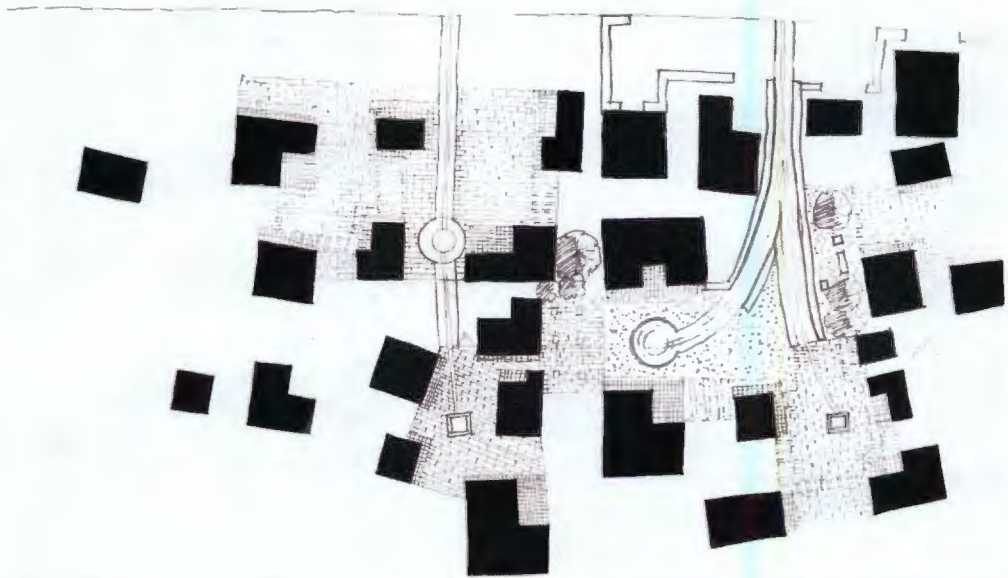
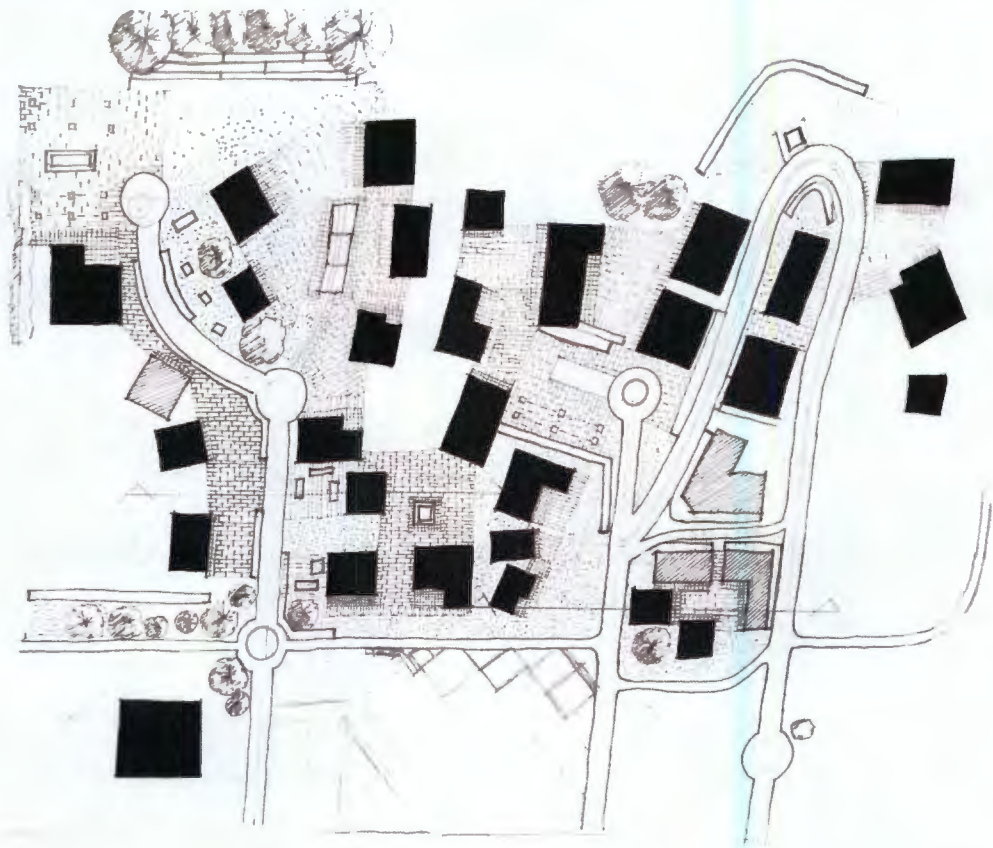
This helped in establishing an idea of materiality for the differentiation and flow of the different spaces.

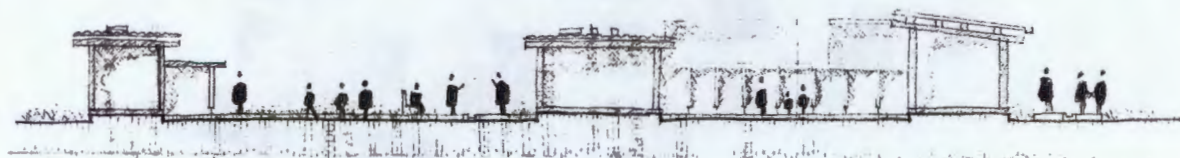
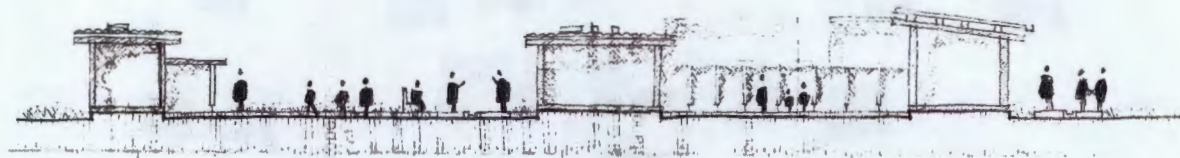
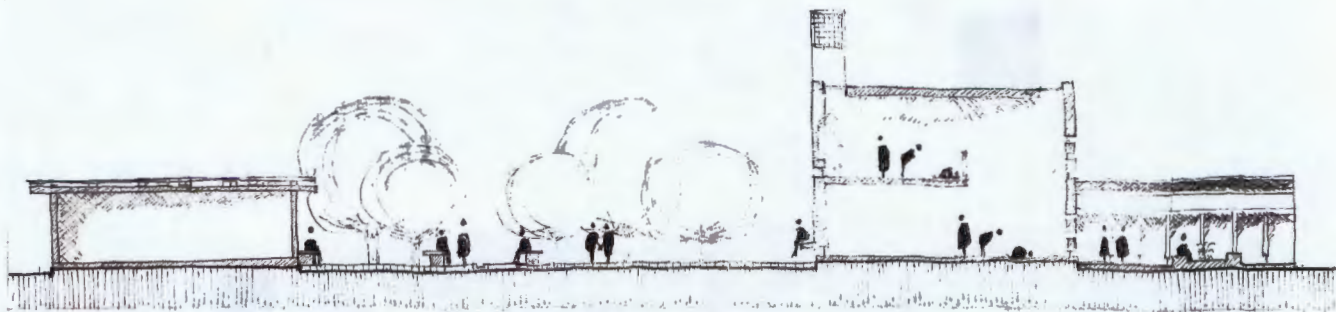
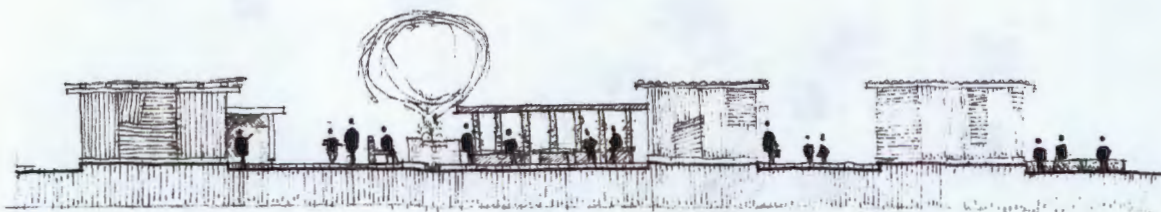
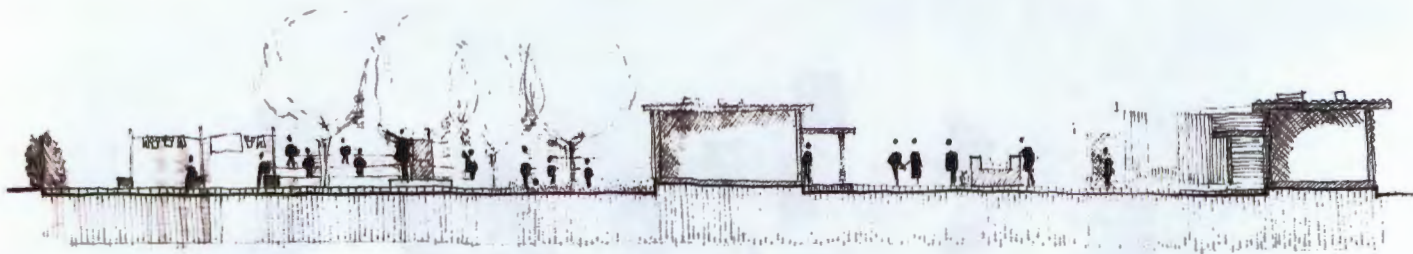
- PRINCIPLE URBAN AREA
concrete . grass . timber

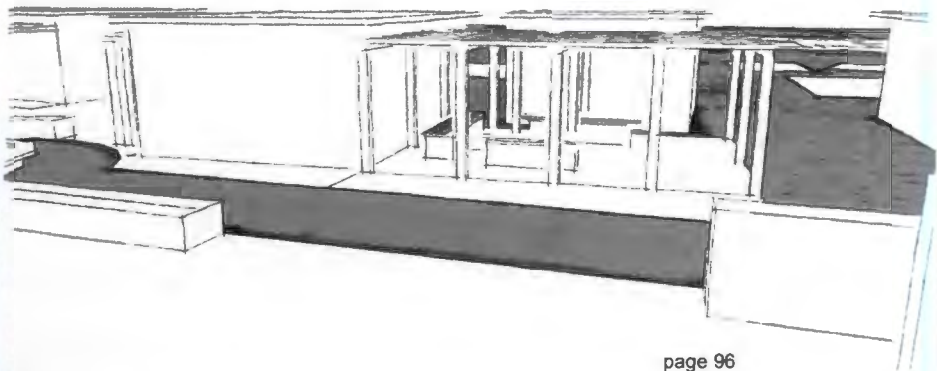
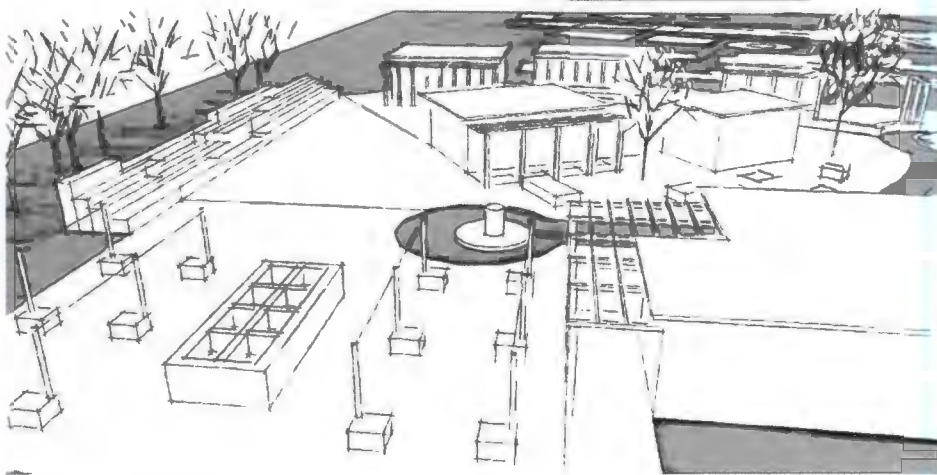
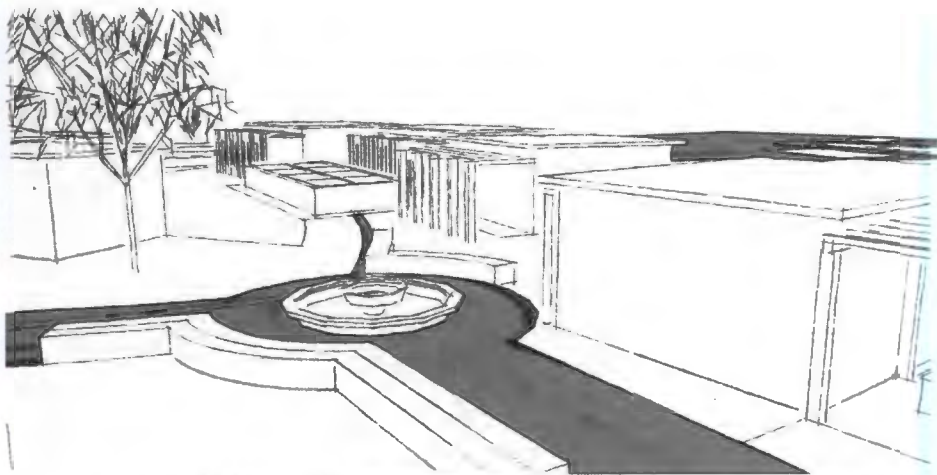
- NEIGHBOURHOOD PLACES
brick . water taps . wash troughs . grass . vegetation

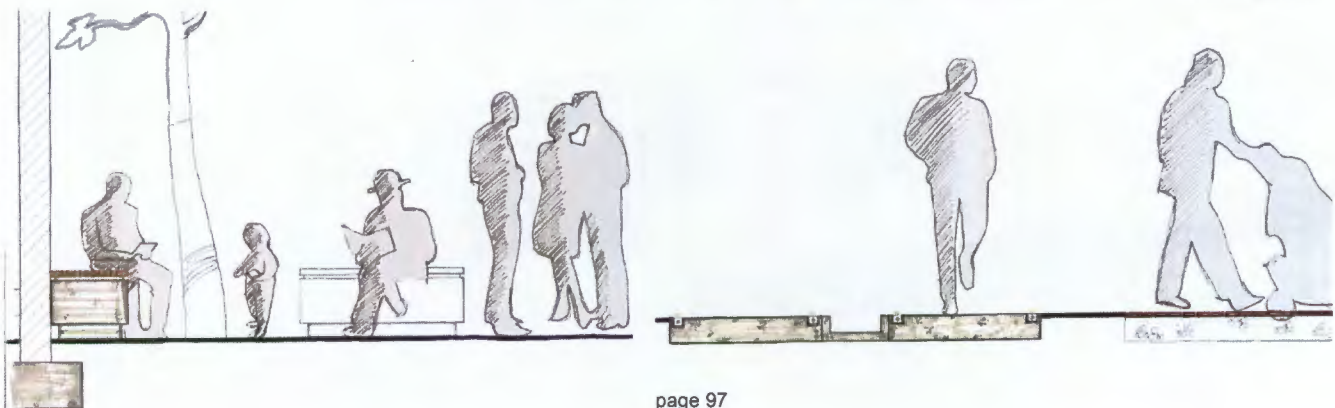
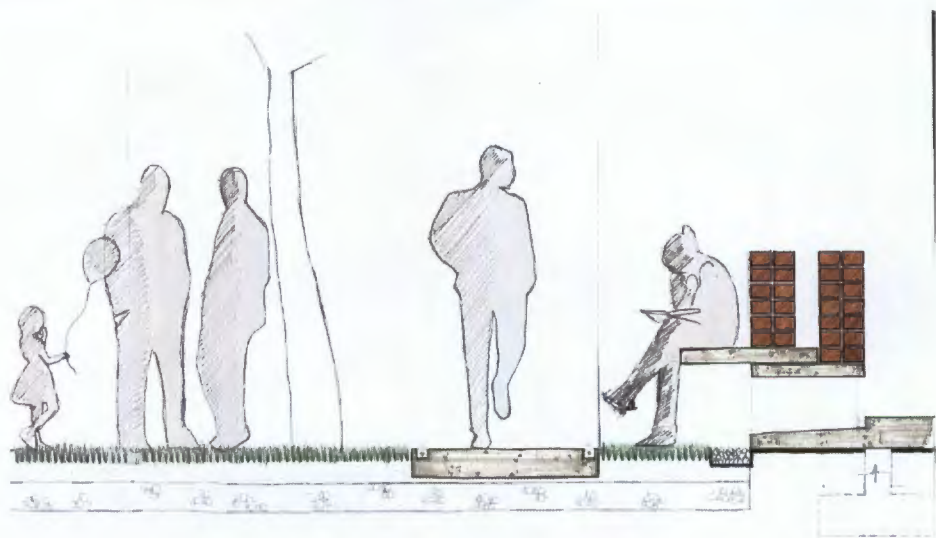
- AREAS OF INTIMATE CONTACT
brick . flower boxes . pebbles











(sadaqallahul atheem) CONCLUDING
REMARKS



CONCLUSION

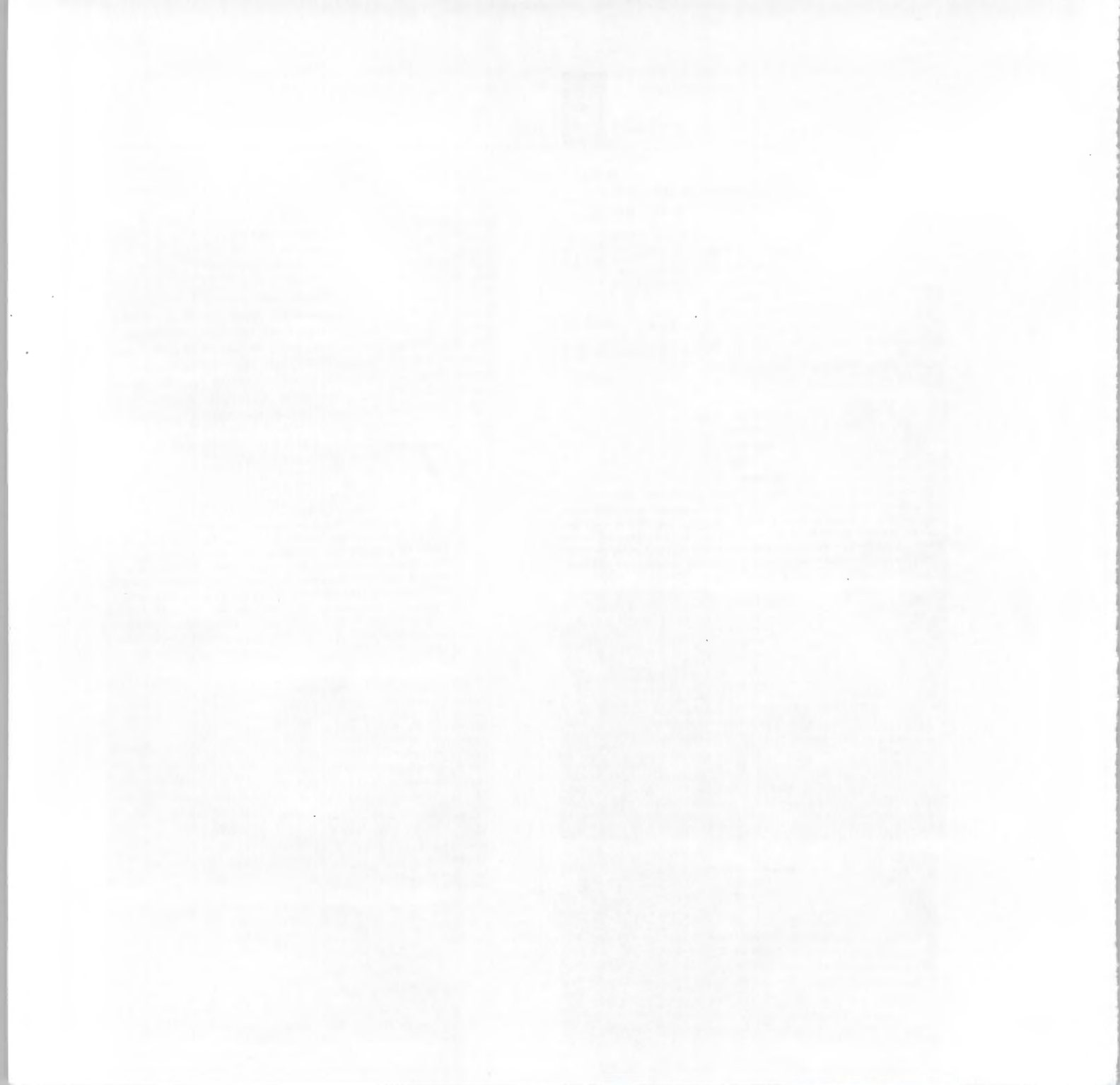
What started as an architectural interest for me at the outset of this thesis, grew into a deep, enriching connection with not only my religion, but also with the essences of architecture as it occurs for me. This project has taught me and reinforced the idea of engagement, commitment, design for the everyday and the power of architecture not to abstractly speak to the people, but to merge with the intricacies of the everyday to produce a design that becomes an asset to the community that receives it.

Throughout this process, I was humbled by the intuition, knowledge and inspiration that the people of Nkhanini had to offer and it highlighted the importance of architecture as an extension of its context - something that I hold very dear to me - while still connecting to a global community of design excellence.

I hope that this project can be the springboard for many more that brings a sense of pride to communities that need them most.



I thank and praise the Almighty for giving me the opportunities that enabled my architectural education, for granting me strength and patience through it all;
Thank you to my parents and family, who sacrificed, encouraged, motivated and supported me all the way;
Thank you to my supervisors and my lecturers throughout my architectural education - you nurtured and strengthened my creativity and confidence;
Thank you to my classmates and friends who reminded me of the important things in life when I lost sight and for always allowing me to be true to myself.



Moak Wiccare Road
Enkanini
Khayelitsha
7764
15 March 2010

Attention: Peter

Quote:

We as a church we like to know that where are we standing. You took out the tent to us without saying anything, and then now we are struggling because we use to do workshops in our Church for the kids and feeding schemes for the poor and the elder's. What amazing us is that our structure does have a number (church) you have said you demolished new structures ours had its number I can even prove that to you.

Mr. Mayor we are from the Church not the politics. We are trying to reduce the crime for our children by work shopping them. I m allocated near the taverns so maybe is what u want for our children not have a brighter future.

Mr. Mayor we will be grateful if you can give us some answers as soon as you get this letter.

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