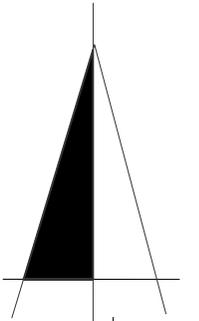




A QUEST OF THE SPIRIT

I hereby humbly dedicate the beginnings of my understanding of the faith from an architectural perspective... Amen.



q i t s i r

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"In the name of God, Most Merciful, Most Gracious

All praise is due to God, Lord of the Worlds

The Most Merciful, The Most Gracious

Master of the Day of Judgment

Thee alone do we worship

And Thee alone do we seek assistance from

Guide us on 'the straight path'

The path on whom Thou bestow Thy Grace

Not on the path of those whom Thou wrath is upon

Nor on the path of those who have been led astray."

(Qur'an, 1:1-6)

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'(SAW)' is an abbreviated form of the Arabic word, 'sallallahu-alayhi-wasallam,' and is exclusively used for the Holy Prophet of Islam.

Terms and terminology:

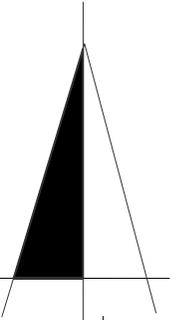
(AS) – a title attached to all the prophets. It is an abbreviated form of the Arabic words 'alay-his-salaam', which conveys salutations of peace upon the person being represented. For example Adam would be addressed as Adam (AS), and likewise for all the other messengers of Allah.

(RA) – a title attached to all the companions of the prophets. It is an abbreviated form of the Arabic words 'radiyallahu-anhu', which also conveys salutations of peace upon the person being represented.

(SAW) – whenever the name 'Muhammad' is used, and is in reference to the Prophet of Islam, it is attached with the abbreviation '(SAW),' as a mark of respect.

- Like every language, Arabic also has its rules of grammar. In this regard, when kings or people of status used to speak, they would address themselves in the plural form, as 'We' or 'Us' instead of 'I'. This denoted their authority and their esteemed value or lofty status. Consequently, the Qur'an, being originally an Arabic one, has adopted Arabic grammar, and thus God addresses Himself as 'We' or 'Us'. Many have been prone to error in misjudging this, and taking it that Islam is contradictory to itself, since it consistently proclaims of "The One God," yet addresses God as 'We' or 'Us,' which indicates partners, or others associated with God. It is purely a matter of grammar, which is not fully understood by non-Arabic speaking people.
- All other Arabic terms to occur in the document, will be immediately accompanied by a translation after its first use, and thereafter will occur in its Arabic form alone, in italics. A glossary for the Arabic terms used in the text, can be referred to at the end of the document.

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INTRODUCTORY INDEX

The book has been broadly divided into nine sections in order to facilitate an easy reading and cross-referencing. Each section has its own index, whilst the introductory index stipulates the sections as follows:

- SECTION A:** The process towards an establishment of a brief, terminating in determining the general guideline parameters
- SECTION B:** Contextual Study
- SECTION C:** The brief proper; guideline parameters
- SECTION D:** Precedent Study
- SECTION E:** Overall framework rationale
- SECTION F:** The design rationale informed by religious narratives and ideals; conceptual sketches
- SECTION G:** Overall design rationale; design development; technical aspects
- SECTION H:** Feasibility study
- SECTION I:** Acknowledgements and Appendices

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Index to Section A

Background towards the establishment of the brief

Component one:

This component is further broken down into two categories:

Category-A: essentially deals with the client's rationale into investing and allocating the proposed site to serve the needs of the South African Muslim community at large:

1. Introduction
2. The Client
3. The Criteria
4. The final check
5. Needs and primary users
6. Tourism and local users
7. To which type of Muslims does the village cater for?
8. Target market
9. Allocating a site
10. Logic versus divine law

Category-B: essentially deals with the client's functional expectations in terms of the basic zoning criteria and the possible structures aimed to be developed. For clarity purposes, the functional requirements of the client are subdivided into a framework of three distinct zones:

1. Zone A
2. Zone B
3. Zone C

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Component two: (Please refer to Appendix A at the back of the book for this section, since it is a background to the establishment of the brief).

This component is further broken down into two categories:

Category A: This component involves a highly complex matrix, which takes one through the features of a local Mosque. Within this walk-through one begins to understand the classical elements of Islam, their origins and historical significance, as well as their religious and symbolic importance. Interwoven into this matrix, are the suggested guidelines applicable to the proposed development, which are methodically placed after the discussion of each classical element.

1. The minaret:

The historic, symbolic and religious origins of the minaret

The evolution of the minaret over time

The restriction against music in Islam

Guideline parameters:

- Height restrictions
- Music restrictions

2. The ablution area

The origins of the ablution ritual and its spiritual implications

The evolution of the ablution area over time

The use of courtyards, gardens, water -within an Islamic context

Recreation in Islam

Guideline parameters for the proposed development:

- Water ethics to be implemented
- Garden maintenance strategies

3. The interior of the Mosque:

The origins of 'sacred' space in Islam

Space and gender in Islam

Creative arts and the role of geometry in Islam

Guideline parameters:

- Geometry and geometric forms
- Space and gender

4. The *mehrab*, (or niche found in the *qibla* wall):

The essence of the *mehrab*: an introduction to the *qibla*

The *qibla* wall: an introduction to 'wall architecture' and colonnades

Guideline parameters:

- The *qibla*; walls and arches

5. The *minbar*, (or raised platform from which the imam addresses the congregation):

The essence of the *minbar*

Guideline parameters:

- Height restrictions

Category B: This component views the impact of global historic traditions as well as the religious emphasis placed upon architecture

1. A glimpse of the history of global Islamic architecture trends and their origins.

2. Traditional guidelines to place-making in architecture

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Section A: Background towards a brief establishment

Component one:

Category-A:

1. Introduction

According to a recent survey, the Muslim population of South Africa numbers approximately two million people, (Jamiat: 2004). Many of these people are conservative or strictly adhere to the *Shari' at*, or Islamic laws. It is difficult for these people to adhere to an Islamic way of life in a democratic society.

People generally look forward to some form of entertainment to relieve their minds from the day-to-day pressures of life. Since leisure, relaxation and entertainment are basic human needs, Muslims are placed in a dilemma. Majority of the places delegated towards entertainment and leisure, have activities that are not permissible by the *Shari' at*, and also have environments that do not facilitate Islamic needs.

Simple examples of impermissible acts would be the intermingling of sexes, gambling, movies, music, the partaking of specific types of foods, which are not declared *Halaal*,¹ etc. Simple Islamic needs would be the catering for *Salaat*, or prayers; for *Azaan*, the call to prayers; for *Wudhu*, the washing before prayers; for the appropriate dress codes; for the separation of sexes; for an appropriate and adequate Islamic environment in every essence, which would cater for more religiously orientated activities.

¹ All animals not slaughtered in the name of *Allah* (God); all animals of prey, pork; all substances that are harmful to the body, as well as all forms of intoxicants are *Haraam*, or not permissible. All other foods are *Halaal*, or permissible.

The need for enjoyment and entertainment is there, but finding a suitable place that also facilitates for Islamic needs, is rare. Thus, many Muslims feel uncomfortable at the local resorts available. The need to cater for a resort, which facilitates for Islamic needs, is becoming a necessity at a regional and national level. (Please refer to Addendum A).

2. The client

The client wishes to establish a cultural resort based upon Islamic principals.

The object of the development is not only commercial, but also to facilitate an Islamic need. By carrying out this deed, the client will be rewarded by *Allah*, or God, and will see the blessings of his actions in this world, and in the Hereafter, according to his belief.

The client wishes to remain anonymous. The reason for this is because good actions are governed by the laws of *Ikhlās*, meaning sincerity. One of the key elements in a state of *Ikhlās* would be to conceal the good action being performed.

The client currently resides on the north-eastern corner of the proposed site. (Refer to Section-F, pg.2).



3. The criteria for checking the Islamic issues against:

- All decisions are to be checked against the Holy *Qur'an*,² an inspiration revealed to the Prophet Muhammad (*SAW*)³, before it can be verified as correct or permissible.
- All decisions are thereafter to be checked against the *Hadith*, which are the traditions, actions, or words of the Holy Prophet (*SAW*), before it can be verified as correct or permissible. If there is a clash between the sayings of the Holy Prophet (*SAW*), and the Holy *Qur'an*, then the Holy *Qur'an* will take precedence over the matter.
- If a matter is not clear, and cannot be found in the *Qur'an* or the *Hadith*, then the local *Ulema*, or knowledgeable elders of the community, will be consulted about the matter, and a *fatwa*⁴ will have to be passed.

²The Holy *Qur'an* is believed by Muslims to be the last, authentic revelation of God's. It has been preserved in its pristine Arabic, and is a reference for all Islamic jurisprudence and way of life.

³*SAW* – *Sallallahu-alayhi-wa-sallum* – means peace be upon him. It is a basic belief and practice that upon hearing or using the Prophet Muhammad (*SAW*)'s name, to respect it by sending peace and salutations to him, who was sent as “a mercy to mankind”.

⁴A ruling by a Muslim judge that will permit an act, or declare it not permissible. His decision will be final and cannot be disputed.

4. The final check:

- The *Jamiat-ul-Ulema* is an Islamic body that has been in existence for many years in South Africa. It comprises of some of Islam's best experts on religion and Islamic law, some of which have world-class recognition. It is this very body that regulates and decides many Islamic matters facing the *Muslim* community, and that makes this information available to the masses. ***The Jamiat's⁵ approval would mean approval from all sides, and must be considered as a standard to comply with, for this project to be a success.***
- Once the project is approved by the *Jamiat*, its marketing will become easy. The *Jamiat* themselves will make it possible to use *Masaajid*, or Mosques, literature and media, to make the Muslim community aware of the development.

⁵'Jamiat' is a short form of saying 'Jamiat-ul-Ulema', which is an Islamic body, comprising of the most learned jurists in Islamic affairs.



5. Why is there a need for an Islamic Resort?

Who will be the primary users?

- South Africa's affluent Muslims of Indian origin have all been through a similar past, that being apartheid and its consequences. The fact that all sorts of entertainment that were previously banned were suddenly, in 1994, open to all, holidays for the average Indian Muslim family has changed. Instead of spending a holiday with friends and families at each other's homes, holidays are being spent at the beautiful resorts available. This led to the realization that these resorts do not offer a suitable environment for Muslims. Since the environments are unsuitable, building an Islamic resort would create a suitable environment for their entertainment. The need for an Islamic resort is thus very high, and needs to be adequately addressed. This need exists at a regional and national level. (Please refer to Addendum A).
- There has also been an Islamic re-awakening amongst the youth in South Africa and more so, in the world at large, (Jamiat: 2004). It is the youth themselves that are reforming, and want to be involved in such types of entertainment that are permissible by the Shari'at. (Please refer to Addendum A).
- Many foreign Muslims find South Africa to be an ideal tourist destination, since *Halaal* food and Mosques are easily located, and the availability of shopping and entertainment is plentiful. For these people, this resort would be an ideal place for a holiday, since their spiritual needs and obligations will also be fulfilled. (Please refer to Addendum A).

6. Tourism and local users:

- To the Muslim users, whether locals or tourists, it will be a pleasure to be at a resort where the *Shari'at* is practiced and abided by.
- Since the resort is to be governed by an Islamic culture, the resort has the potential of becoming a popular destination, attracting many non-Muslim locals and tourists to observe an Islamic setting. All non-Muslims will be specially made welcome, since this will provide an opportunity for *da'wa*, or propagation, or an invitation, to observe Islam.

7. To which type of Muslims does this cultural village cater for?

- Many Muslims have modernized their lifestyle and no longer abide by all the laws of the *Shari'at*. This resort is intended to encourage Muslims to become mindful of their lives, and become more religiously inclined. It would also educate non-Muslims about the true spirit of Islam. By holidaying at this resort, it will make many realize their actual duty towards Islam.
- Many Muslims are conservative and do abide by the laws of the *Shari'at*. For these Muslims, it would be ideal to have a place such as this resort at their disposal.
- In conclusion, this resort is ***not catering for any type or group of Muslims. This resort will be*** designed according to the laws of *Shari'at*, thereby ***creating an Islamic environment***, to cater for ***any individual that sorts for entertainment within the boundaries of the Shari'at***
- ***The intention of this resort is to address an Islamic need of the Muslim community, and to propagate Islam via an Islamic setting.***

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8. Target market:

At the onset, the client was faced with the possibility of numerous venues for hosting the proposed development. The current site was chosen, based upon priority given to the Gauteng Muslims, due to the following reasons:

- The Gauteng community is a very affluent society, and their financial support would be able to make this project a reality. It is the Gauteng community that has the buying and spending power, more so than the Muslims in other provinces. This can be clearly observed from the records of the *Jamiat*, which portray that most of the Islamic financial backing for South African developments stems from this region. (A simple example would be the Mia family, who is responsible for the construction of many Mosques, both locally and abroad, and have spent large sums of money to distribute Islamic literature at an international scale).
- Most Islamic projects in other provinces receive a large sum of their funding from Gauteng sources. (*Jamiat*: 2004).
- There is a large sector of the Gauteng community that is conservative, or wants to preserve their culture. This is eminent from the following facts:
 - The large number of Islamic schools in this region, more so than the other provinces. (*Jamiat*: 2004).
 - The origin of the *Jamiat-ul-Ulema* foundation was in the Gauteng region, and most of its founding or leading members still reside in this province. (*Jamiat*: 2004).
- The large Muslim communities in the Natal and Cape regions, at least have the vast ocean at their disposal. Since the Gauteng province is inland and has no ocean, most Muslim communities in this region have to resort to either making a long-distance trip to the ocean, or to compromise and holiday at the local resorts available.

9. Allocating a site:

The proposed site was chosen by the client due to the following reasons:

- The site was within a reasonable distance from the Johannesburg-Pretoria-Vereeniging regions, a necessary requirement in order to cater for the proposed target market.
- The route to the site from the perspective of tourists and travelers is along a scenic route, through the Hennops and Magalies Mountains, terminating at the Hartebeespoort Dam, a popular tourist destination. From here, the intention would be to bring the people through the dense farming lands of the Brits district, terminating at the proposed site, which is located approximately ten kilometers away from the dam. By extending the existing Hartebeespoort-Dam tourist route towards the town, it would create financial opportunities for the locals, and would allow travelers to experience a country-town setting.
- The site is in close proximity to a Muslim community. The intention is to create job opportunities for disadvantaged Muslim families, and to enable them to enjoy the facilities of a cultural village within their midst.
- The site is easily accessible, since it has an entrance along the main route to the town, and would therefore be easily found by holidaymakers, travelers and tourists alike.
- The site has the advantage of the Crocodile River passing through it, and is characterized by dense greenery, with the Magaliesburg Mountains framing its backdrop.
- The site has an urban link within a kilometer from its main entrance, which enhances public interaction from the urban environment, and it also has a rural link, since it is surrounded by farming land, wild bush and dense greenery along most of its boundaries.
- The site, having an area of approximately twelve hectares, was adequate to suite the needs of the intended cultural village.



10. Logic cut short by divine law:

One needs to be cleansed in a particular manner before a prayer. This cleansing is completed when one washes the hands, face, forehead and the feet. This cleansing by law then falls away if for example, one passes wind. The cleansing will then have to be re-performed before commencing with the prayer. This does not make sense to the human mind, because the passing of wind has no relation to the hands, face, forehead or feet. In fact, it relates to a completely different part of the body; yet when one passes wind, Muslims will wash other limbs not related to the cause of the breaking of the cleansing. Logic is thus cut short by law. Islamic philosophy is based upon making logic out of the law, instead of using logic against the law. It is by accepting the given laws as divine, pure and true, that a new and deeper understanding will be created. It is believed that this understanding will give the world the solutions it is searching for, and will shed new light on many matters. It is in the above light that the possibility of this cultural village should take place.

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Component one

Category-B:

Functional requirements:

This category pragmatically divides the resort into a framework of three functional zones, namely:

- **Zone A:** Public interface
- **Zone B:** Entertainment / Relaxation belt
- **Zone C:** Spiritual belt

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Framework for Zone A: Public interface

1. Conference Center:

- Should be in close proximity to the client's house (Refer to Section-F, pg.2).
- Should cater seating for 600 people
- Should provide an eating hall for 600 people within the same structure, or a structure adjacent to it.
- The preparation and services area of the dining hall should be allocated within the boundaries of the client's personal dwelling area, since the client wishes to personally manage this component of the proposed development
- Should have independent services areas for both itself and the dining hall areas respectively

2. Amphi-theatre:

- Should cater seating for 400 people
- Should have a scenic backdrop, so as to relate the audience symbolically to the notion of the 'paradise garden' often related to in Islamic art
- Should accommodate its own services areas
- Should relate to the conference center

3. Cultural Exhibition Centre: (To be fully rationalized and developed for the purposes of the thesis)

- Should be located in close proximity to the *Jamaat-khana*, (almost similar to the function of a Mosque), since most Muslims would likely want to pray after experiencing such an emotional event.
- Should be centrally located along an axial route, thereby making it easily identifiable and accessible
- Should lead out to a garden area, so as to cater for a 'breathing space'
- Should accommodate its own services area

4. Jamaat-khana: (see explanation below)

- Should be centrally located to all three zones
- Should cater for 600 people
- Should accommodate its own services area

The distinction between a Mosque and a *Jamaat Khana*

A *Jamaat Khana* essentially has the same functions as a Mosque. The difference is usually attributed to the level of responsibility each one adopts:

A Mosque essentially carries a lot of responsibility. Once a structure or piece of land is declared a Mosque, than that structure or land can never have another purpose. It is bound by Islamic law that the Mosque is the property of *Allah*, and will be the responsibility of the community to ensure that it remains a Mosque. However, a *Jamaat Khana*, can be owned by private individuals and can also be converted to have another purpose, be it residential or commercial.

A Mosque demands that five times daily prayers have to be performed. If the prayers are not performed, than the community will be held responsible for this, in view of the *Shari'at*. A *Jamaat Khana* is however not bound to this, and prayers can be performed whenever possible by the community. However, it would be preferable to have the five daily prayers performed in a *Jamaat Khana* as well.

A Mosque is also bound to have people to sit in *I'tikaaf*. This takes place in the month of *Ramadan*, a holy month in the Islamic calendar, when it is necessary for at least one person of the community to stay in the Mosque for a period of a minimum of ten days. A *Jamaat Khana* is not bound to this, but it would be preferable for someone to perform the *I'tikaaf*.

It is thus clear from the above that it would be safer to have a *Jamaat Khana* instead of a Mosque, because it is not yet certain whether the rights of a Mosque will be fulfilled by the proposed village. Once it is certain that the rights of a Mosque can be fulfilled, then it would be possible to declare the *Jamaat Khana* a Mosque.



Framework for Zone B: Entertainment belt (not developed for thesis purposes).

1. Hotel:

- Should accommodate for 200 overnight guests
- Should have a recreation center within the hotel structure

2. Recreation facilities

- Should cater for recreational activities as encouraged by the *Shariat*, according to the discretion of the designer.

Framework for Zone C: Spiritual camp (not developed for thesis purposes)

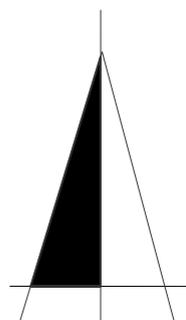
1. Accommodation sector

- Should cater meditation units for 200 overnight guests
- Should cater for staff accommodation, which should be centrally located to all guests.

2. Gathering area

- Should be closely linked to the staff accommodation sector and the Mosque
- Should accommodate a space / courtyard to gather 200 people
- Should have its own services area

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Appendix A:

Component two:

Category A:

This component comprises of the following matrix which will guide one through the basic elements of the Mosque, and thereby simultaneously introduce many complex themes in order to facilitate an understanding of the guideline parameters to follow:

The Matrix
'A philosophical breakdown of the elements...'



Fig.1. Mosque survey: Friday Mosque, Zakariya Park, Lenasia. Illustrating minaret.

Minaret



Fig. 2. Mosque survey: Brits Friday Mosque. Illustrating ablution area

Ablution Area

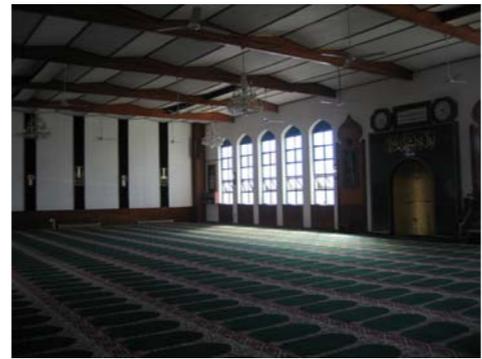


Fig. 3. Mosque survey: Friday Mosque, Laudium. Illustrating internal prayer space.

Inner sanctuary of the Mosque

1. The minaret:

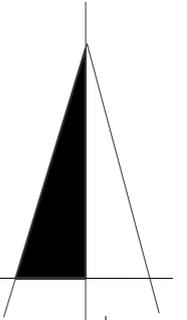


Fig. 4. Mosque survey: PMS Mosque, Laudium, Illustrating mehrab and minbar area

Mehrab

Minbar

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o **The historic, symbolic and religious origins**

Hearing the call to prayer, Muslims are reminded that it is time for them to perform their duty towards their Lord. As one approaches a Mosque from a distance, it is *the height of a minaret* which catches the eye. The minaret, which *symbolically points towards* something beyond the material world, towards *the Divine and Absolute Unity of God*, simultaneously makes an *audio-visual statement*. The symbolic interpretation takes us back to its origins: that being the narrative of Bilal (RA), a former African slave, being the first caller in Islam. (Tayob: 1999, pg.1).

In the early days of Islam when believers were severely persecuted, Bilal (RA) was placed at midday on the hot sands of Arabia, with a rock on his chest, being forced to recant his faith. The people of Mecca, unable to accept the unity of God, had been unable to suppress his faith despite their harsh and cruel methods of torture. After the migration to Medina, he was given the honor of calling the believers to prayer. At a time when Arab prejudices were high, Bilal (RA), a slave, was ironically announcing the same message for which he was formally persecuted for in Mecca. (Tayob: 1999, p.2).

Many reports narrate how *Bilal (RA) climbed onto a high place and delivered the call to prayer* so that as many people as possible could hear him. Bilal (RA)'s taking of a high place for the call to prayer *symbolized all subsequent minarets*, as they too rose to facilitate the call to prayer. This action of Bilal (RA) rising *initiated an architectural style* which became an inextricable aspect of Mosques in most parts of the Islamic world. As a functional instrument for the amplification of the human voice, the height of a minaret was a natural and obvious symbol of the Islamic call to prayer. (Tayob: 1999, p.3).

The words to the calling for prayers are:

"Allah is great (twice)

I bear witness that there is none worthy of worship except Allah (twice)

I bear witness that Muhammad is the Messenger of God (twice)

Come to Prayer (twice)

Come to Success (twice)

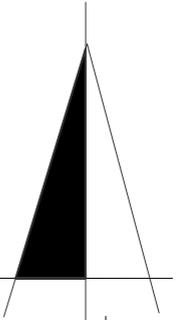
Allah is great (twice)

There in none worthy of worship except Allah"...

(Hoosain: 2002, p.127)

The call to prayer was an important part of the early religious sense of Islam. It was the call to prayer which literally manifested itself into the formation of the first Muslim community and state, thereby becoming a symbol for the formation of all subsequent Muslim communities. "Many Muslims feel that an Islamic community only really comes into being when the call to prayer can be heard in their homes. The Mosque may be a physical symbol of Islam, but the call to prayer is a ritual act which sets that symbol into motion by calling people together." (Tayob: 1999, p.3).

Unfortunately, closer examination reveals that the symbolism of height and the grandeur of exquisite monuments to one God have often been used for less than spiritual reasons. Historical study indicates that height was first used by Muslim rulers to symbolize power and authority. The rulers' audience halls were the first buildings to exploit space and height as symbols of authority. Later, this was extended to the use of the tower and the minaret. Historical evidence has attested that the using of tall slender minarets to call the faithful to prayer was a later development in the architecture of Islam. It was first used by Muslim authorities to make a statement of power, to assert their own authority through the apparent authority of God. The first such dynasty was the Ummayyads who used height in this manner. Since the Ummayyad dynasty was built on the ashes of a civil war, they were eager to search for symbols of legitimacy among Muslims, and built tall minarets over the Mosque in Medina. Minarets were thus



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used by the rich and powerful to make their statement in society, carrying their message from the Mosques of capital cities and ordinary villages. (Tayob: 1999, p.12).

The Abbasid regime used minarets to establish a hierarchy of religious structures. They shortened the minarets in Medina, and made the ones in Mecca taller and slender to indicate the latter's higher value over the former. Minarets were thus first built by the Abbasids as symbols of the most important places in Islam. The minaret was not part of the standard features of all Mosques at that time, but was the 'first significant step towards the exteriorization of a previously interiorized type...' (Tayob: 1999, p.13).

In early Islamic history, the tall tower of the minaret as a feature for Mosques was introduced much later in some areas outside Arabia. A careful look at the religious literature indicates that tall and ostentatious buildings were incompatible with the Prophetic ideal of simplicity and moderation. The height and majesty of a tower seemed to completely nullify the acts of submission and self-negation that constituted the worship inside the Mosque. It was therefore not surprising, that political rulers and not religious groups were the first to exploit the architecture of height in a mosque. Religious acceptance of the tall tower was slow, ambivalent, and contested. (Tayob: 1999, p.14).

o **The evolution of minarets over time:**

Since Islamic architecture is characterized by many regions and states, as well as over a long period of time, varied forms of minarets appeared. Illustrated are some key minarets which had developed through history:



Fig.5. The Great Mosque of al-Mutawakkil at Samarra. (from Hattstein: 2001, p.105).



Fig. 6. Gunbad-I Kabus in Jurjan. , 1006 (from Hattstein: 2001, p.117).



Fig. 7. Ribat of Souse, early 9th century. (From Hattstein: 2001, p. 138).

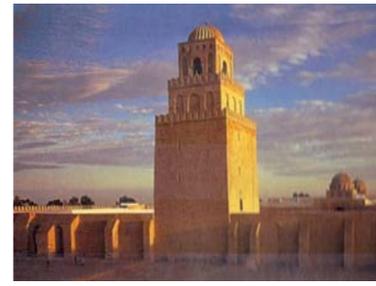


Fig. 8. The Great Mosque of Kairouan, late 9th century. (from Hattstein: 2001, p.132).



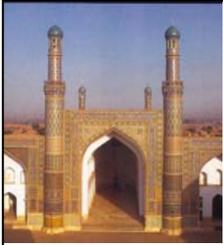
Fig. 9. Tomb of Sitt Zubaida in Baghdad, 1225. (from Hattstein: 2001, p.117).



Fig. 10. Kutubiya Mosque of Marrakech, 1958. (From Hattstein: 2001, p.262).

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|  |  |  |  |   |  |
| Fig. 11. The Great Mosque of al-Mutawakkil at Samara (from Hattstein: 2001, p.339). | Fig. 12. The Great Mosque of al-Mutawakkil at Samara (from Hattstein: 2001, p.339). | Fig. 13. The minarets of the Taj Mahal, Agra, 1643. (From Hattstein: 2001, p. 481). | Fig. 14. The Great Mosque of Tunis, late 10th century. (From Hattstein: 2001, p.134). | Fig. 15. Uc Serefeli in Edirne, 1438. (From Hattstein: 2001, p. 546). Fig. 16. King Faisal Mosque, Islamabad, 1986. (From Hattstein: 2001, p.592). | Fig. 17. Picture of Dar-as-Salam Mosque, Laudium, South Africa, 2002. This recent interpretation highlights the use classical element of the dome and the slender minaret. |
| Figures 5 – 16. depict minarets through the ages. (Illustrations - from Hattstein: 2001) | | | | | |

Even though the minarets were used as a symbol of power and authority, these facts are hardly ever remembered, since minarets are practical in many ways, have a great symbolic value, recall the sacrifices of the early Muslims, and identify the presence of Islam and a Muslim community. Minarets are thus an integral element of the Mosque, and they should never be lost. Modern-day minarets have further testified their importance as a Mosque feature, and portray this element in varied creative frenzies, which are aptly suited to their task and their message

Guideline parameters for the proposed cultural village

- Minarets should be implemented into the scheme, so as to portray an Islamic eminence.
- The form of the minaret would depend upon the architecture being used, and a suitable form should be adopted. The form of the minaret should thus depict a new spirit, and should not be a mere replication of past minarets.
- The height of the minaret should be derived from the overall form of the structure.
- Height should only be used for the purposes of portraying an Islamic identity

The restriction against music in Islam

The Islamic call to prayer brings up the issue of the place of music and the human voice in Islam. The early Muslim communities rejected musical instruments in favor of the human voice. Since then, the call to prayer has been a powerful symbol of the faith. Islam in general, celebrates the role of the human voice. (Tayob: 1999, pg.'s 14-15).

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Since the earliest period of Islamic history, most scholars have apposed the use of musical instruments in society in general, and for religious purposes in particular. They have justified the basis of this position on the base of numerous Prophetic statements which condemn the use of musical instruments. (Tayob: 1999, pg.'s 20-21).

The mystical groups of Islam however, argue that the Prophetic condemnation taken as a whole implied that music was prohibited because it was usually accompanied by singing slave girls, drinking bouts and frivolity. The mystics of Islam used this approach to justify an entirely different perspective of music: for them, music was a source of spiritual perfection and ecstasy; they found a deep spiritual resonance in music and musical sounds. From this approach, gave rise to the development of inspirational music which became extremely popular. Some aspects of this tradition, like the *Qawwali*, or devotional songs of South Asia, have become world famous for practicing a music closely associated with the development of the soul. (Tayob: 1999, p. 24).

Nevertheless, it has been unanimously agreed that music should not be used in fundamental religious obligations: thus no music ever accompanies congregational worship or the call to prayer. (Tayob: 1999, p.21).

Guideline parameters for the proposed cultural village:

- o Music will be totally prohibited, and any entertainment associated with it, will not be permissible.

2. The ablution area:

- o **The origins of the ablution ritual and its spiritual implications**

As one steps into the Mosque, one has to remove one's shoes, and perform a spiritual and physical cleansing ritual of ablution, known as *wudhu*. This can be directly related to a command in the Qur'an, whereupon mankind is instructed:

"Believers, when you get ready for prayer, then wash your faces and arms to your elbows, wipe your heads, and wash your feet up to your ankles. If you are impure from sexual defilement, then purify yourselves. And if you are ill or on a journey, and have gone to the privy or touched women, but cannot find water, then turn to pure sand and wipe your faces and arms therewith. God does not want to place a burden on you; but God wants to purify you and complete his favor upon you so that you may be graceful." (Qur'an, 5:6).

The theme of purification and cleanliness are further emphasized in the verses:

"God loves those who repent, and those who are pure." (Qur'an, 2:222).

"And your garments purify them." (Qur'an, 74:4).

To further implicate the virtue of *wudhu*, the Prophet (SAW) is reported to have said:

"When a servant performs ablution and gargles his mouth, sins fall out from his mouth; when he sprinkles water into his nose, sins fall from his nose; when he washes his face, sins fall from his face until they fall from under his eyelashes; when he washes his arms, sins fall from his arms including right under his nails; when he wipes his head, sins fall from his head until they come out from his ears; when he washes his feet, sins fall from his feet until the inside of his toenails. Then his walking to the Mosque and his prayer is extra."

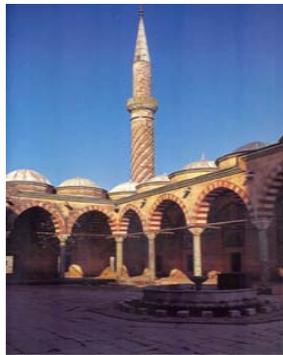
(Malik: 1980; Vol.1, p.37).

"In conformity with the Qur'anic injunction and the Prophetic promise of ritual purification, Mosques throughout the ages had incorporated some form of water system in their architecture". (Tayob: 1999, p.31).



o **The evolution of the ablution area:**

The first public ablution facility was first introduced as late as the Ottoman Empire, prior to which, people were expected to perform their ablutions elsewhere, and then proceed to the Mosque. Illustrated below are the earliest examples, in the form of seating arranged in a radial fashion around a fountain:



Left: Fig. 18. Ottoman Empire
Uc Serefeli in Edirne, 1438
(From Hattstein: 2001, p.546).



Right: Fig. 19. Ottoman Empire
Shehzade Mosque, Istanbul, 1544
(From Hattstein: 2001, p.551).

This type of courtyard-fountain speedily developed across many regions as its popularity and wide-scale practicality and functionality appealed to the masses. (Hattstein: 2001, p.551). Later on, this was improvised into a distinct ablution area, with the typical seating-and-channel system, as depicted below.



(Left: Fig. 20. Brits, Friday Mosque, 1995, indicating the seating and channel system in the ablution area).

(Right: Fig. 21. Friday Mosque, Laudium, 1965, indicating a link from the ablution area to the courtyard space).

(Far right: Fig. 22. Brits, Friday Mosque, 1998, indicating link from ablution area to courtyard space, which has a water-feature at its center).

The passing of time and the emergence of new ideas and techniques had thus transformed a traditional component, and given rise to the birth and adoption of a new space and style.

More recently, within a local context, the ablution facilities had taken yet another leap: a row of cellular units, each characterized by an individual water tray, replaced the usual communal water channel:



(Left: Fig. 23. Dar-as-Salaam Mosque, Laudium, South Africa, 2002, indicating the individual cellular trays in the ablution area).

Ablution areas were initially characterized within a courtyard, as can be observed from the above illustrations of the Ottoman Mosques.

From a more local and recent perspective, the ablution areas, being independent spaces, were found to link themselves towards the internal sanctuary of the

Mosque, as well as to a courtyard, as depicted below:

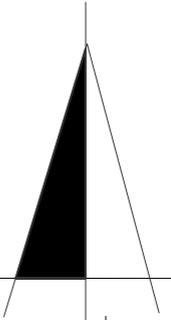
Below: Fig. 24. Illustration of courtyard, Friday Mosque, Laudium



Below: Fig. 25. Illustration of courtyard, Friday Mosque, Brits



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(Left: Fig. 26. Laudium, PMS Mosque, indicating courtyard link from ablution area).

From the illustrations depicted, we notice how courtyards within a local context, differ in their internal treatments of the courtyard space. Whilst the two Laudium Mosques have open courtyard spaces, the Brits example shows a semi-enclosed space, with the roof treated with light-weight materials. We also notice that

courtyards can be further enriched by greenery and water features, as was typically done throughout history.



(Left and right: Fig.'s 27-28. Brits, Friday Mosque, indicating semi-enclosed courtyard space with light-weight roof materials over).

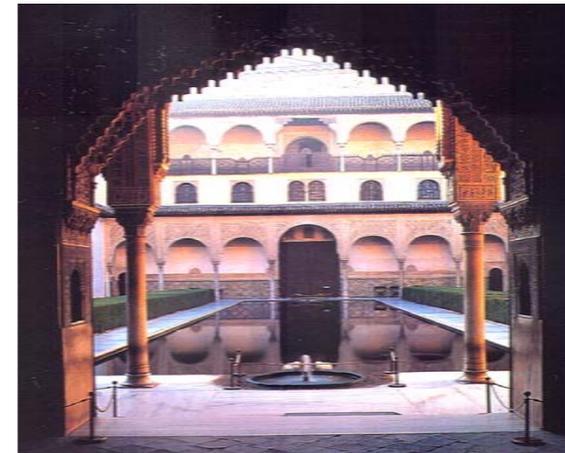


o **The use of courtyards, gardens and water within an Islamic context:**

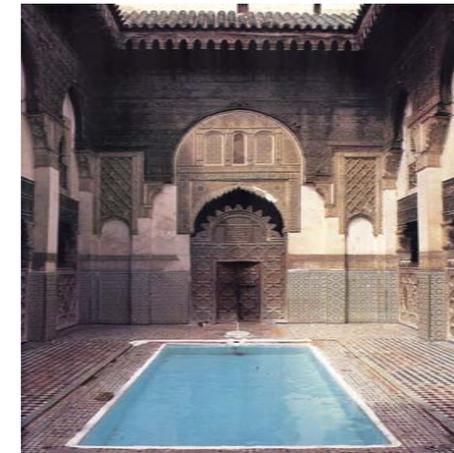
From a local Mosque perspective, the courtyard serves many functions. Since the talking of worldly affairs is condemned in the inner sanctuary of the Mosque as well as in the ablution area, the courtyard serves as an intermediary space between the strictly religious confines of the Mosque, and the outer world at large. It is in the courtyard where people get together and

socialize after prayers. The courtyard, being strategically placed, also serves as a point of entry for those who have already performed ablutions elsewhere, and can thus enter the inner sanctuary via the courtyard, thereby bypassing the ablution area. More importantly, the courtyard caters for the large crowds on a Friday, and for the feeding or hosting of more informal community gatherings. The courtyard thus has the vital role of defining the character of a particular space within a Mosque. It is within the essence of the courtyard aesthetic, with its informal spatial quality, which distinguishes it from the more formal and enclosed spaces of the Mosque at large.

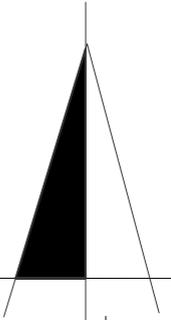
It was typical of the Arabs to build courtyards within their own domestic spheres, since they had long ago learnt the advantages of its vital implementation, which served as a sanctuary against the harsh desert climate. From a socio-functional perspective, the courtyards created an internal environment which was outside, yet inside the parameters of privacy. Courtyards were constantly characterized by greenery, and in later years, by huge masses of water bodies, which further assisted in cooling the internal environment. (Hattstein: 2001, p.284).



Left: Fig. 29. Almo had Dynasty, Spain Court of the Martyles, 1500 (From Hattstein: 2001, p.284). Right: Fig. 30. Maghreb Dynasty, Morocco Al-Sahrij Madrassa, Fez, 1321 (From Hattstein: 2001, p.315).



a quest of the spirit



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Water and greenery are universal elements to sooth the mind and soul. Within the Islamic sphere however, these elements take on a symbolic and spiritual significance as well: water is seen as a purifying element in a spiritual sense, and gardens are intended to depict the eternal garden of paradise, with its pristine rivers of water, and luscious greenery.

The hostile environment and the harsh climate characteristic of the Muslim world further encouraged the laying out of gardens. Gardens in general, provided opportunities for physical recreation and entertainment. Traditionally within the Islamic sphere, gardens were places where fairs were held. (Lari: 1990, p.57).

Gardens were formally planned, with paths laid out geometrically. Watercourses representing the rivers of life, would divide gardens into quadrants. The segmented quadrants were at times filled with trees, and at other times, with precisely planted shrubbery beds, all irrigated by water channels. Watercourses and water channels were typically aligned by a row of trees. Special trees and flowers of all kinds were imported and planted in the gardens. (Lari: 1990, pg's. 57-64).



A striking characteristic of the paradise garden was the way in which geometric symmetry was juxtaposed with the freedom of plant growth. The prototype of the paradise garden was a flat, two-dimensional plane, but waterfalls soon became fashionable when the garden stood on the side of a hill. As supplies of water improved, the patterns of watercourses became increasingly intricate. (Hattstien: 2001, p.490).

Narrow channels developed into wider canals and even into great tanks, as the cooling effect generated by large bodies of water was discovered. (Hattstien: 2001, p.293).

Left: Watercourse in the Nilkanth Pavillion, Mandu, late 16th century. (From Hattstein: 2001, p.490).



Top left: Fig. 31. Patio de la Sultana, Generalife, Spain, 14th century. (From Hattstein: 2001, p.296).

Top right: Fig. 32 Alhambra, Palacio del Partal, Spain, 14th century. (From Hattstein: 2001, p.293).

Middle right: Fig. 33. Palace garden in Fez, 17th century. (From Hattstein: 2001, p.492).

Middle right: Fig. 34. Portal Palace, Taj Mahal, 1643. (from Hattstein: 2001, p.492).

Bottom left: Fig. 35. "Crucero" garden, Seville, 12th century. (From Hattstein: 2001, p.491). Bottom right: Fig. 36. Patio de la Sultana, Generalife, early 1500's. (From Hattstein: 2001, p.297).



a quest of the spirit



Guideline parameters for the proposed cultural village

Water ethics to be implemented:

- Water should be strategically implemented bearing in mind its spiritual and symbolic importance
- Water should be used to further enhance the surroundings.
- Water bodies to be constantly in motion, by the usage of fountains and jets, in order to prevent stagnation, and to create a pleasant environment.

Garden maintenance strategies to be implemented:

- A processional route through the main garden should be clearly demarcated and implemented.
- A precisely geometrical layout of the garden area should be implemented in keeping with the importance of geometry within Islamic philosophy.
- A hierarchy of garden spaces should be created, based upon the above-mentioned geometry.
- Garden areas should be defined by containing them via the usage of stone, vegetation, water and other natural elements.

o **Recreation in Islam:**

Following the theme of gardens and water, one is reminded about their social function within an Islamic environment. Traditionally, Muslims sort for recreation and amusement within the confines of gardens. Gardens were popular hosts of fares, amusements and relaxation activities. (Lari: 1990, p.57).

However, when we look back into the history of Islam, it suggests a different connotation to recreation. Recreation was taken in the literal sense, meaning to 'recreate', to refresh or rejuvenate oneself mentally and physically. Traditionally it has meant a journey into self-knowledge, removing one-self for spiritual transformation by retiring into a saints' sanctuary. Recreation also meant leaving the crowded and often unsanitary environment to avail oneself. (Lari: 1990, p.57).

The difference in meaning and attitude between recreation as self-indulgence and recreation as spiritual rejuvenation is not only a problem of old versus new interpretation; it is also the difference between the Third World and the technologically advanced world. (Lari: 1990. p.58). In the proposed development, the nature of both these recreational sides should be adopted, in keeping with the true Islamic spirit.

In some instances some recreational activities are not allowed by *Shari'at*. A few common examples that will **not be permissible** would be the following:

- Any form of entertainment that involves pictures of animate objects, for example, television, playing cards, chess, video games, etc.
- Any form of entertainment that involves musical instruments

In essence, all activities will have to be tested to conform to the *Shari'at*, and simultaneously be acceptable in the eyes of the local Ulema, before being implemented into the design scheme.



Guideline parameters for the proposed cultural village

Recreational governance strategies and implementation:

- Separate male and female facilities should be catered for, or one area allotted different times.
- According to the discretion of the designer and the available statistics, the potential area for these activities could be indoors, or outdoors, or both, or could facilitate many sporting activities.
- The scale of the above activities should be allocated according to the designer's discretion.

The following cultural activities / facilities should be catered for:

- Islamic conferences / lectures - to deal with current issues.
- Islamic debates
- Islamic literature (via the provision of a small library)
- A *Jamaat Khana*, or prayer room, with the following mass group activities:
 1. *Salaah*, or the five daily prayers compulsory upon all believers
 2. *Quraan reading*
 3. Daily *Fikr* - having / creating a worry and concern for mankind to be guided
 4. *Taalim*- learning, reading or teaching basic Islamic values
 5. *Zikr* or particular remembrance of Allah via specific meditation
 6. Reviving old *Sunnah*, or practices or actions of the Prophet (*SAW*)
 7. *Da'wa*, or propagation of the faith

3. The interior of the Mosque:

- The origins of 'sacred' space in Islam

One step further into the mosque, and we come into the central space for prayer and meditation. The notion of space in Islam plays an important role in the life of Muslims. One speaks with difficulty about sacred space, in the sense of the sacred of the divine descending and occupying a place on earth. Such a notion would go against basic Islamic principals. However, if religious space is regarded more loosely as the product of rituals and narratives, and less as the presence of absence of beings, then Islamic space becomes more meaningful and amenable to analysis and appreciation. Space is constantly being created and shaped through acts; some spaces are accorded more importance than others, and some are regarded as being in closer proximity to important events. (Tayob: 1999, p.59).

The highest prestige in the Islamic spatial framework is accorded to the Sacred Mosque in Mecca, to which all Muslims turn in worship. In cosmological terms, the *Ka'ba* stands directly under the throne of God. Just as the angels circumambulate the latter, human beings perform similar rituals on the earth. By further turning to Mecca in prayer, Muslims all over the world confer a 'sacred' character upon it. (Tayob: 1999, p.61).

Similarly, the eminence of Medina follows Mecca, because the Prophet Muhammad (*SAW*) established his community there, and because it became the centre of religious devotion and study. (Tayob: 1999, p.62).

The Mosque in Jerusalem is also special because it was the home of previous prophets, as well as being the first direction of worship for the early Muslim community. (Tayob: 1999, p.62).

Stories and narratives in other Muslim contexts have further recreated the importance of these places, thereby investing sacral connections in them and inspiring numerous travels and pilgrimages. (Tayob: 1999, p.62).

It is reported that the Prophet (*SAW*) said that the 'earth was made pure and a place of prostrations for me; wherever a person finds himself at the time of prayer, let him pray.' (Tayob: 1999). The Prophet (*SAW*) mentioned this in the context of a distinguishing feature of his prophecy, and thus a distinguishing feature of the religion of Islam. Of course this has not

a quest of the spirit



prevented the production of great monuments of Mosque architecture. However, the fundamental principal within Islam lay in the adoption of the earth as a place of prostration. (Tayob: 1999, p.60). Seyyed Nasr regards the earth and nature as the 'primordial mosque' is emulated by the numerous Mosques in cities and towns. (Nasr: 1990, p.10). It is thus not unusual to see Muslims simply rolling out a carpet anywhere they find themselves and proceeding to fulfill their obligation to God. More recently, this observance of the earth as a Mosque can be seen on the part of modern travelers in some of the world's busiest airports. (Tayob: 1999, p.60).

"And to God belong the mosques," became the corner stones for ensuring that mosque endowments were completely unencumbered." (Tayob: 1999, p.60). This was a juridical and legal way in which to preserve the natural state of the Mosque. In this pure, non-owned status, the Mosque could only belong to God in a way that everything else on earth does and should do. (Tayob: 1999, p.60).

In general terms, a Mosque could be viewed as a religious site which expresses, through rituals and rules, the aspirations and desires of a community. Islamic jurists have defined the Mosque space in terms of what one may or may not do inside it. Sleeping, passing through, raising one's voice, buying and selling, and even decoration of the Mosque walls, are frowned upon. Mosques are often associated with exquisitely beautiful calligraphy and arabesque decoration, yet, there is some agreement among jurists that this is better left out. The general principals guiding these regulations, including the absence of decorations, is an attempt to create a space for unhindered devotion. Not even the name of God on a Mosque wall should come between the worshipper and his or here concentration upon God. This absolute devotional aspect of the Mosque is a means by which space is set aside. Assigning rules of behavior then was a means by which the Mosque became a religious space, as space set apart from other spaces. This is the closest that one gets to the notion of a sacred space in Islam. (Tayob: 1999, p.63).

- **Space and Gender in Islam:**

"The particular place of women in modern Islamic societies is open to change, and it is difficult to say how relations may change. What is true, however, is the fact that women's practices in Islam may and do hold much significance for understanding Islam in context. And, as I believe, they offer much to men who care to listen and take note." (Tayob: 1999, p. 79).

"The debate on Islamic space signifies the difficulty of reconciling the religious and social place of women in Islam. There is a general agreement that women have the same religious and spiritual responsibilities and privileges as men with the religious tradition. On the other hand, society is deeply divided along public / private and male / female axes. Accordingly, women's primary responsibility and preserve is the home, while men move freely in public places". (Tayob: 1999. p.76).

"The Prophet (SAW) is reported to have said: 'The best of rows for men are in the front and the worst at the back; and the best of rows for women are in the back and the worst in the front'." (Siddiqi: 1976, Vol. 1: p.279). Thus, one can visualize men and women occupying their respective places in the mosque from two very different, but very honorable places. To a certain extent, this statement by itself inscribes a spatial symmetry, in that there are two different, but meritorious places, for both men and women.

The gendered construction of Muslim space is not fixed, and the position of women is continuously changing, but some of the complexities lie deep in religious texts, interpretations and social expectations. In the twentieth century, the doors of the mosque are being reopened for women. In some, women are reoccupying the rear of the Mosque, whilst in others, provision is made in special places completely cut off from the men. A few Mosques are beginning to reconsider spatial dynamics of the building and are dividing the mosque lengthways, one side for men and the other for women. (Tayob: 1999, p.73).

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- **Creative arts and the role of geometry in Islam:**

Most Mosques have been humble buildings providing a demarcated space for worship. This is often overlooked when we think of the grand Mosques that grace so many cities and towns where Muslims live. Muslims with financial means, usually rulers and wealthy merchants, have spent generously to decorate the 'sacred' space of the Mosque with some of the most exquisite calligraphy an arabesque, even though this does go against the principal set out by the jurists regarding sacred Islamic space. However, this does give us some leeway to discuss the role of Islamic art practiced in Mosques, and its practice in general. (Tayob: 1999, p.79).

Islamic art includes a great variety of forms, of which Mosque architecture represents only one dimension. The recitation of the Qur'an and the calligraphic shaping of letters into exquisite forms, are also key forms of art. Arabesque, the use of stylized plants and geometric designs, sometimes by themselves, but often together with imbedded calligraphy, is another form of Islamic decoration. The prayer carpet might appear to be an abstract element of art, but is regarded by some as "the medium that brings together the principal features of Islamic art in a concentrated form." (Tayob: 1999, p.79).

There is great debate amongst scholars as to the significance and meaning of the artistic tradition in the world of Islam. There is some agreement that the art produced by the Islamic world exhibits a unity that transcends local variations. By implication, therefore, there should be some underlying foundational philosophy that produces this art; however, there is some disagreement as to where this foundation stems from. (Tayob: 1999, p.80).

Seyyed Nasr, a leading Islamic philosopher states that the "variety of Islamic art, reflecting the diversity of geographical and cultural groups, should not be confused with its essence, or with the appreciation of beauty in Islam." (Nasr: 1990). Nasr further states that the thread that runs through Islam's art, whether in calligraphy on a mosque wall, recitation of the Qur'an, or an exquisite carpet, unmistakably points to its unity. He states that this inherent unity that binds Islamic art across cultures is the underlying source of Islamic art. (Nasr: 1990, p.7). He goes on to indicate that the use of the different media of art

"produces a striking visual image of the primary belief in the Oneness of God in Islam." (Nasr: 1990, p.7). From this perspective, Islamic art could thus be described as "the result of the manifestation of Unity upon the plane of multiplicity." (Nasr: 1990, p.7). Nasr finally postulates his viewpoint by adding that art could only be called Islamic if it was directly connected with the primary sources of inspiration in Islam. (Nasr: 1990, p.7).

From the above perspective, Islamic art is thus strongly associated with a contemplation of basic Islamic values, principals and influences. This phenomenon can be affirmed in numerous manners as the following examples illustrate:

- The art of calligraphy "was produced by the saints who regarded themselves as the pen in the hand of God." (Nasr: 1990, p.24).
- The art of practical items such as cutlery, candlesticks, stem from the Qur'anic descriptions of Prophet Solomon (AS) who ordered the legendary jinn's to create a molten brass fountain, cooking vessels, etc. (Hattstein: 2001, p.35).
- The contents of decorative arts were greatly influenced by the Qur'anic descriptions of the paradise gardens, with its rivers and beautiful settings.
- The art of abstract forms such as geometric and arabesque art were consorted to, due to the prohibition of figurative arts. (Tayob: 1999, p.82).

Islam thus gave rise to an-iconic art through the mediums of geometry and rhythm, through arabesque and calligraphy which fundamentally reflected the Islamic spirit. In general, all forms of Islamic art were thus set out to deliberately 'disguise' and transfigure nature. Mass, volume, depth, perspective, space, enclosure, gravity, cohesion and tension are all elements that have been aesthetically negated by the Islamic artists. Thus stylization, non-individualization and repetition in the varied forms of art removed any semblance of nature within art. The philosophy behind this form of art can be understood from the perspective that the human being, in principal, is unable to reproduce the creation of God. Artists depicted this principled inability by "stylizing plants, denying individuality to human figures and robbing nature of depth and character." (Tayob: 1999). "Rather like the Qur'an, art had to flow continuously." (Nasr: 1990, pg.'s 8-24). This continuous flow was achieved by



the use of arabesque, patterns produced by the combination of geometric figures, calligraphy and stylized elements. "The arabesque provides the artist with an ideal medium in which to combine forms and produce a combination of patterns, endless in principle and effect." (Tayob: 1999, p.82).

Critchlow, in his book on Islamic patterns and numbers describes Islamic art as "essentially a way of ennobling matter by means of geometric and floral patterns united by calligraphic forms which embody the word of God as revealed in the sacred book, the Holy Qur'an." (Critchlow: 1976, p.6). He also states that "Islamic art is a means of relating multiplicity to Unity." (Critchlow: 1976, p.6).

Typical of many Islamic artworks, such as the intrinsic lattice of all patterns, is an underlying complex geometrical grid. These grids derive their inspiration from pure geometric forms, of which the circle is the archetypal governing basis. From the purity of the circle, and the rational arrangement of circles at polarized intervals, the shapes of the triangle, square and hexagon are derived. All patterns thereafter are a sub-division of proportional ratios and interrelatedness of the primary shapes, which serve as underlay for all Islamic patterns. (Critchlow: 1976, p.7).

In more theological terms, the circle is seen as a pure form, which describes the Unity of God, from which the multiplicities of other pure shapes originate. In cosmological terms, the circle represents the heavens and heavenly bodies. (Critchlow: 1976, p.7).

From the derivative of such a pure nature, the equilateral triangle is derived, the most common lattice in nature. The triangle is seen as the geometric expression of two entities and their reconciling relationship. In more cosmological terms, the triangle represents the existence of the sun, the moon and the earth, and their subordinate relationship to each other. In a more theological sense the triangle represents the minimal conditions for existence, one, the other and the conjunctive or put another way, the viewer, viewing and the viewed, or the triangle of human consciousness. It has been suggested that the essential spiritual triangle in Islam is Allah, The Most Merciful, The Most Gracious, as they occur at the beginning of each chapter of the Qur'an. (Critchlow: 1976, p.7).

The triangle gives rise to the square and the hexagon, which co-exist and are complementary to one another. The square is self-reflecting, as squares emerge from the centre of a square matrix. The square is often associated with the symbol of fourness, in terms of the four-ness of the year; or the four-ness of the external conditions of heat, dryness, cold and moistness which embody the principles of expansion, fixation, contraction and solution. (Critchlow: 1976, p.7).

The hexagon represents the six-ness of creation, and ultimately represents the heavens, equating itself as a derivative of both circle and triangle independently. It attaches itself primarily to the period of creation, which is described in the Qur'an as being that of six stages. (Critchlow: 1976, p.8).

From the above we conclude that Islamic geometric patterns are rooted practically, symbolically, philosophically and aesthetically, whilst also exhibiting a hierarchy of order within the complexity of its unfolding geometry. (Critchlow: 1976, p.8).

In an attempt to philosophically describe Islamic art, Critchlow states that "Islamic art is predominantly a balance between pure geometric form and what can be called fundamental biomorphic form: a polarization that has associative values with the four philosophical and experiential qualities of cold and dry – representing the crystallization in geometric form – and hot and moist – representing the formative forces behind vegetative and vascular form." (Critchlow: 1976, p.8). He further defines Islamic art more specifically as a "unique integration between controlling laws and the beautiful variety of patterns and colors." (Critchlow: 1976).

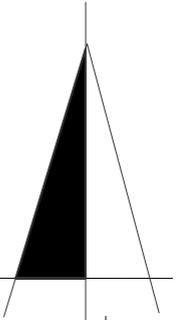
Guidelines for the proposed development:

Geometry and geometric forms:

- Geometry and geometric patterns should influence the overall design rationale
- The pure geometric forms of the circle, triangle and square should be used as the underlying grid to determine overall proportion, symbolism, meaning and scale.
- Geometric forms should flow and relate to each other in a harmonious manner

Space and gender:

- The changing role of women's space should be carefully analyzed and suitably accommodated for.



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4. The *mehrab*, (or niche found in the *qibla* wall):

- The essence of the *mehrab*: an introduction to the *qibla*

The interior paradigm of the Mosque is empty of any cultic materials, its space created by the performance of rituals like the *salaah*, the obligatory prayer, and the recitation of the Holy Qur'an. In almost all mosques, one usually finds a niche or *mehrab* in the front wall, a slight recess which indicates the direction of the Inviolable House in Mecca. It is this particular direction, called the *qibla*, which all Muslims must face when turning to the ritual prayer. Some of the great mosques in Islam also feature *mehrab's* along the outer walls of the mosque. These recesses provide opportunities for personal devotion like the recitation of the holy Qur'an and *dhikr* (remembrance of God via meditation). Sometimes they are large enough for a small group to gather in one for similar religious purposes. An intriguing feature of the *mehrab* and its direction, the *qibla*, is the fact that it represents a self-effacing central point in a mosque.

We approached the mosque by heeding the call to prayer, then performing ablution, thereupon entering the inner sanctuary of the Mosque, and finally engaging in worship. The immediate goal of these activities is standing and facing Mecca, a direction indicated by the *mehrab*. From this perspective, the *mehrab* represents the spatial end-point of a movement towards a particular direction. When we arrive at the *mehrab* however, we find that it points away from the mosque, indicating that the spiritual journey is not over, but to points to something extending beyond. Thus the mosque is not an end-point, but a fundamental starting point for the spiritual journey to come. The semi-circular form of the *mehrab* indicates that the journey to God is not a long, continuous one, but consists of unfolding stages.

In conjunction with the above, Hassen Fathy suggests that "space in the mosque has to be two-directional; the one vertical tending upwards linking it with the sky, and the other horizontal linking it with Mecca. The horizontal direction is due to the fact that Islam is ecumenical; the idea is expressed by having one sanctuary for all Muslims, the Ka'ba in Mecca. This direction is indicated by the *mehrab*, or niche; this alone is not sufficient; it has to be expressed by the building orienting itself architecturally towards Mecca." (Longeteig: 1985, p.151).

- The *qibla* wall: an introduction to 'wall'- architecture and the arched colonnades of Islam

Bearing Fathy's suggestion in mind, one is prone to think of the importance of the *qibla*, which gave rise to the basic orientation of the Mosque, which thereby stresses the importance of the *qibla* wall.

The *qibla* wall, as often described, is the perpendicular wall offset from the direction of the *mehrab* or the *qibla*. It is this wall which then inspires the direction and orientation of the other walls of the Mosque, typically being either perpendicular or parallel to it.

Mosque architecture or Islamic architecture in general, is typically described as 'wall' architecture. This stems from the very origin of Islamic tradition, which characteristically celebrates the internal world, and thereby excludes the outside world. When the outside world is brought in, it is typically enclosed by courtyard walls, once again celebrating the new 'internal' world which it promulgates. In some cases, the popular breeze walls allow for inside-outside interaction, but these once again limit total visual contact within the disguise of apparent decorative arabesque techniques. In essence the primary objective of Islamic architecture is viewed to create definite notions of exclusions to the outside wall, an ever-fixed affirmation of boundary definition and privacy.

Many western critiques criticize this 'wall' architecture, arguing that the structure of the building is not aptly celebrated, and is hidden by masques of decorative arabesque. Historically, the 'wall'- architecture developed from a practical, local and climatic perspective. The local building techniques required heavy structural walls in order to support its structure. These heavy walls had the climatic advantage of insulating the internal spaces, allowing them to resist the heat of the day, and release the absorbed heat at night. This practice was continued, until the column and beam method, via the medium of reinforced concrete, was introduced to the Islamic world. A dilemma faced the Islamic world, since tradition carried forth a 'wall'- architecture, whereas the modern world set the pace towards a more 'framework' architecture, characterized by celebrating



structure via the means of columns and beams, with intermediary walls suspended as curtain walls. This is an entirely different kind of expression from that in which structure within itself is the source of expression. Where structure is the source of expression one is free to open up the walls to view out and let the light in, but that structural style is entirely foreign to the traditions of Islamic architecture. In Islamic architecture, surface, mass and volume are emphasized.

The theme of walls brings us yet to another important component of Islamic architecture, that being of arches within the walls. In a primitive world, where the discovery of the concrete lintel had not yet been discovered, arches were seen as structurally stable, and a suitable means to facilitate an opening in a wall. The aesthetic nature of the arch, combined with its structural suitability, gave rise to its adoption in early Islamic Mosques. Ever since, arches have played an important role in Mosque architecture, appearing with varied styles over different regions within the sphere of Islamic world.

With the use of modern materials, some Mosques have moved away from this element, since its function has become one which is purely aesthetic. Whilst some adopt the arch as an essential Islamic feature, others tend to pick up its essence of reciprocating repetition and rhythm, synonymous to the rhythm of the recitation and calligraphy of the Qur'an, which echoes and flows throughout the internal dimensions of the Mosque.

Guideline parameters for the proposed development:

The qibla; walls and arches

- The general orientation of the entire framework should aspire to adapt itself along the qibla.
- Walls should be bland or decorated in an abstract manner, and yet allow room for important structural elements to be celebrated.
- Walls in general should be used to define spaces and critical axes in a manner to celebrate the qibla, or the making of 'special' places.
- The use of arches should not be emphasized, but rather its repetitive spirit inducing rhythm into the design framework.

5. The *minbar*, (or raised platform from which the imam addresses the congregation):

- The essence of the *minbar*:

The minbar is essentially a raised platform from which the imam addresses the congregation. The minbar was in existence from the time of the Holy Prophet (SAW), who used to stand on a slightly raised platform to address the early Muslim congregation. At this time though, the minbar was merely a step or two, and established the Prophet (SAW)'s authority as a leader of his people.

Shortly after the demise of the Prophet (SAW), the governor of Egypt wanted to build a raised platform to address the congregation in the Mosque. He was given the following reply from the caliph: "Is it not sufficient that you are standing while the people are sitting?" (Tayob: 1999, p.113). Thus the authority that was imbued within this powerful symbol of early Islam was for the meantime curbed to a certain degree.

The minbar, from simply being a raised platform, underwent a total transformation when the Umayyad dynasty introduced beautiful *maqsurah*'s into mosques. The preacher, the symbol of leadership, would enter the *maqsurah* and ascend its flight of stairs. Once he was inside the *maqsurah*, the door would be closed and guarded by soldiers. The *maqsurah* beautiful as it may appear is in complete contrast to a leader standing in front of his congregation with his back to them. As time passed by, the rulers declined from leading the people, and passed this duty over to the learned scholars. Consequently, the *maqsurah*'s disappeared, and stairs leading up towards a raised platform became the characteristic minbar in modern times. (Tayob: 1999, p.113).

When the imam leads the congregation in worship, he stands on the same level as his followers, facing as they do in the direction of Mecca; however, when he addresses the congregation in a sermon, he stands on a raised platform with his back against a wall, facing the people. From a functional point of view, the raised platform simply became a means for carrying the voice of the speaker beyond the initial rows of the congregation. From a symbolic point of view, the physiology of the two places in the Mosque implies radically different leadership roles. The *minbar* in Islam potentially threatens the *mehrab*, and



vice versa. It is this underlying juxtaposition of leadership and believers, height and ground levels, which occurs repeatedly in Islam. (Tayob: 1999, p.113).

When we turn from the local Mosque to the Meccan sanctuary, the height of the Ka'ba raised above ground level also became a point of contention. The Prophet (SAW) is reported to have said: "Your people, (the *Quraysh*), diminished 'the house' (*Ka'ba*) in the direction towards the *Hijr*, and but for the fact that till recently they were unbelievers I would myself demolish the *Ka'ba* and restore the reduced dimensions. I would also make two doors for it down on ground level, one towards the east for people to enter, and to the west for people to exit. And do you know why your people raised the door? And Aisha (RA) said she did not. Muhammad (SAW): 'to make sure that no one but whom they wished would enter it. If they disliked a certain person entering it, they would allow him to climb up, and then, when he was about to enter, they would push him and he would fall to the ground...'" (Quoted from Tayob: 1999, p.122).

Thus it can clearly be observed that powerful symbolic battles of height and ground levels had been characteristic within early Islam. In contrast to this, the Qur'an preaches humbleness and humility. Architecturally translated, humbleness would impose low-rise structures as opposed to high-rise structures, to indicate simplicity and humility.

Guideline parameters for the proposed development:

Height restrictions:

- Other than the concession given to minarets, Islam promotes humility and humbleness. Taking the theme of humility and humbleness into an architectural perspective, structures should also be humble and hence be low in height.
- A three-story height restriction should thus be adopted as the maximum allowable height. This phenomenon will promote an environment that takes the human scale into account, and doesn't promote an architecture that tends to become overbearing. It will also avoid the usage of lifts which will save in the energy efficiency of the development as a whole.

a quest of the spirit



Conclusion to Category A:

My exploration of the symbols, values and images of Islam have been guided by the local, physical and conceptual features of the Mosque. Colonialism, modernity and globalization have presented Islam with a great number of challenges. Whether in matters of beliefs, world views or practices, these global historical forces have forced Muslims to adapt and grapple with their traditions. In the twenty-first century, religion claims its place in the public sphere as both spiritual quest and group identity. Islamic political activities particularly, have been insisting that the social and political nature of Islam should be the source and foundation of state, judicial and educational systems. In essence, Islam determines everything in Muslim societies and should therefore be used as a base in search for new solutions in all spheres of life. (Tayob: 1999)

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Component two:

Category B:

1. A glimpse of the history of global Islamic architectural trends, their origins and their application in the 21st century:

Since the Arabs were mainly a nomadic people, their architecture comprised of the simple elements of the desert. For the more permanent dwellers of the desert, mud bricks and camel skin sufficed for most. With the Prophet (SAW)'s example of modest living, his Companions were eager to follow suite. In this regard, coupled with the fact of traditional lifestyle, the Arabs of the desert had little to offer architecturally. It was these very same Arabs that entered foreign lands and spread Islam. The first Mosque to be built by the Companions of the Prophet (SAW) on foreign land was a field defined by reeds. (Hattstein: 2001, p.). As time passed by, and more territory was gained, the local architecture of the foreign land became the architecture to be used by the Muslim conquerors. New Mosques took on the shape of the local architecture. The Islamic culture now adopted by these societies had an influence on their design, but the Islamic architecture to come from the Companions, was that of temporary dwellings of mud bricks and camel skin. (Hacker: 1979). It can thus be clearly noted that the Islam preached by the Prophet (SAW) and his Companions to follow, had nothing to do with the classical Islamic architectural elements. It is the classical elements which began to become associated to Islam; or rather the communities in which Islam became manifest, together with the local traditional methods of material assembly, which then developed into what is termed as classical Islamic architecture. (Hattstein: 2001, pg.'s 34-44).

In order to cater for the needs of a growing Muslim society in the areas of Syria and Iran, the Umayyads realized that huge areas of prayer were required. This led to the building of the hugest Mosques of the time, which also had an important role to play in the political world, as well as to establish authority. The usual type of Mosque in the Umayyad dynasty was based on the model of the Prophet (SAW)'s house in Medina. Typically, these Mosques consisted of a large courtyard, surrounded by brick walls. (Hattstein: 2001, pg.'s 64-80).

The Umayyads continued the legacy of having exterior walls which were relatively plain, and it was the interior world which was emphasized, as characteristically known of Islamic architecture and the custom of the Arabs. This theme of plain exterior walls, and a celebrated internal environment also carried itself over into the Umayyad palaces.

(Hattstein: 2001, pg.'s 64-80).

From the earliest of times, the dome was taken to theologically and cosmologically symbolize perfection and harmony of the heavens and the Creator. The Umayyads used domes to emphasize authority and religious importance, which can be observed in both Mosque as well as palace architecture, where domes were either placed over the area where the caliph would pray, or would roof the throne rooms. Domes were thus 'an attribute of the sovereigns'. (Hattstein: 2001, pg.'s 64-80).

It was also an attribute to the Umayyad dynasty to have introduced the prayer niche in the qibla wall, commonly known as 'mehrab', which set an example for later Mosques. Complementary to this, niches soon appeared in the throne room of the king, who simultaneously faced the qibla and the people he was addressing. The importance given to the qibla wall was re-emphasized during the Umayyad reign, as was initially emphasized by the Prophet (SAW) in Medina. (Hattstein: 2001, pg.'s 64-80).

The use of mosaics in Mosque and palace architecture was also introduced by the Umayyad dynasty. Many of these mosaics were often in gold, but varied in material, from glass, to tile, to exquisite marble finishes, depending upon the political stability, the region and the availability of resources. (Hattstein: 2001, pg.'s 64-80).



Characteristic of the Umayyad palaces were the fortress-like, high walls, guard-towers and the square plan, which was used as a basic layout mechanism for new structures.

As time went by, the Umayyads developed bathhouses. These bathhouses were entirely ornamented with wall paintings, and the floors with mosaics. We also notice the implementation of a passive air conditioning system, achieved via strategically placed narrow air channels. By this time the Islamic law regarding the portraying of images was forgotten by the Umayyad princes, who ravished in the arts of figurative, sculptural and relief decoration. The arts of fresco painting and stucco works founded their roots within this period. (Hattstein: 2001, pg.'s 64-80).

The opposing Abbasid reign soon took over from where the Umayyads had left, and introduced a few more changes in the realm of Islamic architecture. Mosques changed function, and instead of having social, political and religious functions, Mosques exclusively became used as a religious institutes alone. The Abbasids introduced a standard type of Mosque architecture over many regions, which continued from the Umayyad legacy in some aspects, such as the hypostyle halls, mehrab's and domes, but introduced the minbar and minarets as the new standards. They also emphasized on plastered mud-brick structures instead of stone, as well as geometric patterns which were molded into the walls and into the overall design. (Hattstein: 2001).

The strong enforcement and tendency towards geometry of the Abbasid reign can be observed from their new planning of the city of Baghdad, which became renowned as the 'Round city'. (Hattstein: 2001, p.96).

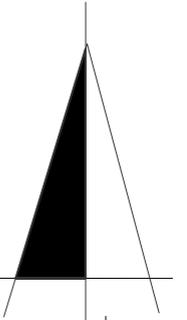
The Abbasids paved the way for palaces, Mosques and city architecture, into what is called the 'imperial style'. This type of architecture was characterized by barrel vaults, huge piers which supported the roof, towers at the corners of a square plan, and arched colonnades which introduced the theme of repetition and rhythm. (Hattstein: 2001, pg.'s 96-118).

Towards the end of the Abbasid reign, the caliph moved the capital to the newly built city of Samara. It was here that architecture was celebrated in the form of numerous huge palaces, with the Mosque placed directly at the center of the city. The palace façades were merely blank walls, and the minarets placed emphasis on the Mosque. The intention was to **shift emphasis from the palaces to the Mosque** as the focal point. Even the customary role of the caliph to lead the Friday prayers was taken over by the ulema in charge of the Mosque. The Mosque, drawing the focal attention, was **externally decorated by careful brick laying techniques and the arranging of mosaic glass and stucco work**. The famous tower at *Malwiya* was built, to further perpetuate the attention towards the Mosque and its external aesthetic appeal. This tower uniquely emerges to set off the trend for the many minarets to come in later times. The internal facades were intensely clad with the usual marble, wood and mosaic finishes. (Hattstein: 2001, pg.'s 96-118).

Another trend that developed during the Abbasid reign was the erection of tombs and shrines. Tombs were generally characterized by domes for purposes of emphasis. This was to set the trend of holy shrines to come in later times, usually characterized by domes as well. (Hattstein: 2001, pg.'s 96-118).

The Abbasid reign is also marked with its influence in the field of decorative arts, which took to many forms and patterns, with a definite geometric progress within the various mediums of textile art, ceramics and metal work. A new age of geometry, writing and arabesque had dawned upon the Islamic world: a vibrant and influential move away from the figurative arts, to establish an art based on vegetal elements such as tendrils and leaf shapes, which were subject not to the laws of nature, but to geometry. (Hattstein: 2001, pg.'s 96-118).

The Aghlabids came into power after the Abbasids, and improved on the Islamic architecture, inspired by both Byzantine and Abbasid architectures'. The Aghlabids later built what is known as 'ribat' architecture, which were essentially built as fort-like dwellings, wherein a siege could be well resisted, since water and storage of food, as well as weapons were catered for. (Hattstein: 2001, pg.'s 96-118).



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The Fatimads came into power, and replaced the Aghlabids. They had a major influence in the Italian regions. (Hattstein: 2001, p.140). They were followed by the Ayyubids and the Mamluks, to be finally crushed by the Crusaders between the east-to-west Mediterranean regions. (Hattstein: 2001, p.164). In the Moroccan to Tunisian regions, the Maghreb dynasty reigned. (Hattstein: 2001, p.298). In the regions of Asia Minor and Central Asia more specifically, the great Seljuk's and Shah's reigned, whilst the mighty Mongol and Khan regimes came into power later on. (Hattstein: 2001, p.346). In Iran, the Safavids and Qajars reigned. (Hattstein: 2001, p.494). By 1453, the Islamic world took over a new turn, as the great Ottoman Empire, which was characterized by its multinational embodiment, came into power. It was the most effective, stable and long-lasting Islamic reign. (Hattstein: 2001, p.534). Simultaneously, within the time-frame between 1800 and 1914, the European world had undergone a rapid change, which resulted in mass colonialism. By the 19th century the Ottoman Empire was thus consequently weakened: Greece, Algeria, Tunisia, Morocco, Spain, Egypt, Sudan and many of the Gulf States were overpowered by strong European colonialists such as the French, British and the Dutch. The Ottoman Empire lost all its Arab states and eventually became contained to modern-day Turkey. (Hattstein: 2001, pg.'s 536-544).

By the 20th century, after the great World Wars, we notice that the Islamic world had gained independence, but had based much of their policies and ideals on European principals. Due to the advent of wars and socio-political changes, we observe the gradual rupture of older traditions, from a political, social and economic perspective. The traditional architecture and arts of Islam also lost its footing. The adoption of a European building style was viewed in many Islamic countries as an opportunity to progress in a more 'modern' direction. An example of this was the intention of the Egyptian King Ismail to Europeanize Cairo, "following the precedent of the city plan of Paris". (Hattstein: 2001, pg.'s 582-585).

Through this type of admiration for European culture, the Islamic traditions came to a standstill. Even students had to undergo training in European states to become recognized in their own countries as masters in the new profession of architecture. It was now possible to see the development of a limited combination of Eastern and Western styles, whereas more predominant was the overtaking Western style, appearing as the new and lucrative 'image' that had to be portrayed. In

place of regional, ethnically orientated artistic styles, the Islamic states now emerged into the unifying style oriented towards the modern world. "The individual Islamic regions temporarily disappeared almost completely." (Hattstein: 2001, p.583).

Throughout the ages, even at a time when modernism appeared to pave the way forward, it is the Mosque architecture that managed to survive this onslaught, and classical elements almost always had some link to the new Mosques being proposed. Mosque architecture could almost always be viewed to conform to its local physical, ecological and landscape environment. Many Mosques became modernized by combining both modern and traditional-classical elements, such as the origination of needle-like minarets created from more modern techniques. This type of transformation became strikingly pronounced in non-Muslim states as well, where the external form conformed to its surrounding modernized architecture, but yet retained some elements of the dome and the minaret, as well as a traditional internal environment. This interplay between modern form and Islamic tradition is commonly found in many countries, and further establishes a common and deliberate connection to the ideology of the older, established states in modern terms. (Hattstein: 2001, pg.'s 583-585).

It is this exceptional quality of Mosque architecture, which managed to relate to its cultural surroundings, and yet possess abstract Islamic elements, that some critics label this evolution attributed to Mosque architecture, as the true Islamic spirit of architecture. (Hattstein: 2001, pg.'s 592-593). The illustrations below are some examples of this sort: (Fig. 37. The state Mosque of Indonesia, Jakarta, 1984. (From Hattstein: 2001, p.593).



The mosque in Jakarta, harks back to old architectural styles such as the minaret, but transforms them into an abstract symbol, and then refers to forms from modern office buildings and large-scale mid-20th-century complexes. The Mosque enabled itself to identify with the modern state promoting itself with Islam as its state religion.

a quest of the spirit



A certain tension exists between the modern building forms and the materials used, and the traditional architectural forms that can be observed in mosque designs in the eastern Mediterranean area and the Near East. The adoption of individual elements of classical Islamic architecture and their transfer into a modern form with modern materials is an approach that can also be



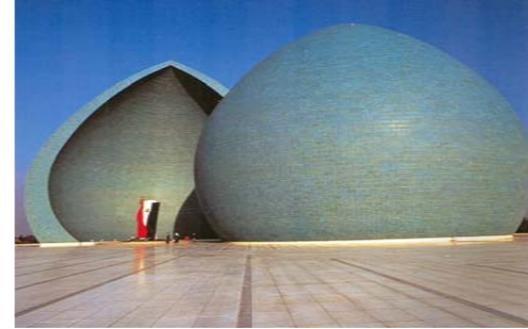
Fig. 38. King Faizal Mosque, Islamabad, Pakistan, 1986. (From Hattstein: 2001, p.592). forms, feature prominently in Islamic states such as Pakistan, Bangladesh and Saudi Arabia, amongst others. **Irrespective of the generalized criticism of being unable to identify the bearing and loading structure, due to the decorative nature of the traditional style wall, as it hides this by a layer of ornamentation that spreads over the whole structure, the practice is seldom abandoned. Islam is proud of its walled-architectural facades, which are well-suited for its harsh climatic environment, and which portray the essence of Islam in a traditional, spiritual and practical manner.** (Hattstein: 2001, p.593).

recognized in the King Saud Mosque in Jeddah, as shown below: (Hattstein: 2001, p593).

It is in this Mosque, that even the niche in the qibla wall is indicated via the use of a laser beam. **This stands to prove the widespread, unbroken relationship with tradition, as the evolution of the combination of old traditions, religious ideas and modern approaches gel together into a harmonious whole.** These key characteristics, where there is a play with classical forms, which are then rendered by modern techniques and in modern building

The quest for a new Islamic identity has not only swept the architectural sphere, but the arts and crafts as well. Even though there was a tendency to sway towards European trends, and little remained of the traditional elements, as sculpture took

figurative forms, Iraqi artisans in the 20th century, in contrast to this, produced a striking monument within the huge voids produced by two huge 'onion domes'. (Hattstein: 2001).



This monument preserves some cultural identity, and dedicates itself as a 'Monument for the Martyrs'. Tiled in blue-turquoise, with the huge masses of the two 'onion domes', arranged on an isolated tiled island, this monument is impressive, simple, yet frightening...which I feel is apt for its purpose.

Fig. 39. The Martyrs Monument, Baghdad, Iraq, 1983. (From Hattstein: 2001, p.596).

It seems as if Islamic architecture is once again finding its roots from traditions, spiritual links, modern techniques, and cultural ethnicity within the frameworks of a quest for a new global Islamic identity.

a quest of the spirit

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1. Traditional guidelines to place-making in architecture

The Qur'an is believed to be the supreme source of guidance in all spheres of life, and would thus be the logical plane to begin with, in order to ascertain the basic principals of Islamic tendencies. Suggested below are some examples from the Holy Qur'an, from which one is able to extract fundamental values of the Islamic culture in relation to architecture:

- **"Squander not thy wealth;** the squanderers were ever brothers of the devils." (Qur'an, Chapter Al-Esra, 27).
"Build ye on every high place a monument for vain delight? And seek ye out strongholds that haply ye may last forever?" (Qur'an, Chapter Ashura, 128-129).
From the above verses we gage that Islam practices the principal that buildings should not be luxurious. "All luxurious phenomena which govern most old Islamic edifices and many modern buildings conflict with this principle." (Lari: 1990, p.41).
- "Thus we have appointed you a **middle nation**, that ye may be witnesses against mankind and that the messenger may be a witness against you." (Qur'an, Chapter Al-Baqarah, 143).
- "And those who, when they spend, are **neither prodigal nor grudging**, and there is ever a **firm station between the two.**" (Qur'an, Chapter Al-Furqan, 67).
From these verses, the principals of modern living and moderate expenditure can be derived. (Lari: 1990, p.41).
- "O ye who believe! **Enter not houses other than your own without first announcing your presence** and invoking peace upon the folk thereof. That is better for you, that ye may be heedful." (Qur'an, Chapter Al-Furqan, 67).

From this verse we can observe the importance of privacy and the rights of private spaces. (Lari: 1990, p.42).

- He it is who hath placed you as viceroys of the earth and **hath exalted some** of you in rank above others, that **He may try you** by that which He hath given you. Lo! Thy Lord is swift in persecution, and Lo! He is forgiving, merciful."
(Qur'an, Chapter Al-An'aam, 165).
This verse signifies both the values of equity in dealing, and the different standards of living. (Lari: 1990, p.42).
- Is he who **founded his building upon duty to Allah** and His good pleasure better, or he who has **founded his building on the brink of a crumbling, overhanging precipice** so that it toppled with him into the fire of Hell? Allah guideth not wrong-doing folk." (Qur'an, Chapter Al-Tawbah, 109).
From this verse the principal extracted is that religious ideals and obligations should be given proper consideration when designing public buildings.
(Lari: 1990, p.42).

It could be said that the above examples, are generalized examples, but in essence, the **Qur'an preaches simplicity, a moderate social life, equity in public life, privacy, respecting religious ideals and obligations, and proper maintenance.** (Lari: 1990, p.42).

It has also been noted that amongst certain traditions, the Holy Prophet (SAW) did not encourage building in general. This has been argued from the viewpoint that **necessary building is permissible**, and beyond that will be wasteful, and thereby will be answerable for, in the eyes of Islamic jurisprudence. This logic stems from the fact that the Holy Prophet (SAW) himself assisted in the building of the first mosque of Islam, and also permitted the building of his quarters. When one observes his quarters however, we find it simply built out of mud brick, with a maximum of four square meters per room, which was allocated to each of his wives. Other than this, he had no other living spaces. His quarters opened directly into the



courtyard of the Mosque, and a piece of camel skin was the only barrier of privacy which separated him from the community. The Mosque has been described by numerous traditions to have been made out of mud bricks, with the roof made out of palm leaves supported by the trunks of palm trees. The floor is proven to be sand, based upon the reports of praying in mud when it rained. (Hattstein: 2001, pg.s 60-64). All these factors further enhance the theme of humbleness of structure, simplicity, and consorting to only that which is entirely necessary. With retrospect to the current development, it will be justified to thus build that which is necessary to further basic comfort needs and requirements. To further substantiate this viewpoint, the entire development is being dedicated towards the faith, with the intention of perpetuating and catering for Islamic needs, as its priority objective. Thus, all the structures being proposed can be categorized as necessary structure to enhance the faith.

As far as comfort levels are concerned, the *Ulema* indicate that a standard equal to the living standards of the community, or the Friday Mosque in the locality, should influence the extent of comfort to be experienced in the proposed development. From a religious judicial perspective, it would thus be permissible to build such structures which have similar finishes to its surrounding community, which I would say, are moderate, and to some extent, avoid luxury. The logic behind this theory is that the inhabitants of the community are used to a certain standard of living, and it is this standard that should be maintained in the proposed development, in order to make people feel comfortable in their surroundings. Furthermore, the living standard of the local Islamic community at large should also be taken into account, in order to accommodate general ideals of comfort. In order to avoid lengthy discussions in this regard, I merely postulate that in essence, ***simple structures, with moderate finishes and levels of comfort should be aspired towards, in keeping with local Islamic injunctions.***

In essence the architecture, in the words of Lari, should express:

- "Unity as its existence: one God, one Truth;
- The Qur'an as its message;
- The Prophetic traditions and Islamic law as its path." (Lari: 1990, p.42).

The Qur'an advises to invite others with wisdom and beautiful preaching, and to argue in ways that are best and most gracious. (Lari: 1990, p.123). The architecture should thus be like a greeting of peace and an invitation to discourse and dialogue about Islam.

a quest of the spirit

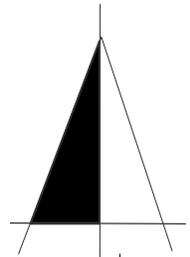


Index to Section B: Contextual Study

1. Location of Brits
2. Approach to Brits
3. A brief history of the Brits Muslim community
 - a. The Hartebeespoort Dam and its impact
 - b. Indians in Brits: 1917 - 2004
 - c. Political Development in the country - proclamation of Primindia – current proposition
 - d. Economic development
 - e. Social implications
 - f. The Mosque
4. An introductory map to the site
5. Physical traits: River, canals and topography
6. Vegetation density
7. The site in context:
 - a. Climate
 - b. Wind
 - c. Solar patterns and solar radiation
 - d. Water supply
 - e. Electrical supply
 - f. Sewage
 - g. Wastes
 - h. Storm water drainage
8. Basic model of site
9. Illustrations pertaining to the site in context:
 - a. Visual links and approach to the southern sector of the site
 - b. Views from the southern sector along the lower main road looking east
 - c. Approach from the upper main road
 - d. Views of the northern sector of the site
 - e. Views of the southern sector of the site
 - f. Important visual links within the community:
 - i. Reservoir view
 - ii. Visual link of minaret within the community
 - iii. Urban links to the site
10. Basic zoning criteria

1. Location of Brits:

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Brits

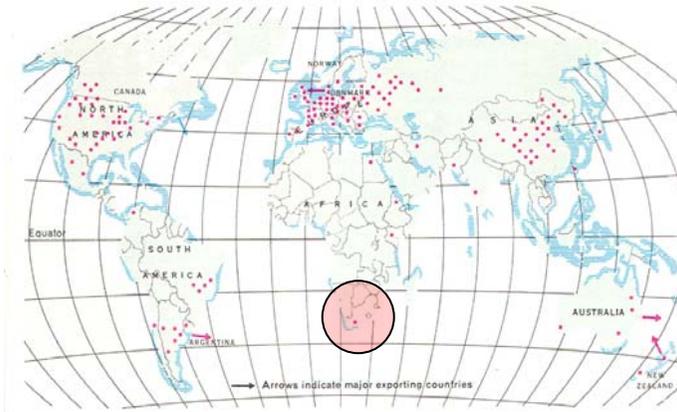


Fig. 1. Location map. (From Debenham: 1990, p.210).

Fig.2. Location map. (From Debenham: 1990, p.126).

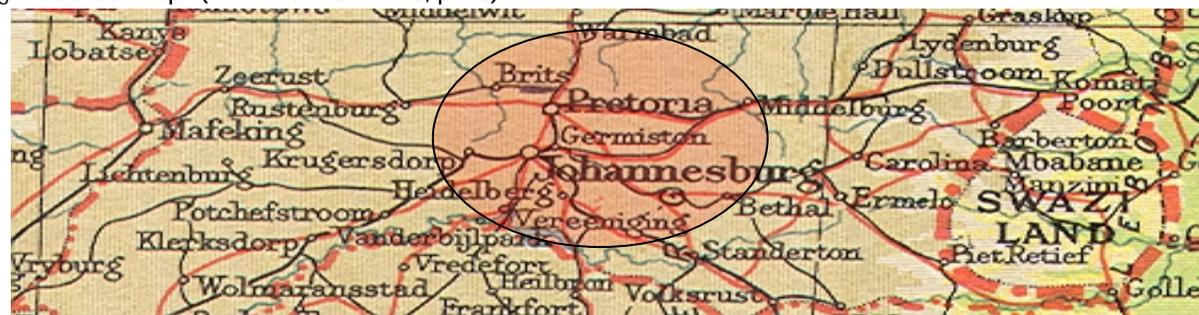
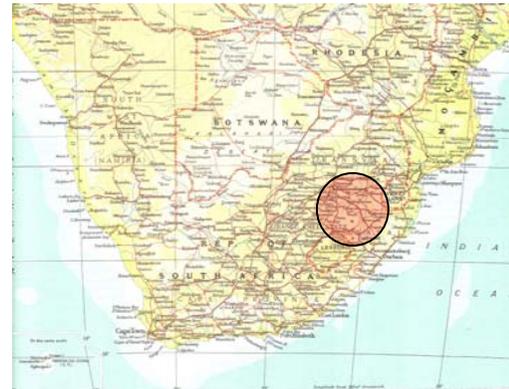


Fig. 3. Location map. (From Debenham: 1990, p.126)

Brits is situated forty-eight kilometers West of Pretoria, eighty-four kilometers North West of Johannesburg, seventy-six kilometers from Rustenburg and thirteen kilometers away from the Hartbeespoort Dam. The town is approximately one thousand and fifty meters above sea level. (Gani: 1987).

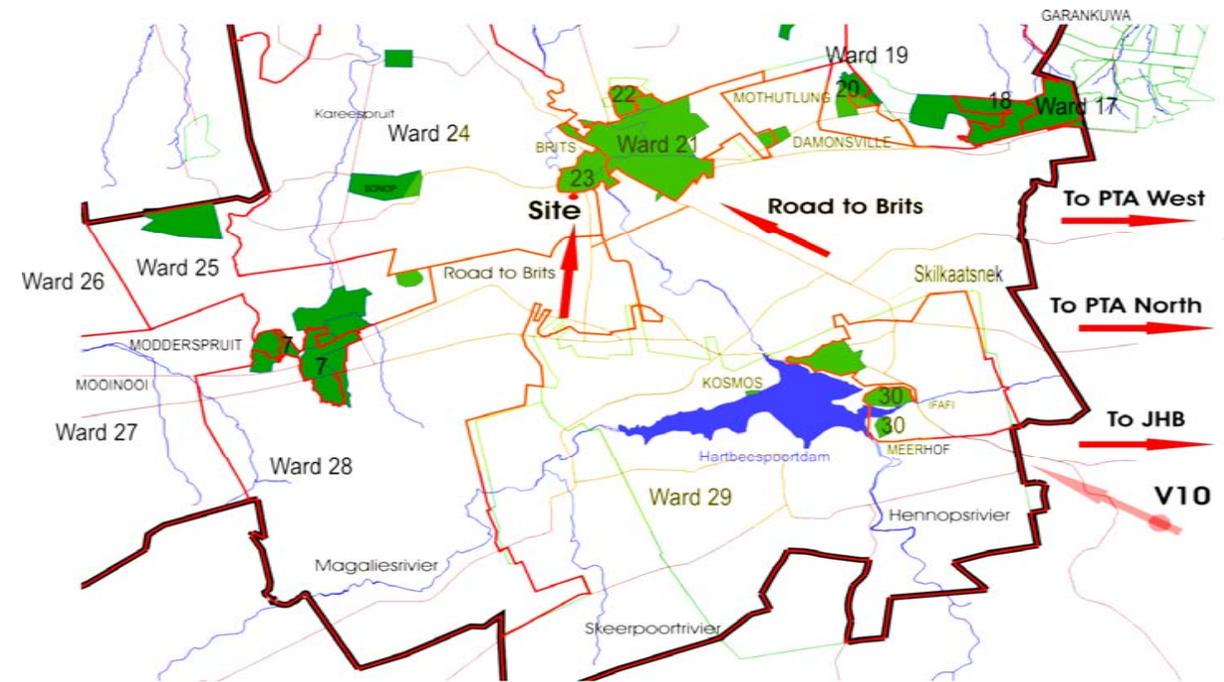


Fig. 4. Location map. (From Madibeng Council Catalogue: 2004, Section JQ8, p.5). The map indicates Brits with its surrounding suburbs. Roads demarcated in brown, indicate easy accessibility to the site. The site is located along the south-western periphery of Brits, along a major road leading into Brits.

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2. Approach to Brits:

Brits has two major roads which brings one into town. The northern-most road is mainly used by the locals, whilst the southern road is used by travelers and tourists alike, since this road is highlighted from the very onset of the approach to Brits via the setting of the Hartbeespoort Dam amidst a backdrop of a scenic mountain range.

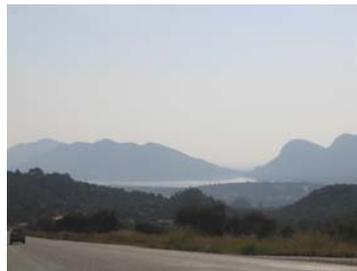


Fig. 5. Brits in general.
Along approach: one is lured to the dam



Fig. 6. Brits in general.
View of dam along winding route



Fig. 7. Brits in general.
Hartbeespoort dam: Boat in the distance



Fig. 8. Brits in general.
View from bridge towards the east



Fig. 9. Brits in general.
Panoramic of Hartbeespoort Dam from bridge



Fig. 10. Brits in general.
Leaving the dam behind



Fig. 11. Brits in general.
African curio market



Fig. 12. Brits in general.
Restaurants neighboring curio market



Fig. 13. Brits in general.
Recently opened Chameleon Village

Upon leaving the dam, the traveler is faced with numerous recreational activities, such as animal farms, camp sites and lodges, tea gardens, restaurants, curio markets and art galleries.

The proposed site is located a further 10 km away, thereby extending the tourist route into Brits town. The route to site is also marked with game farms and lodges, which eventually sprawl out into green countryside, with the mountains as a backdrop.



Fig. 14. Brits in general



Fig. 15. Brits in general



Fig. 16. Brits in general

Views of a green countryside and irrigation lands along route to site, with mountains as a backdrop.

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3. A brief history of the Brits Muslim community:

a. The Hartebeespoort Dam and its impact:

The Hartebeespoort Dam played a crucial role in the coming of the Indians, and Islam, to Brits. During the construction of the Hartebeespoort Dam, many Indian hawkers came to sell their merchandise to the laborers working on the dam. The Indians thus initially served to provide the basic needs for the people on the construction site. The Indians then realized that with the completion of the dam in 1923, farming would flourish because of the consequent irrigation scheme to follow. This made them further realize that Brits could be an advantageous region for future business prospects. Being a business minded people they later flocked to the area as general dealers and hawkers to serve the needs of a growing rural agricultural area. (Gani: 1987).

Today, the Hartebeespoort Dam and its surrounding commercial and residential belt has become prime land. Many weekend houses have been built and recreational activities around the dam have been on the increase. From guesthouses to small motels, from the famous 'Harties' zoo to the numerous water sporting activities, from the cable cars to the beautiful, lush, green and mountainous scenery of the area, the recreation industry appears to have no boundaries. The rise of two new shopping complexes in the near future are currently underway, thereby perpetuating the attractiveness of the Hartebeespoort Dam as a holiday destination for both locals and tourists.

Brits however has a minimal advantage, since it is located a further thirteen kilometers away. With all the recreational facilities, as well as two new upcoming shopping complexes, Brits has a minimal opportunity to attract tourists or locals. A whole new town, with a large residential belt is currently being developed, and the Hartebeespoort Dam appears to be the next target for prospective developers. New investments are thus all turning away from Brits, and the focus has been shifted to the Hartebeespoort Dam as a growing economic node. Thus, the intention of extending recreational facilities towards the town, would benefit the dying economy Tom Street, by attracting holiday makers and tourists towards it.

b. Indians in Brits: 1917 – 2004

The first Indians to come to Brits were the Soomar family in 1917. The three Soomar brothers can be regarded as the pioneers of the establishment of the Muslim Indian community. At that time, most of Brits was open veldt, and the current railway station was merely a siding, towards the western part of Brits. From this siding, materials were transported to the construction site at the Hartebeespoort Dam, some thirteen kilometers away. In 1923, the construction of the Hartebeespoort Dam was completed, and consequently, by 1924, Brits was declared a village. The first police station and court house were soon to follow. Due to the excellent irrigation system that was implemented by the medium of canals and underground storm water channels, farming began to flourish. This attracted the Indian traders in the surrounding areas, such as Pretoria, Rustenburg and Pietersburg to search for business prospects as general dealers. By 1924, the Soomar family had already begun doing business in the heart of the growing Brits district. A few years later the Soomar family was permitted to buy land and own businesses by the district general. Soon, other families arrived and rented out shops from the Soomar's to establish their own businesses. In 1960, because Brits was yet such an old fashion town and appeared to be like a 'cowboy' town, a film was shot in the midst of the one-street town by film star, Mike Todd, featuring the movie titled "The Helions". This further gave Brits more publicity, and by the late 1960's, the Indian commercial area was packed with businesses, boasting three large shopping complexes along its western edge. By the early 1980's, Brits became a fully fledged, operational town. (Gani: 1987).

c. Political Development in the country - proclamation of Primindia – current proposition

Before the Nationalist Party came into power in 1948, Indians were not allowed to buy any land in the Transvaal. In 1946, when the United Party ruled over South Africa it proposed exempted areas where Indians could purchase land. Brits was supposed to be one such exempted area. This area stretched from the East Pretoria Road to the West Rustenburg Road. However, in 1948 the United Party lost the general election to the Nationalist Party. Therefore the proposed idea of exempted areas never materialized. (Gani: 1987).

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In December 1956 under the Nationalist Party rule, Primindia was declared under the Group Areas Act as an area for Indian Occupation only. In terms of the Group Areas Act, buffer strips were required to divide different race groups of the country. Primindia's boundaries thus stretched from the railway line between Tom and the Railway Street in the north, to the Crocodile River in the south, whilst the eastern boundary was Carel Street and the Western boundary, Brug Street, (as depicted on the map alongside). (Gani: 1987).

In 1962 Primindia was proclaimed. Since then, extensions were given to the Indians with special permission from the regional councilor in charge. In 1971 in terms of the Group Areas Act the area was extended and a further forty-four plots were allotted to the Indians. This was known as extension fifteen. In July 1986, extension 26 was proclaimed for Indians. In July 1987 some 142 plots were further assigned as an extension to already existing areas, (as depicted on the map alongside). (Gani: 1987).

Today, even though political freedom has been achieved, the Indian commercial area is sandwiched between Carel and Brug Streets along its western and eastern ends respectively, just as it was years earlier when the original perimeters were set by the apartheid government. Along its northern end, the previous railway line that served as a buffer between white and non-white zones still stands proud, whilst the southern edge is backed up against a strong residential belt. The residential area is likewise sandwiched along its northern end by the commercial area, along its southern end by a belt of stronghold irrigation land, along its eastern end by a highway, and along its western end by light industry. The impacts of the apartheid regime can yet be felt, since the Indian area cannot expand, bound by the boundaries of the past. As the need for space has grown, the Indian area has become immensely dense, and a housing shortage can be felt. Many Muslim families are forced to move out into areas where Islam cannot be felt, an area away from the Mosque, Madressa and Islamic culture. Young married couples live closely with their parents, to be a part of the neighborhood and culture, whilst the demand to ease the growing densification rises to its peak.

A suitable outlet and solution needs to be found. After a careful analysis it can clearly be observed that the link along the south western end of Carel Street to open veldt across the main road would be a best possible solution for an extension to the current Indian area. By creating a cultural village with a Mosque, a new Islamic housing belt will be suitably catered for. The new residents would then have a Mosque and an Islamic environment in their midst, and yet be closely connected to the old neighborhood by two main streets. The cultural village would also provide jobs for the new residential community, who would also

be closely linked to the heart of the western edge of town, and yet be along the periphery of the town, with dense greenery, the Crocodile River, and the Magaliesburg Mountains as their surrounding environment.

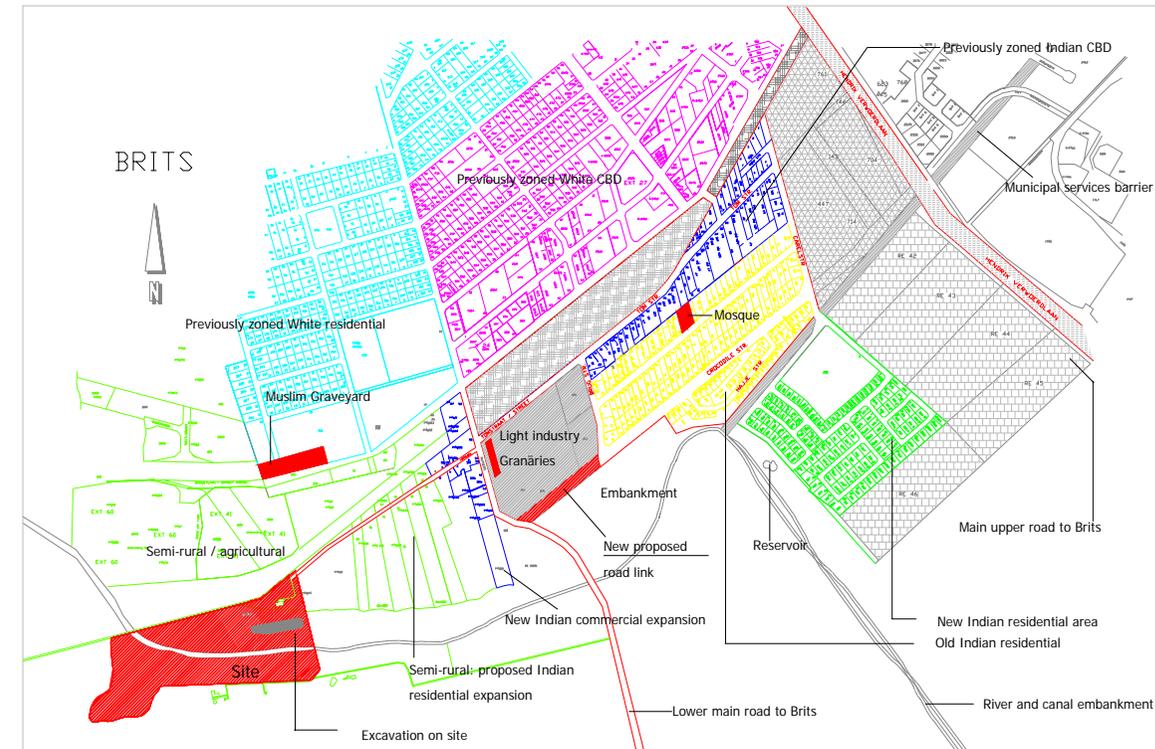
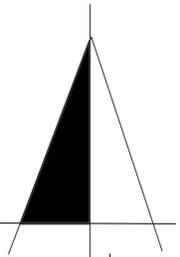


Fig. 17. The site in context. (From Madibeng Council Catalogue: 2004, Section JQ8, p.7).

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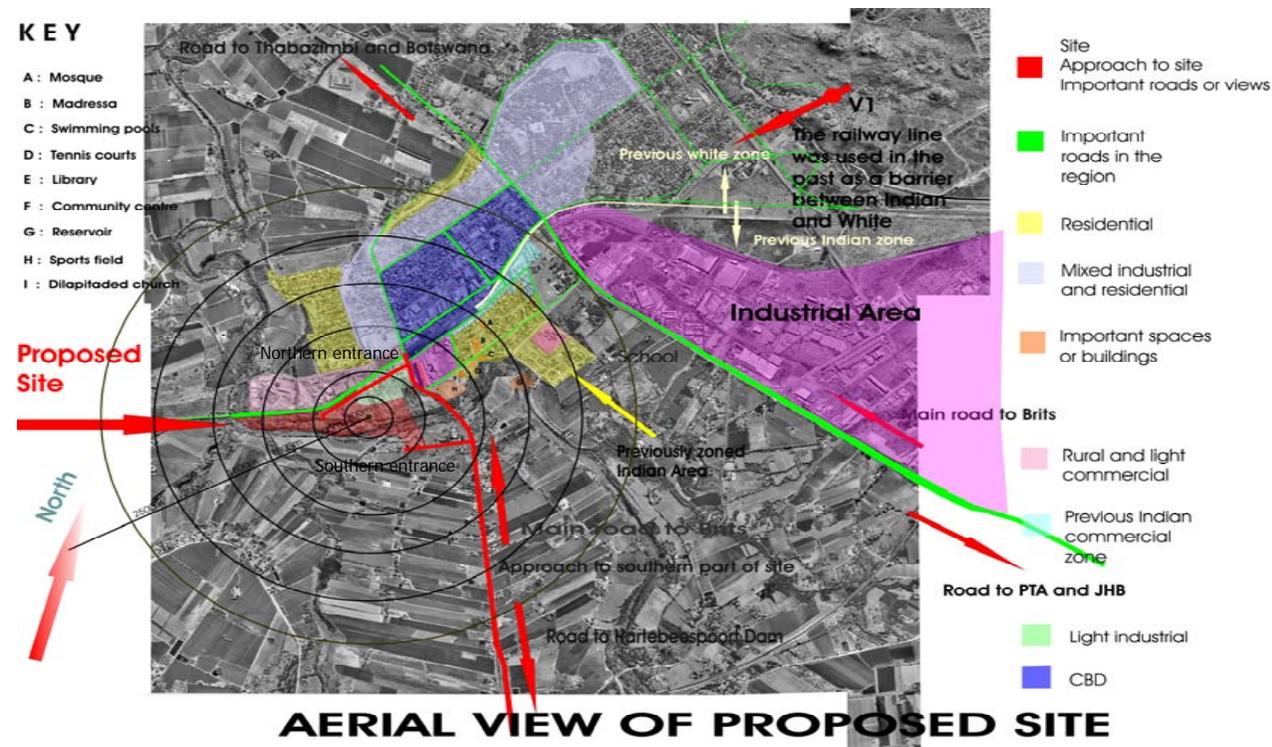
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4. An introductory map to the site:

Fig. 20. The site in context

BRITS: ZONES AND FUNCTIONS MAP



The granaries appear at the heart of Brits, and are an important landmark. Thus pictures taken are in reference to the granaries, in order to facilitate clearer orientation.

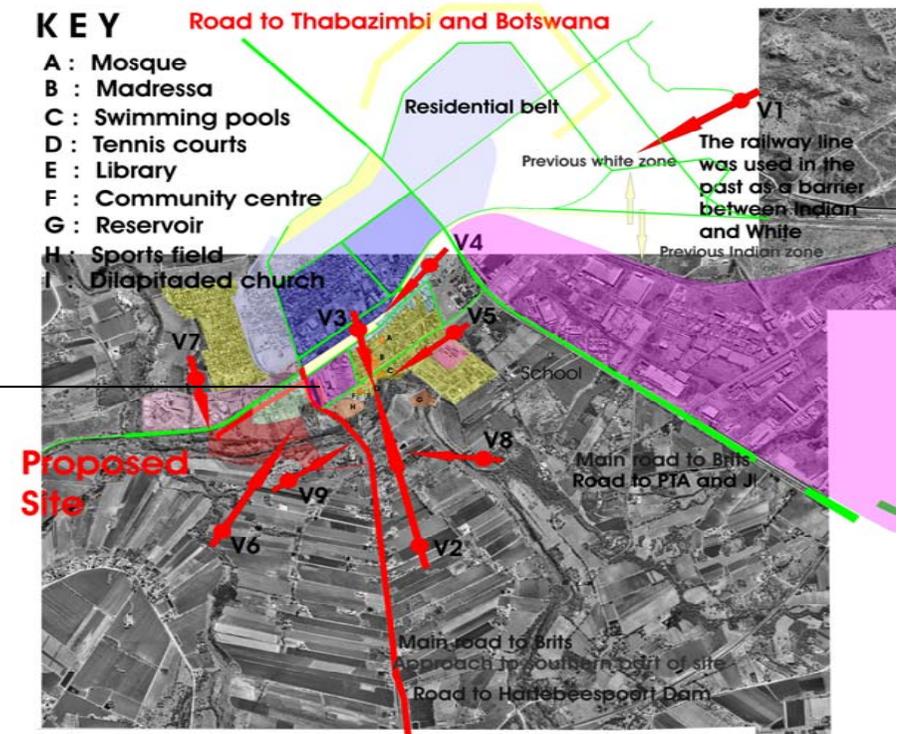
Fig. 21. Aerial view-1 of Brits



Site 1km south west of granaries

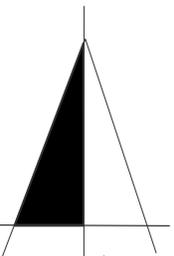
Left: Map indicating different zones and functions of Brits, as well as northern and southern entrances of proposed site.

Right: Viewing map indicating views 1-10

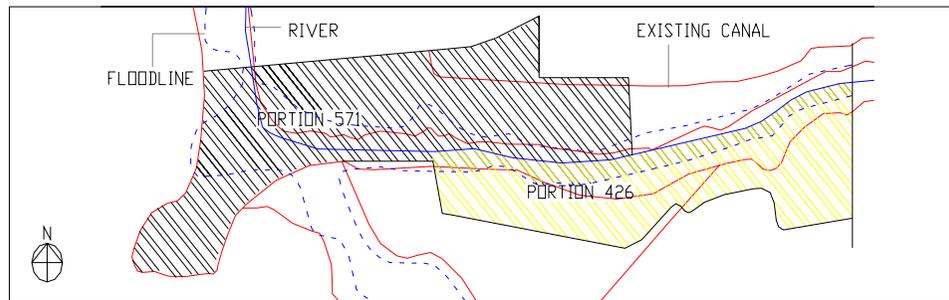
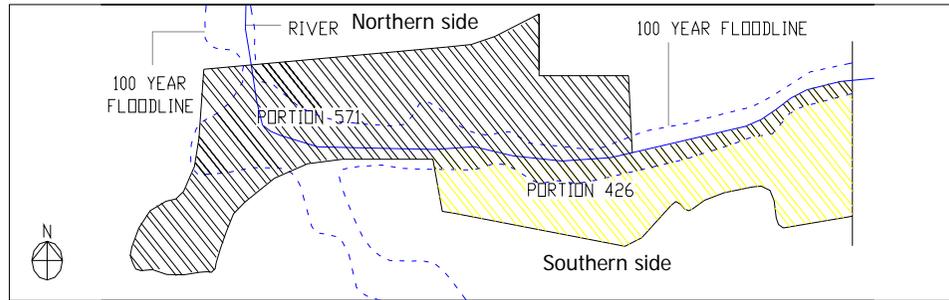
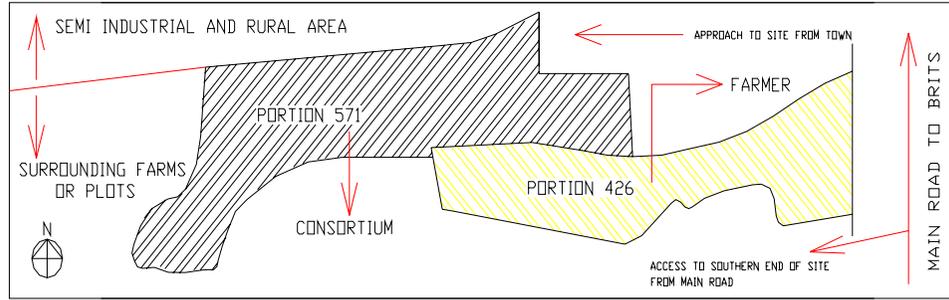


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5. Physical traits: River, canals and contours

The illustrations on the left: Begin by indicating the main road to Brits, as well as the approach to the site from two entrances, namely: the northern urban link, and the southern rural link. Further more, the site boundaries are highlighted in particular, so as to illustrate the narrow, rather longish shape of the site. The site is legally divided into portions 571 and 426 respectively. Whilst each portion belongs to different owners, the joint venture between the two owners enables the site to present itself as a whole.

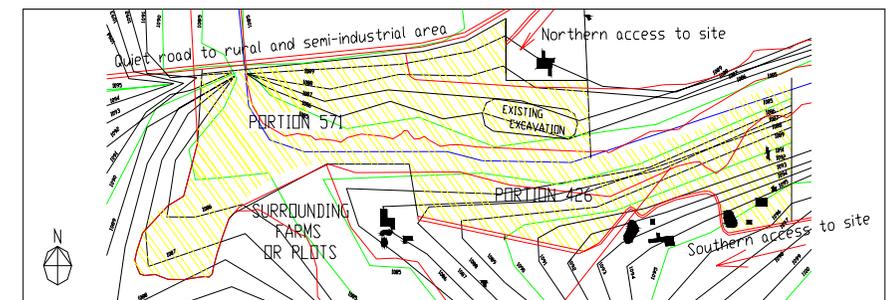
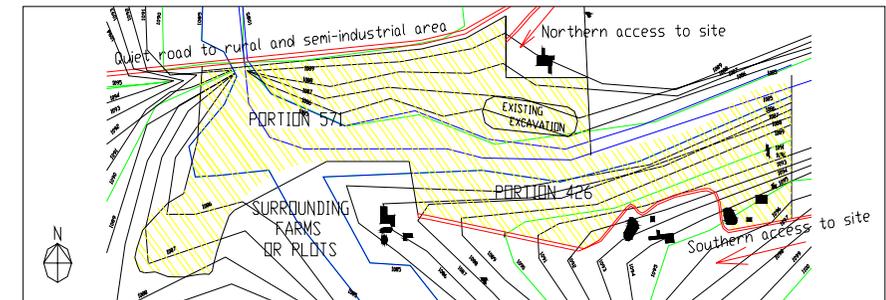
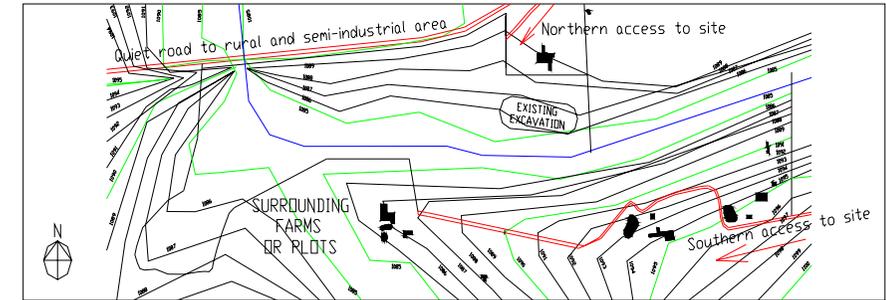
The second illustration introduces the river and its 100-year flood lines, as per the previous flood line declared in 1999.

The third illustration introduces the existing canal system, demarcated in red.

The illustrations on the right: Begin by introducing the natural contours of the site, and illustrate the existing excavation on site, previously meant for a small dam, along the north-eastern frontier.

The second illustration depicts the site (in yellow) within the contexts of its surrounding contours.

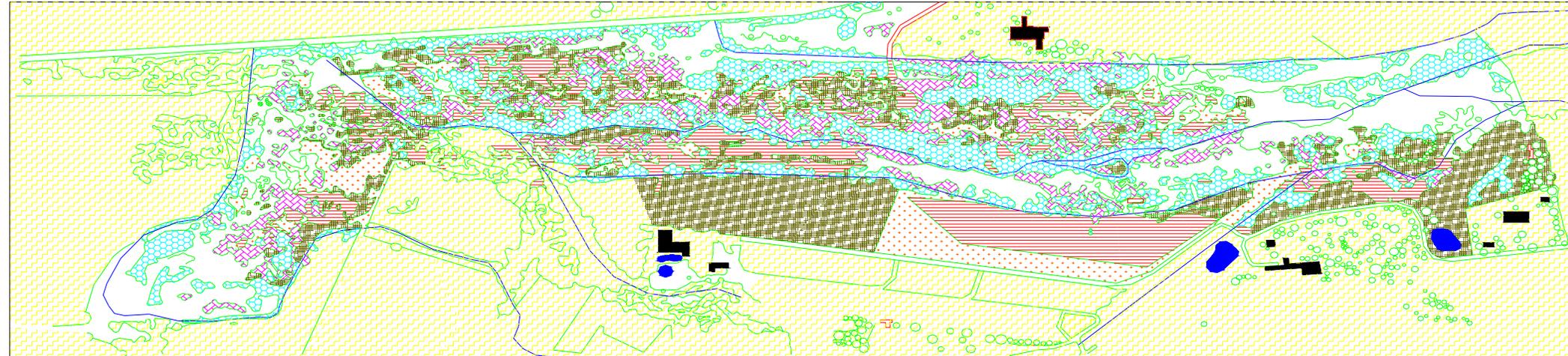
The third illustration portrays all the data compiled into one drawing. In general, the site is located along the south western periphery of town. Along its north western edge, it is surrounded by a semi-rural, semi light industrial area, whilst along its southern belt it is surrounded by dense greenery and agricultural lands. (Please refer to map on page). (Fig's. 22-27. The site in context).



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6. Vegetation density: (Fig. 28. The site in context).



| | Color | Density rating | | | | | Description | | |
|---|-------|---|---|---|---|---|----------------------|---|-------------------------|
| | | 5 | 4 | 3 | 2 | 1 | Density | Type and general comments | Further remarks / input |
| E Y Y | | X | | | | | Very intense density | Sweet thorn, mature trees, indigenous forest bush | |
| | | | X | | | | Intense density | Younger trees, Buffalo thorn – evergreen – ziziphus moeronata | |
| | | | | X | | | Moderate density | Celtus Africana tree: white stinkwood; Arcacias | |
| | | | | | X | | Low Density | Common names: Karee tree, river bush willow | |
| | | | | | | X | Very low density | grassland, weeds | |
| | | Surrounding areas – mainly farms or plots; Open spaces – extreme low density – barren regions | | | | | | | |
| Alien plant life around the river is in the process of being removed in a recent project due to the alien plantation blockage of the river coarse | | | | | | | | | |

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7. The site in

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context:

a. Climate:

Brits is situated 1050m above sea level, with latitude of approximately 26°. Summer temperatures are thus hot, ranging from 13.1° (minimum) to 32° (maximum), and a relative humidity between 45° and 50°. According to SPP, a company specializing in optimal thermal environments, (personal interview), the humidity of the site, due to its closeness to the Crocodile River, could reach a humidity level of 55°, (personal interview). Winter months are usually dry and mild, with relative humidity levels dropping between 25° and 28°, with temperatures ranging between 3.2° and 29.3°. The average rainfall of the area is approximately 700mm, of which 85% occurs during the summer in the form of thundershowers. (SAWS, 2003).

b. Wind:

Winds are light to moderate and are typically from a south easterly direction, probably due to the current location of the town within the dip of the Magalies Mountain range. In general wind turbines require an average of 11km/hour to operate, (Lyle, 1994). With an average wind speed of 6.5 km/hour, with 35% of the year being calm, (SAWS, 2003), generating electricity through wind power would not be a suitable option. The tilt of photovoltaic cells should approximately be equal to the latitude of the site minus ten degrees. Thus the latitude of Brits could be said to be approximately 26°. Thus the angle of the photovoltaic cells should be positioned at 16°.

c. Solar patterns and solar radiation

During summer, the Brits region experiences on average, 70% bright sunshine, whilst in the winter months it is as high as 81%. (SAWS, 2002). The abundance of solar energy should thus be capitalized upon to its maximum potential, in order to save on long-term energy costs. The tilt of photovoltaic cells should approximately be equal to the latitude of the site minus ten degrees. Thus the latitude of Brits could be said to be approximately 26°. Thus the angle of the photovoltaic cells should be positioned at 16°.

In light of the aforementioned climatic and solar patterns, solar radiation would be phenomenal. Care would thus have to be taken in the allocation of materials and their relative transmission of heat, (u-values), as well as effective measures to counter against excessive radiation thereby affecting comfort levels in the internal environment. Both eastern and western facades, as well as the roofing planes should adequately cater for radiation via means of insulation, recesses and screening of various natures'. (Please refer to Section-F, titled 'Technical investigation,' (pg), for more details on sun paths and u-values, and their consequential design alterations.

d. Water supply:

The site currently has a fresh water stream flowing beneath it, along both its northern and southern sections. This could provide water for the proposed development via the means of drilling boreholes approximately 80 feet deep. Since the site borders on the Brits district proper, as well as peri-urban area, it has the advantage of gaining water supplies from council, as well as gaining water, via the existing canal system from the Hartebeespoort Dam. By further conserving rain water, the site has numerous avenues of water supplies.

e. Electrical supply:

The site, as previously mentioned, borders on both urban and peri-urban regions. Therefore electrical supply is determined by two sources, namely, the Brits Electrical Board, as well as ESKOM. These, together with back-up generators in the form of photovoltaic cells, would provide amply for all requirements.

f. Sewage:

The council sewage line runs through the northern sector of the site. Thus the proposed development would drain all its sewage to the provided connection. The southern section however would have to make use of septic tanks and the likes thereof, as is practiced by the surrounding farm belt. Since this sector will be falling beyond the domain of the thesis, it would be sufficient for all sewage to connect to municipal mains.

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g. Wastes:

A waste collection area would have to be determined on both northern and southern sections of the site. The wastes collected on the northern side would then be collected weekly by the council, as is regular practice within the urban precinct. The southern sector in contrast, would have to have its own waste collection and dumping criteria, or could be affiliated to the northern waste collection, via an additional fee. The latter proposition however, would harbor upon council's ruling, and would for the purposes of the thesis be ruled out, with the southern sector having an independent waste collecting and dumping criteria.

h. Storm water drainage:

Storm water in both sections of the site, should carefully be channeled towards its natural water course on site, meaning towards the Crocodile River. Many examples of this sort of water channeling are commonly in practice within the surrounding area, for example Mouna-Manzi, a resort along the Crocodile River banks, approximately 10 km away, as illustrated below:



Fig. 29. Possible solutions



Fig. 30. Possible solutions

Water channeling at Mouna-Manzi, Hartebeespoort, Brits

8. Basic model of site:



Fig. 31. Model of site with initial concept

Fig. 32. Model of site with initial concept

Fig. 33. Model of site with initial concept

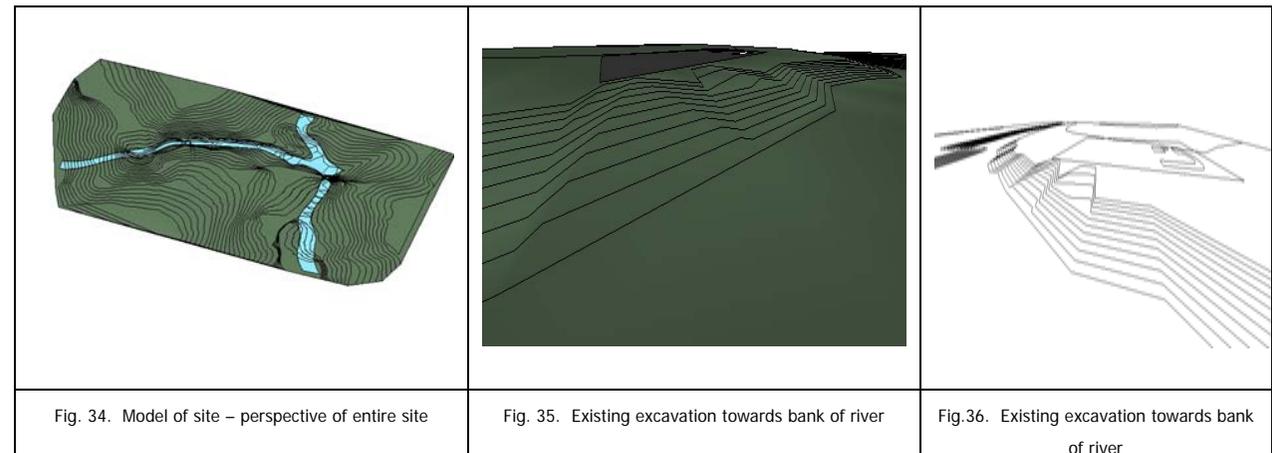


Fig. 34. Model of site – perspective of entire site

Fig. 35. Existing excavation towards bank of river

Fig. 36. Existing excavation towards bank of river





9. Illustrations pertaining to the site in context:

a. Visual links and approach to the southern sector of the site:

Traveling along the southern road towards Brits, one encounters the southern entrance of the proposed cultural village, allowing a peak of the town, with the granaries in the distance.



(Fig. 37. The site in context). View-2
Peak towards town before entering site



(Fig. 38. The site in context). View-6
View of granaries from southern entrance



(Fig. 39. The site in context).
Approach to site off the main road: southern entrance

The northern end of the site can be approached by continuing along the southern road, over the Crocodile River, and into the town.

Entrance to Site from south entrance



(Fig. 40. The site in context).
View 8: View of bridge over Crocodile river



(Fig. 41. The site in context).
View 8: View from bridge looking west



(Fig. 42. The site in context).
Close up view from bridge, looking west

b. Views from the southern sector along the lower main road looking east:

Viewing from the bridge towards the east, we notice the Muslim residential component, as well as the community center.

Viewing from left to right:



(Fig. 43. The site in context). View 9:
Community center in the background



(Fig. 44. The site in context). View 9: Smaller
pedestrian bridge behind community center



(Fig. 45. The site in context). View 9: Muslim
residential component in background



(Fig. 46. The site in context). View 9: Close
up- Muslim residential sector in background



(Fig. 47. The site in context). View 9: View of river
and canal, with Muslim residential area in background



(Fig. 48. The site in context). View 9: ZCC
members traditionally baptizing in the river water

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c. Approach from the upper main road:

Approaching Brits from its northern-most road, one passes through the famous pass of Silkaatsnek. Brits can be seen in the distance, at the bottom of the hill. Upon entering Brits, the site could be accessed via Tom Street, via the Muslim commercial district. The site is located 1km away from the end of Tom Street, amidst a side street. This is termed the urban link of the site.



(Fig. 49. The site in context). Silkaatsnek pass in the distance



(Fig. 50. The site in context). Close-up: Silkaatsnek pass in the distance



(Fig. 51. The site in context). View 4: Tom Street- Commercial heart



(Fig. 52. The site in context). Access road to site at end of Tom street, just pass granaries, leads to gravel road.



(Fig. 53. The site in context). North entrance to site from CBD



(Fig. 54. The site in context). Existing excavation on northern portion of site

d. Views of the northern sector of the site:



(Fig. 55. The site in context). Northern side: existing excavation with client's house in the background



(Fig. 56. The site in context). Northern side: canal passing through site, looking east



(Fig. 57. The site in context). Northern side: canal passing through site, looking west



(Fig. 58. The site in context). Northern side: Viewing dense greenery on site



(Fig. 59. The site in context). Northern side: peak at river through greenery



(Fig. 60. The site in context). Northern side: View of river bank





e. **Views of the southern sector of the site:** Views begin at the river and terminate at the southern entrance of the site.



Fig. 61. Southern side looking north: granaries in the background demarcated in red.



Fig. 62. Southern side looking west: steeper gradient of the site towards the river embankment



Fig. 63. Southern side looking north: steeper gradient of the site towards the river embankment



Above: Fig. 67. View of river from the southern sector.



Fig. 68. View of density on southern side



Fig. 69. View of canal on southern side



Fig. 70. Bridge over canal leading towards the plot 426.



Fig. 64. View from southern side overlooking the canal, with granaries in the background



Fig. 65. View from southern side towards granaries

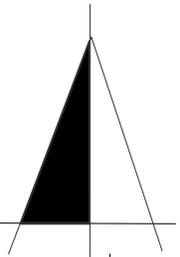


Fig. 66. Existing house on site built from local low-intensity river-sand-concrete blocks



Below: Fig.'s 71-72. The Gardens at plot 426 – the garden will become part of the proposed cultural village experience.

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f. Important visual links within the community:



Fig. 73. View of bridge from the garden at plot 426



Fig. 74. View of granaries from the garden at plot 426



Fig. 75. Exit on gravel road to main road

I. Reservoir view:



Fig. 76. View of reservoir from northern end of site looking south east

Below: Fig. 78.
View of reservoir (on far left) from residential zone. The granaries can be seen on the far right, with the beginnings of the site just behind the granaries



Fig. 77. Close-up of waterfall at reservoir



II. The visual link with the minaret within the community:



III. Urban links to the site:



Above: Fig. 82. Visual links

Left: View 3 - the southern entrance to the site can be seen from town, with the mountain as backdrop.
Right: the northern link to the site is located at the end of the Muslim commercial sector.

Below: Fig.'s 85-86. Visual links



Fig. 84. Physical link to southern entrance of site



Crocodile Street within the residential area, terminates in a gravel pathway which creates a link to the site

Above: Fig.'s 79-81. Minaret links



Above: Fig. 83. Visual links



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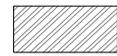
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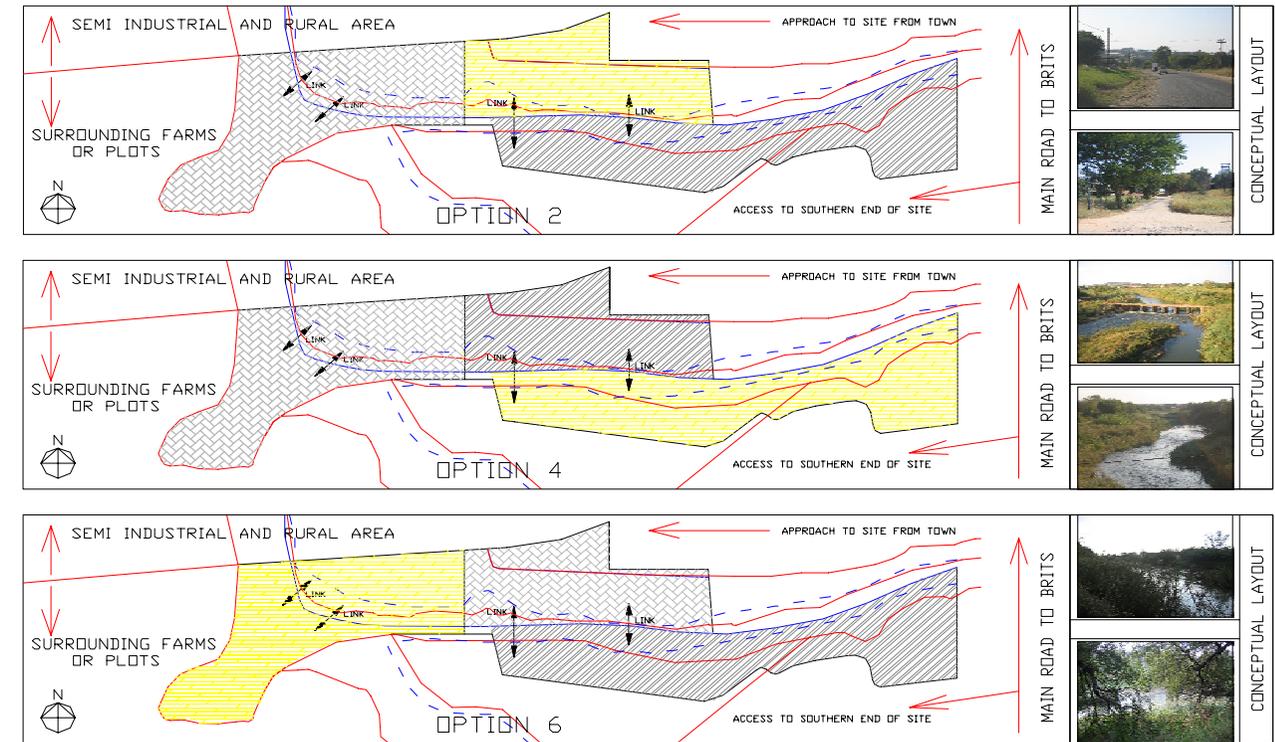
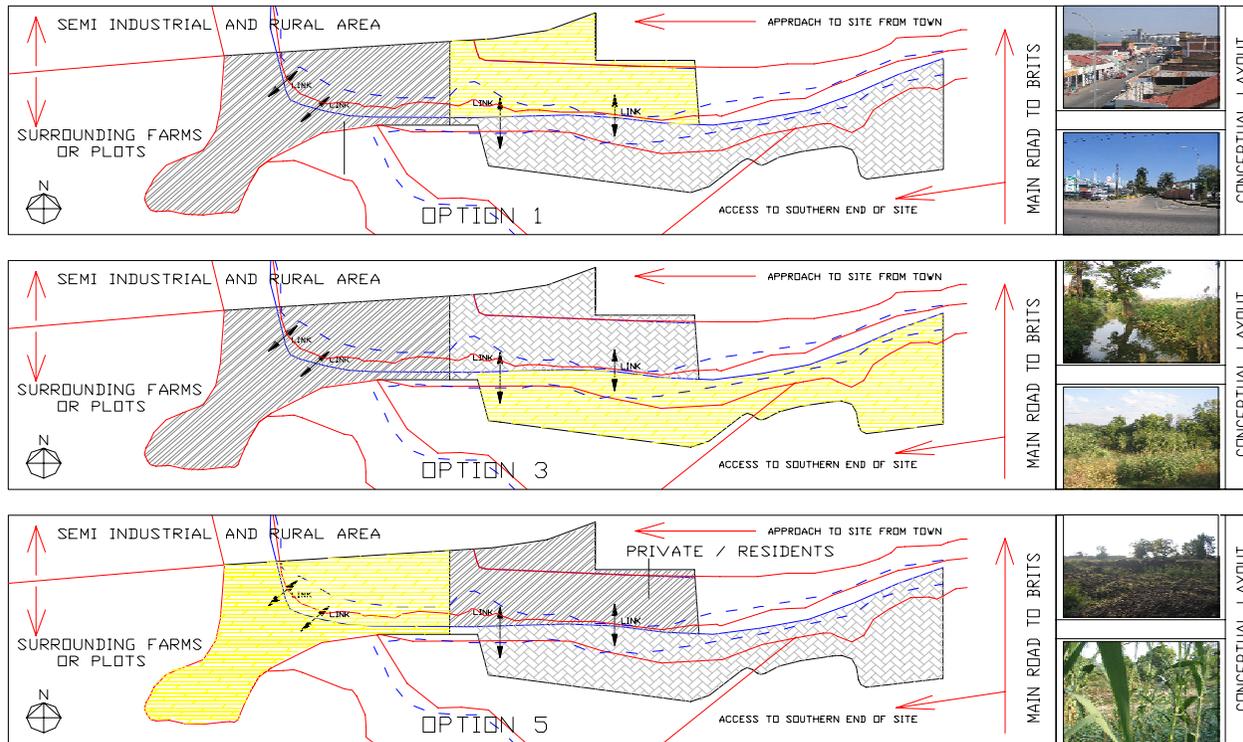


Basic zoning criteria: Scale 1: 10 000

Fig.'s 87-92. Framework analysis

Key:

 Relaxation Belt
  Spiritual Belt
  Public Belt

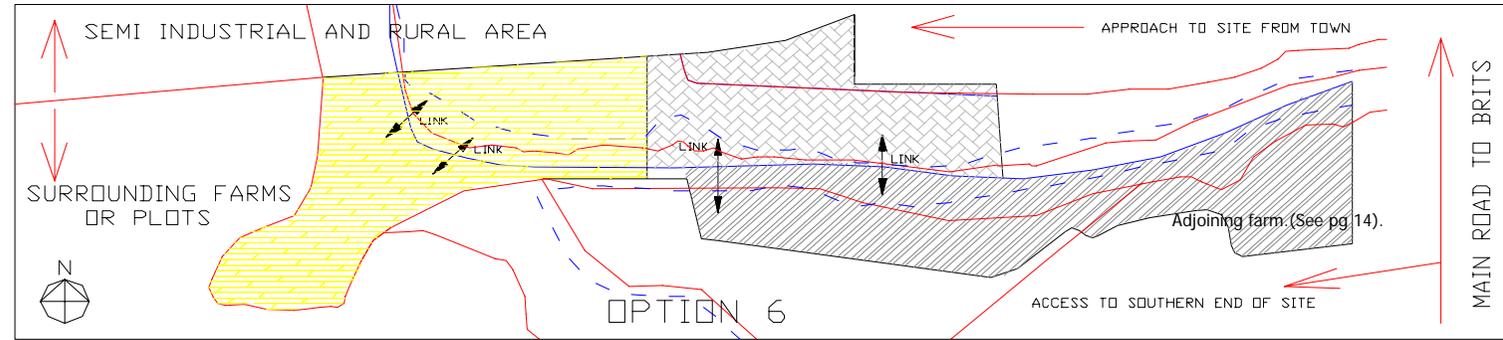


Since the brief stipulates 3 zones, which can be paired with each other in any suitable fashion, 6 possible frameworks could exist.

The best framework was chosen to be option 6, as is explained on the following page.

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Key;

- Relaxation Belt
- Spiritual Belt
- Public Belt

The client implicated that the site be categorized into three distinct zones, namely:

- A public zone to house activities which are intended for all cultures to experience an Islamic setting
- A spiritual belt for residents only
- A relaxation belt for residents only

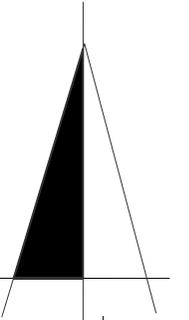
Fig. 93. Framework analysis.

The north eastern sector was chosen for the public belt. This stems from the fact that it has the closest affinity towards the town, and would thereby make it suitable for locals to easily access the site, via the entrance within the town. By placing all public structures, such as the conference center and its adjoining eating areas, the Mosque as well as the exhibition center along this belt, it would thereby bring tourists and travelers into the town in order to access the cultural village. This would thereby have a positive impact upon the economy of local business.

The southern belt was chosen for the spiritual belt. This would enable all meditation units to face the river, spread along the longitudinal pattern of this sector of the site. It would also provide an easy link to the more religious nature of its opposite public belt, yet is separated via the Crocodile River. Furthermore, the spiritual belt would have its own access along the more rural entrance of the site, which would thereby enable these guests to enter there spiritual haven without having to go into the hustle and bustle of the town. The spiritual belt would also have a link to the adjoining farm along the south-eastern sector of the site.

The north-western belt was chosen for the relaxation belt. This would cause guests visiting the cultural village for purely recreational pursuits, to enter the cultural village via the town. The relaxation belt is also suitably tucked away from the more religious nature of the other two belts, separated from them via the Crocodile River.

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Index to Section-C

For the purposes of clarity and simplicity, the brief, the applicable guideline parameters and the accommodation schedule have been presented together.

Introduction to the brief

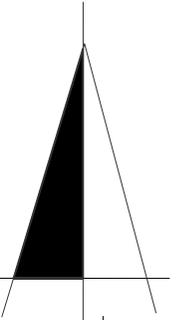
Specifications for Zone-A:

1. **Conference center** (to be designed conceptually)
2. **Amphi-theater** (to be designed conceptually)
3. **Jamaat Khana** (to be designed conceptually)
4. **Cultural exhibition center (to be designed in detail)**
 - A. In terms of functional requirements
 - B. In terms of the overall framework
 - C. In terms of space, form and character
 - D. In terms of more technical aspects
 - E. In more cultural terms
 - F. In terms of a general overview

Overall framework criteria applicable to Zone-A

Accommodation schedule

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Introduction to the brief:

For the purposes of a proposal to the client, a generalized framework for Zone-A should be presented. (Please refer to Section A, Component one, Category-B, pg. 11, for more details). From the required four structures of this zone, the Cultural Exhibition Center should be given priority, and designed in detail. Its relationship to the generalized framework should be carefully analyzed and suitably incorporated into the scheme.

Specifications for Zone-A:

Zone-A should consist of the following four structures, and adequately cater for their functional requirements, as depicted below:

1. **Conference Center:** (To be designed conceptually)
 - o Should be in close proximity to the client's house
 - o Should cater seating for 600 people
 - o Should provide an eating hall for 600 people within the same structure, or a structure adjacent to it.
 - o The preparation and services area of the dining hall should be allocated within the boundaries of the client's personal dwelling area, since the client wishes to personally manage this component of the proposed development
 - o Should have independent services areas for both itself and the dining hall areas respectively

2. **Amphi-theatre:** (To be designed conceptually)
 - o Should cater seating for 400 people
 - o Should have a scenic backdrop
 - o Should accommodate its own services areas
 - o Should relate to the conference center

3. **Jamaat-khana:** (To be designed conceptually)
 - o Should be centrally located to all three zones
 - o Should cater for 600 people
 - o Should cater for both males and females separately
 - o Should accommodate its own services area

Definition of a Jamaat Khana:

A Jamaat Khana essentially has the same functions as a Mosque. The difference is usually attributed to the level of responsibility each one adopts:

A Mosque essentially carries a lot of responsibility. Once a structure or piece of land is declared a Mosque, than that structure or land can never have another purpose. It is bound by Islamic law that the Mosque is the property of *Allah*, and will be the responsibility of the community to ensure that it remains a Mosque. However, a *Jamaat Khana*, can be owned by private individuals and can also be converted to have another purpose, be it residential or commercial.

A Mosque demands that five times daily prayers have to be performed. If the prayers are not performed, than the community will be held responsible for this, in view of the *Shari'at*. A *Jamaat Khana* is however not bound to this, and prayers can be performed whenever possible by the community. However, it would be preferable to have the five daily prayers performed in a *Jamaat Khana* as well.

A Mosque is also bound to have people to sit in *I'tikaaf*. This takes place in the month of *Ramadan*, a holy month in the Islamic calendar, when it is necessary for at least one person of the community to stay in the Mosque for a period of a minimum of ten days. A *Jamaat Khana* is not bound to this, but it would be preferable for someone to perform the *I'tikaaf*.

It is thus clear from the above that it would be safer to have a *Jamaat Khana* instead of a Mosque, because it is not yet certain whether the rights of a Mosque will be fulfilled by the proposed village. Once it is certain that the rights of a Mosque can be fulfilled, then it would be possible to declare the *Jamaat Khana* a Mosque.

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4. Cultural exhibition center: to be designed in detail.

A. In terms of functional requirements:

1. In general:

- An interactive general entrance foyer with an information desk for general queries
- A special entrance foyer for the exhibition center proper, with an independent point of arrival
- A small library in order to further illustrate explanations of the exhibition spaces in particular. The library should comprise of:
 - An entrance lobby
 - A reception area for the library staff
 - A storage area for files and records
 - Services for staff and library users
 - A reading area
 - An informal lounge area
 - A room to cater for thirty people seated. This room could have a multi-purpose function of being a computer room and a debating room.
- A refreshment area, preferably river-facing along the south western edge of the proposed structure
- Adequate change room facilities for both staff and public requirements
- Services rooms for general services and maintenance of the structure, as well as its for its immediate surroundings

2. Exhibition spaces, which should:

- Introduce God from an Islamic perspective
- Create a general understanding of the basic articles of the faith
Celebrate the lives of the Messengers of God

- Explain the fundamental aspects of the life of the Prophet Muhammad (SAW) in a series of spaces
- Create a marked distinction or segregation between the spaces' allocated to God, His noble Messengers, and the life of the Prophet Muhammad (SAW)
- Characterize simplicity, abstractness, practicality and minimalism

3. Staff requirements, which should cater for:

- A reception area
- A small office area, which should have an outside link for maintenance staff to clock in
- A small storage area for files and records
- Services for staff

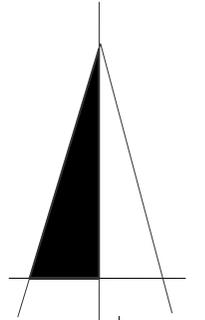
B. In terms of the overall framework:

1. Location and orientation:

- Should be located in close proximity to the *Jamaat-khana* (almost similar to the function of a Mosque).
- Should be centrally located along an axial route
- Should have an overall link to the garden and amphi-theater
- Should be placed upon an easily identifiable route or axes upon arrival
- Should aspire to adapt itself along the qibla axes

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C. In terms of space, form and character:

1. Geometry and the design rationale:

- Geometry and geometric patterns should influence the overall design rationale, and geometry should take architectural form
- The pure geometric forms of the circle, triangle and square should be used as the underlying grid to determine overall proportion, symbolism, meaning and scale
- Geometric forms should flow and relate to each other in a harmonious manner
- Rhythm and repetition of geometric forms should be implemented
- There should be an easy interrelation between the different elements employed in the design.
- The structure and form of traditional activities should be preserved and reinforced by the architecture

2. Height:

- Height should only be used to portray an Islamic identity, such as in the case of minarets and domes.
- In general, Islam promotes humility, therefore the structure should be kept low in height, with a maximum height restriction of three levels.
- Adopting low-rise buildings would also avoid the utilization of lifts, which create complications and difficulties of energy and maintenance, and would further perpetuate a human-scale to the surroundings

3. External facades and walls:

- Should typically be characteristic of 'wall' architecture, and should therefore:
 - Be characterized by heavy external walls, thereby depicting a play with volume and mass. Massing is to be used advantageously to insulate the thermal environment thereby combating local climatic conditions
 - Be designed from the inside, outwards: the external façade should be the product of an internalized design.
 - Exclude the external world, thereby enhancing an inward celebration of space

- Preferably be characterized by small glazed openings. In the event of larger glass spans, these should be in the form of strip-glass facades to enhance the lighting quality of the internal environment, or to create suction-pockets for better ventilation control
- Be bland, and preferably decorated with a regular geometric pattern, either in brickwork, cladding or plaster molding.
- 'Wall' architecture is typically criticized for its hiding of structural elements. In the new spirit of Islamic form, there should be interplay of concealing structural elements via wall-decoration, as well as revealing fundamental structural components, thereby creating a harmonious balance between the two.
- Spaces required to interact with the external as well as internal environments, such as the refreshment area, should be adequately glazed to enhance inside-outside interaction. This might however adversely affect the overall theme of the 'wall' architecture, and therefore it should be implemented by carefully playing with massing and volumes, so as to further emphasize its stark contrast to the overall solid masses of wall. Such type of glazing should preferably be done on the southern facades of the building, thereby creating a link with the view towards the river below.
- Walls in general should be used to define spaces and critical axes in a manner to celebrate the qibla, or the making of 'special' places.
- The use of arches should not be emphasized, but rather its repetitive spirit inducing rhythm into the design framework.

4. Circulation:

- Within the general framework, the pathways leading towards the exhibition center are to be clearly identifiable upon arrival
- The general circulation route within the exhibition center to be simple and easily identifiable via a special floor finish
- As per classification of a Class C2 structure, the overall circulation within exhibition rooms to be approximately 10m² per person at minimum, (includes area for minimal displaying). (NAD, 2000).

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- Circulation route should be disabled friendly

5. Gender:

- Since the exhibition center falls into the Zone A category, (the public belt), the exhibition center should welcome both males and females into the space, without any separation of the sexes. (Please refer to gender criteria for Zone-A, pg.).
- If more stringent gender separation is later required by the local ulema, time slots should be allocated to separate the sexes.

D. In terms of more technical aspects:

1. Materials:

- Materials should preferably be of a renewable resource
- Local materials and construction methods should be adopted
- Specialized components locally not available, should be attained from the nearest possible distance, thereby reducing embodied energy levels.

2. Modular co-ordination should be implemented since:

- It promotes the Islamic heritage of rhythm and repetition
- It reduces costs
- It allows for easier construction and material specification
- It promotes flexibility in the overall design

3. The following should assist in enhancing thermal comfort:

- Architecture should be used as a means of controlling the environment
- Adequate ventilation systems, mechanically operable, and manually adjustable.

- Appropriate material choosing and placement
- Strategically placed insulation especially on roof planes. The insulation properties of various materials should be exploited
- Appropriate sun control and strategically placed glazing and openings
- Strategic placement of hot and cold water sources.
- Evaporative cooling principals
- Twenty-four hour monitoring of thermal environment via advanced thermal equipment and accessories, independently operable.
- Manual adjustments to the thermal environment should be easily operable and accessible.
- A thermal guidelines manual should be given to all staff in charge.

4. Ventilation:

- Passive ventilation systems should be adopted. Where necessary, passive systems should be assisted via mechanical means to ensure adequate ventilation.
- The use of low-energy air conditioning system to be implemented where mechanical means are required
- Mechanical equipment should be easily operable and accessible.
- A ventilation manual should be given to all staff in charge.
- The structure should be airtight, with access doors to open only upon arrival. Access doors to be electronically operable, or rotating door s should be implemented.

5. Use of technology:

- Technological equipment to be utilized to enhance overall sustainable usage in terms of long term energy savings, or considerably decreasing the energy cycle of the building
- The use of photovoltaic cells should be implemented

afifa

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- The use of exposed solar geysers should be implemented
- The architecture should be technologically appropriate in terms of choice of materials and techniques of construction.

6. Renewable energy sources

- Overall energy consumption to be reduced by using renewable energy sources as far as possible

7. Space use:

- Spaces to be used more than 30 hours per week
- Areas not in use should be shut down after hours
- The ratio of the floor to external wall surface should not exceed 0.4. This would thereby enhance simplicity of design and the use of modulation and repetition in order to maximize floor space.

8. Lighting quality:

- Natural lighting within the exhibition spaces to penetrate subtly, thereby creating a soothing atmosphere for contemplation and meditation of the spaces
- Natural lighting penetration within the more public spaces to be brighter, thereby promoting interaction
- Majority of the natural lighting source to be from the roof, thereby symbolically illustrating the countenance of God as the supreme source of assistance and guidance
- Lighting from glazed facades should be in the form of small openings or large strip-glass spans. Larger glass spans, where needed, should typically be allocated along the southern façades, thereby allowing subtle daylight penetration
- In order to promote maximum use of space, artificial lighting should create a striking atmosphere within the exhibition center, thereby promoting night visits, in order to experience the exhibition spaces in a uniquely different manner

9. Sound:

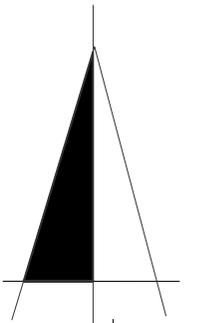
- Sound should be used to further enhance the experience within the exhibition spaces
- All forms of musical sounds should be avoided
- Unwanted sound filtration towards the more conservative areas should be prevented via suitable buffers or distance, or via acoustics, or thick sound-repellent insulated walls, or double glazing and or double entrance doors, depending upon the location of the library in relation to the exhibition spaces.

10. Furniture and fittings should:

- Be locally manufactured
- Be made in parts, to allow for easy disassembling
- Be of a hard-wearing nature and to be treated against wearing
- Have low energy values
- Be easily replaceable
- Be easily recyclable
- Opt for energy saving options such as low energy light fittings

11. Toilet facilities:

- Toilets should not be allowed to face the qibla
- Toilets to cater for both staff and public needs, as per building-type specifications
- All sanitary fittings and fixtures to be of a hard-wearing nature
- To be well ventilated passively, if possible. If this is not so, then to be mechanically ventilated
- Paraplegic toilets to be located according as per NBR specifications



qibla

a quest of the spirit



12. Service areas

- Service blocks should as far as possible, align or juxtapose with each other, in order to minimize on wasted space and costs.
- Service areas not to be more than 20% of built structure
- To be independently and easily accessible
- To be guarded by surveillance camera and alarms
- To be discreetly tucked away
- To accommodate all technical elements
- To adequately cater for all services needs

13. Local aspects:

- “The history of Mosque development clearly reveals the open-mindedness of Muslims toward their architecture. They had synthetic attitudes and could accommodate to and integrate foreign influences. They made these foreign elements their own, and did not suffer from any conflicts.” (Lari: 1990).
- Local architecture should where possible and practical, be merged with traditional Islamic design concepts.
- The overall design and layout criteria should gain approval from the local community as well as from the local ulema
- The project should be aimed to be as labor intensive as possible
- Local contactors should be used as far as possible
- Repairs and maintenance to be given to local contractors as far as possible

14. Safety and security:

- Exhibition center and refreshment area to be accessible 24-hourly, with security at entrance and exit points only
- Entire structure to be under strict camera surveillance
- Library to have an adequate alarm system

15. Fire:

- Early fire detection system to be implemented. This would include early smoke detectors and fire alarm, operable on a back-up system in terms of workability and electrical supply
- Ventilation system to adequately conform to standard fire regulations criteria, thereby allocating for smoke extracting in the event of a fire.
- Fire hoses and hydrants to be implemented as per standard fire regulation criteria
- Escape routes to be within allowable distance as per standard fire regulation criteria
- Sprinkler system to be avoided, (in order to minimize costs), via the compartmentalization of fire zones, where possible.

16. Water:

- Water should be used to further enhance the surroundings
- Water bodies to be constantly in motion, by the usage of fountains and jets, in order to prevent stagnation, and to create a pleasant environment
- The use of borehole water should be incorporated in conjunction with local municipal supply, which will serve as a backup system
- All rain water to be efficiently collected and stored. Access rainwater to be channeled along natural water course, terminating at the bank of the river
- Low-water pressure systems to be installed to all appliances
- Water pipes should be strategically placed to efficiently cater for cold and hot water demands, and to play a role in thermal comfort
- Hot water storage to be strategically placed, within well-insulated black tanks, and exposed direct sunlight should be adopted, thereby reducing energy levels to heat water.
- Exposed, black solar geysers



E. In more cultural terms the exhibition center should:

- be as a bearer of meaning – link between man and God via faith
- be as a fountain and treasure of knowledge
- be as a synthesizer of collective identity
- be a system of human development
- serve as a guide to society
- become a place of cultural importance - to become a traditional center of pilgrimage
- as a landmark, generate a sense of pride; the message it conveys must be comprehensible to be understood; its functions must be coherent to be efficiently discharged; and the need it fulfills must be one which the population actually feels.

F: In terms of a general overview:

“All Muslim societies would like to achieve the spiritual and physical continuity of their traditional, present and future man-made environments. This cannot be achieved by copying past and traditional concepts or forms, or by completely breaking away from tradition and interpreting entirely new concepts using ultra-modern jargon – it can only be achieved by addressing ourselves to a more in depth philosophy, simple and clean like Islam itself, and by incorporating into the vital aspects of this tradition the new technological innovations of today.” (Lari: 1990).

- Surface treatment should be applicable so as to de-materialize buildings through decoration and thereby deny the building as an icon or idol.
- Islam discourages excessive expenditure on buildings and encourages the judicious use of resources.
- A passive energy-conserving design should be implemented
- There should be an overall respect for a human scale.
- There should be some form of historical and spiritual continuity
- The architecture should be ecologically appropriate; embellish and reinforce the natural context; be energy-conserving and climatically sensible.

- The misinterpretation of what is ‘Islamic’ in architecture should be remedied.
- Outer shells using pseudo-Islamic motifs such as pointed arches should be avoided. Thus “instant-Islamic” architecture, (an architecture created by the mere application of certain elements on the facades), should be avoided.
- The essence of Islamic culture should be seen in its basic principles and spiritual conception, more than in the application of traditional artistic forms.
- A search for unique, yet traditional form should be aspired for.
- An excessive usage of architectural vocabulary could be misconstrued as a stifling orthodoxy of elements and should thus be avoided.
- The traditional architectural character should be respected and should not be demeaned by a mindless replication of details.
- As in traditional Muslim architecture, each component should be a part of the whole. As a holistic aesthetic, the geometry of the total plan, each building, each unit and each garden should be a variation of the basic geometry in keeping with the Islamic ethic and the past. Thus an impressive form and organization of the scheme as an intrinsic whole should be implemented
- Simplicity of the architectural system and spatial organization should be implemented.
- Muslim tradition in form, materials and geometry should be taken into account.
- The aim to display a new Islamic character and spirit should be aspired towards
- Local forms should perpetuate new meanings to the Islamic spirit
- Respect and harmony with the past should act as a fundamental guide.
- Modernization of Islamic elements should be done in the spirit of being “sensitive in creating new forms that suit the new materials without losing touch with the established tradition, preserving the implicit and not overlooking the same spiritual and social virtues or the cultural values as in the past.” (Longeteig: 1985).
- The sacred and the mundane should be integrated through continuity and juxtaposition, yet differentiated by the character of space and form



- Simplicity, adaptability, participation, continuity, equality and a sense of stability should be implemented.
- The architecture should portray simplicity and anonymity, and solutions designed with humility
- The architecture should be expressive and understandable to all. It should employ a form of language which for immigrant Muslims evokes a sense of belonging in their present and hope in their future. To indigenous Muslims it should present a linkage with Muslims from other parts of the world, and should underscore the universality of Islam. To new Muslims this architecture should invoke confidence in their new belief. To non-Muslims it should take the form of clearly identifiable buildings which are inviting and open, or at least not secretive, closed and forbidding.

The Qur'an preaches simplicity, a moderate social life, equity in public life, privacy, respecting religious ideals and obligations, and proper maintenance. The architecture should be characterized by simple structures, with moderate finishes and levels of comfort aspiring towards local Islamic injunctions, thereby portraying:

- "Unity as its existence: one God, one Truth;
- The Qur'an as its message;
- The Prophetic traditions and Islamic law as its path." (Lari: 1990).

Overall framework criteria applicable to Zone-A:

1. Parking requirements:

- Adequate drop-off zones and provision for tourist busses to be implemented
- Adequate parking bays to cater for entire cultural village
- Catering for paraplegic parking as per regulation
- Parking area to be either bordered by a belt of vegetation, or one in every three parking bays to have a vegetation box.

2. Approach:

- The approach should be easy to understand, and should be characterized by easily identifiable axes, characterized by covered pathways or specified floor finishes
- Major axial routes should preferably be allocated to provide easy circulation and access to the various components
- An emphasis primarily towards the exhibition center should be distinguishable, with easily identifiable subsidiary branches to the Jamaat Khana should be implemented

3. Geometry:

- The entire framework should be based upon a harmonious geometric layout so as to imbue a link to tradition
- The geometry should be informed by the site and the basic requirements of the brief, and should not be forced onto the site

4. Qibla

- A major axial route should preferably be allocated along the qibla axes
- All structures are to relate or orientate themselves to the qibla axes
- Other major routes to orientate themselves perpendicular or parallel to the qibla axes
- The qibla axes should be easily identifiable and suitably punctuated across the site

Qibla

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5. Hierarchy

- A hierarchy of the structures should be implemented, with primary importance given to the Cultural Exhibition Center and the Jamaat Khana, and secondary importance given to the amphi-theatre and conference facilities
- A hierarchical sequence should be implemented, taking the user through a procession of spaces

6. Existing excavation

- The existing excavation currently on the north western sector of the site should be suitably incorporated into the scheme. (Please refer to Section B, pg for more details)

7. Pathways and circulation

- A definite grid of geometric pathways should be implemented to cater for easy public circulation
- Easy circulation in different directions should be implemented.
- All circulation routes and overall access to accommodate paraplegics
- Suitable resting points to be allocated along route, with water and waste disposal provisions

8. Water and Electrical supply; sewage and wastes:

- (For the above categories, please refer to the details already outlined in Section-B, pg.'s 10-11).

9. Landscape inputs:

- General landscape layout to be determined in proposed framework
- Landscaper to design detailed character of landscape
- Existing indigenous fauna and flora to be preserved. Where plants are removed due to construction purposes, these should be strategically planted elsewhere within the site parameters
- New plants to be of an indigenous, low-water-requirement type

10. Safety and security

- Local people should be employed
- Strategically placed open spaces would assist in security
- Adequate location of surveillance cameras
- Adequate security at entrances
- Adequate boundary security
- Twenty-four hour, independent surveillance crew

11. Eco-systems:

- The biodiversity of the area is to be further preserved by:
 - Disturbing the natural site as little as possible during the construction process
 - Carefully monitoring construction and construction wastes
 - Creating more green spaces so as to further encourage new eco-systems in the area

12. Water use and ethics:

- Water should be used to further enhance the surroundings.
- Water bodies to be constantly in motion, by the usage of fountains and jets, in order to prevent stagnation, and to create a pleasant environment.
- The use of borehole water should be incorporated in conjunction with local municipal supply, which will serve as a backup system.
- All rain water to be efficiently collected from all structures, stored and utilized in watering the gardens
- Minimize storm water runoff by using absorbent surfaces so as to maximize ground water. Hard surfaces to be at a minimal

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- French drains and servitudes to be implemented
- Paving should take precedence over concrete or tar, so as to allow for water penetration where applicable

13. Viewing: Framework

- A general grading of views should be implemented, thereby enhancing junctures of arrival.
- Strategic viewing platforms should be implemented.
- Viewing towards restricted areas should be prevented by the use of screens, stone walls and trees.
- Axial visual access should be selectively admitted or denied, and integration with nature would be required.

14. Gender:

- For the framework of Zone-A in particular, the zone should be open to both sexes, in order to promote easy interaction with other cultures.
- The gender separation for the other zones should be enforced in light of the Shari'at, but these sectors fall out of the scope of the brief, and therefore deem no further explanation.

15. Garden maintenance strategies to be implemented:

- Special emphasis on gardens as places for entertainment should be adopted
- A processional route through the main garden should be clearly demarcated and implemented.
- A precisely geometrical layout of the garden area should be implemented in keeping with the importance of geometry within Islamic philosophy.
- A hierarchy of garden spaces should be created, based upon the above-mentioned geometry.
- Garden areas should be defined by containing them via the usage of stone, vegetation, water and other natural elements.
- Large garden areas and dense greenery should be implemented and incorporated throughout the scheme.
- Rain water is to be utilized in the maintenance of the garden areas.

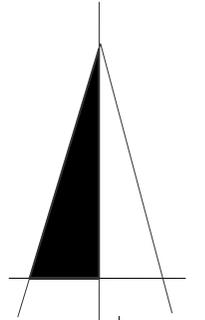
- A sprinkler system based upon passive pressure techniques should be implemented
- The monthly water supply from the dam, together with the collected rain water should be the only water used for the maintenance of the garden.
- Since most of the alien vegetation has already been removed by the council due to the recent floods in the area, the problem of removing alien vegetation has been mostly resolved. New plants introduced should be of an indigenous nature.
- Plants and trees deemed necessary to uproot due to planning and building constraints should be replanted in other suitable areas of the site.
- New plants of an indigenous nature with low water requirements should be implemented

16. In relation to structures:

- The design should incorporate a hierarchy of spaces, elements and forms
- Traditional cultural values should be the essence of place-making
- The concept of a variety of building shapes and sizes which relate to the character of the land, to the content of the buildings and the urban fabric should be implemented.
- A rhythm and flow of spaces between buildings should be implemented

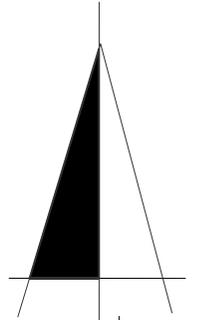
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| Schedule of accommodation | | | | | | |
|--|------------------|---|------------------------|-------------------------|--------------------|---------------------------|
| Spatial entity | Number of spaces | Norms and standards | Determining space size | Area per m ² | Unit Total | Overall Total |
| General entrance foyer (100 people) | 1 | Assume 5m ² per person at min. | 100 x 5 | 500m ² | 500m ² | 500m² |
| Small library: | | | | | | 274.1m² |
| • Entrance lobby | 1 | Assume 10m ² (Total capacity / 8hours = 78 / 8 = 10m ²) | | | 10m ² | |
| • Reception area (2 people) | 1 | Assume 15m ² per person (including service area) | 15 x 2 | 30m ² | 30m ² | |
| • Storage - records | 1 | | 3 x 2 | | 6m ² | |
| • Reading area (30 people) | 1 | 1.5 – 2m ² per person (allow for fixtures and fittings) – (NAD, 2000). | 30 x 2 | 90m ² | 90m ² | |
| • Informal lounge area (15 people) | 1 | 2.3m ² per person at min. (NAD, 2000) | 15 x 2.3 | 34.5m ² | 34.5m ² | |
| • Seminar room (30 people) | 1 | 3m ² per person (NAD, 2000) | 30 x 3 | 90m ² | 90m ² | |
| • Toilets: (10 people) | 1 | | | | 9.6m ² | |
| o Men | 1 | 1 water closet; 1 hand basin | | | 3.2m ² | |
| o Women | 1 | 1 water closet; 1 hand basin | | | 3.2m ² | |
| o Disabled | 1 | | | | 3.2m ² | |
| • Store / Maintenance | 1 | | 2 x 2 | 4m ² | 4m ² | |
| Refreshment area: | | | | | | 197.7m² |
| • Customer service area (50 people) | 1 | 2.3m ² per person at min. (NAD, 2000) | 50 x 2.3 | 115m ² | 115m ² | |
| • Staff area | 1 | | | | 9m ² | |
| • Storage area | 1 | | | | 15m ² | |
| • Toilets : (60 people) | | | | | 38.7m ² | |
| o Men | 1 | 3 water closets; 3 urinals; 3 wash hand basins (SABS, 1990) | | | 17.5m ² | |
| o Women | 1 | 5 water closets; 3 hand basins (SABS' 1990) | | | 18m ² | |
| o Disabled | 1 | | | | 3.2m ² | |
| • Store / maintenance | 1 | (To cater for building as well as surrounding environment) | | | 20m ² | 20m ² |

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| Schedule of accommodation | | | | | | |
|---|------------------|--|------------------------|-------------------------|--------------------|----------------------------|
| Spatial entity | Number of spaces | Norms and standards | Determining space size | Area per m ² | Unit Total | Overall Total |
| Exhibition Center proper: | | | | | | 3916.7m² |
| • Entrance foyer | 1 | | 6 x 5 | | 30m ² | |
| • Reception area | 1 | | | | 10m ² | |
| • Staff office area | 1 | | 4 x 3 | | 12m ² | |
| • Store-records | 1 | | 3 x 2 | | 6m ² | |
| • Toilets (60 people) | | | | | 38.7m ² | |
| o Men | 1 | 3 water closets; 3 urinals; 3 wash hand basins (SABS, 1990) | | | 17.5m ² | |
| o Women | 1 | 5 water closets; 3 hand basins (SABS, 1990) | | | 18m ² | |
| o Disabled | 1 | | | | 3.2m ² | |
| Exhibition spaces (10 people) | 19 | 20m ² per person at minimum (includes minimal display units) (SABS, 1990) | 19 x 20 x 10 | 3800m ² | 3800m ² | |
| General storage / maintenance | 1 | (To cater for building as well as surroundings) | 5 x 4 | 20m ² | 20m ² | |
| Sub-total | | | | | | 4888.5m ² |
| Plus 14% circulation | | | | | | 684.4m ² |
| Total | 46 | | | | | 5572.9m² |
| (PLEASE REFER TO SECTION I FOR AN EXPLANATION TO THE NUMBER OF EXPECTED OCCUPANTS WITHIN THE EXHIBITION SPACE PROPER) | | | | | | |

a quest of the spirit



Index to Section D: Precedent Study

1. **A brief overview of arches, vaults and minarets and its application within a local architectural context.** (Please refer to section-A for more details of a breakdown of the classical Islamic elements).
2. **Case Study:** Principles from the Great Mosque at Mecca
3. **Case Study:** Museum of Glass and Ceramics, Tehran, Iran
4. **Case Study:** The Martyr's Memorial: Amman, Jordan
5. **Case Study:** Museums, Galleries and Churches by Tadao Ando
6. **Case Study:** Aga Khan Awards

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1. A brief overview of arches, vaults and minarets and its application within a local architectural context:

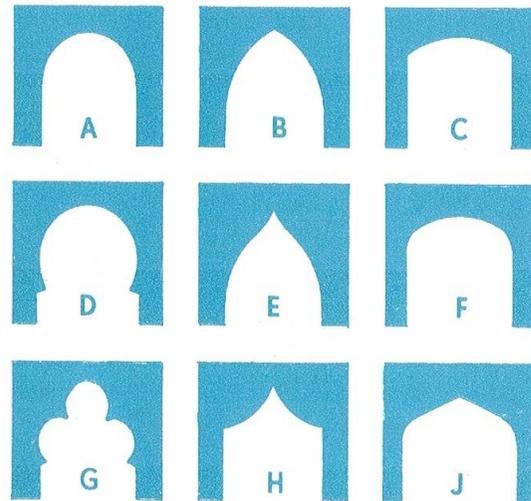
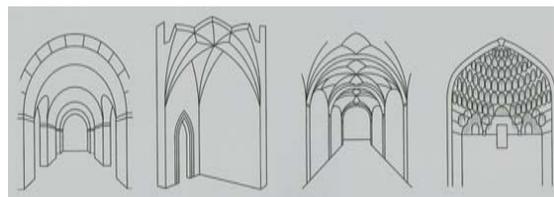


Fig. 1. Arches (From Pothorn: 1971, p.146).
Fig. 2. Vaults (From Hattstein: 2001, p.).



Arches were essentially constructed due to their structural suitability in a time when construction techniques were limited: arches were primarily used to create openings in load-bearing walls, and were simultaneously aesthetically pleasing. They soon developed into various forms and types over the passage of time and over the dynasties of varying regions. (Hattstein: 2001).

Thus, arches, and even vaulting such as barrel, cross and fan vaults, were merely techniques to brace the structural limitations of their time. With the advent of concrete, these archetypes, within the political Islamic world, were replaced by the

column and beam method of construction: the way forward was seen to be set by the trends of European models.

(Hattstein: 2001).

Nasr, in his book on Islamic patterns, mentions that the essence of the arch could be said to be its rhythm and repetitive nature, which is emphasized within a colonnade. He further postulates that it is the rhythm

and repetition and not the physical elements themselves which has become attached to Islam. (Nasr: 1990).

However, within a local context, arches are still used: a simple illustration would be the recent Dar-as-Salaam centre in Laudium, wherein arches were used to portray an Islamic eminence, as depicted below:

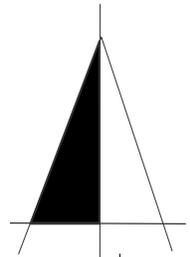


(Fig.'s 3-6. Local studies). Dar-as-Salaam, Laudium, 2000 – uses arches to create an Islamic eminence. However some institutions, such as the Brits Friday Mosque, have turned away from the typical usage of arches, and rather maintain the element of rhythm and repetition as the remains of a classical element.



(Fig.'s 7-10. Local studies). Friday Mosque, Brits, 1998 – uses repetition in material, colour and architectural elements to create the rhythm in the absence of the arched colonnades.

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Where arches have been used, they have been portrayed in a modified manner, depicting a link with the past heritage, and yet indicating the way forward as illustrated below:



Rusty red aluminium arch attached to wall with linear elements (Fig.'s 11-14. Local studies). Arched skylights placed above linear main entrance (Fig.'s 11-14. Local studies). Arched semi-permeable roof attached to linear columns (Fig.'s 11-14. Local studies). Pointed arched window within linear setting (Fig.'s 11-14. Local studies). Friday Mosque, Brits, 1998 – uses arches in an innovative manner, to create a theme of the past within a new context.

The play with arches in a new manner within a linear setting using columns and beams seems to work effectively, and portrays a traditional link, yet plunges towards a new Islamic spirit.

'Wall-architecture' is a theme which comes across strongly, even though the column and beam method have been adopted in both the Brits and Laudium Mosques. Historically, walls with heavy massing, characterized by small windows, due to structural limitations, were typical. With the advent of curtain walls, the Islamic world experienced larger openings, but essentially maintained large spans of external walling. In this manner, the internal world is celebrated. From the perspective of local climatic conditions, this type of massing, coupled with recessed

windows, creates optimal internal thermal environments for both winter and summer months. Illustrated below are examples:



(Fig.'s 15-17. Local studies). Friday Mosque, Brits, 1988 – carries forth the theme of 'wall-architecture', with a bland external wall, decorated by functional requirements stemming from the inter sphere of the Mosque.



(Fig.'s 18-20). Dar-as-Salaam, Laudium, 2002 – celebrates a 'wall-architecture' decorated by a face-brick façade, with recessed windows informed by the internal requirements of the Mosque.

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Minarets, as discussed in Section-A, have been through changes with the advent of time, as depicted below:

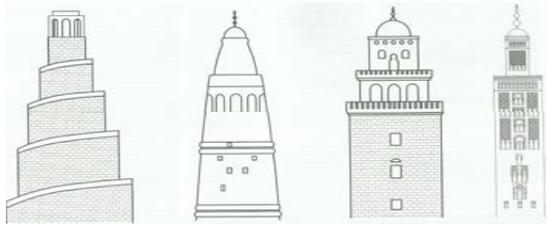
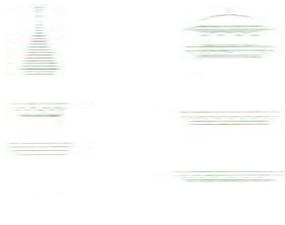


Fig. 21
Minarets through history.
(From Pothorn: 1971)



From a more local perspective, minarets haven't assumed much transformation, and are an assimilation of past minarets. Depicted below are some examples of local minarets: (Fig.'s 22-26. Minaret study).



Dar-as-Salaam, Laudium, perspective

Dar-as-Salaam, Laudium

Friday Mosque, Zakaria-park

Saint-Gothard, Friday Mosque, Johannesburg

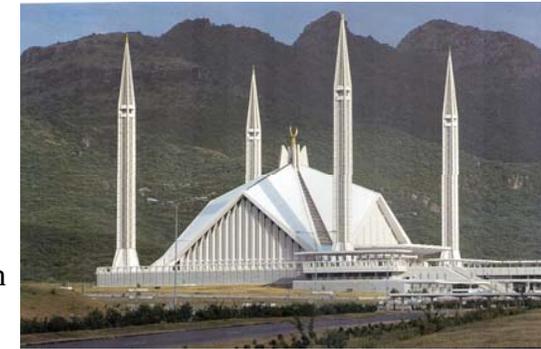
Friday Mosque, Laudium

The minarets in the Holy cities' of Mecca and Medina follow much in the same manner. However, some of the Mosques in other Islamic countries have adopted interesting forms for minarets, some of which have been depicted below: (Illustrations below from Hattstein: 2001).



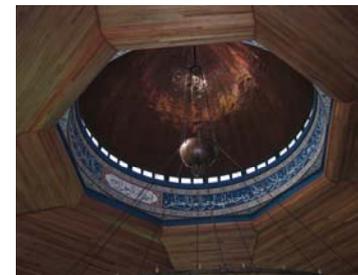
Fig. 27. The great Mosque of Djenne, Mali, 1906.

Whilst the Mosque in Mali has been traditionally characterized by local materials, and takes on a unique form with exposed structural elements, the Mosque in Islamabad takes on needle-like minarets, derived from the use of modern materials.



(Fig. 28. Minaret studies). King Faizal Mosque, Islamabad, Pakistan, 1986.

As previously mentioned in Section A, domes have an important link to Islamic architecture. Locally, their application is used very commonly as is depicted below:



Adjacent: (Fig.'s 29-30. Mosque analysis). Dome placed at centre the of the Dar-as-Salaam Mosque, to portray an Islamic eminence.

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(Fig. 31. Study of domes).
Saint Gothard Friday
Mosque, Johannesburg.

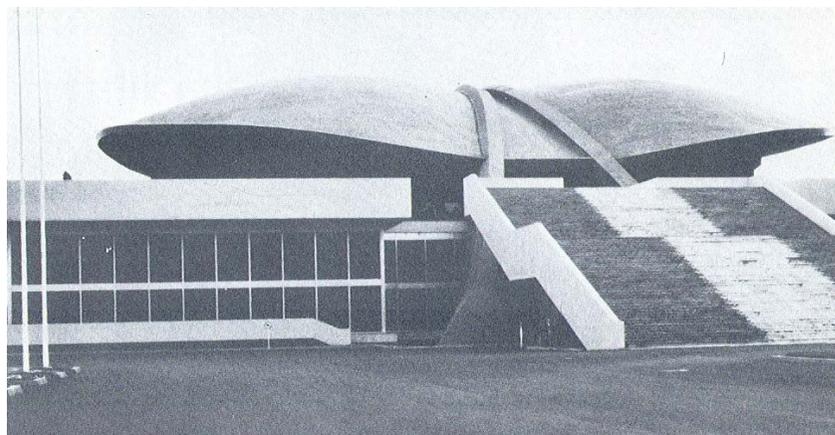


(Fig. 32. Study of domes).
Friday Mosque, Brits

Whilst the adjacent Mosques have domes, these domes are however not centrally located above the centre of the Mosque like the Laudium Mosque.

These much smaller domes have been rather allocated along the approaching façade along the southern end, in order to portray in Islamic aura along the street façade.

The variety of classical elements in varying forms leaves one with inspiration and hope of finding new localized meanings of traditional elements. The elements of a revived Islamic spirit continue to evolve with the passing of time, linking them to the past, and yet venturing forth for more refined interpretations.



Adjacent:
(Fig. 33. Study of domes).
Parliament building, Jakarta,
Indonesia. (Picture from Lari:
1980).

The dome has taken on a new shape and form, being held by concrete beams that wrap around the dome, which appears to be floating.

a quest of the spirit



2. Case Study: Principles from the Great Mosque at Mecca

From the very onset of Islam, the focus is towards the Ka'ba, The Holy House at Mecca. The

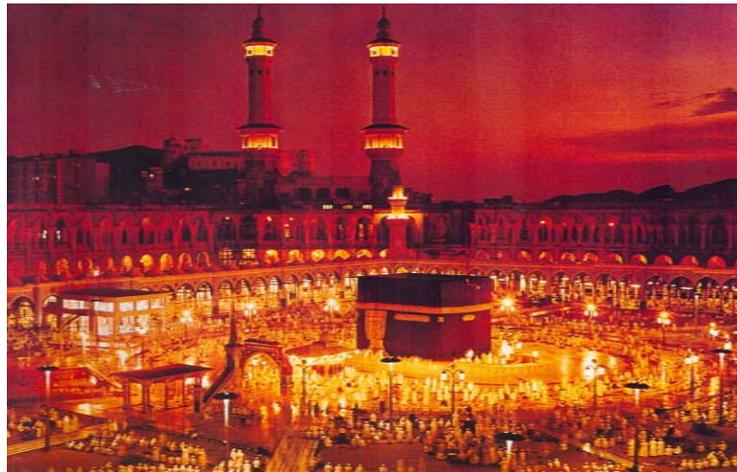


Fig. 34. The Ka'ba, Great Mosque at Mecca, 1998. (From Hattstein: 2001, p.13).

Ka'ba together with its surrounding sanctuary, called the *Harem*, is characterized by arched colonnades which appear on each of the three surrounding levels. The rows for prayer around the Ka'ba are circular, whilst the Ka'ba itself is cubic in form. The overall shape of the *Harem* has been modified through the passage of time, but could be described as fairly linear, whilst the inner sanctuary of the *Harem* surrounding the Ka'ba area, is a square with its corners cut-off.

The overall tendency is the use of pure shapes, which are then in certain instances, cut away to accommodate functional requirements; repetition, rhythm and symmetry are key components. These themes have an everlasting link to Islam, and can also be viewed in the prayer mats produced by the Islamic world, as depicted alongside:



(Fig. 35. Pattern analysis). Southern Siberia, 5th century, Parzyryk carpet. (From Hattstein: 2001, p.531).



(Fig. 36. Pattern analysis). Morocco, late 17th century, Prayer mat. (Picture from Hattstein: 2001, p.323).

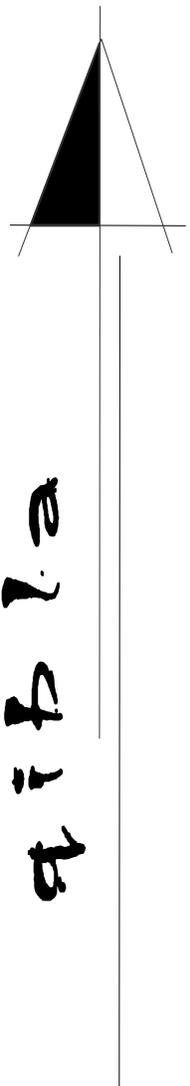


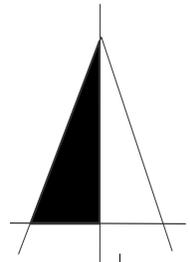
(Fig. 37. Pattern analysis). North western Persia, 18th century, Garden mat. (Picture from Hattstein: 2001, p.491).



(Fig. 38. Pattern analysis). Cairo, Mehraz apartment, Wood cabinet detail, 1971. (From Richards: 1985, p.75).

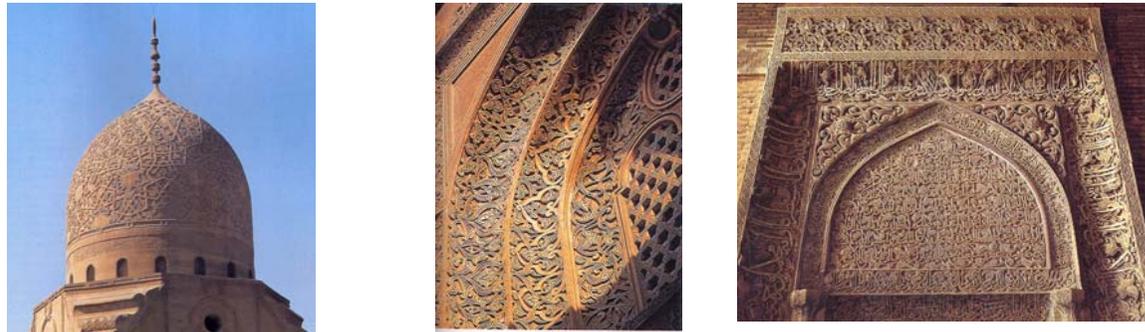
The prayer mats illustrate rhythm, regular shapes derived from pure geometrical forms, as well as repetition. The use of contrasting colours is used to portray varying geometries. The spinning motif behind the geometric designs can also be observed, whilst the wood cabinet illustrates this concept more boldly. It seems as if these principles are derived from the *Harem*, which has similar themes characterizing it.





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The external walls of the Harem are purely decorative walls clad in different patterns of marble and mosaic arrangement, punctuated by necessary openings for access towards the inner sanctuary. This theme of decorative walls, and typically a 'wall-architecture' can be observed in many examples of the Islamic world, as depicted below:



(Fig.'s 39-41. Façade decoration). Mausoleum of Sultan Qaitbay, 1474. (From Hattstein: 2001, p. 191). Illustrations highlights the use of arabesque as a decorative feature to the external wall



Fig.'s 42-44. House Samarra: Wall decoration, Abbasid reign, 892. (from Hattstein: 2001, pg's 106-107)

The Harem thus excludes the external world, and is inward looking, thereby celebrating the internal world. The focus of the internal world terminates into an open courtyard with the Ka'ba at its centre. From this stems the focus of the internal world in the Islamic world. Depicted below are some examples of an internalized architecture, with the emphasis on the lighting techniques adopted:

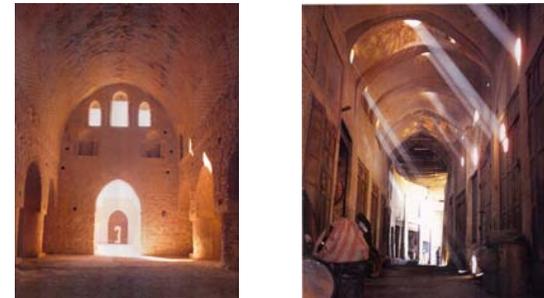
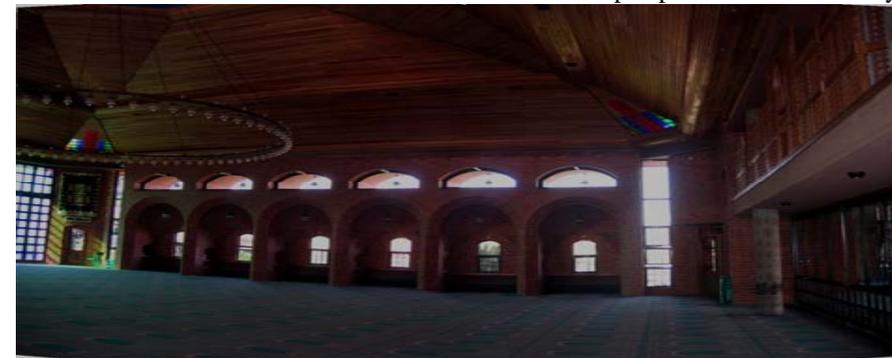


Fig. 45. Lighting Fig. 46. Lighting

Fig. 45: Qasr al-Banat. Al-Rafika, 12th century. (From Hattstein: 2001, p.100).
Fig. 46: Wakil Bazaar, Kerman, Iran, late 18th century. (From Hattstein: 2001, p.326).

(Below: Fig. 47. Lighting). Dar-as-Salaam centre, Laudium, internal perspective shot at midday.



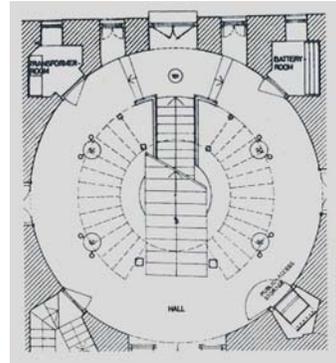
Interesting to note is that ATA Architects, in their Dar-as-Salaam Mosque, chose heavy walls, and small or recessed glazed openings, which thereby made the interior space dimly lit, even at midday. They state that it is this type of lighting which is soothing to the eye and mind, and ideal for contemplative and meditative purposes, instead of bright daylight filtering through the prayer space.

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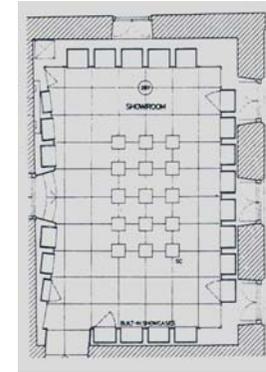
3. Case Study: The Museum of Ceramics and Glass; Tehran, Iran

(Below: Fig.'s 52-57. Museum study).



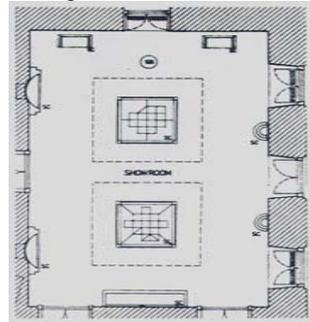
(Fig. 48. Museum study). Simple, symmetrical circular route within a rigid cube (Picture from Lari: 1990, p.). (Below: Fig.'s 50-51. Museum study).

(Fig. 49. Museum study). Simplicity of route and approach confined within a circle. (Picture from Lari: 1990, p.).



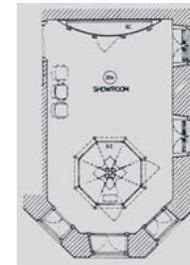
Rectangular plan, with display units centered. (Picture from Lari: 1990, p.).

The theme of a grid on the floor plan is taken through into the interior wall façade, wherein the display units also form part of the grid, both in their physical form, and in their individual location. (Picture from Lari: 1990, p.).



Square plan, gives rise to cubical space. (Picture from Lari: 1990, p.).

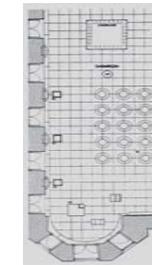
Display units take on shape of a reduced proportion of plan. (Picture from Lari: 1990, p.).



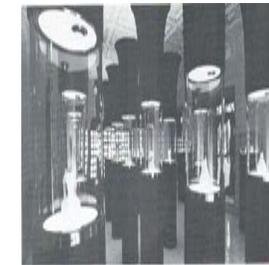
(Picture from Lari: 1990, p.).



(Picture from Lari: 1990, p.).

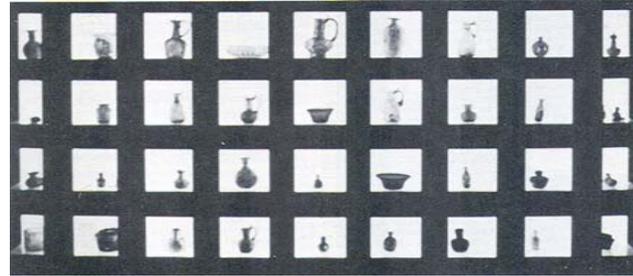


(Picture from Lari: 1990, p.).



(Picture from Lari: 1990, p.).

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(Fig. 58. Museum study). Internal wall façade segmented into a rigid grid for the display of individual exhibits. (Picture from Lari: 1990, p.).

Simplicity, symmetry and rigid geometric implementation become the theme of the exhibition. Circles, squares and rectangles play an important role in the general arrangement, developing from the plan, and terminating in the arrangement of the individual displays within the exhibition.

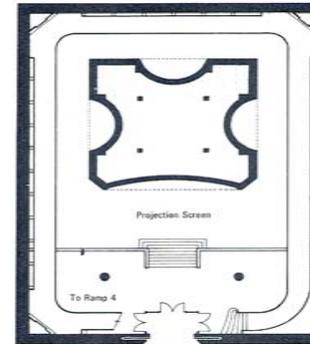
The theme seems to have developed from the circulation of the Ka'ba: the Ka'ba being the celebrated cube, whilst the pathway around it is fixed within the confines of a rigid route. The route

initiates within the confines of a circle, similar to the circumambulation of the Ka'ba, and later changes the circulation within the confines of squares and rectangles, amidst cubic display units.

4. Case Study: The Martyrs Memorial, Amman, Jordan

This is a monument to the members of Jordan's Armed Forces, who had lost their lives in the service of their country. The building is made of reinforced concrete faced with white stone. The height of the museum allows hot air to rise, whilst the white marble reflects heat. Encircled near the top is a basalt band of *Qur'anic* inscriptions. The internal space is merely a cube. Along the sides are ascending ramps devoted to a procession through periods of military history. The ramps support display cases. At the very top, the journey terminates into a garden, symbolizing the garden of paradise in which lie the brave warriors.

(Below: Fig.'s 59-60. Museum study).



(Picture from Lari: 1990, p.)



Kuwait Museum. (Picture from Lari: 1990, p.)

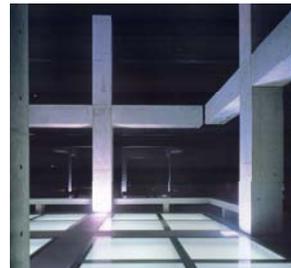
Characteristic of this monument, as well as the Museum of Glass and Ceramics, are the strict geometry and rigid routes which have been implemented. Both exploit the use of the cubic form to generate the plan as well as the internal spaces.



5. Case study: Museums, Galleries and Churches by Tadao Ando

- Abstract elements and geometry:

Tadao Ando's play with abstract elements in their purest forms avoids the figurative display of images. Simple gestures are made, using the principles of mass, volume, scale and proportion to stimulate powerful meanings.



Church on the water, Hokkaido, 1988



Church on the water, Hokkaido, 1988



Church of the Light, Osaka, 1989.



(Above: Fig.'s 61-64. Museum study. From Jodidio: 2001, pg.'s 79-85).

He emphasizes these abstract elements by placing them within a definite geometric grid across floor and roof plans, and across internal and external facades. The result is a suggestive blend of materials, symbols, geometry and architecture holistically working together to suggest strong character and meaning.

- Floating masses within pure geometry:



Koshino project, Ashiya, 1984. (from Jodidio: 2001)

(Adjacent: Fig. 65. Museum study). Concrete appears to be supported by a large span of glass. The contrast between heaviness and lightness are juxtaposed to create tension and a feeling of one element floating over another.

The example below illustrates the using of a concrete cylinder, and creating a floating experience internally via a circular concrete slab hovering above.



Meditation space, UNESCO, Paris, France, 1995. (Fig.'s 66-68. Museum study. From Jodidio: 2001, pg.'s 160-163).

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• Celebration of geometric form and the internal world:



(Above: Fig.'s 69-72. Museum study). Literature Museum, Himeji, 1996. (From Jodidio: 2001, pg.'s 104-107).
(Below: Fig.'s 73-75. Museum study. From Jodidio: 2001, pg.'s 116, 102, 122).



Water Temple, Hyogo, 1989.



Forest of Tombs Museum, Kumamoto, 1992



Literature Museum, Himeji, 1996.



(Fig. 76. Museum study).
Church of the Light, Osaka, 1989.
(Form Jodidio: 2001, p. 86)



(Fig. 77. Museum study). Church of the Light, Osaka, 1989.
(From Jodidio: 2001, p. 87).

Form and shape originate from an underlying geometry. The external facades are characterized by heavy walls within regular geometric forms, housing concrete panels. The external façade has few openings, and the internal world is celebrated via majority of the light stemming from the roof or via the courtyard space.



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• **Structural elements:**



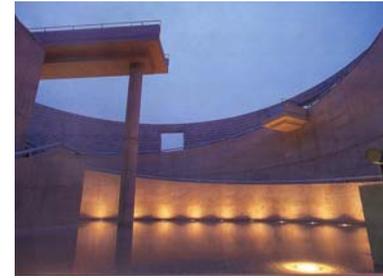
(Fig 78. Museum study). Rocco project, Kobe, 1989.



(Fig. 79). Child Museum, Himeji, 1989.



(Fig. 80). Lit. Museum, Himeji, 1996.



(Fig. 90. Museum study). Awaji Island project, Hyogo, 2000.

(Illustrations from Jodidio: 2001, pg.'s 62-63, 91, 101, 165).



(Fig's 91-92. Museum study). Narawiya Museum, Okayama, 1994. (From Jodidio: 2001, p. 135).



Comments: The architecture is celebrated by protruding structural elements beyond the confines of the building proper. Adjacent: A vertical wall placed between two flights of stairs, terminating horizontally between their landings, creates a strong separation between the two. A new character is given to the vertical ascension / descension of space. The stairs at their uppermost end terminate at an almost floating landing characterized by light railings and a single column for support.

• **The internal world:** (Below: Fig.'s 93-95. Museum study).



Art Museum, Kagawa, 1995.



Vitra project, Germany, 1993.



Historical Museum, Osaka, 1994.

(Above illustrations from Jodidio: 2001, pg.'s 97, 107, 129).



Koshino project, Ashiya, 1984. (From Jodidio: 2001, p.69)

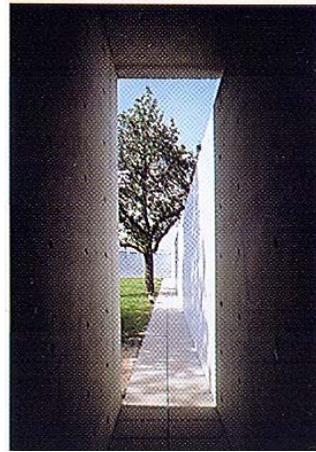
The internal world is characterised by light-weight elements in contrast to the heaviness of the exterior concrete walls. The internal world is painted white, with timber flooring. Verticality is punctuated by light-weight ramps or bridges, with slender, almost transparent balustrade components.

(Adjacent: Fig. 96. Museum study). The play of lighting has been determined from the inside out. This can clearly be observed upon analyzing the strip-lighting puncturing through a heavy concrete wall, thereby celebrating the emphasis of an 'internalized' architecture.

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• Surroundings and Approach:



(Above: Fig.'s 97-98. Museum study). Vitra project, Germany, 1993. (From Jodidio: 2001, p.108-109).



Koshino project, Ashiya, 1984. (from Jodidio: 2001, p.66).

Above: Upon leaving or entering the building, one encounters a small passageway, which is almost hidden via an overlapping external world.

(Adjacent: Fig. 99. Museum study). There exists a strong contrast between the greyness of the concrete to the surrounding greenery which complements each other in a striking manner.

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6. Case Study: Aga Khan Awards

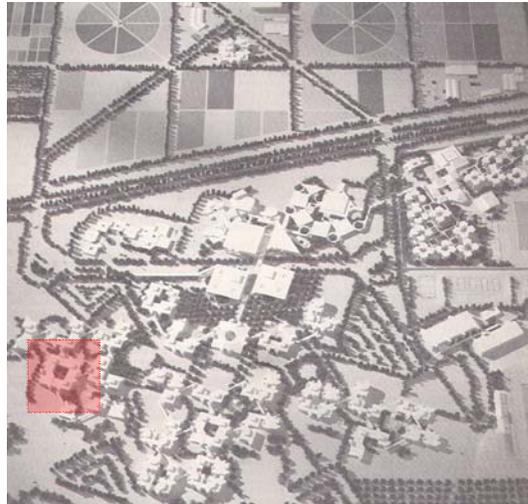
The theme of repetition within geometry is observed to be a typical Islamic trait for both architectural and art forms. This repetitive geometry is then further highlighted, at times within a spinning motif, or within a regular geometric grid, thereby establishing a hierarchy of structures. Internal environments are typically characterized by leading out into a courtyard or semi-courtyard. 'Wall-architecture' further lends support to this theory, since their massing within the harsher environments is advantageous in ensuring protection and better internal thermal environments. Where external environments need to be excluded, yet ventilation is required, a breeze wall is placed. Glazing is usually recessed, or appears as a small fraction of the wall-to-floor ratio. The internal world is celebrated, with the external world either being completely or semi-permeably shut out, and structures are within the shade of neighbouring structures. The examples below are set out to methodically illustrate these concepts:

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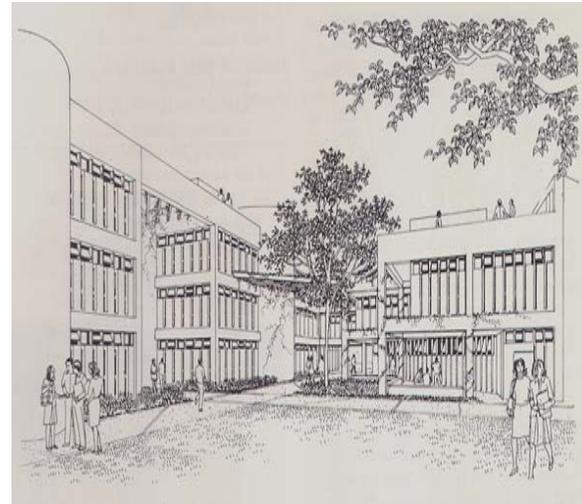
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Illustrated below is an example of a university layout in Algeria. The plan is based upon a rigid geometry, and the courtyard spaces thereby generated, are typical of an inward Islamic layout. Sustainable practices, such as, passive ventilation, recessed glazed facades, the use of locally produced low intensity concrete blocks and the emphasis on preserving and adopting local fauna and flora, were adopted.



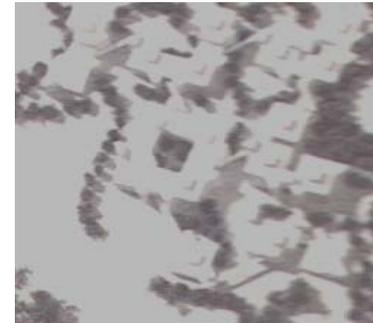
(Fig. 100. General study). University of Blida, Algeria. Aerial view. (Picture from Lari: 1990, p.32).



(Fig. 101. General study). University of Blida, Algeria. Cluster courtyard (Picture from Lari: 1990, p.32).

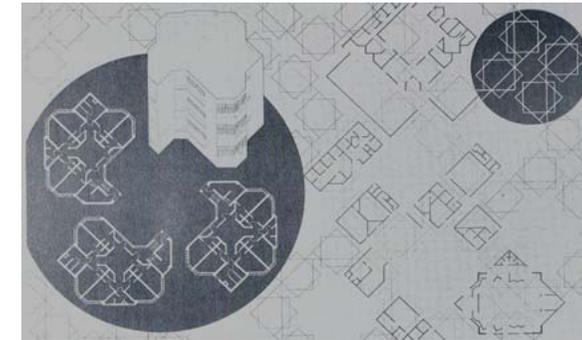
Demarcated alongside in red, is the spinning motif of an individual structure of the university. This spinning motif of the plan in the form of a square accommodates the adjacent structures to align themselves to it, and thereby creates a system of parallel axes within a definite grid. This

theme of a spinning motif within the overall geometry can be observed in many contemporary Islamic complexes. In the case of this university, the majority of the structures are similarly based, providing an internal courtyard for every structure, and thereby creating a distinct rhythm, repetition and character of the overall form. The general idea is to create an architecture wherein each component becomes part of a whole, or wherein the geometry of each component is a variation of the underlying geometry of the whole.



(Fig. 102. General study). Enlarged aerial view, (demarcated in red alongside), of a component of the University of Blida, Algeria. (Picture from Lari: 1990, p.32).

Illustrated alongside, geometric patterns have been extensively used within the confines of the general landscape, resulting in a variety of building shapes and sizes which relate to the overall geometry of the university. The plan has an underlying spinning motif, whilst the form is a resultant of internal functionality within the confines of a strict geometrical order.



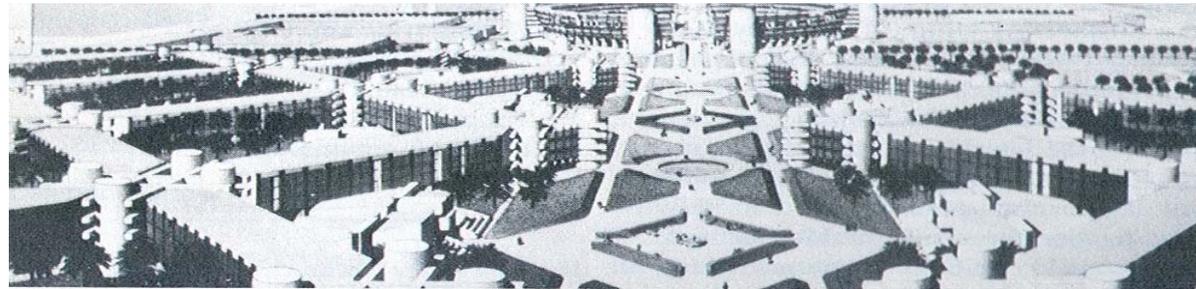
(Fig. 103. General study). University of Blida, Algeria, Housing Component. (Picture from Lari: 1990, p.37).

Similar principals can be observed from other examples within different contexts, as illustrated on the following page:





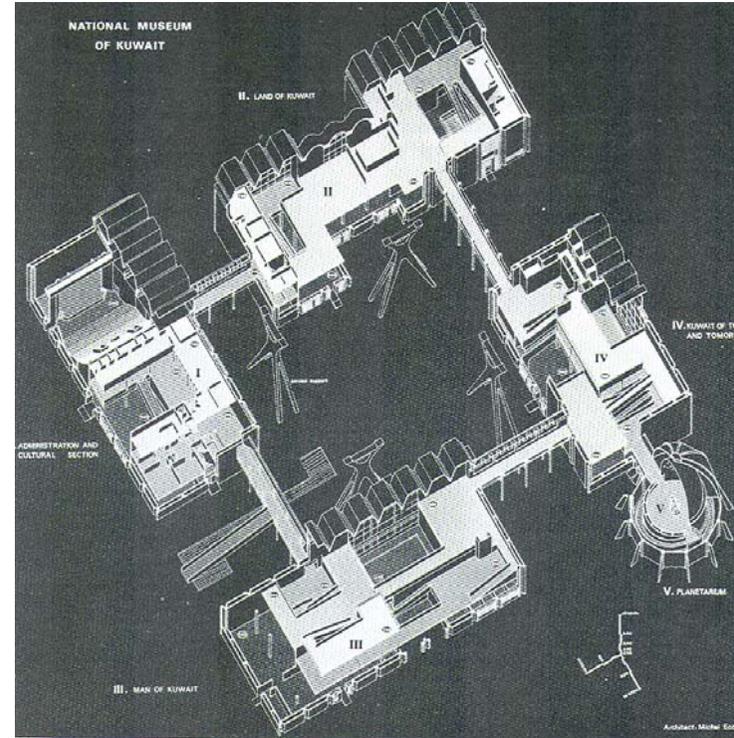
(Fig. 104. General study). Holiday Village, M'diq, Morocco. (Picture from Lari: 1990, p.1).



(Fig. 105. General study). Yarmouk University, Jordan. (Picture from Lari: 1990, p.41).

The National Museum of Kuwait, as illustrated below, essentially comprises of five separate buildings around a centrally inward looking garden. The buildings are linked to each other by

longitudinal ramps which serve the dual function of being galleries whilst commuting viewers from one region to another.



The National Museum of Kuwait. (From Lari: 1990, p.100).

resulting in a 'wall-architecture' with internalized courtyards.

This example once again denotes the use of the spinning motif, within a rigid geometry. The result of the spinning motif was the creation of an internal courtyard, which has climatic advantages, and is strongly linked to tradition and Islamic architecture.

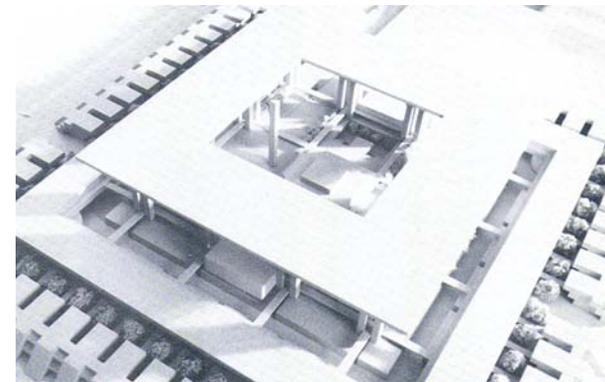
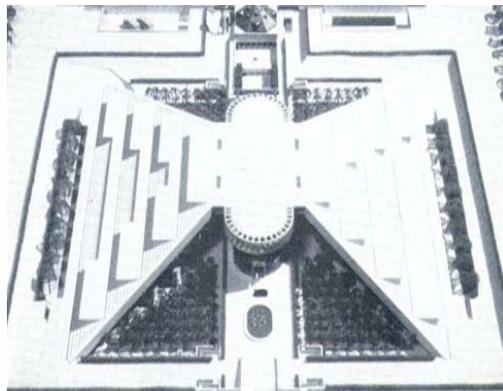
(Adjacent: Fig. 106. General study).

The following examples further illustrate the spinning motif and the application of rigid geometry, such as the cube, which has been cut-away,

ايفيا

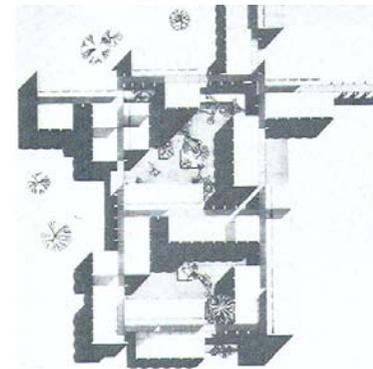


(Fig. 107.). Government administrative centre, Riyadh, Saudi Arabia. (Picture from Lari: 1990, p.90).



(Fig.'s 108-109. General study). Air Defence Headquarters, Riyadh, Saudi Arabia. (From Lari: 1990, p. 92). 'Wall-architecture' can be seen in the following illustrations below, wherein massive walls are celebrated with small window openings, thereby placing emphasis on the internal world. The

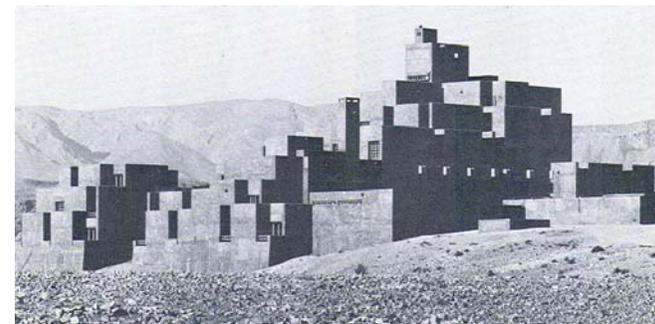
grouping of structures can also be observed from the plan, with open spaces in between, so as to take advantage of shadows in a harsh climate.



(Fig. 110. Global study). Casbah at Taliouine, Morocco. (Picture from Lari: 1990, p.74).



(Fig. 111. Global study). Casbah at Taliouine, Morocco. (Picture from Lari: 1990, p.72).



(Fig. 112. Global study). Hotel at Dadus, Morocco. (Picture from Lari: 1990, p.70)



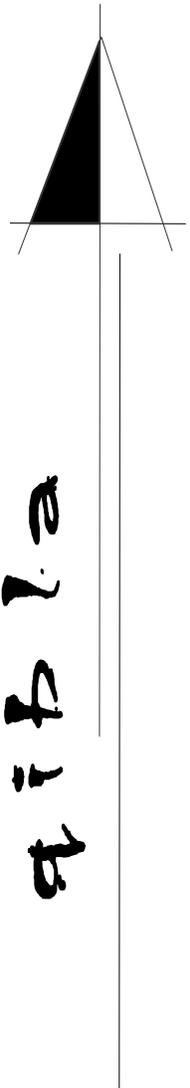
(Fig. 113. Global study). Hotel at Dadus, Morocco. (Picture from Lari: 1990, p.70)

a quest of the spirit



(Fig. 114. Global study). Press and publication building, Amman, Jordan (Picture from Lari: 1990, p.143).

The above illustration indicates a new spirit to Islamic architecture in Jordan. It is climatically suitable, with its huge mass walling and recessed glazing. The design has been informed by a cubical geometric form, with cut-outs, protrusions and recesses in the cube to cater for functional, climatic and aesthetic needs.



a quest of the spirit

Index to Section E:

1. An introduction to Allah

Design rationale: Exhibition 1

2. An introduction to the Holy Qur'an

In praise of the Qur'an

The Qur'an in reference to creation

Design rationale: Exhibition 2

Preservation of the Holy Qur'an

Design rationale: the significance of 19 and its implementation

3. An introduction to the Prophets

A detailed version of the selected Prophets:

Adam (AS)

Design rationale: Exhibition 3

Design rationale: Exhibition 4

Noah (AS)

Design rationale: Exhibition 5

Abraham (AS)

Design rationale: Exhibition 6

Moses (AS)

Design rationale: Exhibition 7

Jesus (AS)

Design rationale: Exhibition 8

4. The life of the Prophet Muhammad (SAW)

In praise of the Prophet Muhammad (SAW)

a. Background and birth

Design rationale: Exhibition 9

b. Early life

Design rationale: Exhibition 10

c. The cave of Hira

Design rationale: Exhibition 11

d. The first believers

e. Public declaration

f. Sad plight of the believers

g. Emigration to Abyssinia

h. Abu Talib's pass

i. The year of sorrow

j. Visit to Ta'if

Design rationale: Exhibition 12

k. Me'raj

Design rationale: Exhibition 13

l. Emigration to Medina

Design rationale: Exhibition 14

m. Enemies of Islam

n. The Battle of Badr

o. The effects of the victory

Design rationale: Exhibition 15

p. The Battle of 'The Trench'

Design rationale: Exhibition 16

q. Treaty of Hudaibiya

r. Invitation letters to the Kings

s. The conquest of Mecca

t. Pilgrimage to Mecca

Design rationale: Exhibition 17

u. Battles of Hunain, Ta'if and Tabuk

v. The year of deputation

Design rationale: Exhibition 18

w. The farewell pilgrimage

x. Demise

Design rationale: Exhibition 19

An introduction to Allah:

Unlike the word 'God', which can be manipulated to its plural, 'gods', or reverted into its gender connotation, 'goddess', or converted to its diminutive form, 'god-ling', or could be attached to a guardian of a child as "god father", the Arabic word 'Allah' is pure from all these defectives, just as God is pure from all defects. This is so, because the Arabic language does not allow such interpolation of this word, as a law of grammar. Thus the name 'Allah' is protected by the laws of grammar, and its manipulation is unacceptable: there is no such thing as an "Allah father." (Deedat: 1995, 32).

The word 'Allah' commonly means God, but to its Arab users it has a special meaning. In Islam, Allah has many attributes and qualities. Of these, ninety-nine attributes or names have been specifically assigned to describe Allah. These pristine attributes and qualities can only truly belong to God. For example, God is All Knowing, and is aware of the condition and state of every atom in the entire cosmos at any given time. No one can share this quality with God. (Please refer to these ninety-nine attributes of Allah in Appendix B).

The word 'Allah,' thus encompasses all His attributes and qualities, and by saying Allah, one will be including all His attributes and qualities which make Him God.

The Qur'an makes it explicit to mankind in numerous manners, in order to describe and allow mankind to reflect, ponder and realize who the Creator is. I quote:

- ***"He is Allah, besides whom there is no other Gods; who knows all things both secret and open; He is Most Gracious, Most Merciful.***
- ***He is Allah besides whom there is no other God. The Sovereign, The Holy One, The Source of Peace and Perfection, The Guardian of Faith, The Preserver of Safety, The Exalted in Might, The Irresistible, The Supreme: Glory to Allah: High is He above the partners they ascribe to Him. He is Allah, The Creator, The Evolver, The Bestower of Forms, To Him belong the most beautiful names: All that is in the heavens and the earth, doth declare His praises and glory. And He is The Exalted in Might, The Wise."*** (Qur'an, 59:22-24).

In the Chapter of Sincerity, the Qur'an establishes a definition of God in four lines:

- ***"Say: 'He is Allah, The One and Only; Allah, the Eternal Absolute / The Self Sufficient; He begetteth not, nor is He begotten: There is none like unto Him'."*** (Qur'an, 112:1-4).

The above four-lined definition from the Qur'an is a clear and decisive manner for Muslims, in order to ascertain whether a being is God or not. The first and second verses above indicate that God is alone and shares no partners, and is totally independent of anything. The third verse indicates that God has no offspring and that He was never begotten; He always existed, even though

this may be far from human comprehension. (Commentators explain that God is the creator of the abstract elements, such as 'time and space,' and these are human limitations, paradigms to appease human purpose, but for God, He is beyond these dimensions). The fourth verse is the ultimate definition: nothing can be compared to God, who is unlike anything humans can ever perceive.

(Only the form for Building-A is required for thesis purposes. Thus spaces 1-9 are merely presented to indicate the process towards finding a suitable form)

Design rationale: Exhibition 1- Introduction to Allah

This introductory exhibition space was decided to portray God, which is the first article of faith: Belief in the One God. Without this aspect, the entire journey through the exhibition spaces to follow would be meaningless.

Symbolically reflecting God within space, led to the realization of the circle being implemented as a key element, as depicted below:

Attributes and qualities of a circle:

Purity
Perfection
Infinity
Harmonious form
Holistic and all encompassing nature

Attributes and qualities of God:

The Pure
The Perfect
The Eternal; The Everlasting
The Designer; The Giver of Form
The One; The Mighty

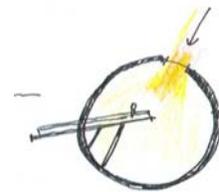
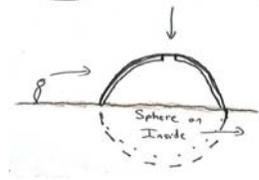
Thus the circle was found to be a suitable means to symbolically represent God. In terms of a circle transforming itself into the third dimension gave rise to the implementation of the dome. A dome in essence gave rise to imperfection to a certain degree, since a dome resulted in a semi-circle in the third dimension. This then gave rise to a sphere, whose form ultimately coincided with the circle, and was consequently chosen as the internal form of the space.

Due to structural difficulties in constructing a sphere, especially with regard to openings, it was decided that the sphere should be contained within a cube, thereby facilitating structural requirements, and also integrating the forms of both square and circle into a harmonious fusion: the sphere would be perfectly embedded within the dimensions of the cube. Externally, this would give rise to a flat two-dimensional bland wall, which would conceal the spherical nature of the internal space. Thus a strong contrast between inside and outside was created, which was to become a part of the theme as discussed later on.

Fig. 1. Introspection of sphere

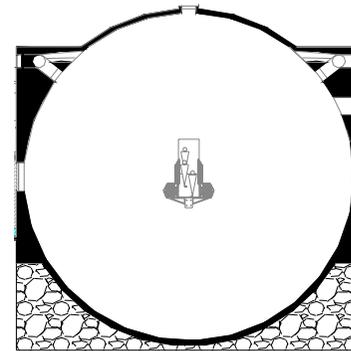
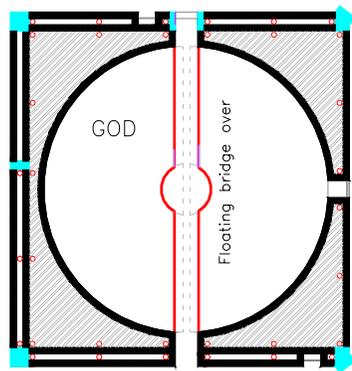


Below: Fig. 2. Section through sphere. Externally the sphere appears to be a dome. Internally the sphere is excavated into the ground



Far right: Fig. 3. Journey experienced through sphere via a floating bridge, with supports hidden beneath the bridge. Light to penetrate through a vertical opening, with the word "Allah" above. In this manner the name of God will be seen to move along the inside perimeter of the sphere, portraying God's countenance throughout the universe.

Fig.'s 4 and 5. Later in the design stage, the plan and section portrayed itself as follows:



The space was seen as suitable since it portrayed the perfection, infinity and purity of God

**An introduction to the Holy Qur'an:
In praise of the Qur'an:**

- "There is probably in the world no other book which has remained twelve centuries with so pure a text," states the historian critique, Sir William Muir. (Ramakrishna: 1995, p.3).
- "So there has been no opportunity for any forgery or pious fraud in the Koran, which distinguishes it from almost all other important religious works of ancient times...It is exceedingly strange that this illiterate person should have composed the best book in the language." (Basanta Coomar Bose, Mohammedanism, London 1953, p.33).
- Goethe, a famous German poet, in complimenting the Qur'an says, "This book will go on exercising through all ages a most potent influence." (Ramakrishna: 1995, p.11).

The Qur'an in reference to creation

"There is no human work in existence that contains statements as far beyond the level of knowledge of its time as the Qur'an", states Becuille in his book titled "The Qur'an and Modern Science". (Becuille: 1995, p.44). He further substantiates his findings in numerous examples, out of which I have elaborated a few below:

- **The origin of the universe:**

"Do the disbelievers not see that the heavens and the earth were joined together, then I split them apart?" (Qur'an, 21:30).

"The Quranic references are all in perfect agreement with the modern ideas on the existence of the primary nebula (galactic dust), followed by the separation of elements which resulted in the formation of galaxies and then stars from which the planets were born." (Becuille: 1995, 18).

Reference is also made in the Qur'an to an intermediary creation between the heavens and the earth, as seen in chapter *al-Furqaan*:

"God is the one who created the heavens, the earth and what is between them." (Qur'an, 25:59).

- **Stars and planets**

"The word '*najm*' or 'star' in the Qur'an (86:3) is accompanied by the adjective '*thaaqib*' which indicates that it burns and consumes itself as it pierces through the shadow of the night. It was much later discovered that stars are heavenly bodies producing their own light like the sun." (Becuille: 1995, 21).

The Qur'an uses the word '*siraj*' or 'lamp' for the sun, which indicates that it gives off light, (78:12-13), whilst it uses the word, *kawkab*, to refer to the planets, that are celestial bodies that reflect light and do not produce their own light like the sun. (Becuille: 1995, 21).

- **Orbits**

"Today the laws governing the celestial systems are well known. Galaxies are balanced by the position of stars and planets in well-defined orbits, as well as the interplay of gravitational forces produced by their masses and the speed of their movements. In chapter *Al-Ambiyaa* we find:

"God is the one who created the night, the day, the sun and the moon. Each one is traveling in an orbit with its own motion." (Qur'an, 21:33).

- **The Day and Night**

"The Qur'an uses the verb '*kawwara*' in chapter *az-Zumar* to describe the way the night 'winds' or 'coils' itself around the day and the day around the night." (Becuille: 1995, 23).

"He coils the night upon the day and the day upon the night." (Qur'an, 39:5).

"The original meaning of the verb '*kawwara*' is to coil a turban around the head. This is a totally valid comparison; yet at the time the Qur'an was revealed, the astronomical data necessary to make this comparison were unknown. It is not until man landed upon the moon and observed the earth spinning on its axis that the dark half of the globe appeared to wind itself around the light and the light half appeared to wind itself around the dark." (Becuille: 1995, 23).

- **The Solar Apex:**

"The sun runs its course to a settled place. That is the decree of the Almighty, the All Knowing." (Qur'an, 36:38)

"Settled place is the translation of the word '*mustaqarr*' which indicates an exact appointed place and time. Modern astronomy confirms that the solar system is indeed moving in space at a rate of twelve miles per second towards a point situated in the constellation of Hercules (alpha lyrae) whose exact location has been precisely calculated. Astronomers have given it a name, the solar apex." (Becuille: 1995, 23-24).

- **Expansion of the universe:**

"I have built the heaven with power and it is I, who am expanding it." (Qur'an, 51:47).

Becuille explains this phenomenon is in perfect accordance with modern astronomy in the following manner:

"The expansion of the universe was first suggested by the general theory of relativity and is supported by the calculations of astrophysics. The regular movement of the galactic light towards the red section of the spectrum is explained by the distancing of one galaxy from another. Thus, the size of the universe appears to be progressively increasing." (Becuille: 1995, 51:47).

- **Geology: Mountains**

"It has been recently discovered that the stability of mountains is linked to the phenomenon of folding. The process of mountain formation by folding drove the earth's crust down into the lower layers and provided foundations for the mountains. Stakes, which are driven into the ground like those used to anchor a tent, are the deep foundations of geological folds." (Becuille: 1995, 29). This is in perfect keeping with the Quranic version: **"Have We not made the earth an expanse and the mountains stakes?"** (Qur'an, 78: 6-7).

- **Biology**

"Do the unbelievers not realize that the heavens and the earth were joined together, then I clove them asunder and I made every living thing out of water. Will they still not believe?" (Qur'an, 21:30). Becuille states: "This is a dramatic affirmation of the modern idea that the origin of life is aquatic." (Becuille: 1995, p.30).

- **Botany**

"Progress in botany at the time of Muhammad (SAW) was not advanced enough in any country for scientists to know that plants have both male and female parts. Today we know that fruit comes from plants that have sexual characteristics even when they come from unfertilized flowers like bananas." (Becuille: 1995, 31).

This is once again in accordance to the Qur'an: **"God is the one who sent down rain from the sky and with it brought forth a variety of plants in pairs,"** (Qur'an, 20:53), or **"...and of all fruits God placed on the earth two pairs,"** (Qur'an, 13:3).

- **Physiology**

"The constituents of milk are secreted by the mammary glands (of cattle) which are nourished by the product of food digestion brought to them by the bloodstream. The initial event which sets the whole process in motion is the conjunction of the contents of the intestine and blood at the level of the intestinal wall itself.

This very precise concept is the result of the discoveries made in the chemistry and physiology of the digestive system over one thousand years after the time of Prophet Muhammad (SAW)." (Becuille: 1995, 33).

The Qur'an made this known to man in the following manner: **"Verily, in cattle there is a lesson for you. I give you drink from their insides, coming from a conjunction between the digested contents (of the intestines) and the blood, milk pure and pleasant for those who drink it."** (Qur'an, 16:66).

- **Conclusion:**

"A totally objective examination of the Qur'an, in the light of modern knowledge, leads us to recognize the agreement between the two...It makes us deem it quite unthinkable for a man of Muhammad's time to have been the author of such statements, on account of the state of knowledge today." (Becuille: 1995, 48).

"He does not speak of his own desire; it is no less than inspiration sent down to him; he was taught by One Mighty in Power." (Qur'an, 53:3-5).

Design rationale: Exhibition 2 – The origin of creation

This space was later designed to become part of exhibition 3 and 4. The plan below thus depicts it in this manner.

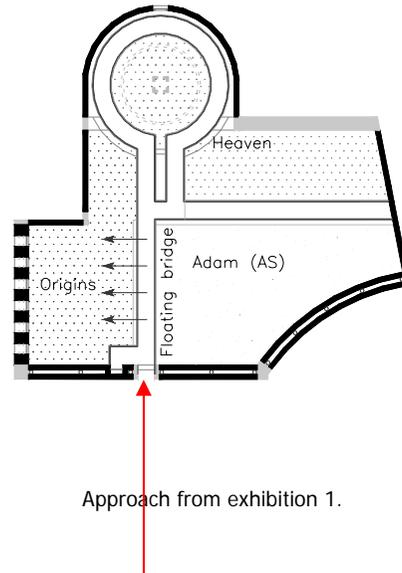


Fig. 6. Spatial resolution – exhibition 2.

After introducing the concept of God in exhibit 1, exhibition space 2 was set out to illustrate the origination of the universe as described in the Holy Qur'an. It was decided that since the theme of this section relates to the origin of creation within space, the exhibit should spatially present itself as a double volume, with the viewer over-viewing the space from above. A light floating bridge, either suspended or supported by beams underneath, would create a feeling of being suspended in space. This would allow the viewer to symbolically associate a relationship with God, and observe the formation of creation from God's perspective: God above everything, creating the universe from nothingness into existence. The theme of water was introduced since it is Islamically believed that water was used as a means to create life forms.

Lighting was decided to penetrate from above, depicting the countenance of God. Subtle lighting was chosen to infiltrate the space at large, appearing from specified locations, to depict the light of God.

Preservation of the Holy Qur'an:

It is a basic article of faith to believe in all the messengers of God, and in the divine scriptures which were revealed to them. However, Muslims believe that these scriptures were interpolated by the people, and that the Qur'an is the last and final word of God, which has been unchanged ever since it was revealed. (Muhammad: 2001, p.12). For the Holy Qur'an, God Himself declares:

"We have, without doubt, sent down the message; and We will assuredly guard it (against corruption)." (Qur'an, 15:9).

"And if you are in doubt as to that which We revealed to Our servant, then produce a chapter like it and call upon your helpers besides Allah, if you are truthful." (Qur'an, 2:23).

"No falsehood can approach it (the Qur'an) from before or behind it. It is sent down by One, All-Wise and worthy of All Praise." (Qur'an, 41:42).

"Were men and jinn to combine to produce something like the Qur'an, they could not do so even if they aid each other." (Qur'an, 17:88).

"Had the Qur'an been a discourse other than Allah's, then they would have found in it many incongruities and contradictions." (Qur'an, 4:81).

The Holy Qur'an has been preserved in two manners. The first manner, is one common to all Muslims. For generations in every Muslim society, thousands of Muslims memorize the entire Qur'an. Furthermore, the "Qur'an is the most 'read' book in the world," (Ramakrishna: 1995, p.32). This is so, because Muslims are compelled to at least read the entire Qur'an twice a year, one reading of which is commonly performed during the holy month of Ramadan. Muslims are also compelled to read portions of the Qur'an at will, five times a day during obligatory prayers. This has also allowed the Qur'an to be preserved in its original form. All translations of the Arabic Qur'an are also accompanied by the Arabic text, in order to further preserve its originality. Also noticeable, is the fact that the Arabic of the Qur'an is not the vernacular Arabic spoken today: it is a classical form of Arabic which existed during the time of the Prophet Muhammad (SAW). Arabs also refer to the Qur'an as the source for correct grammar application and principals. (Personal interview, Jamiat: 2004).

The second manner of preservation can be found in the works of Ahmad Deedat, in his book titled "Al-Qur'an, The Ultimate Miracle". From his detailed diagnosis of the preservation technique adopted by the Qur'an, I have withdrawn the following:

The Holy Qur'an comprises of 114 chapters, of which every chapter, except the chapter of forgiveness, begins with the words: *"In the name of Allah, The Most Gracious, The Most Merciful."* Each word of this code is repeated in the Qur'an as a multiple of nineteen. For example, the word 'Allah' is repeated 2698 times, which is a multiple of 19. Even the total number of chapters, 114 in total, is a multiple of 19. The code is thus repeated 113 times in the beginning of every chapter, except for the chapter of forgiveness, whereupon it is compensated for in chapter nine, when the prophet Solomon wrote a letter to the neighboring queen, recorded in the Qur'an as follows:

“She said: ‘O ye my ministers! Surely there has come to me a letter worthy of respect. It is from Solomon, and it begins: ‘In the name of God, The Most Gracious, The Most Merciful.’”

This once again brings the total number of this code to 114, an exact multiple of 19.

The Holy Qur’an has the heading of certain chapters, as ‘initials’ or ‘code’ letters. Adding all these abbreviations throughout the 114 chapters, we land up at 57. Once again, 57 is a multiple of 19. More shockingly however, is that the ‘initials’ then carry themselves throughout the chapter as a multiple of 19. For example, the initials ‘a’, ‘l’ and ‘m’ are the initials to the beginnings of chapters 2, 3,7,13,29,30,31. For these chapters, all the words beginning with the letters ‘a’, ‘l’ and ‘m’ collectively add up to multiples of 19. To elaborate further, I have demonstrated a table below:

| Chapters beginning with the initials ‘a’, ‘l’ and ‘m’: | | | |
|--|--------------------|--------------------|--------------------|
| | Beginning with ‘m’ | beginning with ‘l’ | beginning with ‘a’ |
| Chapter 2 | 2195 | 3204 | 4592 |
| Chapter 3 | 1251 | 1885 | 2578 |
| Chapter 7 | 1165 | 1523 | 2572 |
| Chapter 13 | 260 | 479 | 625 |
| Chapter 29 | 347 | 554 | 784 |
| Chapter 30 | 318 | 396 | 545 |
| Chapter 31 | 177 | 298 | 348 |
| Chapter 32 | 158 | 154 | 268 |
| ----- | | | |
| Total | 5871 | 8493 | 12312 |
| ----- | | | |
| 5871 + 8493 + 5871 | = | 26676 | (19 x 1404) |

(Table from Deedat: 1979, 68).

This is no coincidence, since it works for all the chapters with different initials’ for example the chapters titled with the initial ‘k’ collectively have a 114 words beginning with this letter, which once again is a multiple of 19. Furthermore, this interlocking system goes across chapters as a cross check, for example, the initial ‘k’ is also the initial to other chapters, with other initials as well, which also add up to multiples of 19! Even the very first revelation consisted of 19 words, which have exactly 76 letters, once again a multiple of 19. (Deedat: 1979, 30).

This interlocking system of multiples of 19 is carried forth throughout the Qur’an, accompanied by the most rhythmic and poetic Arabic, such Arabic that the poets of Arabia, when poetry was at its peak, openly admitted that “such poetry was not humanly possible”. (Deedat: 1979).

The discovery of this interlocking theme was unknown until it was recently discovered, prompted by the unexplained verse: “And over it are 19.” (Qur’an 74:30). This verse was revealed during the revelation of the 96th chapter of the Qur’an, which is the 19th

chapter from the back of the Qur’an (114 -18= 96). (Deedat: 1979, p. 1-75). Due to the limitations of text, it would be sufficient to say that the number 19 is intertwined into the fabric of the Qur’an, as illustrated from the above examples.

Design rationale: The significance of nineteen and its implementation

Since the number 19 holds such an important link to the Qur’an, it was decided to symbolically link this number to the Exhibition Center. Initially it was conceived to duplicate this number along smaller elements in a repetitive manner. After realizing that the entire context of the exhibition center was based upon Qur’anic narratives, it was decided that this theme of 19 should be subtly implemented into the scheme, more as a symbolic gesture, in order to further the theme of abstractness. This notion finally manifested itself into creating 19 distinct exhibition spaces, which would for the contemplative viewer, link its attachment to the Qur’an. This will be further explained in Section F, titled ‘The Overall Design Rationale’.

Introduction to the Prophets

In attempting to demonstrate Islamic beliefs, it would be of paramount importance to initially identify with elements common to all. According to the latest statistics released by the Jamiat of South Africa 2004, Christianity is the world’s largest religion. It would thus be safe to assume that Christian beliefs are widely and commonly known to all. Furthermore, within a more local context, South Africa was a Christian country until the 1994 elections, practicing Christian based ideologies, such as labeling abortion as illegal, and declaring Sundays as public holidays. Islam could be seen as a sister religion to Christianity, and essentially differs upon matters relating to the Christ, and furthermore, the acceptance of the Prophet Muhammad (SAW) as the seal of the prophet hood. Besides these differences, Islam and Christianity share almost the same beliefs in all the Biblical narrations of the prophets from the beginning of time when Adam (AS) was created, until the birth of Christ (AS). From this analogy, it can be observed that the belief in the Prophets is a common link, and introducing Islam through this means, would enable people to identify the with religion via common knowledge.

Furthermore, the importance of the Prophets and accepting them as messengers of God is a fundamental article of the Islamic faith. Muslims believe that in order to guide mankind, God sent Messengers or Prophets to earth, to remind the various nations and tribes of the Oneness of God, and His attributes, and to enjoin upon mankind to establish good and to abstain from evil. *“And verily we have raised in every nation a messenger.”* (Qur’an, 10:48). *“Verily, We sent before thee (O Muhammad) messengers to their own folk. They brought clear proofs (of Allah’s Sovereignty).”* (Qur’an, 13:7).

It is believed that approximately 124 000 Prophets were sent to different nations and tribes, to preach this message.

“Say ye: ‘We believe in Allah, and the revelation given to us, and to Abraham, Ishmael, Isaac, Jacob and the Tribes, and that given to Moses and Jesus; and that given to (all) Prophets from their Lord: We make no difference between one another of them: And we bow to Allah (in Islam).’” (Qur’an, 2:136).

Indeed all the Prophets enjoy a lofty status in the eyes of God, but due to the lack of financial funding and space, only a few selected Prophets could be accommodated for in the proposed exhibition center. After measuring up spatial constraints, it was realized that only six Prophets could comfortably be viewed.

Upon observing the Qur’an, it is noted that the Qur’an only mentions twenty five prophets by name. Of these twenty five, six were chosen based upon the following criteria:

Adam (AS):

Adam (AS) was the first human being to be created, and allows man to reflect upon his origins. Furthermore, the story of Adam (AS) and Eve (AS) is well known throughout all Biblical records. (Muhammad: 2001, p.14-32).

Noah (AS):

Noah (AS) is often known as the “second Adam (AS)” or the “second father” of human kind. He was the first prophet to emigrate, and his story of the escape with the “Arc” to save the believers from a terrible flood, is also well known to throughout all Biblical records. (Muhammad: 2001, p.34-55).

Jesus (AS):

Jesus (AS) is known as the ‘founder of Christianity’, and he brought forth the Holy Bible. His miraculous birth, his miracles to cure the sick and feed the poor, is acknowledged throughout the Christian world. He is held in high esteem in the eyes of the Muslim world, and is believed to return to the earth in the future. His birth was approximately some 570 years before the birth of the Prophet Muhammad (SAW). (Gemeiah: 2001, p.332-363).

Muhammad (SAW):

The Prophet Muhammad (SAW) and his life would devour special detail and attention, since it his honor of bestowing the Holy Qur’an upon mankind, and for being the seal of the prophet hood. Without him there would be no Islam, and after declaring that there is no God but Allah, the second article of faith, would require one to testify that the Prophet Muhammad (SAW) is the messenger of Allah. (Muhammad: 2001, Vol.2, p.231-355).

Muslims also believe that none of the other Prophets were sent to the entire universe, but were sent to a particular tribe or nation. In the case of Muhammad (SAW), Allah himself declares:

“You (O Muhammad) have been sent for the entire creation as a giver of glad tidings and a Warner.”

(Qur’an, 34:27).

“We have sent you (Muhammad) as a Messenger to mankind, and Allah is sufficient as a witness.” (Qur’an, 4:79).

Abraham (AS):

Abraham (AS) is accepted by both Christian and Jewish religions. For Muslims however, Abraham (AS) holds special value in many ways. He is often addressed as “the friend of God”, and had many trials and sacrifices to make, some of which are ritualized to this present day, during the obligatory pilgrimage. His story of being thrown in the fire is referred to in both the Bible and the Torah.

It was also Abraham (AS), with the help of his son Ishmael (AS), who had built the Holy Ka’ba, the first house to be built in the name of God, in the city of Mecca.

(Muhammad: 2001, p.95-147).

Abraham (AS) had two sons, Ishmael (AS) and Isaac (AS). From Isaac (AS) came the lineage to many great prophets, such as Moses (AS) and Jesus (AS). From Ishmael (AS), came the Arab brethren of the Jews, without any apparent lineage to the prophet hood, until after many centuries, Muhammad (SAW) was born. He was thus a descendent to Abraham (AS), through the lineage of his son Ishmael (AS). Due to this link in lineage, stems the link of Islam to Abraham (AS), to its sister religions, Judaism and Christianity. (Muhammad: 2001, p.95-147).

Moses (AS):

Moses (AS) came from the lineage of Isaac (AS), and was sent to the children of Israel, then residing in Egypt. He brought down the well-renowned Ten Commandments, as well as the Torah. He was blessed by saving his people through the parting of the ocean, and his life has many lessons to take heed from. He is mentioned no less than 514 times in the Holy Qur’an.

(Muhammad: 2001, p.225-333).

“And We have not sent you (O Muhammad), but as a bringer of glad tidings and as a Warner unto all mankind, but most of mankind know not.” (Qur’an, 34:28).

“We sent you not but as a mercy for all creatures...” (Qur’an, 21:107).

A full walk through and explanation of his life would enable one to understand the origin of basic Islamic principals and beliefs. (The section to follow illustrates a more detailed account of the lives of the above mentioned Prophets, as well as a more refined version of the selection criteria. This would further enable the reader to understand the value of the prophets and their sacrifices in the eyes of Islam, as well as comprehend the symbolic, religious and spiritual meanings, as well as the rationale and overall layout in the exhibition spaces).

A detailed version of the selected Prophets

“Alas for mankind! There never came a Messenger to them but they used to mock at him. Do they not see how many of the generations We have destroyed before them? Verily they will not return to them.” (Qur’an: 36:13).

“...messengers as bearers of good news as well as of warning in order that mankind should have no plea against Allah after the Messengers. And Allah is Ever All-Powerful, All-Wise.” (Qur’an, 4:165).

Origin of Adam (AS):

Before Allah created Adam (AS), He informed the angels of the creation of vicegerents on the earth. The angels thus asked: “Are you going to create a being that will cause corruption and bloodshed on earth, while we on the other hand hymn Your praises and glorify You?” Allah replied: “I know that which you know not.” (Muhammad: 2001).

After Adam (AS) was created, the angels were commanded to prostrate before him. All besides Satan complied. Satan arrogantly proclaimed that Allah had created him from fire and Adam (AS) was created merely from dust, something inferior to him: he did not realize that merit did not depend upon external appearances. Upon realizing that he was distanced from the mercy of Allah, he requested respite till the Day of Judgment. His request was granted, whereupon he exclaimed that because Adam (AS) was the cause of his ruin, he would attempt to misguide and betray him in every conceivable manner. (Muhammad: 2001, p.14-32).

Adam (AS)'s superiority over the angels became manifest to the angels when they were asked the names of various entities. They were unable to reply, but since Adam (AS) had been given knowledge from Allah, he was able to inform the angels the names of the many things that he had been taught. The angels realized that the basis of vicegerency was not excessive hymning of praises but knowledge. (Muhammad: 2001, p14-32).

Adam (AS) resided in Heaven for some time. Heaven as depicted in the Qur’an is described as a place which no human mind can ever comprehend. Many traditions and versus from the Qur’an describe certain elements of Heaven, from which stem the descriptions of large, green gardens with rivers flowing through them in Islamic paintings. The rivers are described as being seven in number, with each flowing with differing contents. One should bear in mind that the number seven has a different connotation in Arabic terms, comparable to the English notion, ‘I’ve told you a dozen-times,’ which would in essence indicate ‘many’ or ‘numerous’. (Muhammad: 2001, p14-32).

Another description of Heaven mentions the Ka’ba, or Holy House in Heaven, which is placed directly above the Ka’ba on earth, with the angels circulating it in a similar fashion as is customarily performed at Mecca. It is believed that from the Ka’ba of Heaven, divine light and guidance pours down onto the Ka’ba on earth, and then radiates to the rest of the world. (Muhammad: 2001, p14-32).

Design rationale: Exhibition 3 - Heaven

This space was decided to depict Heaven, in order to indicate man’s initial above, to which he is bound to return to. In order to depict heaven spatially, it was decided to increase the height of the space, with Heaven hovering above, thereby allowing the viewer of observing Heaven, but not totally. The viewer’s position would be along a suspended floating bridge, circulating around Heaven just above eye level.

Heaven itself was decided to be portrayed as a transparent world, with natural light shining above it in the form of a skylight. The base of Heaven was depicted as a circular glass plate. The contents of Heaven were depicted as a glass Ka’ba, surrounded by water, which would fall to the ground in seven waterfalls.

From the floating bridge circulating Heaven, the viewer would be able to view the earth below, to which Adam (AS) was sent to.

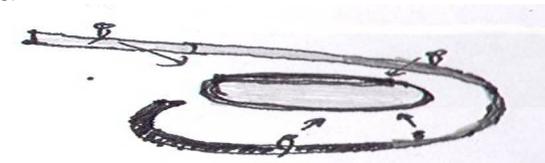


Fig. 7. Spatial rationale: Exhibition 3

The figure illustrates the conceptual circulation around Heaven via light floating bridges.

Adam (AS) sent to earth:

Adam (AS) lived alone in Heaven for a certain period, when he perceived a vacuum in his life. Accordingly, Allah created Eve (AS). Adam (AS) was overjoyed in finding a companion, and they were allowed to live in Heaven and partake of all its contents except for one tree, the partaking of whose fruits was forbidden. (Muhammad: 2001, p.14-32).

Satan found an opportunity of misleading Adam (AS) and Eve (AS), and deceptively convinced them that the prohibited tree was the “tree of eternity”. Upon hearing this, the human weakness of forgetfulness overcame Adam (AS) and he forgot that the command of prohibition was given against that tree. (Muhammad: 2001, p.14-32).

Allah reproached Adam (AS) for his mistake. Adam (AS), unlike Satan, did not begin debating with Allah, and admitted his mistake. The cause of his error was not obstinacy or rebelliousness, but forgetfulness. He implored Allah for forgiveness and he was pardoned. However, the time had come for Adam (AS) to fulfill the responsibility of vicegerency on earth. Based upon divine wisdom, the command to inhabit the earth for a specified period was given. (Muhammad: 2001, p.14-32).

Adam (AS) and Eve (AS) then lived on earth and had children who were then married to each other. Mankind soon began to expand into the different nations and tribes from thereon. (Muhammad: 2001, p.14-32).
The object of mentioning Adam (AS) is to firstly inform mankind of his origin, and to inform people that the Islamic perspective of man’s origin also began in this manner, similar to the Jewish and Christian narratives.

It is a basic article of the faith to believe in the “ismat,” or sinlessness of a prophet. Every prophet was thus divinely protected from even the intention of sin, since it was essential for the messengers to be free from all types of sin in order to present Allah’s message correctly and to guide mankind. However, the messenger’s were also human, and consequently made mistakes or forgot. This however, is different from sin, which is done with an intentional pursuit, contrary to forgetfulness or erring, which is done unintentionally. In other words, **Adam (AS) did not sin, but was innocent, and his humanness made him forget Allah’s command.** (Muhammad: 2001, p.14-32).

His innocence can be noted from the following versus of the Holy Qur’an:

“Satan caused the two, Adam and Eve to **falter.**” (Qur’an, 2:36).

“**Satan whispered to him.**” (Qur’an,7:20).

“We took an oath from Adam before, but **he forgot** it and We did not find him of determination.” (Qur’an, 20:115).

“Adam did not fulfill the command of his Sustainer and **he erred.**” (Qur’an, 20:121).

This goes for all the prophets, who were divinely protected against sin, but however, did make mistakes, which were not sins. This law and logic of Islam, elevates the status of the prophets, and indicates that they were perfectly suited to their task, since they were divinely protected and assisted. (Muhammad: 2001, p.14-32).

Design rationale: Exhibition 4- Adam (AS)

This space was decided to become a part of the overall space for exhibition 3, thereby allowing the viewer to reflect where Adam (AS) originally resided, and his new abode upon the earth. The space was decided to portray Adam (AS) and his wife as two glass columns, with their names inscribed within them. This would thereby highlight the origin of mankind upon earth, originally stemming from these two individuals.

Fig. 8. Sketch of Adam’s descent to earth from Heaven



Fig. 9. Exhibition 2 and 3 demarcated (in red)

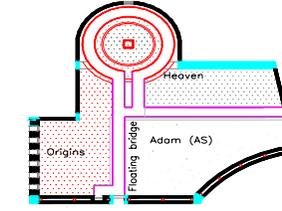
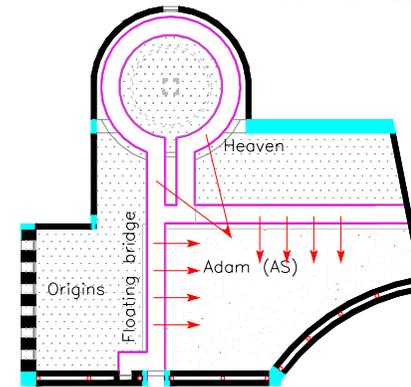


Fig. 10. Spatial rationale: Exhibition 4

The figure alongside illustrates Exhibition space’s 2,3 and 4 as one, since all three exhibition spaces relate strongly to the beginnings of creation. The floating ramp, illustrated in pink, begins to descend after circling Heaven, and brings one totally ‘down to earth,’ to depict Adam (AS) who was sent down to earth from Heaven



Noah (AS):

With some reservations, according to the experts on lineage, and narratives from the Torah, the lineage of Noah (AS) as follows:

"Noah (AS), son of Lamik, son of Matushalih, son of Akhnukh, son of Yarud, son of Mahlil, son of Qaynan, son of Anush, son of Adam (AS)." (Muhammad: 2001, p.34).

Before the advent of Noah (AS), people had replaced the Almighty with man-made idols. "Pagan worship had become the norm of the people." (Muhammad: 2001, p.35).

Noah (AS) was sent to guide his nation, and he invited his people to the true religion. His people ridiculed at him and rejected his message, except for a few, who were mostly of the poor of his nation. (Muhammad: 2001, p.36). "...**very few believed with him.**" (Qur'an, 11:40).

"The leaders of the disbelievers among his people said: 'We see nothing in you but a human like us and we see only the most despised amongst us following you...'" (Muhammad: 2001, p.37).

"Indeed We sent Noah to his nation with the command: 'Warn your nation before a grievous punishment afflicts them'.

He said: 'O my people! I am a clear Warner to you that you should worship Allah, fear Him and obey me...'

He said: 'O my Sustainer! I have invited my nation day and night, but my propagation only increases their flight. Every time I invited them so that You forgive them, they placed their fingers in their ears, covered themselves with their clothes, became obstinate and arrogant. Thereafter I spoke to them in public and private. I said: 'Seek forgiveness form your Nourisher. Indeed He is most forgiving'. (Qur'an, 71:1-10).

"They said: 'O Noah! You have quarreled with us and increased your dispute. If you are truthful, bring that which you are promising us.' (Qur'an, 11:32).

"It was revealed to Noah that none of his people will believe except those who have already embraced Islam. So do not grieve any longer on their actions." (Qur'an, 11:36).

When Noah (AS) realized that it was no deficiency in his propagation, but that the fault lied with the people, he supplicated to Allah:

"O my Sustainer, Do not leave any disbeliever on the surface of the earth. If you happen to leave them, they will mislead your servants and beget only wicked and ungrateful offspring." (Qur'an, 71:26, 27).

Allah accepted Noah (AS)'s supplication, and he was instructed to prepare an ark: ***"Construct the ark under Our protection and according to Our revelation. Do not address Me on behalf of the oppressors, for they are about to be drowned."*** (Qur'an, 11:37).

When he began constructing the ark, the disbelievers began jeering at him: "When we are drowning, you and your followers going to be saved on this ark? What a foolish thought!" (Muhammad: 2001, p.35-55).

Noah constructed the ark and saw the first sign of the bubbling of water from the earth. Thereupon he was given the divine command to embark on the ship with his followers and a pair of all the animals. The sky was ordered to pour forth its rain and the earth was ordered to let the water gush out. (Muhammad: 2001, p.35-55).

Noah (AS) supplicated to Allah: ***"O my Lord, indeed my son is of my family and your promise is true. You are the most just of all sovereigns."***

Allah replied: "O Noah, he is not of your family. His deed is incorrect. Therefore do not ask Me that of which you have no knowledge. I advise you, lest you become of the ignorant."

He (Noah) said: "O my Lord, I seek refuge in you from that of which I have no knowledge. I will become of the losers if you do not forgive me and have mercy on me."

It was said: "O Noah, alight with peace from Us and blessings upon you and those who are with you." (Qur'an, 11:45-48).

It thus became apparent to Noah (AS) that the promise of rescue was based upon belief and faith and not family relations. (Muhammad: 2001, p.35-55). His son announced in the distance: ***"I will seek refuge on a mountain which will protect me from the water."*** (Qur'an, 11:43).

Upon hearing this, Noah (AS) proclaimed: ***"Today there is no protector from the command of Allah except the one whom He has mercy on."*** (Qur'an, 11:43). A wave intervened and his son was drowned. (Muhammad: 2001, p.35-55).

When the divine punishment terminated, the ark settled on mount Judi, and the passengers of the ark safely stepped onto land once again. Noah is thus referred to as "the second father of mankind." (Muhammad: 2001, p.35-55).

Design rationale: Exhibition 5- Noah (AS)

After Noah (AS) was informed that the remaining disbelievers would never believe in him, we notice a turning point in the life of Noah (AS), as he prays not for the guidance of the disbelievers, but for their destruction. This culminated in the destruction of the disbelievers, and the escape of the believers via an ark. The ark was thus considered as a means of portraying the turning point in Noah (AS)'s life. Following this concept, water was introduced into the space, and a timber plank was placed at its center, thereby literally depicting the historical event. The timber plank was decided to be submerged into the water, held up by thin cables, in order to depict the feeling of floating. For further effects, the water would bubble, and little jets of water would be released from the ceiling.

By using the above-mentioned elements as a background, a suitable spatial setting was created. It was decided to use minimal text and graphics, and to rely more on sound effects to narrate the events leading to the escape with the ark.



Fig. 11. Initial sketch depicting a timber plank floating in water, held by cables springing from the walls.

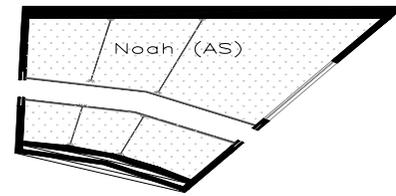


Fig. 12. Final plan of Noah (AS)'s exhibition space.

Abraham (AS):

His lineage according to the Torah is as follows:

"Abraham (AS), son of Tarikh, son of Nahur, son of Saruj, son of Ra'oo, son of Faleh, son of Abir, son of Shaleh, son of Irfkishaz, son of Sam, son of Noah (AS)." (Muhammad: 2001, p.95).

According to the Torah, Abraham (AS) was from the area of Aur in Iraq. He belonged to the tribe of Faddan who were idol worshippers. According to The Gospel of St. Barnabas, Abraham (AS)'s father was a carpenter, who made idols and sold them. (Muhammad: 2001, p.95-96).

From the very outset, Abraham (AS) had a firm conviction that these man-made idols could neither benefit nor harm, and could never be deities. "When he was conferred the mantle of prophet hood, this was the first aspect to which he turned the people's attention to". (Muhammad: 2001, p.97).

Abraham (AS) consequently addressed his nation:

"Behold!" he said to his father and his nation. "What are these statues to which you are so assiduously devoted?"

They said: "We have found our fathers worshipping them."

He said: "Undoubtedly you and your forefathers have been in manifest error."

They said: "Have you brought us the truth or are you one of those who mock?"

He said: "Nay, your Lord is the Lord of the heavens and the earth and He is the one who created them. I am a witness to that". (Muhammad: 2001, p.97).

On another occasion, he is reported to have said: "O nation! How can you worship idols which you make with your own hands? Are you in such a dream of negligence that you construct idols with wood, and if the idol is not made according to your wishes you break it and make another one? You regard these man-made idols as gods that can neither benefit nor harm. Refrain from such futility and accept the unity of Allah." (Muhammad: 2001, p.108).

"Abraham's nation began disputing with him. Abraham asked, "Are you disputing with me regarding Allah." He also said at another juncture, "I have turned my attention to the one who created the heavens and the earth. I am not of the polytheists." (Muhammad: 2001, p.112).

"One day, during his conversations with the people he said in passing to them: 'By Allah, I will conspire against your idols in your absence.' Very shortly thereafter, the people had an auspicious day of celebration. Whilst busy reveling in their celebration, Abraham (AS) proceeded to the largest idol in the temple: 'Will you not eat? What is the matter with you that you do not speak?' Then he turned upon them striking them with the right hand. He smashed them to pieces except the largest one so that they could refer to him as to what had happened. When the people returned, they asked: 'Who has done this to our gods? He is indeed an oppressor.' Some of the people said: 'We heard a youngster by the name of Abraham talking about them.'

They said: 'Bring him before the eyes of the people in order that they may bear witness.' When he was brought forth, they asked: 'Are you the one that did this to our gods, O Abraham?' He said: 'Nay, the largest one of them all has perpetrated this sin. Ask them if they can speak.'

They turned to themselves and said: 'Surely you are the ones in the wrong.' Then they were confounded with shame and said: 'You know full well that these idols do not speak.' Abraham (AS) then reproached them and gave them advice in the following manner: 'Do you then worship things besides Allah which can neither benefit nor harm you? Fie upon you and the things you worship besides Allah. Have you no sense?'" (Muhammad: 2001, p.114).

Instead of listening to Abraham (AS)'s advice, they became enraged and were deciding what to do about the matter. *Namrud*, the king at that time, soon came to know of the incident, and realized that if Abraham (AS) continued propagating, it would make all the subjects rebel against his godhood and authority. Abraham (AS), despite the slogans of enmity and a dreadful punishment in store for him, carried on his propagation. *Namrud* and his people captured Abraham (AS), and built a special place in which they lit a fire for several days. The fire was so intense that it scorched all the things around it. When they were completely satisfied that Abraham (AS) had no way of surviving, they flung him into the fire by means of a catapult. Allah ordered the fire to cool down and be a means of contentment for Abraham (AS). He emerged completely unscathed by the fire. (Muhammad: 2001, p.116).

"When Allah saved him from the fire and disgraced his nation, he decided to migrate to another place to continue his mission of propagating the truth. He said: 'I am going to my Sustainer. Soon He will guide me.'" (Muhammad: 2001). In this way he emigrated, and continued his propagation until he reached Egypt. The King of Egypt at that time became certain that Abraham (AS) was an accepted servant of Allah, and went to the extent of handing over his daughter Hagar (AS) to Abraham (AS). According to the custom prevalent at that time, Hagar (AS) would be a servant and assistant to Abraham (AS)'s elder wife, Sara (AS). (Muhammad: 2001, p118).

Hagar (AS) soon fell pregnant and gave birth to Abraham (AS)'s first child, Ishmael (AS). Sara (AS) was extremely perturbed at the birth of Ishmael (AS), since she was the first and elder wife. Consequently she told Abraham (AS) to remove Hagar (AS) and her son from her sight. This request hurt the feelings of Abraham (AS), however he was then told by Allah that it would be more expedient for him to do as Sara (AS) requested. (Muhammad: 2001).

Abraham (AS) thus took Hagar (AS) and his infant son, Ishmael (AS) and left them, as he was divinely commanded, with a packet of dates and a water-bag, in a barren and desolate place, approximately where the current well of Zam-Zam is located. (Located in Mecca, Saudi Arabia). After some time their sources became extinguished, and the situation deteriorated. Hagar (AS) ascended to the nearest hill, *Safa*, in the hope of seeing someone or finding some water. Then she rushed back to the child, who was now restless due to the extreme thirst being experienced. Thereafter she ascended to the opposite hill, *Marwa*. She repeated this procedure seven times, when upon the final ascent she heard a gurgling sound. Water came gushing out of the earth, close to where the child was located. She began enclosing the water due to the tremendous force

with which it was coming out, saying '*zam-zam*' or 'stop-stop'. For this reason the well became known as the well of *Zam-Zam*. Consequently, when Muslims perform the obligatory pilgrimage, they run up *Safa and Marwa* as part of a ritual, in commemoration of the event. Hagar (AS) then drank water and breast-fed Ishmael. During this period, birds began to fly to the newly found water, and the passing tribe of Jurhum, saw the birds flying, and assumed their destination to be water. They soon settled at the well, and took Hagar (AS) and her infant into their tribe. (Muhammad: 2001).

As time passed, Abraham (AS) would frequently come and visit his family. One day he had a dream in which he was commanded by Allah to sacrifice his son. Since the dreams of prophets are true, he immediately began to carry out the order of Allah. He first mentioned the dream to his son, Ishmael (AS), who replied: "O my father, do as you have been commanded to. By the will of Allah, you will find me of the patient ones." (Muhammad: 2001, p.118-123).

Abraham (AS) found his son willing and tied his hands and feet. Then he sharpened his knife and made Ishmael lay down and began to slaughter. The revelation immediately dawned upon Abraham (AS) that he had fulfilled the dream, and that this was indeed a test. Now he was ordered to sacrifice the ram which appeared next to him. This sacrifice was so thoroughly accepted by Allah, that today, Muslims throughout the world are compelled to practice it during the obligatory pilgrimage. (Muhammad: 2001, p.125).

Later in life, Abraham (AS) was commanded to build the Ka'ba. He mentioned this to his son Ishmael (AS), and thereafter both father and son began the construction. When they began digging, the foundations of the previous construction became evident. It is believed that Adam (AS) was the first to build the Ka'ba, although there has been no mention of this in the Qur'an. The Ka'ba is believed to be the first house erected to manifest the unity of Allah. As the Ka'ba was being constructed, and increased in height, Abraham (AS) began using a slab of stone, which he stood upon, to reach the higher portions of the Ka'ba. This stone is said to still bear the footprint of Abraham (AS), and can be found near the existing Ka'ba in a preserved casing, known as the '*Maqame-Ibrahim*,' or the footprint of Abraham (AS). (Muhammad: 2001, p.137-141).

Many centuries later, through the progeny of Ishmael (AS), the lineage of prophet hood was bestowed upon the Prophet Muhammad (SAW), the seal of the prophets. From the lineage of Ishmael (AS)'s step brother, Isaac (AS), the son of Sara (AS), came the lineage to many great prophets, amongst them being that of Moses (AS) and Jesus (AS). (Muhammad: 2001, p.147).

Design rationale: Exhibition 6- Abraham (AS)

Abraham (AS)'s life was characterized by many important incidences. Due to the limitation of space, it was decided that only one aspect of his life should be depicted. It was felt that the turning point in his life was his absolute faith in God, and his disgust towards the idols, which consequently led to him being thrown into a fire. With the divine protection of God, the fire could not harm him. From this point onwards we notice a change in his life: he migrated and was bestowed with the gift of prophet-hood.

The theme for this exhibition space was thus decided to depict the incident of the idols and the fire. For the idols, broken columns were used symbolizing his act of breaking the idols. The columns were decided to be made of concrete with the names of the prominent Gods of the time inscribed onto them. The fire was to be depicted as a void surrounding the entire perimeter of the space. This would highlight the isolation felt when he was being cast into the fire by his own community. The use of visual screens would portray blazing fire, whilst sound would be used to explain the narrative.

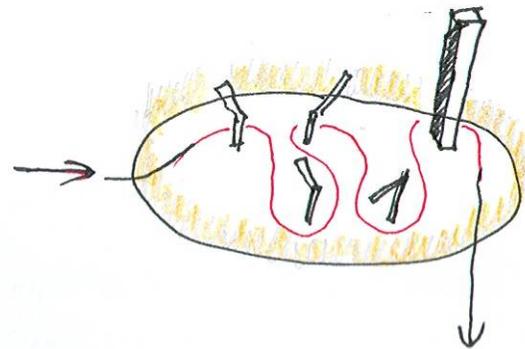


Fig. 13. Spatial rationale: Exhibition 6

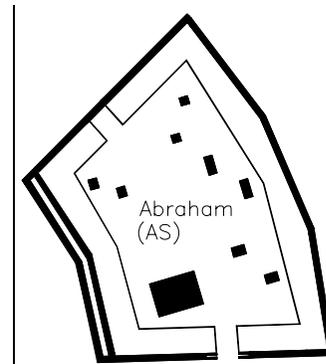


Fig. 14. Final plan: Exhibition 6

Moses (AS):

As indicated above, Moses (AS)'s lineage goes back to Isaac (AS), the son of Abraham (AS).

The Pharaoh of Egypt at the time of Moses (AS) was told by the fortune tellers, that his government would fall at the hands of an Israelite. It was perhaps this that caused him to dislike the Israelites in his land. The Pharaoh, in fear of the prophecy, passed the decree that all the male children of the Israelites should be killed. God assisted Moses (AS)'s mother during this fragile period and divinely inspired her to make a water-tight box and place the child in it, and thereupon to leave it in the Nile River. The box floated along and reached the royal banks of the Pharaoh's palace. The child was taken from the banks and the wife of the Pharaoh, upon seeing the baby, desired to adopt him. Thus Moses (AS) was brought up in the royal palace. He grew up to be particularly strong and brave. He noticed how the Israelites were being persecuted and oppressed, and this greatly disturbed him. (Muhammad: 2001, p.225-333).

Once he saw an Egyptian dragging along an Israelite for forced labor. The Israelite saw Moses (AS) and screamed for help. Moses (AS) in extreme anger punched the Egyptian. The enormity of his blow was so strong, that the Egyptian could not bear it, and died. Moses (AS) felt guilty for his action and supplicated to God to forgive him, since he had not meant to kill the Egyptian. Soon the news reached the Pharaoh, and he ordered the arrest of Moses (AS) for murder. In the meantime, a courtier of the Pharaoh, who had a particular liking for Moses (AS), informed Moses (AS) of the decree. He advised Moses (AS) to immediately emigrate. Moses (AS) accepted his counsel and quietly emigrated to Madyan, the land of his forefathers, without any companions or provisions. (Muhammad: 2001, p.225-333).

When he arrived at Madyan, he found a large crowd of people around a well, giving water to their animals. He noticed two women at a distance, preventing their animals from going towards the water. He immediately realized the oppression at stake: the women were weak, and had to allow the strong and mighty to complete feeding their flocks first. Moses (AS) could not bear this, and pushed through the crowd, lowered the pail into the well, and went to feed the women's flock of sheep. The crowd, although distressed, dared not confront Moses (AS), after witnessing that he had removed the pail of water himself. (Muhammad: 2001, p.225-333).

After the flocks had drunk water, the girls returned home and narrated the event to their ageing father. One of the girls returned shortly and informed Moses (AS) that their father intended to reward him for his services. Moses (AS) met the saintly elder, and after narrating his life story, he was offered a proposal to marry one of his daughters. His dowry would be to work for several years, and he accepted this proposal. (Muhammad: 2001, p.225-333).

"When Moses (AS) completed the period and traveled with his wife, he perceived a fire from the side of Mount Tur. He said to his wife: 'Wait here, I have discerned a fire. Perhaps I may bring a firebrand or I may find some guidance at the fire.'" (Muhammad: 2001, p.252).

Moses (AS) observed that it was a strange fire. Light could be seen on the tree but neither was it burning the tree nor was it being extinguished. Then he heard a voice saying: "O Moses, indeed I am your Lord. So remove your shoes. You are in the sacred valley of Tuwa and I have chosen you. Therefore listen attentively to whatever is revealed. He was the mantle of prophet hood and commanded to go to the Pharaoh of Egypt, to invite towards truth. Moses (AS) returned to his wife who was waiting for him. From here he immediately set off with his family to fulfill the order of God. (Muhammad: 2001, p.257).

Upon reaching Egypt, Moses (AS) secretly made his way home, whereupon he was met by his family. Moses (AS) requested of God to make his brother Aaron (AS) assist him in his mission, and this was accepted. The two brothers then went to the court of the Pharaoh, and Moses (AS) told him: "O Pharaoh, indeed I am a messenger from the Lord of the worlds. It is not suitable for me but to speak the truth. I have come to you with a clear proof from your Lord. Thus send the children of Israel with me." (Muhammad: 2001, p.263).

The Pharaoh retorted: "Did we not nurture you when you were a child and did you not spend many years of your life among us? And you committed a crime and were ungrateful."

Moses (AS) responded: "I committed it unknowingly. Then I fled from you when I feared you. My Lord has since granted me judgment and appointed me as a prophet."

(Muhammad: 2001, p.277).

The ruler of Egypt was not only a king but had the position of a deity of the sun. When Moses (AS) spoke about the lord of the universe the Pharaoh became interested to know which other deity there was beside him. (Muhammad: 2001).

"What is the Lord of the worlds?" Moses said: "He is the Sustainer of the skies and the earth and whatever is in between, if you have certainty. Pharaoh said to those around him, "Did you not hear?" Moses continued: "He is your Lord and the Lord of your forefathers." The Pharaoh said: "Indeed the messenger sent to you is insane." Moses said: "He is the Lord of the east and the west and whatever is in between, if you have any intelligence." (Muhammad: 2001, p.278).

These discourses between the Pharaoh and Moses (AS) continued during several sessions. The Pharaoh soon realized that the foundation of his godhood was weak in front of the truth which Moses (AS) propagated. His courtiers also realized this. In order to terminate this situation he said: "O Moses (AS), if you take anyone besides me as your deity, I will imprison you." Moses (AS) replied: "Even if I bring a clear sign to you?" The Pharaoh replied: "If you are truthful then bring it." (Muhammad: 2001).

During the era of Moses (AS), magic was an important constituent of the Egyptian sciences. The magicians held a high status and were consulted on all important aspects. Magic held a religious and lofty status. (Muhammad: 2001, p.279).

Moses (AS) stepped forward in front of the entire court assembly and threw down his staff. It immediately changed into a serpent. Upon drawing out his hand it changed into a shining star. The Pharaoh said to Moses (AS): "We can most certainly produce magic to match yours. (Muhammad: 2001, p.280). An agreement was reached that Moses (AS) and his brother would be given respite and were to appear before the entire community at the day of the 'festival'. (Muhammad: 2001, p.280).

The day of the festive had arrived. On the one side stood the magicians of Egypt and on the other, Moses (AS) and his brother, Aaron (AS). The Pharaoh was extremely confident that he could vanquish them with his magicians, whom he had promised great rewards.

Moses (AS) said to them: "Woe to you, do not ascribe falsehood to Allah. Otherwise He will uproot you with a punishment. Unsuccessful is the one that ascribes lies to Him." (Muhammad: 2001, 299).

It was agreed that the magicians should throw their staffs first. Suddenly their ropes and sticks turned into running serpents. Moses (AS) then threw down his staff, and it became a mighty serpent that swallowed all the other serpents. The magicians on witnessing this openly declared that this was a miracle and declared their faith in God, in front of the entire public community. When the Pharaoh saw that his plan had come to no avail, he became afraid that the Egyptian public would go against him. He defiantly exclaimed that it appeared as if the magicians were working together with Moses (AS) and that he was probably their teacher. The Pharaoh was however ultimately overawed by the spiritual power of Moses (AS), and he feared that Moses (AS) would create havoc in the whole of Egypt. He thus decided that it would be better to assassinate Moses (AS). (Muhammad: 2001, p.302).

Moses (AS) was however divinely forewarned about this, and was commanded to take the children of Israel to the land of their forefathers. Together with the assistance of his brother Aaron (AS), Moses (AS) led the Israelites, at night to the shores of the Red Sea. The Pharaoh's scouts informed him of what had transpired. The Pharaoh took a powerful army and reached the Israeli camp by the morning. (Muhammad: 2001, p.303).

Moses (AS) was commanded to strike the sea with his rod. The water split on both sides, and a road appeared in the middle. When the Pharaoh saw this he exclaimed: "Look at what I have done! Now you can go and capture the Israelites." (Muhammad: 2001, p.303).

Consequently, the Pharaoh and his entire army stepped into the sea. When every individual of the Israelites had reached dry land, the sea then returned to its normal state. The Pharaoh and his army were drowned. When the Pharaoh began drowning he called out: "Now I believe in the Being which the Israelites have believed in..." (Muhammad: 2001, p.304).

Moses (AS) gathered the people and told them to thank and worship God who saved them from a terrible doom. He then took his people on the road to Sinai. (Muhammad: 2001, p.305).

During his remaining life, Moses (AS) was given the Ten Commandments, and the Torah. He performed many miracles, and fought oppressors. According to the Torah, his birth was approximately 250 years after the demise of Abraham (AS), and he passed away at the age of a 120 years. (Muhammad: 2001, p.333).

Design rationale: Exhibition 7- Moses (AS)

The key points in Moses (AS)'s life could be said to be:

His narrow escape at birth

His escape through the sea, which was a turning point in the life of his people

Upon observation it was realized that both these aspects were related to water. This was then portrayed in literal terms, with his birth depicted by streams running adjacent to each other along the ground. This was then picked up by these streams transforming into the third dimension as large rectangular shafts of water enclosed in glass, to depict the parting of the sea. This simple play with water was chosen to be the background setting, whilst the narrative of his life and the 'Ten Commandments' would be explained via the use of sound, and transparent touch-screen media, so as to promote physical interaction with the space.

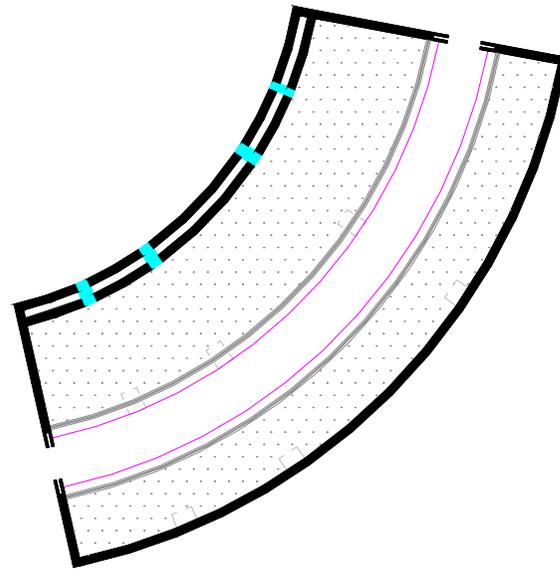


Fig. 15. Plan of Exhibition 7.

The plan depicts a central pathway amidst water, to symbolically relate to the theme of water in Moses (AS)'s life. This abstract display would be in keeping with the theme of abstractness and minimalism portrayed throughout, and symbolically depicts the life of Moses (AS), which was characterized by simplicity.

Jesus (AS):

The Prophet Zechariah (AS)'s wife's sister had a daughter named Hannah. She was married to Imran, a leader of the Israelites. For many years the couple remained childless. She turned to Allah and pleaded with Him for a child. In return, she would offer the child in the service of Allah. Allah granted her request; however, while she was pregnant, her husband passed away, and thus did not live to see his child, for whom he had so longed for. (Gemeiah: 2001, p.332-363).

Hannah gave birth to a girl, and named her Mary. Hannah, in reference to her promise, wrapped the baby in a shawl, and handed Mary over to the temple elders. To ensure that no one had access to Mary, Zechariah (AS) built a separate quarter for her in the temple. (Gemeiah: 2001, p.332-363).

As she grew up, she spent her time in devotion to Allah. Zechariah (AS) visited her daily to see to her needs, and so it continued for many years. One day Zechariah (AS) was surprised to find fresh fruit which was out of season in her room. Since he was the only person who could enter her room, he asked her how the fruit had gotten there. She replied that these provisions were from Allah, as He gives to whom He wills. From this, Zechariah (AS) understood the status of Mary in the eyes of Allah. (Gemeiah: 2001, p.332-363). The Holy Qur'an further supports her lofty status in the following manner: "Behold! The angels said: 'O Mary! God hath chosen thee and purified thee – chosen thee above the women of all nations.'" (Qur'an, 3:42).

One day, while Mary was praying in the temple, an angel in the form of a man appeared before her. Filled with terror, she tried to flee, praying:

"Verily, I seek refuge with the Most Beneficent, (Allah), from you, if you do not fear Allah."

The angel said: "I am only a Messenger from your Lord, (to announce) to you the gift of a righteous son."

She said: "How can I have a son when no man has touched me, nor am I unchaste."

He said: "So (it will be), your Lord said: 'That is easy for me: And We wish to appoint him as a sign to mankind and a mercy from Us, and it is a matter (already) decreed, (by Allah).'" (Qur'an, 3:47).

The angel's visit caused Mary great anxiety, which increased as the months went by. "How could she face giving birth to a child without having a husband? How could she prevent tongues from wagging about her honor?" (Gemeiah: 2001, p.340).

After some months, she could not bear the mental strain any longer. Burdened with a heavy womb, she left Nazareth, not knowing where to go. She had not gone far off, when she was overtaken by the pangs of labor. She sat down against a dry palm tree, when suddenly she heard a voice: *"Grieve not, your Lord has placed a rivulet below, and shake the trunk of this tree, from which ripe dates will fall. So eat and drink and regain the strength you have lost; and be of*

good cheer, for what you see is the power of Allah, Who made the dry palm tree regain life, in order to provide food for you." (Qur'an, 19:16-39).

After witnessing this, she began to gain calmness, and was sure of her innocence and purity. She decided to return to the city. She was however concerned how to explain this to the people. As if sensing the mother's worries, the baby began to speak, and told her to inform the people that she is fasting, and is thus not allowed to speak. With this miracle, she felt at ease. (Gemeiah: 2001, p.342).

As she had expected, her arrival in the city with a newborn baby aroused the curiosity of the people, who began scolding her: "This is a terrible sin that you have committed." (Jeremiah: 2001, p.344). She indicated that she was fasting and pointed to the child. To their total amazement, the child began to speak clearly, saying: *"I am Allah's servant. Allah has given me the Book, and has made me a prophet, and has blessed me wherever I may be, and has enjoined on me prayers and alms-giving as long as I live. He has not made me arrogant, nor unblest. Peace unto me the day I was born, the day I die and the day I shall be raised alive."* (Qur'an, 19:29-33). The people realized that this was a unique baby, and Mary could now stay in Nazareth without being harassed. (Gemeiah: 2001, p.344).

The following versus of the Qur'an boldly declare the Islamic beliefs concerning Jesus (AS), which might offend sensitive readers; however, one should bear in mind that the Qur'an is bold and straightforward in nature throughout its text, and thus no light-natured text could be found to portray the beliefs regarding Jesus (AS):

"Such is Jesus, son of Mary. (It is) a statement of truth, about which they doubt. It befits not (the Majesty of Allah) that He should beget a son. Glorified (and Exalted be He above all that they associate with Him). When He decrees a thing, He only says to it, 'Be'- and it is." (Qur'an, 19:16-39).

"And they say: 'The Most Beneficent (Allah) has begotten a son. Indeed you have brought forth a terrible evil thing, whereby the heavens are almost torn, and the earth is split asunder, and the mountains fall in ruins, that they ascribe a son to the Most Beneficent (Allah).'" (Qur'an, 19:16-39).

"But it is not suitable for the Most Beneficent that He should beget a son. There is none in the heavens and the earth but comes unto the Most Beneficent as a slave." (Qur'an, 19:16-39).

"O people of the Scripture, do not exceed the limits in your religion, nor say of Allah aught but the truth. The Messiah Jesus, son of Mary, was (no more than) a Messenger of Allah and His Word; which He bestowed on Mary and a spirit created by Him; so believe in Allah and His Messengers. Say not: 'Three (trinity)!' Cease. (It is) better for you; For Allah is (the only) One God; Glory be to Him. (Far Exalted is He) above having a son. To Him belong all that is in the heavens and all that is in the earth. And Allah is All-Sufficient as a Disposer of affairs." (Qur'an, 19:16-39).

"The similitude of Jesus before God is that of Adam; He created him from dust, then said to him: 'Be,' and he was." (Qur'an, 3:59).

As Jesus (AS) grew, he could tell his friends what kind of supper awaited for them at home, and what they had hidden, and where. (Gemeiah: 2001, p.344-363).

Jesus (AS) had grown up to manhood. It was Sabbath, a day of complete rest: no fire could be extinguished or lit, nor could females plait their hair: Moses (AS) had commanded that Saturday be dedicated to the worship of Allah. However, the wisdom behind the Sabbath and its spirit had gone. (Gemeiah: 2001, 344-363).

Jesus (AS) was on his way to the temple. Although it was the Sabbath, he reached out his hand to pick two pieces of fruit to feed a hungry child. This was considered to be a violation of the Sabbath law. He made a fire for the old women to keep themselves warm from the freezing air: another violation. He went to the temple and looked around. There were twenty thousand priests registered there who earned their living from the temple. Jesus observed that the visitors were much fewer than the priests. Yet the temple was full of sheep and doves which were sold to the people to be offered as sacrifices. Every step in the temple cost the visitor money. Jesus (AS) observed that the poor who could not afford the price of the sheep or the dove were swept away. The priests would burn the offerings, whilst thousands of poor people were hungry outside it. On this night, two noble prophets, John (AS) and Zechariah (AS) were killed by the ruling authority. It was on this night that the revelation descended upon him: He was commanded to begin his call to the children of Israel. To Jesus (AS), the pages of struggle had begun. (Gemeiah: 2001, 344-363).

Like an opposing force, the message of Jesus (AS) came to denounce the practices of the priests, and reinforce the Law of Moses (AS). In the face of a materialistic age, he called his people to a nobler life by word and deed. This exemplary life was the only way out of the wretchedness of his age. His call was marked by its complete uprightness and piety. It appealed to the inner soul, and not to a closed system of rules laid down by society. His calling was based upon the principal that there is no mediation between the Creator and His creatures. His calling was however in conflict with the priests' superficial interpretation of the Torah. He said that he did not come to abrogate the Torah, but to complete it, by going to the spirit of its substance to arrive at its essence. He was thus in conflict with the materialistic nature of his people. (Gemeiah: 2001, p.344-363).

His teachings annoyed the priests, for every word of Jesus (AS) was a threat to their position, exposing their misdeeds. The priests in the meanwhile began to plot against Jesus (AS) in numerous manners to embarrass him. Once they brought to him an adulteress and asked him: "Does not the law stipulate the stoning of the adulteress?" (Gemeiah: 2001). He realized that if he was going to apply the Mosaic Law, he would be destroying his own rules of forgiveness and mercy. He smiled and said: "Whoever among you is sinless can stone her." (Gemeiah: 2001, 344-363). His call was thus based upon mercy for the people, and he continued in this fashion.

Muslims believe that whenever a prophet performs a miracle, then it is not the power of the prophet which allows him to do so, but the power of God, whose permission has to be granted, in order to enable a prophet to perform a miracle. Jesus (AS), like the other messengers of Allah, was no different. The Qur'an further pronounces this fact clearly in the following verses: *"...and will make him (Jesus) a Messenger to the Children of Israel (saying): 'I have come to you with a sign*

from your Lord, that I design for you out of clay, as it were, the figure of a bird, and breathe into it, and it becomes a bird by Allah's Permission; and I heal him who was born blind, and the leper, and I bring the dead to life by Allah's permission. And I inform you of what you eat, and what you store in your houses. Surely, therein is a sign for you, if you believe. And I have come confirming that which was before me of the Torah, and to make lawful to you part of what was forbidden to you, and I have come to you with proof from your Lord. So fear Allah and obey me. Truly, Allah is my Lord and your Lord, so worship Him (Alone); this is the straight path." (Qur'an, 3:48-54).

Jesus went on with his mission until "vice knew that its throne was threatening to fall". (Gemeiah: 2001, p.357). "The forces of evil accused him of magic, infringement of the Mosaic Law, allegiance with the devil; and when they saw that the poor people followed him, they began to scheme against him." (Gemeiah: 2001, p.357). The highest judicial council secretly met to plot against Jesus (AS). The plan took a new turn: the decision was reached that the best way of getting rid of Jesus (AS), was to kill him. Since they had no authority to pass the death sentence at that time, they convinced the Roman governor that Jesus (AS) was plotting against the security of the Roman Empire and urged him to take immediate action against him. The governor ordered that Jesus (AS) be arrested. (Gemeiah: 2001, p.358).

According to the book of Mathew, Jesus (AS) was arrested and the council of the high priests passed the death sentence upon him. Then, they began insulting and spitting on him. He was then brutally beaten and then handed over to the soldiers for crucifixion. They took off his clothes and kept them. According to custom he carried his cross on his back to increase the suffering. Finally they reached Golgotha, outside the walls of Jerusalem. They then crucified him, together with two thieves. The faith of Islam differs regarding the last portion of Jesus (AS)'s life, and states that they did not kill Jesus (AS), nor did they crucify him. Allah saved Jesus (AS) from his enemies and raised him to Heaven. His enemies killed someone else, who was made to resemble Jesus (AS), through the order of Allah, as is revealed in the following verse:

"...we killed the Messiah Jesus, son of Mary, the Messenger of Allah' – but they killed him not, nor crucified him, but the resemblance of Jesus was put over another man; and those who differ therein are full of doubts. They have no (certain) knowledge; they follow nothing but conjecture. For surely, they killed him not: But Allah raised him up unto Himself; and Allah is Ever All-Powerful, All-Wise." (Qur'an, 4:157-159).

"...then the sects differed; so woe unto the disbelievers from the meeting of a great Day (i.e. the Day of Judgment)." (Qur'an, 19:16-39).

"How clearly will they see and hear, the Day when they will appear before Us! But the polytheists today are in plain error. And warn them (O Muhammad) of the Day of grief and regrets, when the case has been decided, while they are in a state of carelessness, and they believe not." (Qur'an, 19:16-39).

Muslims believe that Jesus (AS) was taken up to the heavens, but has not yet experienced death. Since every soul shall taste death, so too should Jesus (AS). This is then explained in his second coming, when he will come back to the world as a follower of the Prophet Muhammad (SAW), and will marry, have children, and will remain alive for a period of forty years.

Thereafter he will pass away, and the people will perform his funeral prayer, and bury him alongside the grave of the Prophet Muhammad (SAW). (Ali: 1999, p.14).

Aisha (RA), the wife of the Prophet Muhammad (SAW) says: "I said, O Prophet of Allah, I think that I might remain alive after you, so do permit me to be buried alongside you."

The Prophet (SAW) replied, 'How can I permit such a thing. Here will only be my grave, Abu Bakr's, (the first caliph), Umar's (the second caliph), and Jesus (AS)'s grave'."

(Ali: 1999, p.17).

The Prophet (SAW) is further reported to have said:

"By Him in whose hands is my soul, the time is near when Ibn Maryam (Jesus) will descend upon you; he will rule over you with justice...he will end all battles...," and he will kill 'Dajjal', commonly termed the 'anti-Christ' by the Christian world. (Ali: 1999, p.18).

"Jesus (AS) will descend on the white eastern minaret of Damascus...his hands will be resting on the shoulders of two angels...," and his descension "will be observed by all present there. He will descend from the minaret by means of a ladder...;" after witnessing this, "there is none among the People of the Book but will believe in him before his death."

(Ali: 1999, p.32).

"And remember Jesus, the son of Mary, said: "O children of Israel! I am the messenger of God (sent) to you, confirming the law (which came) before me, and giving glad tidings of a messenger to come after me, whose name shall be Ahmad."¹ (Qur'an, 61:6).

It wasn't some six hundred years after the ascension of Jesus (AS) that the Prophet Muhammad (SAW) was born in the heartlands of Arabia...the beginning of the seal of the prophet hood. (Gemeiah: 2001, p.363).

Design rationale: Exhibition 8- Jesus (AS)

The space of Jesus (AS) was decided to portray the following four essential Islamic beliefs:

- His miraculous birth: a beam of light shining down from the ceiling to the ground
- His ascension: a beam of light shining up from the ground towards the ceiling
- His second coming to the world: a beam of light shining down from the ceiling to the ground
- His demise: a beam of light shining up from the ground towards the ceiling

This simple manner of depicting the important Islamic beliefs regarding Jesus (AS) was chosen due to its repetitive and abstract nature.

Later in the design stage, the space was divided into two, with the space upon arrival depicting the above mentioned elements, whilst the second space, as an aside, would explain the symbolisms behind the beams of light, as well as offer a more detailed explanation. Sound was avoided in this section due to the sensitive nature of the topic, which could be taken in a negative light. A more subtle approach of using text against walls was thus implemented, bearing in mind that the intention was to welcome dialogue, and not to boldly shout out differences of beliefs.

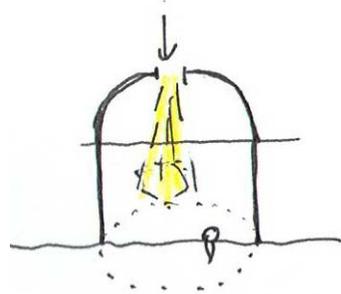


Fig. 16. Sketch depicting the miraculous birth, as well as second coming.

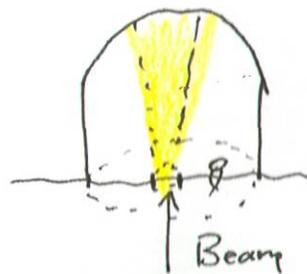


Fig. 17. Sketch depicting ascension and final demise.

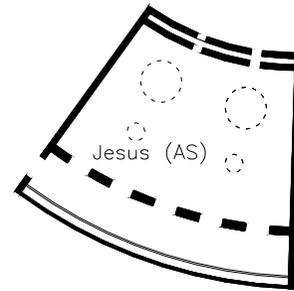


Fig. 18. Plan of Exhibition 8. The dotted circles represent sketches 16 and 17.

Thus a very abstract, minimalistic and simple space was defined as a background, whilst the narrative would be simply displayed along the walls.

Overall form of Building-A towards a later design stage:

The overall form for Building-A was as a result of designing from the inside-out. Noticeable are the heavy walls and volumetric forms which emphasize the Islamic character of the building, as well as make it suitable for better insulation. The resultant form is a plan generated from the central courtyard, which is shut-out from the outside world, and can only be experienced from the inside. The apparent dome façade created hides the sphere embedded within the cube, and thus further emphasizes the theme of designing from the inside-out. The building portrays geometry, repetition, rhythm and an overall spinning motif, within the confines of new materials, thereby depicting a new spirit and form of Islamic architecture.

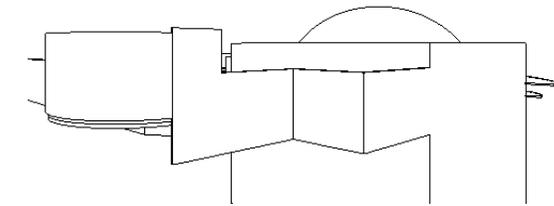


Fig. 19. Sketch perspective- Building A

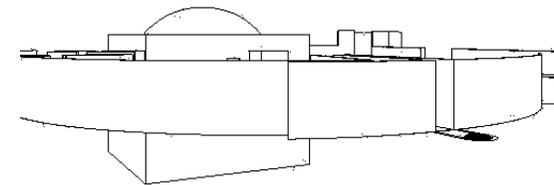


Fig. 20. Sketch perspective- Building A

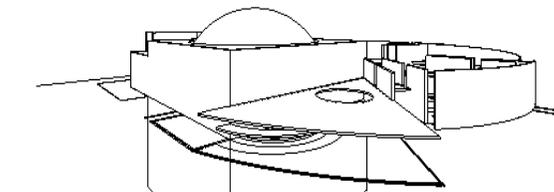


Fig. 21. Sketch perspective- Building A

The life of the Prophet Muhammad (SAW):

Acknowledgements of praise

- “He is to me the greatest mind among all the sons of Arabia...” (Ramakrishna: 1995, p.1).
- “The personality of Muhammad, it is most difficult to get into the whole truth of it. Only a glimpse I can catch...There is Muhammad, the Prophet, Muhammad the General, Muhammad the King, Muhammad the Warrior, Muhammad the Preacher, Muhammad the Philosopher, Muhammad the Statesman, Muhammad the Orator, Muhammad the Reformer, Muhammad the Refuge of Orphans, Muhammad the Protector of Slaves, Muhammad the Emancipator of Women, Muhammad the Judge, Muhammad the Saint. And in all these magnificent roles...he is like a hero.” (Ramakrishna: 1995, p.16).
- Reverend Bosworth Smith remarks: “Head of the State as well as the Church, he was Caesar and Pope in one; but, he was Pope without the Pope’s pretensions, and Caesar without the legions of Caesar, without a standing army, without a bodyguard, without a police force, without a fixed revenue. If ever a man had the right to say that he ruled by a right of divine, it was Muhammad, for he had all the powers without their supports. He cared not for the dressings of power. The simplicity of his private life was in keeping with his public life.” (Ramakrishna: 1995, p.19).
- “The most famous men created arms, laws and empires only. They founded, if anything at all, no more than material powers which often crumbled away before their eyes. This man Muhammad moved not only armies, legislations, empires, peoples and dynasties, but millions of men; and more than that, he moved the altars, the gods, the religions, the ideas, the beliefs and the souls.” (Ramakrishna: 1995, p.18).
- “...philosopher, orator, apostle, legislator, warrior, conqueror of ideas, restorer of one spiritual empire, that is Muhammad. As regards all standards by which human greatness may be measured, we may well ask, is there any man greater than he.” (Lamartine, *Historie de la Turquie*, Paris 1854, Vol.11pp.276-277).
- “In an age of barbarism, the battlefield itself was humanized and strict instructions were issued not to embezzle, not to cheat, not to break trust, not to mutilate, not to kill a minor child or a woman or an old man, not to hew down date or palm nor burn it, not to cut down a fruit tree, not to molest monks and persons engaged in worship. His own treatment of his bitterest enemies was the noblest example for his followers.” (Ramakrishna: 1995, p.21).
- “Muhammad was more than honest. He was human to the marrow of his bones. Human sympathy, human love was the music of his soul. To serve man, to elevate man, to purify man, to educate man, in a word, to humanize man – this was the object of his mission...In thought, in word; in action he had the good of humanity as his sole inspiration, his sole guiding principal.” (Ramakrishna: 1995, p.31).
- “He was most unostentatious and selfless to the core. What were the titles he assumed? Only two, Servant of God, and His Messenger; Servant first and then a Messenger.” (Ramakrishna: 1995, p.31).

a. Background and birth

The Ishmaelites, descendants of Prophet Ishmael (AS), renounced the religion of their ancestor and became idolaters. In the course of time they were split into a number of tribes of whom the Quraysh were most celebrated and noble. The Quraysh were delegated as the custodians of the Holy Sanctuary in Mecca, the Ka’ba, and were also responsible for looking after the pilgrims who mustered strong in Mecca every year for pilgrimage. The Quraysh were composed of a number of families, of whom the Hashimites were most prominent. Mecca at that time was along the commercial caravan trade route between Syria in the North and Yemen in the south. (Ashraf: 1999, p.2).

The ancestor of the Hashimites, Hashim, was a leading merchant of Mecca, noted for his generosity and large-heartedness. He was the chief of the town responsible for the administration of the different departments of the State. He had a son, known as Abdul-Mutallib, whom, like his father also rose to fame. As a trustee of the Ka’ba, his duty was to supply water to the pilgrims. He was also known to be the founder of the well of Zam-zam, after it had been buried for centuries by a tribe that was forced to leave Mecca upon their evil ways which they had adopted. (Ashraf: 1999, p.3).

Abdul Mutallib had ten sons, of whom Abu Lahab, Abu Talib, Abdullah, Hamzah and Abbas were famous. Of all his sons, Abdullah was the nearest and dearest to him. When Abdullah was seventeen years of age, he was married to Amina, a girl from the Banu Zahra family, also a clan of the Quraysh. A few months after his marriage, he passed away, leaving his wife pregnant. (Ashraf: 1999, p.5).

Amina gave birth to a son, who was named Muhammad, in the year termed as ‘The year of the Elephant’. The Arabs had termed this year as such, due to the tyrannical intention of Abraha, the Abyssinian governor, who had planned to attack the holy sanctuary via an army of elephants. However, this army was miraculously defeated, testifying to the Arabs, that God had taken action against those who planned to destroy His house, the Ka’ba. (Ashraf: 1999, p.6).

As it was the custom prevailing in Arabia at the time, the babies of noble families were to be brought up and weaned in the desert, away from the towns. Thus, Amina, the mother of Muhammad, gave her baby to Halima, from the Sa’d tribe of the Hawazin. Halima took the baby Muhammad to her village and nursed and brought him up. She returned him to his mother when Muhammad was six years old. (Ashraf: 1999, p.8)

Shortly thereafter, Amina went to Medina with her son, and stayed among her relatives. Upon her return journey to Mecca, she fell ill and passed away. The orphan Muhammad, bereft of father and mother, was then taken under the care of his grandfather, Abdul Mutallib. At the age of eight, his grandfather too passed away. He was then taken under the care of his paternal uncle, Abu Talib. (Ashraf: 1999, p.8)

Design rationale - Exhibition 9- Birth of Muhammad (SAW)

Due to the importance of the Holy Prophet (SAW) attached to the Faith, it was seen as desirable to distinguish his blessed birth from the rest of the Messengers. A dome was thus aptly suited for the task since it would portray numerous meanings from varying perspectives.

In essence the dome would:

- Symbolically portray a link to the spherical space designated to God. In this manner the Prophet (SAW)'s closeness to God would be depicted, thereby emphasizing his special status in the eyes of God in comparison to the other Messengers.
- Physically portray a junction for contemplation and admiration of perfection of form, and thereby make the space special
- Enhance the religious importance of the space
- Continue the legacy of an architectural form associated to the faith, and thereby celebrate the remembrance of the holy land of the Prophet (SAW).
- Link itself to the present dome placed over the sanctuary in Medina, wherein lies the grave of the Holy Prophet (SAW).
- Be the only natural light source in the space, thereby depicting the light of God upon the world with the birth of the Holy Prophet (SAW).

From a technical perspective, the dome would play a role in passive cooling, since it could allow glazed louvers to be placed along the circumference of its base, which could be opened in the summer, thereby perpetuating hot air to rise. From a fire regulation perspective, adequate ventilation for smoke evacuation would be catered for, which could be mechanically operable to open in the event of a fire.

The space was decided to be rather abstract and simple in keeping with the life of the Prophet (SAW), with text and graphics to cover the walls, thereby explaining the historical background of Arabia during the 6th century. Thus the dome would be the only architectural element in focus, thereby emphasizing the birth of the Prophet (SAW) as a key element to influence a sixth of the world's population to date.

Later on in the design phase it was decided that the birth of the Holy Prophet (SAW) should have a link with the reception foyer upon arrival, thereby blessing the individual to symbolically become attached to the Prophet (SAW) from the very onset of the experience.

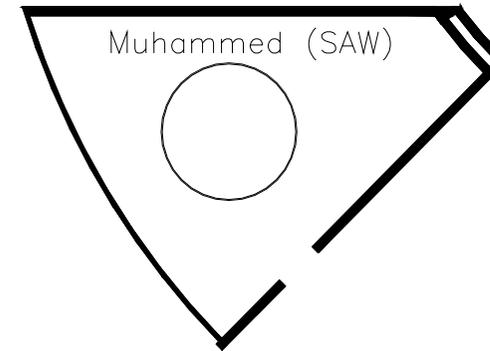


Fig. 22. Plan of Exhibition 9

Since the Muhammad (SAW) is viewed as the most beloved in the eyes of Allah, and is believed to be the last Messenger, his birth is depicted by a glazed dome in the southern sector of Building-A. By using a dome, it would symbolize closeness to God, since God was symbolized by using a spherical form. The space is abstract and bare, thereby emphasizing the effectiveness of the dome placed at centre.

(This section refers to Building-B, and is thus developed in detail, as per brief stipulation).

b. Early life:

Abu Talib loved his nephew dearly, but was not a man of much wealth. Thus Muhammad's early life was not free from the burden of labor, and as a child, he took to tending flocks and herds in order to pay his keep: a familiar path, it seems, to those intended to fulfill the role of prophet hood. When he grew up, he began to take an interest in the business of his uncle, who was a trader by profession. (Ashraf: 1999, p.10).

The people of Arabia were hopelessly divided into a large number of warring camps. They took up arms against one another and continued their hostilities for years together. A simple illustration of this would be the tribes of Bakr and Taghlib, who remained tied up in wars for forty years, without a shadow of justification. Due to these constant tribal feuds in Arabia, none regarded his life and property safe. The weak and helpless were entirely at the mercy of the strong. (Ashraf: 1999, p.12).

During the early life of the Prophet (SAW), the Ka'ba had been severely damaged due to a recent flooding. The inhabitants of the Ka'ba decided to rebuild it. When its construction was completed, members of the different tribes began to quarrel with regards to the placement of the Black Stone, a stone believed to be sent down from heaven during the era of Prophet Abraham (AS): each tribe wanted the honor of placing the Black Stone back in its place along one of the higher corners of the Ka'ba. The quarrel took so serious a turn that a war was imminent. An aged member of the Quraysh proposed that the dispute should be decided by the first one to enter the Sanctuary. The first man to walk in was Muhammad. Every one was pleased that he had entered, for they knew that he was fair and just in his dealings. After hearing the problem at hand, Muhammad affected a compromise among the rival claimants in an amicable manner. He called for a cloth and asked the leaders of the four tribes to each hold a corner of the cloth, onto which the stone was placed. The four leaders together raised the stone, and Muhammad himself eased it into its rightful position. In this manner, he had solved a war-threatening event into a peaceful and united process. (Ashraf: 1999, p.14).

The nobles amongst the Quraysh were generally merchants by profession. As aforementioned, Muhammad gained much experience in trade with his uncle, Abu Talib, and took to commerce. He soon became renowned for his trustworthiness and honesty, and his business thrived with success. In a time when trust was rife, people would trust him more than their own kith and kin, and would leave their valuables and possessions with him for safe keeping. His unflinching faithfulness and stern sense of duty and justice thus won him the title of 'al-Amin', or 'the trustworthy,' both at home and abroad. A rich and noble widow of Mecca, Khadeeja by name, hearing all about his good qualities, decided to hire him for the sale of her commodities in Syria and other places abroad. She found him to do her business so fairly and honestly, that she proposed to him in marriage. (Ashraf: 1999, p.15).

Muhammad, a young man of twenty five, accepted the proposal of Khadeeja, a widow of forty. They were happily married, and Muhammad continued his business for some time, but he gradually began to get inclined towards seclusion and meditation. He was greatly moved by the sad plight of his people who were engrossed in constant quarrels, immoral deeds and inhumane activities. They were a people who had little respect for the weak, the orphans and the widowed. They were addicted to heavy drinking and frivolity. Because of the important status given to sons, many fathers practiced the evil custom

of burying their daughters alive at birth. At the root of all evils lay polytheism, the cult of worshipping idols, which was practiced by almost everyone. The everlasting religion and legacy of Abraham (AS), the worship of one true God alone, had been buried and forgotten. Over the years, some 360 idols and statues had been installed in and around the holy Ka'ba, worshipped as lords and intercessors. "But Muhammad (SAW) was an exceptional figure; he did not take part in any of this," (Ashraf: 1999, p.17-25).

Design rationale: Exhibition 10- Early life

Since many years of the Prophet (SAW)'s early life was characterized by herding sheep, (which was also a familiar trait of the lives of the other Messengers), the theme of this room was decided to emphasize this by employing longitudinal concrete blocks to lie horizontally on the ground to represent the sheep, whilst the background of the internal walls would be characterized by the mountainside whereupon the flocks were herded. A digital screen with surround sound effects would portray the early life, whilst the concrete blocks would serve as seating whilst viewing.

Towards the later stages of the design it was decided to:

- Include pockets of skylights above the concrete blocks, thereby depicting the light of God upon the actions carried out by the Prophet (SAW) during his early life.
- Glaze the space along its internal walls, thereby providing an internalized building, celebrating the internal environment with the Ka'ba as its primary focus within a central void. This theme was then chosen to be characteristic of all exhibition spaces, thereby creating a central journey of pilgrimage around the Ka'ba. This theme was further implemented due to its many technical advantages with specific regards to lighting, internal communication and ventilation criteria, as will be discussed later.

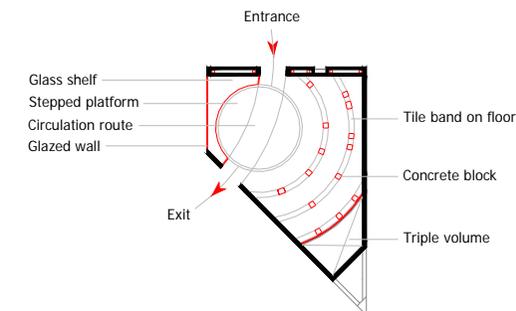


Fig. 23. Plan of Exhibition 10

The plan displays a rhythm stemming from the circular glass shelf, passing through to the floor tiles and circulation route, and onto radial tile bands. Radially placed upon the tile bands are concrete blocks for people to sit on, whilst viewing the transparent screen.

c. The cave of Hira:

It became a custom of Muhammad to spend a month every year in a cave, known as the Cave of Hira, a few miles away from Mecca. One night, whilst absorbed in his meditation in the cave, the angel Gabriel descended upon him with the words: "Read!" Muhammad was so overawed by the sight of Gabriel that he began to tremble and replied: "I cannot read". The angel repeated: "Read!" Muhammad had never learnt to read or write, and once again he replied: "I cannot read". (Ashraf: 1999, p.35). The angel began: *"Read in the name of thy Lord, Who created man from a clot of blood; Read, and thy Lord is the most generous. Who taught man (the use of) the pen. Taught man what he knew not."*

On hearing this divine call, he became afraid and returned home, relating to his wife what had transpired. She consoled him and said; "You help the poor, you support the needy, you relieve the debtors and you do many other good acts, so God will never desert you." (Ashraf: 1999). Khadeeja then she went to her cousin, Waraqah bin Naufal, who had been well versed in the Torah and the Gospel. Hearing the news he proclaimed: "This is the same message that was revealed to Moses." (Ashraf: 1999, p.38-39).

The religion which the Prophet (SAW) preached was Islam, which literally means peace and submission to the Will of Allah. Islam consists of unconditional resignation to Allah and His commands. The following are the articles of faith in Islam:

- Belief in the Oneness of God
- Belief in the angels
- Belief in the Prophets of God
- Belief in the Scriptures of God
- Belief in the Day of Judgment

The fundamentals of Islam are summed up in the declaration: "There is none worthy of worship except Allah, and Muhammad is the Messenger of Allah." (Ashraf: 1999, p.43).

Design rationale: Exhibition 11- First revelation

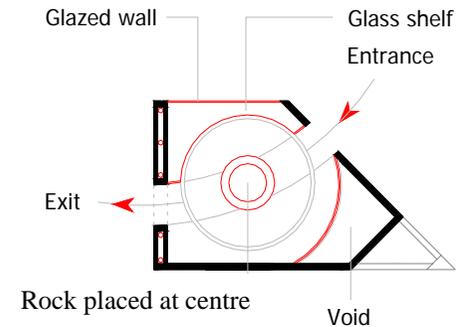


Fig. 24. Plan rationale: Exhibition 11

Since the first divine inspiration was experienced in a cave, it was decided that this space should depict a 'cave-like' experience, with a rock placed at its center. The rock would bear the inscription of the first verses of the revelation, which could glow against the overall darkness and starkness of the room. Thus no natural lighting would accompany this space, thereby allowing the Qur'anic words to illuminate the room, and thereby symbolically illuminate the brilliance of the Qur'an.

d. First believers:

As the Arabs had been shrouded in ignorance and had been addicted to idolatry and all kinds of vices, it was quite natural that they resented the Prophet (SAW)'s call. The first believers were his wife, a few friends and family. Up until now the Prophet (SAW) preached Islam to those closest to him. Thus for a period of three years the religion was preached privately, sometimes with success, and at others times, without. (Ashraf: 1999, p.44-68).

e. Public declaration of the religion:

"O you wrapped up. Arise and deliver thy warning..." (Qur'an, 74:1-2), which woke Muhammad (SAW) from his sleep. Breathing heavily, and sweating profusely, his wife Khadeeja, approached him gently to go back to bed and have some rest. His answer was: "O Khadeeja, the time for sleep and rest is over. Gabriel has commanded me to warn the people and call them to God and his worship. Whom should I call? And who is going to respond to me?" (Ashraf: 1999, p.74).

After three years the Prophet (SAW) was commanded to declare the religion openly and publicly. Standing on the mount of Safa at Mecca, he called out to the Quraysh, and asked: "Would you believe me if I say that there is an army behind the hill intending to attack you." "Yes," was the unanimous reply, "as we have always found you speaking the truth." (Ashraf: 1999, p.75). Then the Prophet (SAW) delivered the message of Islam, and informed them that he was a messenger of God. Hearing this, the chiefs of the Quraysh left the scene, followed by the rest of the gathering. His own uncle, Abu Lahab, had cursed him, saying: "May you perish!" (Ashraf: 1999, p.75). The Prophet (SAW) however continued his preaching, paying no heed to the resentments of the infidels. After years of knowing him as truthful and the most kind and honest amongst them, he was

now subjected to all kinds of persecution by the Quraysh. One has to bear in mind that the message Muhammad preached was the unity of God. The Quraysh on the other hand were involved in polytheism. Thus Muhammad's message was directed against their Gods, their cultural beliefs and ideals. It was this that they could not tolerate. Despite their hatred towards his message, they knew him to be the most truthful and honest, as it can be noted from their remarks: *"O Muhammad we do not call you a liar, but we deny Him who has given you a Book and inspired you with a Message."* (Ashraf: 1999, p.76).

"They thought he was possessed...but the best saw that a new light had dawned upon him and they hastened to seek that enlightenment." (Ramakrishna: 1995).

All the forces of aggression were arrayed against him and the believers, but they stood undaunted in their resolve.

At this juncture, it would be important for me to illustrate the Arabian customs and their policy with regards to chieftaincy. The Quraysh chiefs, as was customarily the practice, could offer protection to any person, and this would render the individual seeking protection to be safe from any type of physical harm. Since the Prophet (SAW) was family to the Quraysh, any of his uncles could stand guarantee for his protection. It had ordinarily been Abu Talib's concern to issue protection for the Prophet (SAW), since the Prophet (SAW) had been under his care from his early days. Since no one could harm the Prophet (SAW) due to his protection by a chief, namely his uncle, no physical harm could befall him. This did not mean that he couldn't be mocked or jeered at, but physically, he was safe. The Qurayshite chiefs, as a last attempt even went in as body to his uncle, Abu Talib, and requested that he disassociate himself from his nephew, or face terrible consequences. However, Abu Talib never withdrew his protection over his nephew, even though it placed him in a difficult position. (Ashraf: 1999, p.89).

Frustrated in their attempts to coerce the Prophet (SAW), the Qurayshite chiefs adopted a new strategy: they tried to induce him. They sent a leader of the Quraysh who addressed the Prophet (SAW) as follows:

"O Muhammad! What is the use of dividing the people of the land? If you desire supremacy and power, we are willing to acclaim you as our leader; if you hanker after riches, we are prepared to place the entire wealth of the town at your disposal; and if you desire to marry a lady of the noblest family we are ready to procure the same for you, provided that you stop preaching your religion." (Ashraf: 1999, p.91). The Prophet (SAW) was not moved by any of these offers and recited some verses from the Holy Qur'an, inviting the people to accept the religion of God.

f. The sad plight of the believers:

Islam was making headway slowly but steadily, and many were touched by Muhammad (SAW)'s message, some of which belonged to notable tribes, but yet most of the chieftains were still hostile to the new religion. When the Qurayshite leaders realized that all their threats and inducements could not deviate the believers from their faith, they adopted more repressive measures against them. The slaves who embraced Islam were the worst sufferers in this respect, as they were entirely at the mercy of their cruel-hearted masters, who would torture them in order for them to renounce their faith. Renowned examples of this sort are the cases of Bilal and Khabab. Bilal, a slave and a new convert to Islam, was made to lie on the burning sand of the desert at mid-day, with a rock placed on his bare chest, yet he would consistently utter, "The One, the One," in order to

indicate that whatever atrocities were placed onto him, he would never renounce his faith in the Unity of Allah. (Ashraf: 1999, p.95).

"Khabab bin Adi was put to death in a cruel manner by mutilation and cutting off his flesh piecemeal. In the midst of his tortures, when asked whether he did not wish Muhammad in his place...the sufferer cried out that he was gladly prepared to sacrifice himself, his family and children and all to save Muhammad from a prick of a thorn...Is not the intense faith and conviction on the part of the immediate followers of Muhammad, the noblest testimony to his sincerity and to his utter self-absorption in the task assigned to him?" (Ramakrishna: 1995, p.28).

"If these men and women...had perceived the slightest sign of earthliness, deception, or want of faith in the Teacher himself, Muhammad's hopes of moral regeneration and social reform, would all have been crumbled to dust in a moment." (Ramakrishna: 1995, p.29).

Others, who had no chieftaincy protection, as well as those who were family to the leaders of the Quraysh, were also mercilessly abused to recant their faith.

g. Emigration to Abyssinia: (5th year of the Mission)

When the Prophet (SAW) realized that the plight of some of the believers had become unbearable, he permitted them to migrate to Abyssinia. The King of Abyssinia, the Negus, welcomed them into his land. Being enraged by this, the Qurayshite sent two representatives to the King, sending gifts and requesting him to return the Muslims on the plea that they were culprits. The King asked the believers to explain their position, and was told:

"O King, we were an ignorant people worshipping idols, eating the dead, committing sins and oppressing the neighbors. Brother tortured brother, and the strong swallowed the weak. Meanwhile, one from among us appeared on the scene, of whose nobility, truthfulness and honesty we had been fully aware. He preached the right religion and enjoined on us to worship one God, to give up idolatry, to speak the truth, to abstain from oppression, to stop the misappropriation of the properties of the orphans, to treat well our neighbors, to avoid accusing chaste ladies of infidelity, to offer prayers, to keep fast and to give alms; We acknowledged this man as an Apostle of God, and acted up to his teachings. For this reason our own people have become our worst enemies. They compel us to give up this man and go back to the previous state of affairs." (Ashraf: 1999, p.147).

The King then asked to hear some of the recitation of the Qur'an, to which the opening verses of the Chapter of Mary was recited to him. The King was deeply impressed, and said: "By God, the Qur'an, the Bible are the rays of the same light." (Ashraf: 1999, p.153). He then told the two spokesmen of the Quraysh to return, as he would not deliver the oppressed to them. A few more Muslims, after hearing the kindness of the Negus migrated and took shelter in Abyssinia. (Ashraf: 1999)

h. Abu Talib's pass:

In the seventh year of the mission, all the non-Muslim families of the Quraysh entered into an agreement among themselves cutting off all connections with the Muslims. This agreement was hung up in the Ka'ba. Abu Talib, the Prophet (SAW)'s uncle, together with the believers, took refuge in a pass. As a result of the agreement, all intercourse with the believers was stopped, and many of them went without food or water for days. Some ate the leaves of trees, whilst yet others remained

content with the boiled leather of their shoes. Children in vain cried for milk and food. Thus lived the Prophet (SAW) and the Muslims for three years, when some of the infidels took compassion on the oppressed and cancelled the agreement. (Ashraf: 1999, p.155-188).

i. The year of sorrow:

The believers returned from the aforementioned pass to their houses. After some time, the Prophet (SAW)'s uncle, Abu Talib, passed away. His chieftaincy protection had now been lifted, and his uncle, Abu Lahab, to whom the chieftaincy protection was given to, had not taken to the faith, and was unwilling to protect him. Simultaneous to this, his affectionate wife, Khadeeja also passed away. These two bereavements, coming in quick succession, have given rise to this year, being termed as the 'year of sorrow'. With the death of these two influential supporters, the difficulties of the Prophet (SAW) increased enormously, and the infidels emboldened to molest him openly. (Ashraf: 1999, p.205).

The Prophet (SAW) was once engaged in prayer in the Ka'ba, when an infidel put his cloth round his neck to strangle him. Abu Bakr, his close friend and companion, saved him, but he was beaten profusely for his lending assistance in the defense of the Prophet (SAW). Mud was thrown upon the Holy Prophet (SAW), thorns were spread in his path, obstructions were placed in his daily prayers, and the intestines of a camel were flung over him. Despite these and other atrocities, they could not shake the iron-will of the Prophet (SAW). He remained undaunted and unbending, and his followers did the same, and never flinched in their duty. (Ashraf: 1999, p.207).

j. Visit to Ta'if:

Being disgusted with the treatment of the Qurayshites, the Prophet (SAW) went to Ta'if, forty miles away from Mecca, in the hope of inviting the leaders of the town to the religion of Allah, but none responded. They mocked and jeered at him, and whilst he was leaving, the leaders of the town instructed the young boys to molest him. They volleyed him with stones until he bled profusely. This barbaric treatment continued until he was able to take refuge in a garden just outside the town. In the meanwhile, an angel appeared before him, and informed him that at his command, Allah would destroy the entire town. The Prophet (SAW) responded in the negative, saying that if they do not accept the truth now, maybe their progeny would become believers in time to come. (Ashraf: 1999, p.210).

Design rationale: Exhibition 12- The year of sorrow

This space in essence represents a time when the Prophet (SAW) was saddened by the hostile attitude of the people towards his message and towards those that had accepted the faith, as well as the demise of his anchor pillars of support, namely his beloved wife and uncle. The only ray of hope was the kind-hearted gesture by the King of Abyssinia. The overall theme of this space was thus rationalized as follows:

- The space was to have a downward gradient, in order to reflect the sadness of the Prophet (SAW).
- Two pillars would represent the moral support of the Prophet (SAW)'s wife and uncle. These pillars were later changed to be of glass for his wife, and of solid concrete for his uncle. This stems from the fact that his wife was a believer, and his uncle had supported him, but had not accepted the faith. The pillars would bear the inscriptions of their names, thereby allowing viewers to understand the symbolism behind the columns
- The kind gesture of the Abyssinian King would be the major source of light entering the room, indicating the hope within these gloomy early stages
- The lowest and darkest portion of the room would depict the attitude of the people of Ta'if, and would be characterized by text and graphics on the wall within this sector

Later on this space was altered to a ramp going down, thereby suitably catering for symbolic interpretation as well as the functional requirement of physically moving people from the second floor to the first floor level.

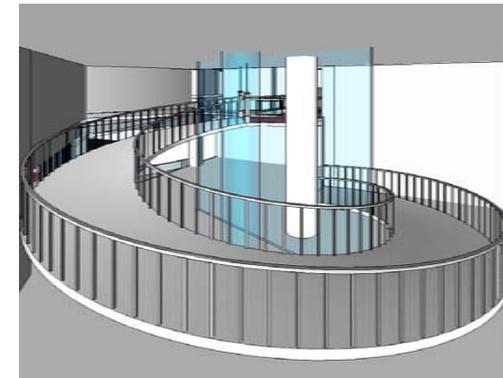


Fig. 25. Internal ramp perspective: Exhibition 12

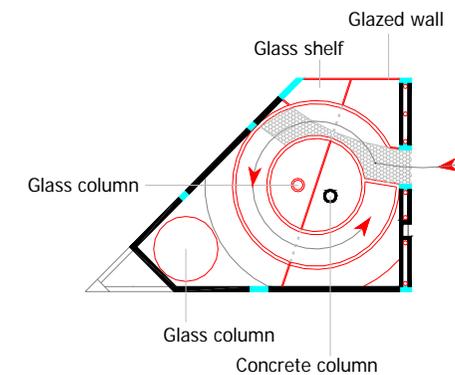


Fig. 26. Plan: Exhibition 12

After the death of his uncle and beloved wife, as well as the recent assault he had faced at Ta'if and the hostility of the Quraysh towards him and the believers, the Prophet (SAW) was greatly saddened. Allah thus bestowed him with a great gift, known as Me'raj. This was a privilege bestowed upon him, whereupon he was taken on a night journey, from the Sanctuary in Mecca, to the al-Aqsa Mosque in Jerusalem, thereupon he ascended to the heavens, where he met all the Prophets of the past, including, Adam (AS), Abraham (AS), Jesus (AS) and Moses (AS). He was then taken to a point, whereupon the angel Gabriel, who had accompanied him, informed him that he could go no further. The Prophet (SAW) then went past the region of "The Lote Tree," as described in the Qur'an, and spoke to Allah directly. He was then given the gift of five times daily prayers, and then descended back to Mecca within the same night. When he expressed this miracle the following morning to the people, they mocked and jeered him. As a proof of his journey, he told the people of the caravans which he had seen along his journey, which would be approaching the city in the weeks to come, as well as a detailed description of the Mosque in Jerusalem. To his companions he described some details of heaven and hell, as well as the new gift of the prayers. (Ashraf: 1999, p.212-217).

Design rationale: Exhibition 13

This space was decided to portray three elements:

- The firm faith of the believers, maintaining their belief in this miraculous event, for which the disbelievers particularly ridiculed and jeered at them. This firm faith could thus manifest itself into the first pillar of the faith, which distinguished the believers from the disbelievers. A glass column bearing the inscription declaring the first pillar of the faith would thus symbolically reflect their conviction and unbending resolve.
- The gift of the five prayers: unlike all the other Islamic injunctions, this injunction was personally delivered to the Prophet (SAW). Symbolically, the space was decided to reflect this as five glass columns, terminating as protruding skylights, thereby depicting this gift as descending from God. The glass columns would bear the names of each prayer within a thin solar absorbent filament, which would glow in the dark, thereby creating a uniquely different experience at night. The glass columns, arrayed along a circular time dial, would inform the viewer about the particular times allocated for each prayer.
- The link to Jerusalem: this stems from the historical and religious importance of Jerusalem, as well as indicates the first stopping station of the *me'raj*, and the first qibla for the five prayers, which was initially Jerusalem. Symbolically, a glass column was decided to represent Jerusalem, with the name of the Holy Jerusalem Mosque inscribed within it.

In terms of lighting, the space would thus be illuminated via the many glass columns. The luminance of the glowing filament would cater for lighting at night. This theme was later adopted into all glass columns, thereby perpetuating night visits in order to perceive the spaces within a different setting.

In terms of ventilation, the glass columns would be punctured with small circular holes, thereby allowing hot air to vent via the verticality of the columns, and to the outside via a mechanical louver system.

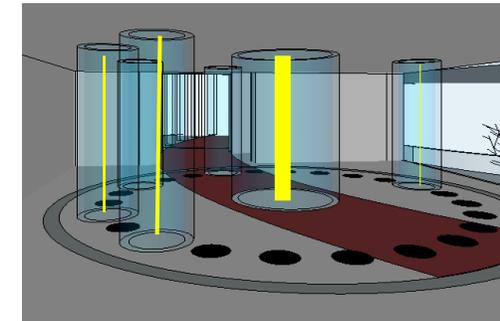


Fig. 27. Internal perspective- Exhibition 13
Illustrates the glass columns arranged along a circular dial in order to depict the times of prayer. The central pillar is symbolic of the first article of faith.

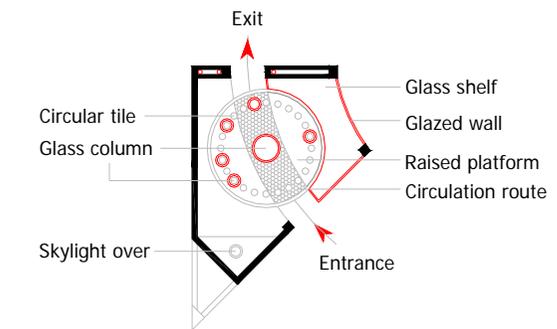


Fig. 28. Plan rationale- Exhibition 13

Aus and Khazraj of Medina:

After the miraculous incident of *Me'raj*, the Prophet (SAW) began to tour among the various tribes of Mecca, to once again preach the message of Islam. On the occasion of pilgrimage, people from all parts of Arabia used to assemble at Mecca, and the Prophet (SAW) availed himself of this opportunity of inviting them to the religion of Islam. The two famous tribes of Medina, the Aus and the Khazraj, were the first people outside Mecca to come under the sway of Islam. They had long been expecting a prophet in Arabia. At the first meeting with these people six men accepted Islam. In the following year, twelve men accepted him as the Apostle of God. The Prophet (SAW) then sent one of his companions with them on their return to Medina, to propagate Islam, and to explain its teachings to the people. Within a period of a year, a considerable number of people accepted the divine message. By the following year, seventy-two men of Medina came forth to declare their faith in him. It was at this meeting, commonly known as the 'Oath of Aqabah,' whereupon the people of Medina offered the Prophet (SAW) to accompany them back to their land, since the situation in Mecca had severely begun to threaten the lives of the Prophet (SAW) and his fellow companions. The Prophet (SAW) thus appointed twelve preachers to preach Islam in Medina, pending his migration in a short while to come. (Ashraf: 1999, p.227-233).

k. Emigration to Medina:

Finding shelter at Medina, the believers began to migrate singly or in groups with the permission of the Prophet (SAW). When all the believers had left, excepting his close and bosom companion, Abu Bakr, as well as his cousin Ali, and some women and children, the Prophet (SAW) intended to leave for Medina. The chiefs of Mecca however became profusely enraged at the successful conclusion of the 'Oath of Aqabah,' and began to plot against the Holy Prophet (SAW) in a manner never undertaken before. All the chiefs elected an assassin from each tribe, with the intention that all twelve assassins would simultaneously attack the Prophet (SAW). In this manner, the blame of the murder of the Prophet (SAW) would be put on the heads of all the chiefs, and anybody waging war would have to fight the entire Quraysh. This would indeed be an impossible task, and according to Arabian custom, the blood money would then be given as a contribution to settle the affair. Through divine inspiration and assistance, the Prophet (SAW) was pre-warned of the plot, and managed to leave Mecca with Abu Bakr. As soon as the Meccans realized that the Prophet (SAW) had already left Mecca, a vigorous search was made, and a reward of a hundred camels was declared upon the capturing of the Prophet (SAW). After many days, the Prophet (SAW) and Abu Bakr safely reached Quba, three miles outside the precincts of Medina, where he was warmly received. Here, the Prophet (SAW) laid the first foundations of a Mosque – the first Mosque in the history of Islam. He then proceeded to Medina. The people of Medina were overjoyed at this blessing which God had graced upon them. The entire town stood in rows, waiting upon his arrival. The women and children began to sing songs of rejoicement as he entered the town. All the people of Medina, young and old, rich and poor, surrounded the Prophet (SAW), each imploring him to be their guest. The Prophet (SAW) however thankfully refused their offers, adding that his camel was under divine instruction, and therefore he would stay wherever it stopped. The camel stopped near the house of an Abu Ayyub, which became the Prophet (SAW)'s place of residence for the next seven months to come. (Ashraf: 1999, p.236-238).

The people of Medina welcomed Islam with open arms to such an extent, that they sacrificed all their possessions and belongings in the way of God. They shared their wealth, houses and families with the Meccan emigrants, and were thus given the title of 'Ansar,' or 'helpers' of the faith by God himself. (Ashraf: 1999, p.238).

After thirteen years of persecution, the Prophet (SAW) and the believers obtained shelter. The first task to be fulfilled was the erection of a Mosque, where everyone could assemble in congregation and say prayers. The Prophet (SAW) himself helped in constructing the Mosque, which became known, until this very day, as 'The Mosque of the Prophet.' The Mosque comprised of a courtyard surrounded by mud walls and covered with the branches of palm trees. Close to the Mosque, a few rooms were also built for the accommodation of the Prophet (SAW) and his family. The Mosque also had a special section in the courtyard for the poor and homeless, known as the 'Ahlus-sufaa.' These people spent a great deal of time in learning, reading, writing and memorizing the sayings of the Holy Prophet (SAW). They earned their meager livelihood by collecting firewood and selling it to the people of the town.

Initially, the qibla wall of the Mosque faced Jerusalem. This was done in order to create reconciliation and unity with the Jews of Medina, but later, when matters turned unfavorable, the Prophet (SAW) was commanded by Allah to ultimately change the qibla towards the Sanctuary in Mecca. The new qibla wall was accordingly altered. (Ashraf: 1999, p.241-242).

Design rationale: Exhibition 14

It was decided that this space should portray three aspects:

- **The emigration to Medina:** it was initially decided to represent the emigration via a tunnel, which would depict the feeling of moving from one location to another. Later, this was reverted to a glass tunnel, in order to portray the help of God during this journey. Towards the later design stages, it was decided that the movement from one exhibition space to another could be said to be a journey from one aspect of the Prophet (SAW)'s life to another. With this in mind, coupled with the influence of the use of repetition and symmetry, all links between exhibition spaces were characterized via glass tunnels, to depict the overall concept of journeying from one incident towards another. Thus the emigration in particular, depicted via the same medium began to lose its effect as a physical journey in retrospect of symbolically similar spaces. In order to emphasize the physical as separate from the symbolic, an inscription and a change of glass-type was implemented.
- **The welcoming gesture of the people of Medina:** was chosen to be simply depicted via glass columns, arranged in a similar manner as the people of Medina stood when welcoming the Prophet (SAW), in rows side by side, and adjacent to each other. Eight columns were chosen, four on either side, bearing the names of the eight most prominent supporters of the Prophet (SAW). (The columns would follow the general description for glass columns mentioned in Exhibition 13).
- **The erection of the Mosque at Medina:** the erection of the Mosque established the first Muslim community. The importance of the qibla, and the consequent global focus towards one location symbolically represented the unity of the Muslim *ummah*. To symbolically depict the Mosque of Medina, the historical activities and functions of the Mosque were analyzed, and the following criteria assisted in establishing the essence of the space:
 - The Prophet (SAW) housed the poor in the Mosque: This was decided to be represented via columns against the back wall of the exhibition space, with the names of the prominent people amongst the poor highlighted in a text form. The location towards the back portion of the space is not due to their lack of importance, but reflects their actual location within the Mosque of Medina.
 - The Prophet (SAW) held his own quarters within the side flank of the Mosque. His quarters were characterized by small rooms, one for each of his wives. This was decided to be represented in a similar fashion as the above-mentioned example, with the names of his wives, contained between columns backed against the side flank of the exhibition space.
 - The change in qibla resulted in a physical alteration of the Medina Mosque. Furthermore, the qibla remains to this day as the fundamental feature of Islamic architecture, which influences the orientation and ultimately the design of the Islamic world. The essence of the qibla, depicted physically is the resultant *mehrab*. (Please refer to Section A, pg for more details). Thus it was decided that the qibla should be physically represented via a semi-circular wall, as well as a raised platform with a carpet finish, to distinguish the sanctity of the Mosque, as well as to emphasize prayer, and more specifically the associated qibla direction.

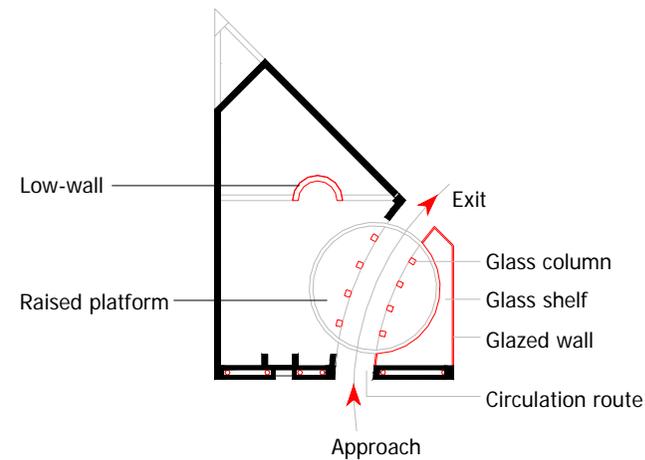


Fig. 29. Plan rationale: Exhibition 14

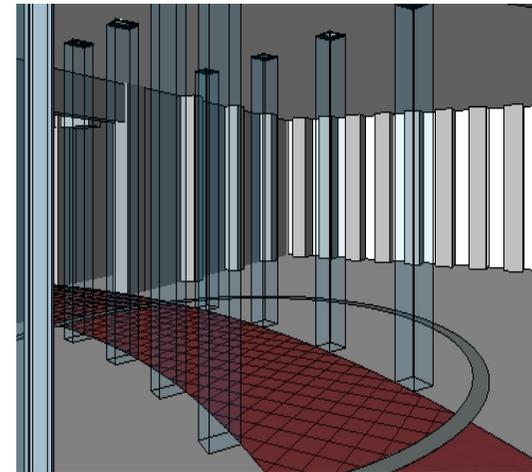


Fig. 30. Internal perspective- Exhibition 14

I. Enemies of Islam:

The Quraysh of Mecca were enraged by migration of the Prophet (SAW). They felt embarrassed and feared that the whole of Arabia would soon come to know what had transpired, and might feel that they were incompatible to maintain the sacred sanctuary, and might face possible replacement via another tribe. The Quraysh also feared that if the religion of Islam flourished, the days of their pagan ways would be washed away. For these, as well as fears of the interruption of their caravan routes bypassing Medina, they began plotting against the believers from within Medina, via other tribes. The believers also faced an internal crisis within Medina: many proclaimed to be believers, but were essentially hypocrites, pending to wait and observe which side their bread was buttered; others were secretly annoyed at the arrival of the Prophet (SAW) in Medina – such being the supporters of Abdullah bin Ubayy, who was previously being contemplated as being declared the King of Medina. Some of the surrounding tribes were also wary of the coming of the Prophet (SAW) with a new religion to restore the 'old ways.' Circumstances such as these resulted in the first battle of Islam, known as the 'Battle of Badr.' (Ashraf: 1999, p.245-269).

m. The Battle of Badr:

Totally in self defense, the Prophet (SAW) and his companions, prepared for battle. They numbered some three hundred men, and were poorly equipped, with a few privileged to have conveyances to ride upon, and a lack of swords. The opposing army mustered a stronghold of a thousand men, fully armed for battle. The opposing army was determined to wipe out this small force once and for all. With the divine help of God, the believers came out victorious. This was indeed a strong blow to the Quraysh, and a strengthening exercise of faith for the believers.

For the first time in Arabian history, the prisoners of war were treated like brothers. The believers provided them with better food and clothes than what they could afford for themselves. The rich prisoners were released on payment of ransom, whilst the poor were set free without any payment, with the literate among them required to teach ten children how to read, before being released. (Ashraf: 1999, p.273-277).

n. The effects of the victory:

"To the Arabs who would fight for forty years at the slightest provocation...the Prophet of Islam taught them self-control and discipline...he taught the Arab barbarians to pray, to pray not individually but in congregations, to God Almighty...even amidst the dust and storm of warfare. Whenever the time of prayer came...the congregational prayer could not be abandoned or even postponed. A party had to be engaged in bowing their heads before God while another was engaged with the enemy. After finishing prayers, the two parties had to exchange their positions." (Ramakrishna: 1995).

The victory at Badr was a turning point in the history of Islam. Not only did it strengthen the position of the Muslims but it also imbued them with a will to fight for the cause of truth and inspired them with self confidence to survive all the ordeals to come. The new religion also began to exert its character as a unification combination of state, church and the spiritual aspects of human life. The believers were now rising in power, and the entire Arabia, witnessing this, began to militarily prepare for the future. (Ashraf: 1999, p.278-279).

Design rationale: Exhibition 15

It was decided to allow this space to abstractly depict the battle-scene, and illustrate the events leading to the battle as a text form, depicted along glass planes. This theme of depicting background information along glass panels was later implemented throughout the entire scheme, so as to create a consistent theme, and thereby allow geometry, rhythm and repetition to take their natural course in the design process.

The battle scene was chosen to be described via the use of columns, continuing the theme of glass columns to symbolize believers, whilst non-believers were to be portrayed via concrete columns. This theory stems from the symbolism behind the hearts of the believers, who were enlightened, in contrast to the hearts of their enemies, whose hearts were hard and cruel. After observing the statistics of the battle in terms of numbers, namely, one thousand against three hundred, it was decided to

depict this in its simplest fraction, that being ten against three. Thus ten concrete columns are arranged facing three glass columns. The proportions of the concrete columns to the glass columns are depicted as the sum of smaller proportions with being larger in number in contrast to the sum of larger proportions being smaller in number. The overall volumetric area of the glass columns would thus be greater than the overall area of the concrete columns, even though the concrete columns are larger in number. This would symbolically depict the spiritual strength of the believers in contrast to the disunited and spiritual lacking of their opposition.

The internal finishes of the room were decided to be raw and exposed, characteristic of the rough texture of timber floated plaster finishes. In essence this was chosen to depict the difficult times at hand, and later on, this theme was chosen to reflect an aesthetic character of all exhibition spaces throughout the scheme. This further plays on the theme of contrasting the internal and external paradigms, the former characteristic of a rough texture, and the external presenting a smooth texture in the form of regular paneling. This theme of contrasting internal and external elements was then further developed throughout various aspects of the design, as will be discussed later.

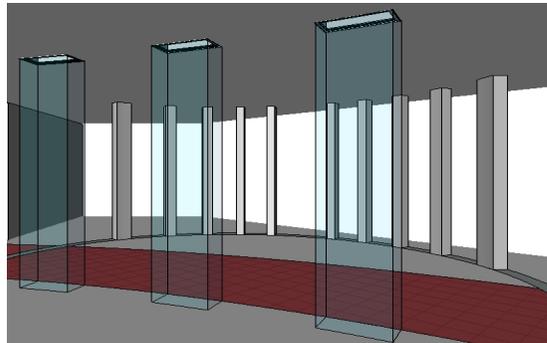


Fig. 31. Internal perspective- Exhibition 15

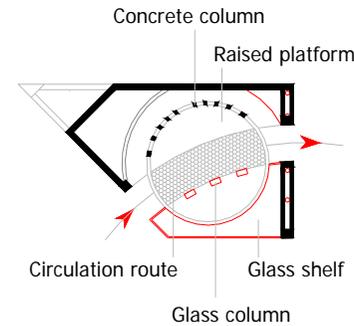


Fig. 32. Plan of Exhibition 15

o. The battle of The Trench:

The Qurayshites were filled with sorrow and shame at their defeat, and swore to take vengeance the following year, resulting in the Battle of Uhud. This battle was not victorious to either side, and resulted in a wide onslaught against the believers, as the Quraysh, together with all their allies throughout Arabia, schemed to annihilate Islam from the face of the earth. Mass preparations were underway, and soon, an army of ten thousand, backed with further reinforcing to come, marched towards Medina. The believers were totally outnumbered, and stood no chance against such a mighty force. An emigrant Persian, Salman Farsi, suggested to the Prophet (SAW) that they should build a trench around the city. The Prophet (SAW) accepted this proposal, and the entire community of Medina assisted in digging this mighty trench. The battle thus became known as 'The battle of the Trench.' (Ashraf: 1999, p.322-356).

The enemies approached, and the believers stood as guards on the opposite side of the trench, attacking anyone who attempted crossing the trench. Since the trench was deep and wide, the enemies were forced to a halt: no horse could bridge this gap, and no human valuing his life dared to cross it. Many attempts were made to cross, but these were in vain, as the boldest of the infidels were immediately put to death. On the believer's side however, there was a limited amount of resources, which soon ran out as they stood guarding the trenches day and night. Eventually, when the hardships became almost un-bearable upon the believers, Allah sent a terrible wind, blowing the desert sand in all directions. The believers took refuge in the town, whilst conditions for the enemies, whom had pitched their tents alongside the borders of the town, became unbearable. This led to them finally giving up hope, and withdrawing from the battle scene, under the harsh desert winds in their midst. It was after this battle that the believers dealt with the hypocrites within Medina, since they had taken sides with the Quraysh during the siege. The hypocrites were consequently expelled or killed, depending upon the nature of their deeds. (Ashraf: 1999, p.322-356).

Design rationale: Exhibition 16

A similar theme of using columns to depict the believers and the enemies was chosen. The further complexities of this battle gave rise to the different orientation of the columns. Within this example, the believers are represented via a single glass column, totally surrounded by concrete columns to depict the surrounding opposition in their large numbers. The single glass column further depicts the unity of the believers, against the seemingly united enemy front, whose actual unity was based upon material strengths, in contrast to the spiritual strength. The help of God in the form of wind is depicted as a skylight above, subtly allowing light to penetrate the space. The boundaries of Medina were decided to be depicted via a special floor finish, in contrast to the surrounding floor finish of exposed screed. An opposition group rose within Medina, consisting of hypocrites and traitors; thus the allocation of the three concrete columns within the boundaries of Medina.

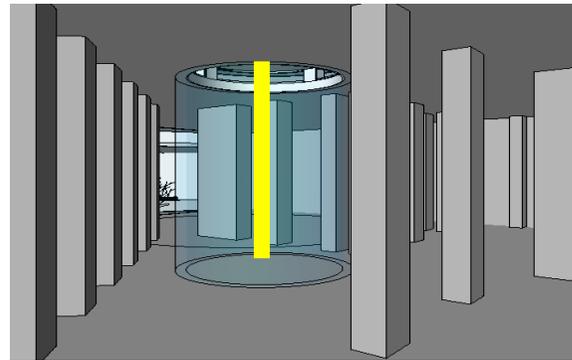


Fig. 33. Internal perspective- Exhibition 16

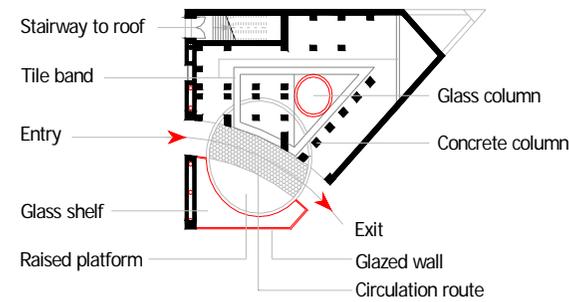


Fig. 34. Plan rationale- Exhibition 16

p. The Treaty of Hudaibiyah:

The sacred month of pilgrimage dawned upon the believers. The Prophet (SAW), together with 1400 men marched towards Mecca, to perform their pilgrimage rights according to the new faith they possessed. The Prophet (SAW) forbid them from carrying any weapons, since they were not going to fight, but to pay homage to the Holy Sanctuary. When the Qurayshites received the news, they hurriedly got an army together. The Prophet (SAW) sent one of the companions to inform the Quraysh that they had not come to fight, but to perform pilgrimage in peace, and that it would be better for them to come to some sort of negotiations as regards to this. A representative, Urwah by name, was sent by the Qurayshite envoy, to negotiate for them. Urwah was so immensely impressed by the companion's devotion to the Holy Prophet (SAW), that he returned to his fellow Qurayshites, remarking: 'O Quraysh, I have seen the great courts of Kisra, Ceasor and the Negus, but by God, I have never seen any man loved by his people as much as Muhammad is loved by his companions. If he makes ablution, they would not let the water fall on the ground, and if he speaks, the entire community remains the embodiment of attention.' (Ashraf: 1999, 362-363).

Carlyle in his book, Heroes and Hero-Worship, states: "They were wild men, bursting ever and anon into quarrel, into all kinds of fierce sincerity; without right worth and manhood, no man could have commanded them. They called him Prophet, you say? Why, he stood there face to face with them; bare, not enshrined in any mystery; visibly clouting his own cloak, cobbling his own shoes; fighting, counseling, ordering in the midst of them: they must have seen what kind of a man he was, let him be called what you like! No emperor with his tiaras was obeyed as this man in a cloak of his own clouting." (Ramakrishna: 1995, p.19).

For some time negotiations continued, but in vain. The Prophet (SAW) sent another messenger, who was then attacked by the Quraysh; however, he managed to escape. The Quraysh thereafter sent a body of soldiers against the believers, but they were repulsed, and those who were taken prisoners were let off. At last the Prophet (SAW) sent his son-in-law, Uthmaan (RA). It was soon rumored that he had been murdered. The believers were so angered by this, that they took a pledge under a tree, to avenge the death of Uthmaan (RA), and would fight to death. This pledge became known as 'The pledge of Ridwaan.' The rumor, however, proved to be false, but as a result, the Quraysh were impressed at the strong devotion of the believers, and became subdued for peace, which opened the way for the final negotiations, known as 'The Treaty of Hudaibiyah'. This treaty was concluded to be in effect for ten years. The treaty weighed heavily against the believers; the bulk of the believers were dissatisfied, but when the Prophet (SAW) accepted them, they had no choice but to agree. The treaty had one advantage however; it allowed the free intermingling of the believers with the non-believers, and as a result the way was paved for many to become touched by the noble character of the believers and the Prophet (SAW). (Ashraf: 1999, p.364-377).

q. Invitation letters to Kings:

Back in Medina, the Prophet (SAW) addressed the congregation in the Mosque as such: "O people, God had sent me as a blessing to all mankind and now time has come that you should spread this blessing among the people of the world." He then selected some messengers and sent them with his letters, among other rulers, to the Kings of Abyssinia, Persia, Rome and Egypt inviting them to Islam. The Negus, King of Abyssinia accepted Islam. The Kisra of Persia lost his temper and tore the letter to pieces. When the Prophet (SAW) heard this he remarked that Allah would likewise tear his empire into pieces. Maquqas, the King of Egypt, did not embrace Islam, but gave a courteous and polite response and sent gifts back to the Prophet (SAW). Heracleus, Emperor of Rome, on receiving the letter, sent for some Arabs to enquire about the new religion. Coincidentally, Abu Sufyan, the deadly opponent of Islam from amongst the prominent Quraysh, had been there on business. He was sent to the royal court and the following conversation took place:

Heracleus: "What kind of family does the claimant of prophet hood belong to?"
 Abu Sufyan: "Noble."
 Heracleus: "Has there been any king in his family?"
 Abu Sufyan: "No."
 Heracleus: "Are the people who have embraced his religion, weak or strong?"
 Abu Sufyan: "They are weak."
 Heracleus: "Are his followers on the increase or decrease?"
 Abu Sufyan: "On the increase."
 Heracleus: "Have you ever known him speaking lies?"
 Abu Sufyan: "No."
 Heracleus: "Has he ever gone back on his word?"
 Abu Sufyan: "Not so far. But we are yet to see whether or not he abides by the new agreement made between him and us."
 Heracleus: "Have you ever fought with him?"

Abu Sufyan: "Yes."
Heraclius: "What has been the result?"
Abu Sufyan: "Sometimes we have won, and sometimes he."
Heraclius: "What does he preach?"
Abu Sufan: "He preaches, 'Worship one God: join no partners with Him; offer prayers; remain chaste; speak the truth; and give relations what is due to them'."
Heraclius: "If you have spoken the truth, a day will come when his kingdom will reach the place I tread. I wish I could go to him and wash his feet."

(Ashraf:1999, 383-384).

Several tribes of Arabia accepted Islam. The Abdul Qais of Bahrain and Ash'ar of Yemen embraced the new religion. The tribes of Abu Sulaim, Ghiffar, Juhnayah Aslam, Muzniyah, Ashja and other leading tribes also responded to the call of Islam. As aforementioned, after the 'Treaty of Hudaibiyah,' free intercourse with the believers and the non-believers resulted which consequently gave rise to a great increase in the number of believers within the following two years to come. The hypocrites who were banished earlier from Medina, due to their siding with the opponents at the time of war, went against the agreement that was reached between them and the believers. This resulted in a war between them and the believers, known as the 'Conquest of Khaibar.' By now the strength and numbers of the believers had greatly increased, and it became easy for them to crush any resistance which opposed them. Once Khaibar was taken over, the believers were so fair and just in their treatment to their opposition that even the hypocrites commented in appreciation of such justice. It was this kind of attitude that attracted many towards the call of Islam, since the intention of the religion was not to conquer nations, but merely to act in self-defense when being threatened. (Ashraf: 1999, p.384-389).

r. Pilgrimage to Mecca:

'Umrah' is a kind of smaller pilgrimage, which can be performed at any time during the year. It comprises of circulating the Ka'ba, and performing the ritual of ascending and descending the hills of Safa and Marwa, in the manner in which Abraham (AS)'s wife had done when she was left in the barren desert at that time. The treaty of Hudaibiyah stipulated that the believers could come the following year to perform this smaller pilgrimage. Nearly two thousand companions marched with the Prophet (SAW) for this occasion. The believers disarmed themselves as per agreement, and performed the pilgrimage without any incident. (Ashraf: 1999, p.396-407).

As the ruler of Basra had killed an innocent messenger with the invitation letter of the Prophet (SAW), an army of only 300 men was dispatched to combat this merciless treatment. The Basran ruler, together with reinforcements sent an army of 100 000 men as his defense. A bloody battle began, where the believers were totally outnumbered and were forced to withdraw, and returned to Medina. This battle is termed 'The Battle of Muthah,' and it indicated the will of Islam, as well as the determination of the believers against injustice. It impressed the neighboring tribes to observe that the believers didn't think twice against fighting the mighty tyrannical rulers of the time.

s. Conquest of Mecca:

In violation of the agreement of Hudaibiyah, the Quraysh instigated an ally of theirs to attack the believing tribe of the Banu Khaza'ah. In response to this, the Prophet (SAW) gathered an army of 10 000 and marched to Mecca. The Quraysh, unaware of the action were taken by surprise when they received the news that the believers had just taken camp a few miles away from Mecca. A message was sent to the Quraysh, declaring that all who stayed in their houses, as well as women, children and the aged would not be harmed. Then the believers marched into Mecca, with the instructions of the Prophet (SAW) to offer overtures of peace, unless they were forced to fight. "The city which had tortured him and his followers, which had driven him and his people into exile, and which had unrelentingly persecuted and boycotted him even when he had taken refuge in a place more than 200 miles away, that city now lay at his feet. By the laws of war he could have justly avenged all the cruelties inflicted on him and his people. (Ashraf: 1999, p.410-412).

The Prophet (SAW) went to the Holy Ka'ba, and broke all the 360 idols. He thereafter issued Bilal, the very slave who was persecuted due to his belief in the one God, to call the Muslims to prayer. The office of calling Muslims to prayer was considered to be a position of honor in the early days of Islam and it was offered to this Negro slave, Bilal (RA). Bilal (RA), stood over the roof of the Holy Ka'ba, the most historic and the holiest place in the Islamic world, and called the believers to prayer. (Ashraf, 1999, p.413).

Some proud members of the Quraysh, upon seeing the former slave, Bilal (RA), painfully cried aloud: "Oh, this black Negro slave, woe to him. He stands on the roof of the Holy Ka'ba to call for prayer." (Ashraf: 1999, p.413). As if in answer to this outburst smacking of pride and prejudice, the Prophet (SAW) delivered the following sermon: ***"Allah is to be praised and thanked for ridding us of the vices and pride of the days of ignorance. O people! Note that all men are divided in two categories only: the pious and God-fearing who are esteemable in Allah's reckoning, and the transgressors and hard-hearted, who are lowly and contemptible in the eye of Allah. Otherwise all human beings are the progeny of Adam and Allah has created Adam of clay."*** (Ramakrishna: 1995, p.22).

"Whenever the second caliph of Islam, known as 'Umar the Great' in Islamic history, saw Bilal (RA), he immediately stood in reverence and welcomed him by exclaiming: "'Here comes our master, here comes our lord.' What a tremendous change was brought by the Qur'an and the Prophet (SAW) in the Arabs..." (Ramakrishna: 1995, p.23).

"...it was the first religion that preached and practiced democracy; for, in the Mosque, when the Azaan, (the Muslim call to prayer), is sounded, and the worshipers are gathered together, the democracy of Islam is embodied five times a day when the peasant and king kneel side by side and proclaim, 'God alone is Great'." (Ramakrishna: 1995, p.23).

The Prophet (SAW) led the prayers, and after words addressed the Quraysh: "O leaders of Mecca, do you know what treatment I am going to accord to you?" The Quraysh were held in suspense, since they were about to find out what

punishment was to be requited their way. Muhammad's heart overflowed with the milk of love and kindness as he declared: "Go away, you are free. No blame on you this day." (Ashraf: 1999, p.418).

"This was one of the chief objectives why he permitted war in self-defense – to unite human beings. And when this object was achieved, even his worst enemies were pardoned." (Ramakrishna: 1995, p.32).

"History makes it clear, however, that the legend of fanatical Muslims sweeping through the world and forcing Islam at the point of the sword upon conquered races is one of the fantastically absurd myths that historians have ever repeated." (De lacy O'Leary, Islam at the Crossroads, London 1923, p.8).

The Prophet (SAW)'s declaration of general amnesty was so unexpectedly generous, that even the bitterest foes could not help being impressed. "Muhammad was the soul of kindness, and his influence was felt and never forgotten by those around him." (Ramakrishna: 1995, p.32).

Even the wife of Abu Sufyan, Hind, who had harbored such hatred for the Prophet (SAW), that she chewed the liver of the Prophet (SAW)'s beloved uncle on the battlefield, embraced Islam. Hind declared: "O Prophet of God! Hitherto I did not hate any camp more than yours, but now I love no camp better than yours." (Ashraf: 1999, p.418).

The Prophet (SAW) then addressed the people:

"There is no God but one Allah. There is no partner in his Godhead. He has made good His promise and helped His servant, and He alone has crushed all the forces of disbelief. All pride, all ancient customs of revenge for bloodshed, and all old claims of pagan days are under my feet (i.e. are abolished). Now only two offices (i.e. hereditary) remain: the custody of the Ka'ba and supply of water to pilgrims. O Quraysh! God has effaced all pride of pagan days, and all pride of ancestry. Now all descendants of Adam are equal. You are all descended from Adam, and Adam was made of out of clay. God says: "O mankind! Indeed We have created you from a male and a female and We have made you into races and tribes so that you may recognize one another. Verily, the most respectable of you in the eye of God is the most pious of you. Allah has declared the dealings in wine and usury as illegal." (Ashraf: 1999, p.421).

Design rationale: Exhibition 17

The key elements in this chapter of the Prophet (SAW)'s life were the Treaty of Hudaibiya and the Conquest of Mecca. The intermediary incidences were decided to be explained in text form along glazed panels.

The Treaty of Hudaibiya as well as the consequent 'Pledge of Ridwaan' or the 'Pledge under the Tree' were initially chosen to be depicted in a background amidst trees, since the final pledge was sworn under a tree. Due to the general theme of implicating elements abstractly, the tree was finally depicted as a glass column capped with a floating glass-top. This arrangement intended to depict the light of sincerity within which the pledge was taken: such sincerity was portrayed to which even God responded his pleasure in the Qur'an. The overall transparency of the structure was intended to depict transparent nature of the believers, as well as the eventual 'light' outcome of the incident in terms of physical battle.

Since the 'Conquest of Mecca' was an entirely different episode preceded by many intermediary incidences, a glass panel was introduced to divide the space into two components. This theme was at a later stage used in other areas which required transparent partitioning in order to relate events within the same era, yet indicate some sort of separation to highlight them as independent exhibitions within their own right. Thus, with the use of glazed panels, visual connection between elements within the same era was maintained and yet simultaneously separated.

The 'Conquest of Mecca' was now allocated along the adjacent side of the glass panel which semi-separated the two spaces. This space was decided to be illustrated by merely allowing clear visual access towards the Ka'ba area within the central core. Text and graphics along the side flanks were utilized to explain the conquest in detail. The fact that the space was just an empty space merely emphasized via a view towards the Ka'ba, was intended to depict the peaceful manner in which Mecca was taken over, with hardly any blood spilt.

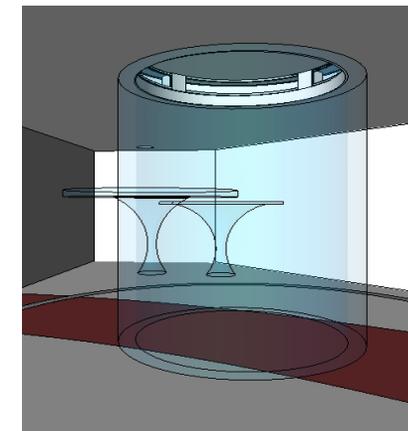


Fig. 35. Internal perspective-Exhibition 17

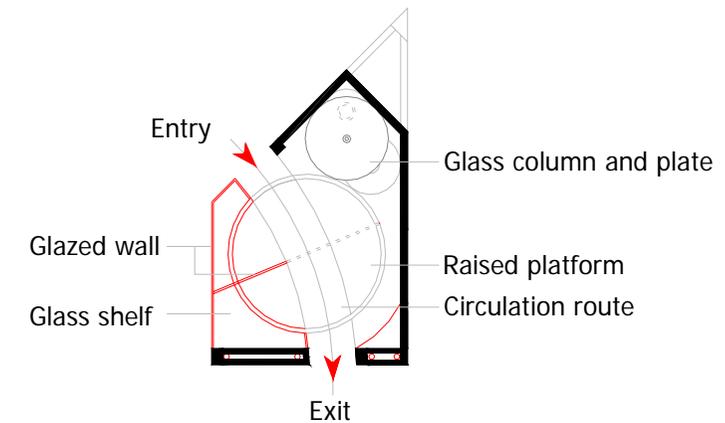


Fig. 36. Plan rationale- Exhibition 17.

of the Ka'ba and supervision of pilgrimage were to remain exclusively in the hands of Muslims. A large number of disbelievers, within a comparatively short period of time, embraced Islam. (Ashraf: 1999, p.445).

t. Battles of Hunain, Ta'if and Tabuk:

Though the Prophet (SAW)'s peaceful conquest of Mecca and his general amnesty and overtures of peace Islamicised a large portion of Arabia, there were still many pagan Arabs who adhered to their ancestral customs and institutions, and retained their hatred of Islam and its new ideals. Of these, the people of Ta'if were the most powerful and warlike, the very same people who had stoned the Prophet (SAW) in his earliest years of prophet hood. While the Prophet (SAW) was still in Mecca, these people began to assemble a huge army in preparation of war against him. The Prophet (SAW), in self-defense, sent an army of 12 000 to oppose the enemy. It wasn't very long when the believers began gaining the upper-hand of the battle. The opposing army retreated and sought refuge in their well protected forts. The believers laid siege to the fort, but could not however break through the fort. Due to the facts that the siege had become too prolonged and costly, the Prophet (SAW) and the believers withdrew. The believers asked the Prophet (SAW) to curse the enemies, but he instead prayed for them in the following words: "O God, guide the Thaqif and bring them to the fold of Islam." (Ashraf: 1999, p.433-436). He further released most of the prisoners taken captive during the battle, which numbered some 6000. Within two years of that, the tribe personally went to Medina and embraced Islam.

In the meanwhile, several Christian Arab rulers, under the suzerainty of the Roman Empire, it was heard that an army was being gathered to march upon Medina. Upon hearing this, the Prophet (SAW) amassed an army of 30 000 to defend Medina, and marched towards the intended battle field. Upon reaching their destination, it was realized that the report was false, but that certain tribes were indeed endeavoring to devise ways to weaken the rising power of Islam. Since the Prophet (SAW) went there not to invade Syria but to defend his own land, he did not pursue the enemy. "This was one of the chief objectives why he permitted war in self-defense – to unite human beings. And when this object was achieved, even his worst enemies were pardoned." (Ramakrishna: 1995, p.24).

He stayed at Tabuk for a period of twenty days, within which he managed to peace treaties with several tribes. The incident is known as 'The Expedition of Tabuk.' (Ashraf: 1999, p.444).

The Prophet (SAW) then returned to Medina, where a right royal reception awaited him. The Tabuk expedition was a great moral victory to the believers, and the enemies of Islam were overawed by their organization, spirit of self-sacrifice and courageous nature, fully challenging the Roman Empire, the then superpower of its times. (Ashraf: 1999, p.445).

Upon returning from Tabuk, the Prophet (SAW) sent Abu Bakr to lead the believers for a pilgrimage. This pilgrimage is recorded in the Holy Qur'an to be the 'Greatest Pilgrimage,' since the Ka'ba was finally purified of impurities. The polytheists were debarred from entering the sanctuary, and the people were forbidden to make pilgrimage in a naked state. The control

u. The year of Deputation:

Slowly but steadily, Islam extended its way over different parts of Arabia. The Ash'ar tribe of Yemen sent their representative to Medina to seek the enlightenment of Islam. The representative was convinced of its truth, and accepted the faith. Upon his return, Islam spread among the people of Yemen. Many from the region of Najran, then occupied by Christians, also accepted Islam. The region of Bahrain, then under Persian rule, also accepted Islam, including the Persian governor at Hijr, after receiving the letter of the Prophet (SAW). In Uman, their two leaders accepted Islam, and through their influence, the entire region accepted the faith. Even in Syria, though under Roman rule at that time, the presence of Islam was steadily rising. (Ashraf: 1999, p.446-447)

In addition to the general articles of faith, the Prophet (SAW) issued a number of injunctions to his followers for the betterment of their social, ethical, political and economic conditions. These injunctions were promulgated gradually and continuously, so that the believers should not feel any hardship in observing them. It can be observed that the first part of the revelations were to bring about a change of heart and outlook, so that the people could study and understand Islam in an enlightened spirit, and later on, versus containing commandments and prohibitions came. (Ashraf: 1999, p.447).

Design rationale: Exhibition 18

This space was decided to have a gradual decrease in floor gradient, so as to indicate that the faith had firmly established itself and the struggle was no longer uphill, but downhill, as most of the *Hijaz* and surroundings had embraced the faith. The downward gradient would also prepare one for the coming demise of the Prophet (SAW), since his mission to establish the faith had been accomplished. Later on, this space was converted into a double volume ramp, with four glazed-panels crossing over the core of the ramp, thereby providing an interesting space, transparently divided into segments. The four divisions would depict the three battles as well as the letters sent to the rulers of the time in text and graphic form along the flanks of the glazed panels.

From the establishment of this space along a circular frame came the overall establishment of all the exhibition spaces, based upon a similar theme being repeated, thereby promoting a rhythm within the internal world.

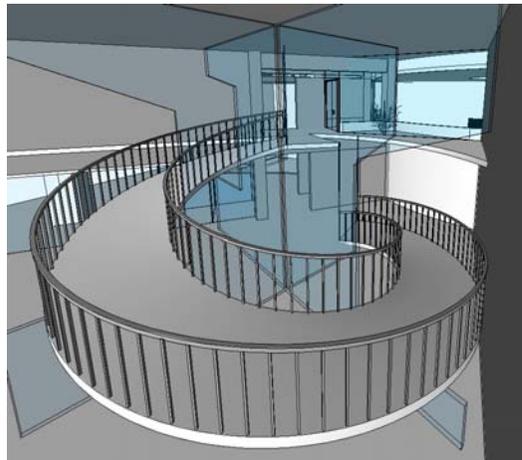


Fig. 37. Internal perspective- Exhibition 18

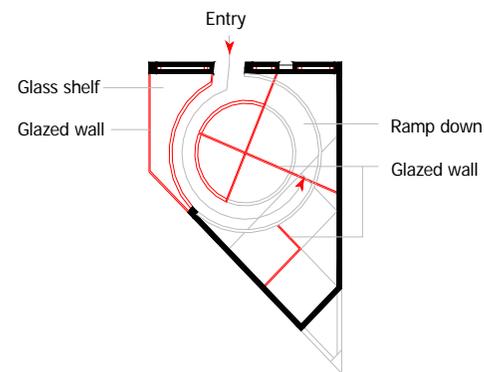


Fig. 38. Plan rationale- Exhibition 18

v. The Farewell Pilgrimage:

The Prophet (SAW) sent messengers to different tribes of Arabia informing them of his intention to proceed to Mecca for pilgrimage. The believers, upon receiving the news, assembled at Medina in tens of thousands. The Prophet (SAW) set out from Medina, and entered Mecca with his pilgrim's garb, riding upon his camel, calling out: ***"Here I am at Thy service, here I am, O God. Here I am to declare that there is no partner with Thee. All praise and blessings belong to Thee***

and all sovereignty in Thine. I am here at Thy service, and Thou hast no partner, O God." (Ashraf: 1999, p.452). As the Prophet (SAW) recited this, all the believers followed suite, and this is the same call to which pilgrims declare today. The Prophet (SAW), followed by all the believers, made seven circuits around the Ka'ba, then performed a prayer at the footprint of Abraham (AS), then climbed onto Mount Safa and declared: ***"There is no deity but Allah. He has no partner. All sovereignty and praise belong to him. He gives life and He gives death. He is All-Powerful over everything. There is no deity but Allah alone. He fulfilled His promise; He helped his servant, and He alone crushed all the forces (of disbelief)."*** (Ashraf: 1999, p.455).

He then left with the entire gathering for Mina. Here he passed the night, and the following morning, after the morning prayers, he set out for Arafat, where he addressed his followers with what is termed, 'The Farewell Sermon':

"All the customs and practices of the pagan age are under my feet (abolished). All compensation for bloodshed of the old days is abolished... All usuries of the past are wiped out... Fear God in respect of women. You men have your rights over your wives and they have their rights over you. As regards your slaves, be fair to them. Give them to eat what you eat, and wear what you wear. Your blood and your properties are as sacred for one another as are this day, this month and this place. Each Muslim is a brother of another. All Muslims form one brotherhood. An Arab has no superiority over a non-Arab, nor has a non-Arab over an Arab. You are all born of Adam, and Adam was made out of clay. Whoever is entrusted with a thing belonging to another, must deliver his trust to its owner. The debtors must pay their debts. I leave behind two things, and you will never go astray if you hold it fast, and that is the Book of God, and my example." (Ashraf: 1999, p.458).

In conclusion the Prophet (SAW) asked the audience, "Have I conveyed my message to you all?" The crowd unanimously shouted: "Yes." Then the Prophet (SAW) looked up towards the heavens and said: "O my Lord! Thou art my witness." He then asked the congregation to convey his message to the world at large. (Ashraf: 1999, p.458).

The Prophet (SAW) then completed the pilgrimage, and hinted at the coming of his death in the words: "Listen to my words and learn the pilgrimage ceremony from me as I do not know if I shall ever be able to meet you in this place again." (Ashraf: 1999, p.466).

w. Demise:

After the fall of Mecca more than a million square miles of land lay at his feet. Lord of Arabia, he milked his own goats, swept the heath, kindled the fire and attended to other menial chores. In these later days of his life, Medina had grown wealthy from all the spoils of war, yet many weeks would elapse “without a fire being kindled in the hearth of the King of Arabia, his food being dates and water. He slept on no soft bed, but on a palm mat, after a long busy day, to spend most of the night in prayer, often bursting with tears before his Creator to grant him strength to discharge his duties.” (Ramakrishna: 1995, p.28). On the day of his death his only assets were a few coins, a part of which went to satisfy a debt and the rest were given away to a needy person who came for charity: he had told his wife, Aisha (RA), to distribute to the poor the few dinars he had, as he did not like to meet his Lord, leaving any wealth behind. “The clothes in which he breathed his last had many patches. The house from where light had spread to the world was in darkness, because there was no oil in the lamp.” (Ramakrishna: 1995, p.29).

He fainted with the words, “None but Allah the High.” (Ashraf: 1999). On the following day he was buried. “Thus ended the career of the Greatest Messenger of God, the greatest leader of humanity, the greatest benefactor of mankind and the greatest reformer of the world...” (Ashraf: 1999, p.469).

And his legacy lives on: “(The) one who has founded a great empire that has survived all these 14 centuries. If the devotion that a leader commands is the criterion of greatness, the Prophet’s name even today exerts a magic charm over millions of souls, spread all over the world.” (Ramakrishna: 1995, p.32).

Allah himself praises the Prophet (SAW) in the Holy Qur’an in the following manner:

“And verily you, (O Muhammad), have an exalted standard of character...” (Qur’an, 68:4)

“Indeed, in the Messenger you have a noble pattern of conduct.” (Qur’an, 33:22).

“He (Allah) it is Who sent down clear revelations unto His bondsman (Muhammad), that he may remove you from darkness into light. And Lo! for you Allah is full of Piety, Merciful.” (Qur’an, 57:9).

Design rationale: Exhibition 19

This space had two major components to portray, namely the farewell sermon and the demise of the Prophet (SAW). The space was decided to be more brightly lit than the other exhibition spaces, in order to depict the light of the words of the farewell sermon, as well as the light emanating from the grave of the Prophet (SAW). In terms of a continuing legacy, the light of the faith would be depicted as shining out to the world at large. This created the basis for having placed this space along the southern façade, thereby creating a suitable location for a totally glazed façade. This glazed façade was to have the inscription of the farewell sermon, thereby creating visual contact with the internal as well as the external world, since these were the words to be carried out to the world at large.

Following the theme of glazed panels used to segment spaces, this method was similarly adopted into this space, to promote continuity, repetition and rhythm towards a central theme.

The grave of the Prophet (SAW) was decided to be partially sheltered, and partially exposed, thereby creating a special place of commemoration. The glazed panel was thus decided to be frosted in order to attain a suitable space. The actual demise was decided to be represented within a rectangular glass box, slightly raised above the ground. The raising was to depict his special status, whilst the rectangular glass tomb was to depict his sincerity, humbleness, honesty, or in other words, his totally transparent and open nature. The glass casing would bear his name inscribed in the center of the casing, along a similar filament as adopted throughout all other glazed sections previously described.

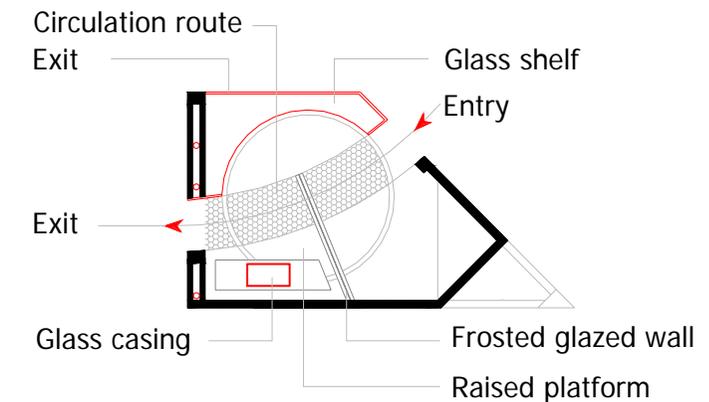
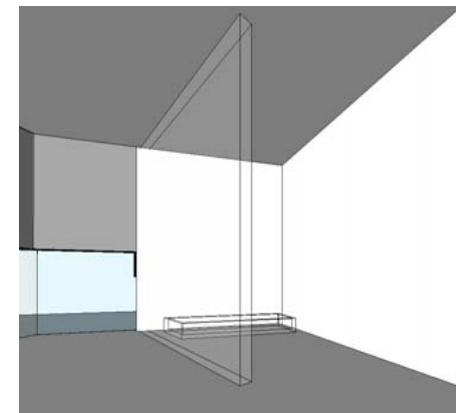
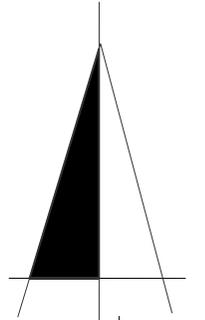


Fig. 39. Internal perspective- Exhibition 19. Fig. 40. Plan rationale- Exhibition 19.



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Index to section F:

In terms of geometric resolution, rhythm and repetition:

Since Islamic architecture is typically characterized by the use of geometry, rhythm and repetition, it was decided from the very onset to use these principles as the basis for design.

Based upon the significance of the number 19, (please refer to Section-E, pg 7), it was decided to have 19 exhibition spaces. After drafting the historical narratives and forming basic sketches for each exhibition space, the information presented itself in the following format:

- Exhibition 1:** An introduction to God
- Exhibition 2:** The origin of creation
- Exhibition 3:** Heaven – Man’s original abode
- Exhibition 4:** Adam (AS) - Descent to earth
- Exhibition 5:** Noah (AS) - Escape with the ark
- Exhibition 6:** Abraham (AS) - The incident of the idols and the fire
- Exhibition 7:** Moses (AS) - Birth and escape via the parting of the sea
- Exhibition 8:** Jesus (AS) – Birth, ascension, 2nd coming and demise
- Exhibition 9:** Muhammad (SAW) – Birth and background

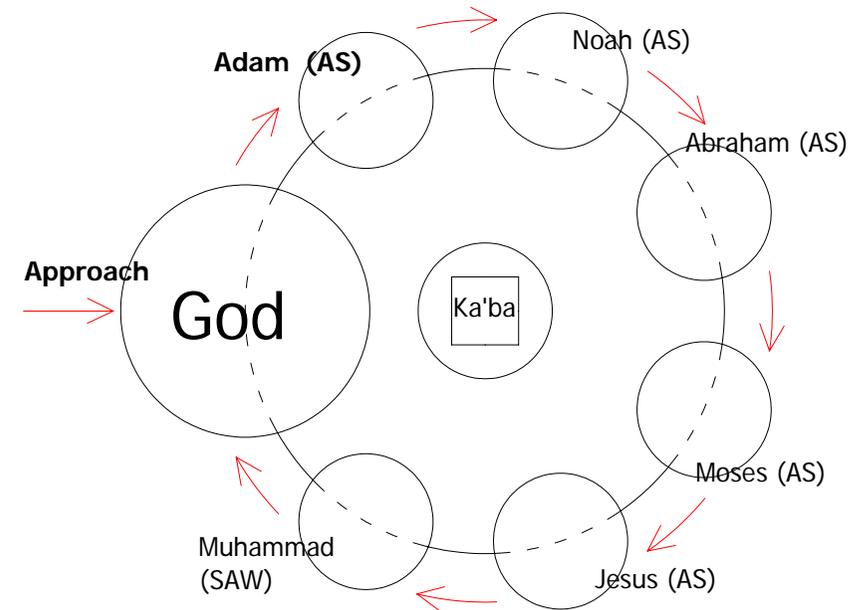
The life of the Prophet Muhammad (SAW) in detail:

- Exhibition 10:** Early life
- Exhibition 11:** First revelation in the Cave of Hira
- Exhibition 12:** The years of sorrow
- Exhibition 13:** Me’raj – the miraculous night-journey
- Exhibition 14:** Welcome to Medina
- Exhibition 15:** Battle at Badr
- Exhibition 16:** Battle of the Trench
- Exhibition 17:** The Treat and the Conquest of Mecca
- Exhibition 18:** Intermediary battles and invitation to Kings
- Exhibition 19:** Farewell sermon and demise

From the above data it can clearly be seen that two very different categories exist: The first category depicts the introduction to God and his Messengers, beginning from the first Messenger, Adam (AS), and terminating at the last Messenger, Muhammad (SAW). The second category depicts the life of the Prophet Muhammad (SAW) in detail.

From this analogy came the introduction to two very separate concepts, which later manifested itself into two very distinct buildings. The following illustrations portray this graphically:

Fig. 1. Concept for Building-A: An introduction to the Messenger’s of God



The form of a circle was used to indicate:
The purity and perfection of God
The purity and piety of the Messengers of God
The link to Islamic notions of pure geometry
The cycle of life within the cycle of time

Since the exact dates between Prophets is not known and is not mentioned in the Qur'an, the circular bubbles representing the individual Messengers are arranged equidistantly apart from one another, generated from a central point. This generating centre is depicted by the Ka'ba, which is believed to be the centre of all light and guidance, as well as the geographical centre of the world, and in more common terms, the focus of the global ummah.

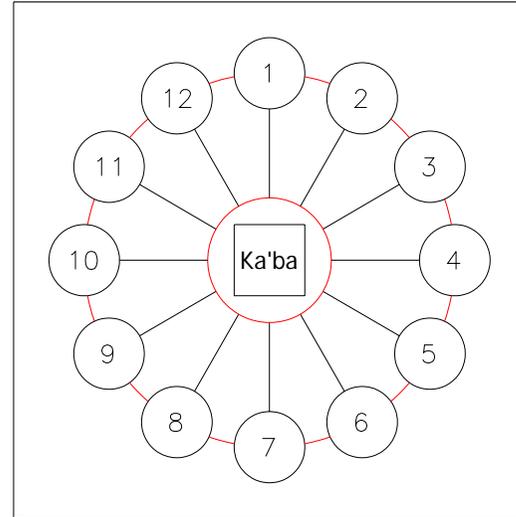
The concept thus brings in the application of using pure geometry, as well as imbuing the theme of rhythm and repetition which are typical Islamic traits. The spinning motif is to some extent also portrayed.

This layout also emphasizes the close link between God and the first man, Adam (AS), and the close link between Muhammad (SAW) and God.

a quest of the spirit



Fig. 2. Initial concept for Building-B: The life of the Prophet Muhammad (SAW)



Once again, circular bubbles set equidistantly apart, generated from a common point, the Ka'ba, had been implemented.

The general idea was to use the form of a cube to:

- Depict the rigid rules of Islam to the outside world
- To create a contrasting façade to the internal world

Internally, the beginnings of a circular route was developed:

- To implicate the life cycle of the Prophet (SAW)
- To implicate the general cycle of life and time
- To implicate the purity of the life of the Prophet (SAW)
- To implicate the consistent 'straight path' a believer should be treading
- To create a simple, identifiable circulation route throughout the Exhibition Centre

The concept thus brings in the application of using pure geometry, as well as imbuing the theme of rhythm and repetition which are typical Islamic traits. The spinning motif is to some extent also portrayed.

From this point onwards, Buildings A and B will be discussed as two entirely separate entities. The overall idea of the two buildings is to portray Islamic character, and yet within themselves appropriate different symbolic gestures. Since Building-A takes a global overview of the lives of many Messengers, it was decided that it should typically characterize a circular form. Building-B emphasizes the life of the Prophet (SAW), and consequentially defines the origin of Islamic jurisprudence and theology, commonly termed Shari'at. The Prophet (SAW) is mentioned to have said that the world is like a prison / jail to the believer. This is so because of the restrictions Islam implements upon humankind.

Since the Shari'at is seen as the application of rigid injunctions and a typical stipulated way of life, it would seem appropriate for this building to house this rigidity within the form of a cube, which thereby depicts the rigidity and confinement which Islam implements.

Design development of Building A:

The two remaining components, the origin of creation and Heaven, were soon added to Building-A, thereby allocating a total of nine exhibition spaces to this structure.

Fig. 3. Conceptual sketch

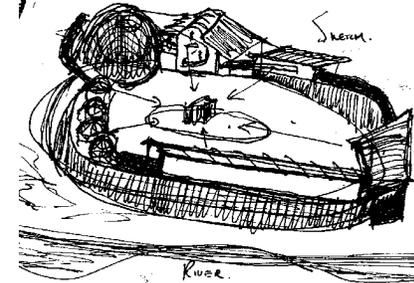


Fig. 4. Conceptual sketch

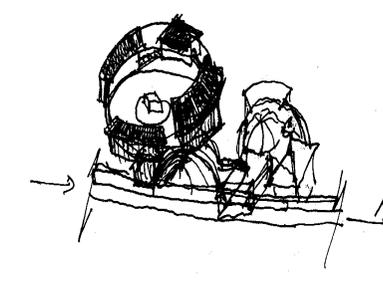
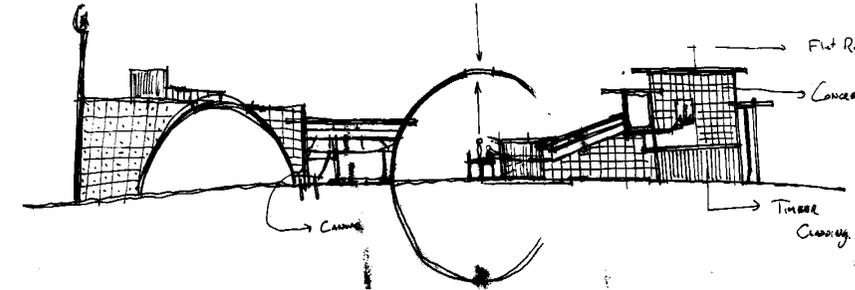


Fig. 4. Conceptual sketch



The early sketches search for new form and spirit, using pure geometric shapes, couple with rhythm, repetition and the spinning motif to portray Islamic character.

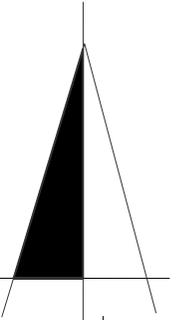
Celebrating the Ka'ba at centre, led to the realization of using sand around the immediate ring about the Ka'ba, whilst the larger surrounding circumference was characterized by water, thereby depicting the globe, with an approximate one third as land and two thirds as water.

A panelling system can be observed along the external world, and the manner in which each space rose in height to depict the struggle through time to establish faith in God.

The use of time-tunnels to depict different eras can also be noticed from these early sketches.

From these early sketches, coupled with the individual conceptual sketches for each space, (refer to Section E), the overall external forms developed into their final stages as depicted below:

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Fig. 5. In search of form



The elevations illustrated depict a play with volumes and masses as a consequential result of designing from the inside-out. Whilst the external facades are characterised by bland volumetric walls, the section gives an indication of a contrastingly different internal environment. The internal world is thus celebrated, as can be noticed from the sphere embedded within the cube: the sphere was an internal requirement, whilst the consequential cube surrounding it was added for structural purposes. The exterior of this cubic form is a bland two-dimensional flat surface, displaying a phenomenal volumetric proportion within the overall façade. Thus the theme of 'wall' architecture has been maintained to portray the Islamic spirit of a celebration of the internal world. This theme can be further noticed when viewing the overhanging volume in the west and east elevations, whilst the internal environment relates to this within the confines of a human scale.

a quest of the spirit

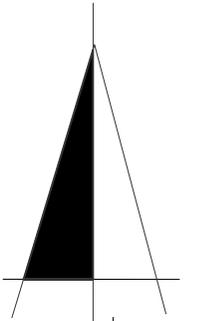
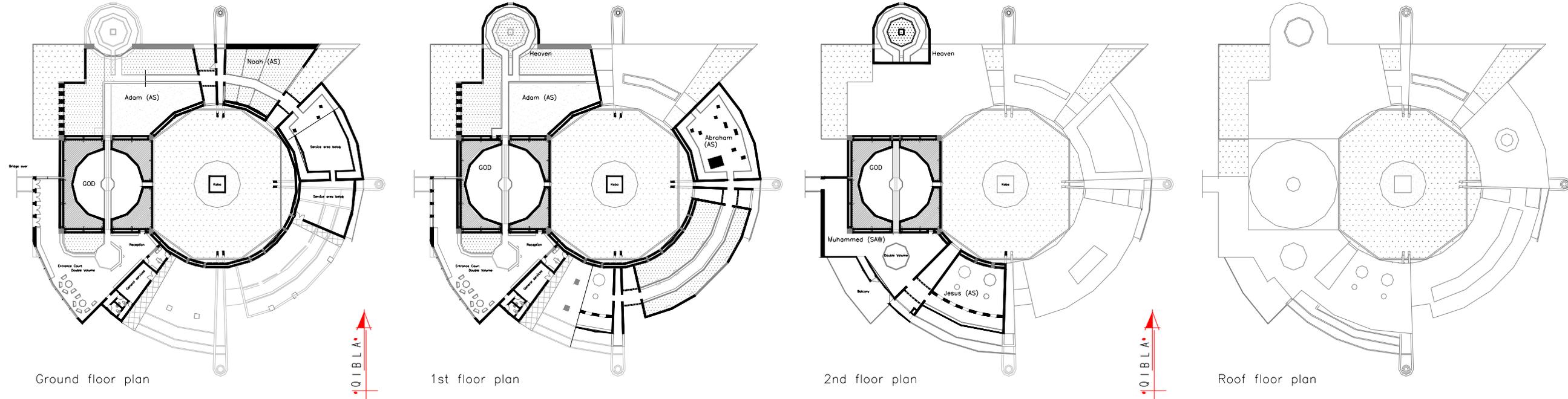


Fig. 6. Plans towards the later design stages:



The above plans depict the following themes:

- **The spinning motif-** The plan is generated from the innermost ring surrounding the Ka'ba at centre. From this ring is generated the form of the walls along both the external and internal rings, as well as the internal circulation route. The six walls protruding outwards are derived from the cardinal points of the inner circle.
- **Repetition-** The protruding walls terminating into beams holding glazed minarets, as well as the overall forms of each segment, distinguished by time-tunnels placed equidistantly apart from one, another depicts the theme of repetition. The

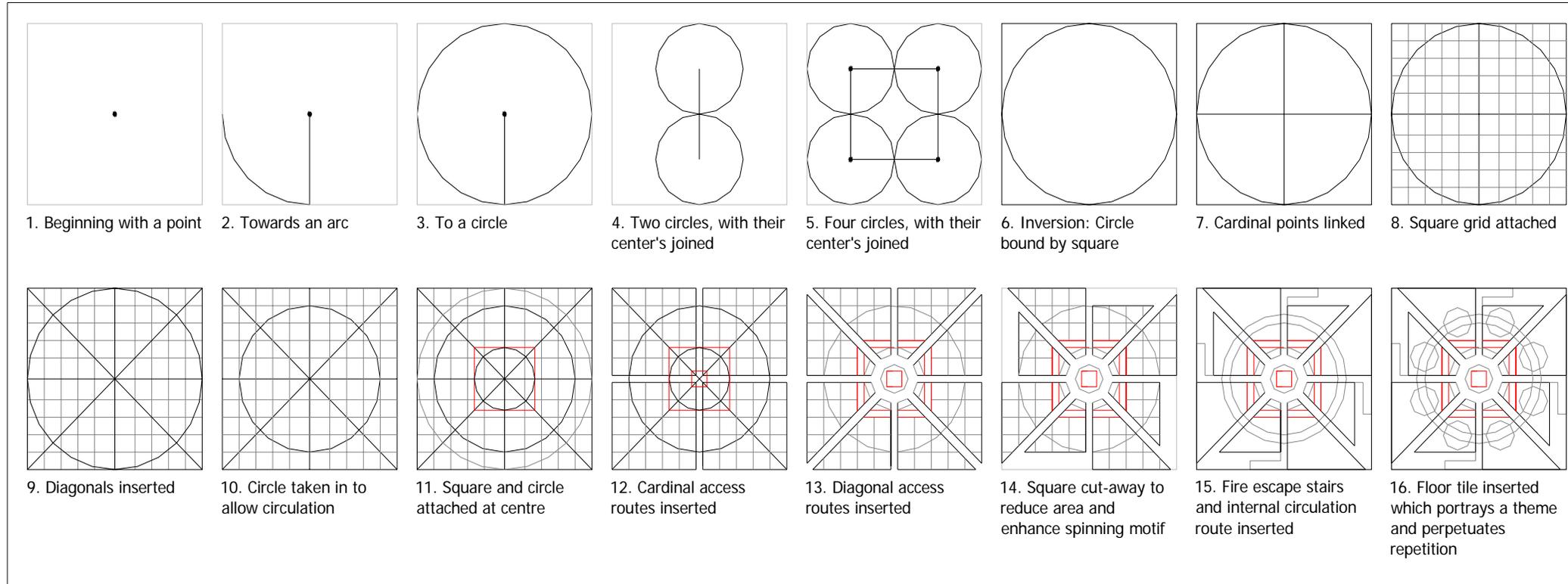
repetition enhances the overall rhythm, which in turn enhances the theme of the spinning motif.

- **Celebration of the internal world, contrasted by a bland volumetric external world**
- **Geometric forms influencing overall design rationale**
- **Qibla orientation-** Respect for the qibla axial route resulted in the building taking upon a linear form along its northern and eastern edges. Thus the entire form of the building adapted and orientated itself in order to emphasize the qibla. All toilet facilities were designed so as not to face the qibla as part of a customary requirement of the qibla.

a quest of the spirit



1. Design influenced by geometric forms, repetition and rhythm (fig. 7.)



Geometric Rationale:

Since Islamic architecture strongly suggests the use of pure geometric forms, the illustration alongside depicts the influence of geometry upon the design.

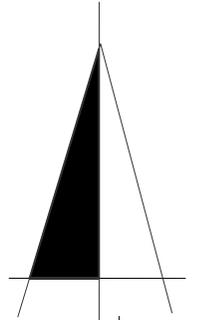
The use of pure forms were taken and accordingly cut-away to accommodate the internal requirements of the brief.

The use of geometry and a geometric grid consequently positively impacted upon implementing the themes of repetition, rhythm and the spinning motif.

Illustration 16 became the basis for the overall design. This coupled with the conceptual sketches of the individual internal spaces, (refer to Section E), formed the basis for a suitable design concept to be generated.

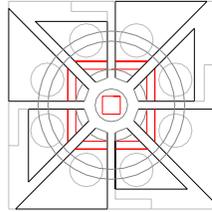
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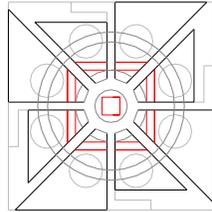
The process towards attaining a suitable form:



1. Introduction:

The finalized form as depicted alongside, was derived through a process of trial and error, using basic geometry, repetition, rhythm and the spinning motif as its primary objectives. However, the form was also influenced by many other considerations, such as design suitability, functional requirements and technical aspects as will be discussed below:

(fig.'s 8-10).

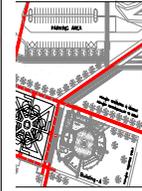
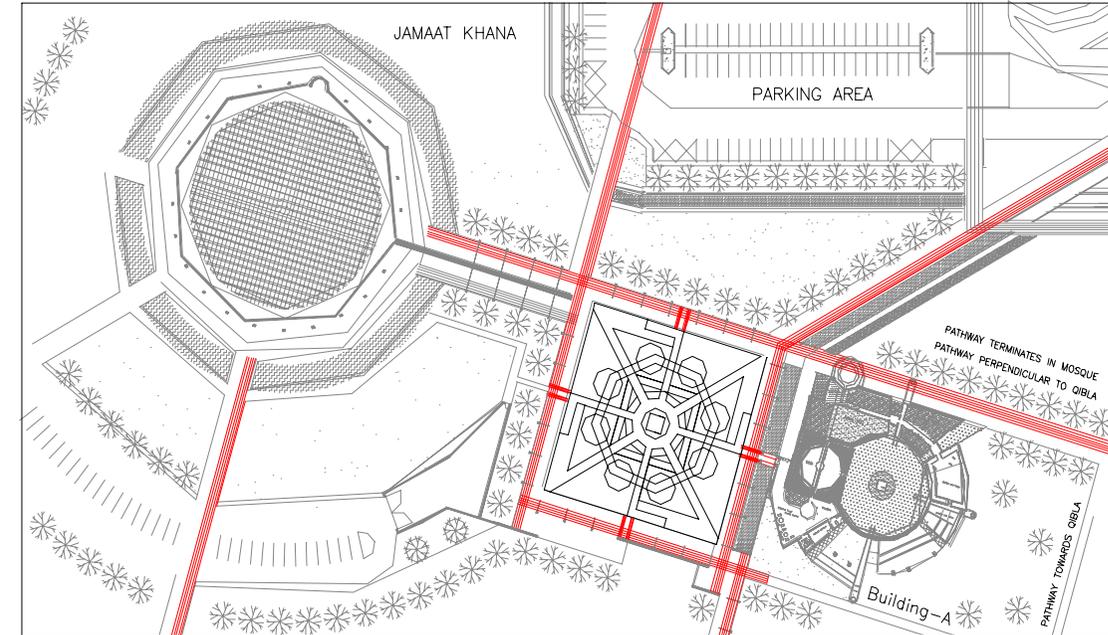


2. The functional requirements of the brief and basic scaling:

The brief stipulated to accommodate a total capacity of 120 people, as a minimum, within the entire exhibition centre, with the maximum area set at 3500m², due to financial restrictions. Since the building fell into the Class C2 category, the requirements of a minimum of 15m² per person, with minimal displays, were thus suitable. Upon viewing Building-A, a population of 56 people was taken care of. Thus Building-B would require accommodating for the remaining 64 people, with 10 exhibition spaces to fulfil the purposes of the narrative. (Refer to pg.2). The form thus aptly suited this task, by generating 2 exhibition spaces on the 2nd floor level, 6 exhibition spaces on the 1st floor level, and 2 exhibition spaces on the ground floor level. However, this meant that the minimum exhibition space size would have to be 75m² (15m² x 5), thereby accommodating 25 people, whilst the bigger exhibition spaces would have to be 117m², (64-25 = 39 / 5 exhibits = 7.8 x 15m² per person = 117m² per larger exhibition space at minimum), thereby accommodating the remaining 39 people. (Please note that the above were taken as the minimum requirements thereby checking whether the applicable form was suitable via a constant trial and error process).

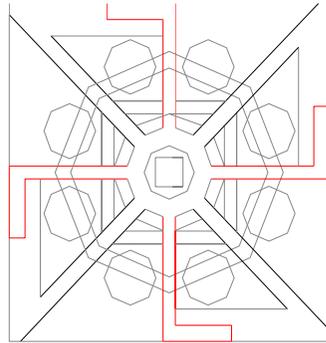
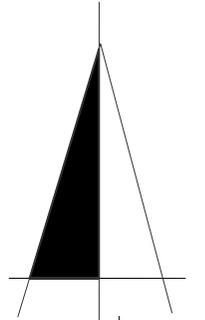
3. Implementing scale to the form, and its consequent impact on site:

The form was proportionately scaled to the above mentioned criteria, with the smallest exhibition spaces being 75m², resulting in the larger exhibition spaces being 133m², (by scale factor), thus enabling an approximate 22.5 m² per person including minimal displays. Thus the form in terms of minimal space as per regulation was adequate. In terms of the framework, the form aligned itself along important axial routes, and further suitably contrasted the circular forms of the both the adjacent Jamaat Khana and Building-A. Slight adjustments had to be made on site to fully incorporate the new form, but these were not major, and were thus seen as negligible within the design phase.



The main pathways informed by the qibla axis or by the axis of approach are demarcated in red. The flexible form accommodates surrounding pathways adequately. The form adequately adapts to the qibla axis, with its edges running parallel to it. The entire orientation of 'the form' is informed by the qibla axis

a quest of the spirit



4. Fire: (Fig. 11)

From the very onset of the form, fire regulations were considered in order to easily accommodate for it in the later design stages.

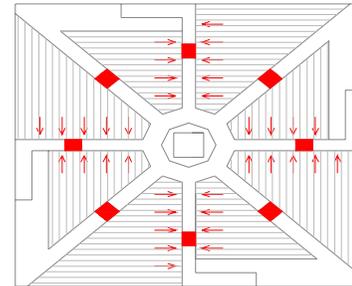
- The building was intended, as depicted, to be compartmentalized into 8 distinct zones, separated by fire walls. This would work advantageously in the event of a fire, since the fire would be contained within a particular zone, thereby limiting its spread. The ventilation requirements of this type of compartmentalized volumes within the area range of 150m², and the volumetric range of 500m³, would not require a sprinkler system, (as per SABS 0400, 1990). Thus only the double volumes exceeding the above would require a sprinkler system, which would ultimately reduce costs.
- Fire hydrants and fire hoses would be allocated along the cardinal passages, as indicated in red alongside. The distances would be within a 30m radius, thereby accommodating for maximum reach of hoses. When the form was scaled, it was found that this aspect was maintained.

- The form also allowed for fire exit routes along the ground floor, allowing for adequate exit within a 45m radius along the diagonals of the building, as indicated in black.
- The overall circular circulation route, coupled with the regular rhythm of the form, allow for easy identification of the exit passages, repeatedly portrayed along each of the cardinals.
- The overall fire layout will be explained in detail later, and this is merely an illustration to indicate that the form took into account basic fire regulations from the very onset.

5. The impact of the compartmentalization within the form: (fig. 12).

The form compartmentalized the building, which had the following impacts:

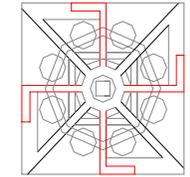
- Storm water drainage was conceptualized as to allocated two adjacent zones to drain towards a common point
- Independent tunnels would link zones to one another. The tunnels were decided to be glazed since they were within the general shade of the building, and would allow viewers to easily distinguish different zones, and furthermore have many symbolic interpretations as will be discussed later. The placing of tunnels equidistantly from each other, generated via a common centre, perpetuates the theme of rhythm and repetition, as well as the spinning motif.



- Compartmentalization introduced fire walls, as depicted alongside, which consequently gave rise to cavity walls, with insulation placed along its innermost brick course. Since Islamic architecture is typically portrayed by 'wall' architecture, the adoption of cavity walls further increased the massing of the walls, which assisted in creating the play with large volumes.

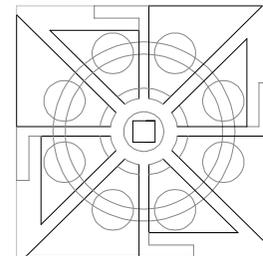
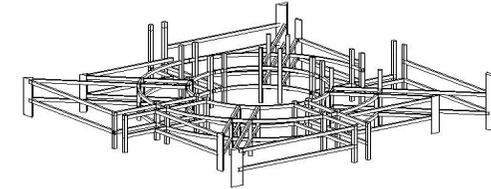
6. Approach: (fig. 13)

The form takes into account the approach towards the structure, via the use of diagonal recessed slits. This is characteristic of Islamic architecture, which celebrates the internal world and the point of arrival. By the usage of numerous narrow slits, it excludes the external world in contrast to the typical usage of large glazed external facades, which allows for visual communication to the inner world from the outside. This form of approach, via long, narrow openings, creates a sense of mystery, and allows the internal world to be consequently separated to the surrounding external environment.

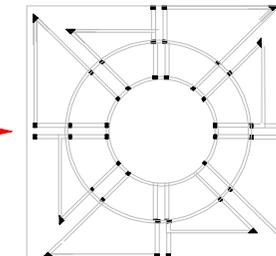


7. Structure: (fig. 14-15)

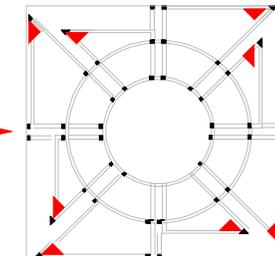
After the proportionate scaling of the form mapped onto the site was implemented, the form became more refined, and initiated the basic guideline towards a basic structural grid layout.



Geometric form



Column and beam grid



Square cut-away at corners

The form thus gave rise to the beginnings of a structural form along a basic columns and beam grid outline. The basis for the beginnings of the planning stage had thus been laid out.

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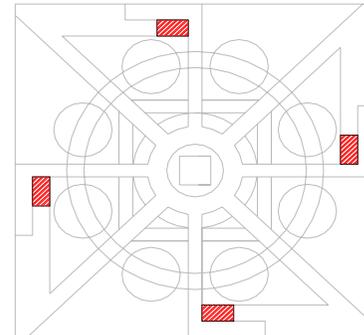


8. Services allocation: (fig. 16).

The form took into consideration the provision for services, in the form of vertical shafts along the façade of the building, hidden by the escape fire routes. These shafts would be divided into four, one for each side. The division at this early stage was thought of as a way to cater for the separate zoning of services, namely:

- Water supply
- Sewage
- Electrical system
- Ventilation system

The service shafts would also be independently accessible from the exterior.



9. Roof area

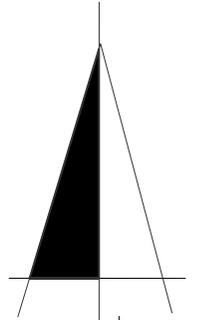
The form gave rise to the implementation of a flat roof system.

The roof area would need to be insulated, with pebbles strewn across the roof bed.

Services such as air-conditioning would be placed on the roof.

Photovoltaic cells would serve the advantages of covering roof surface, and absorbing energy.

Parapet walls to be introduced to mask services on roof.



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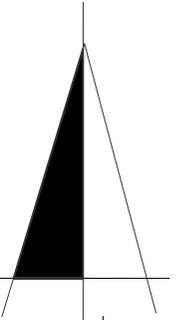
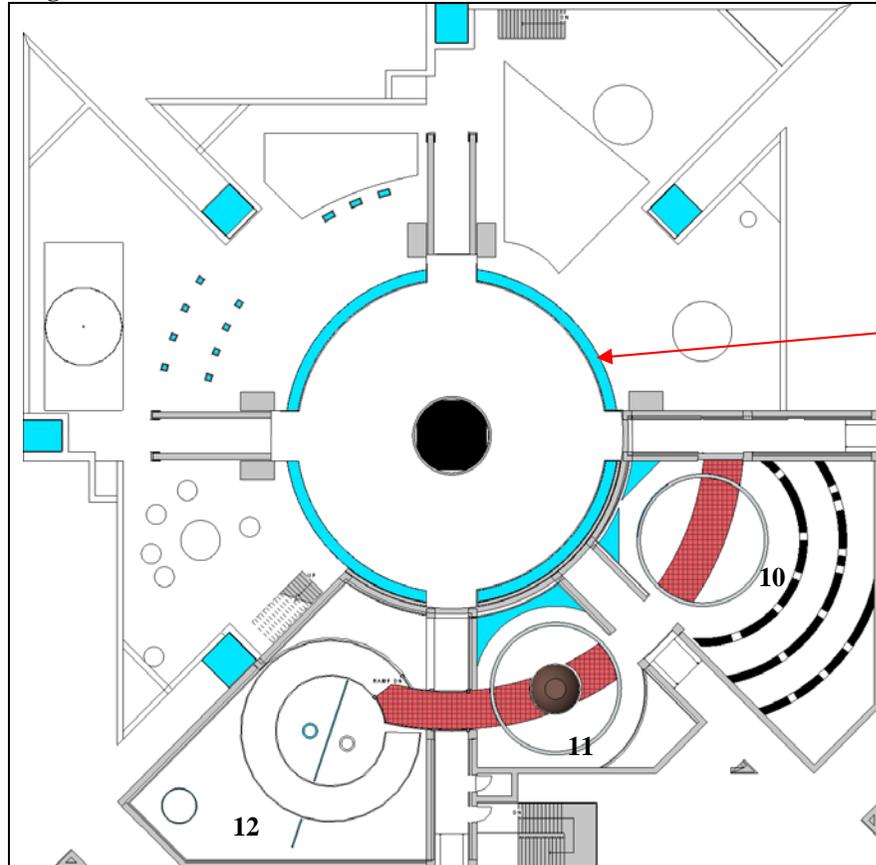


Fig. 17. 2nd Floor Plan



Since building-A links up to building-B via a bridge at 2nd floor level, the development of the plan is consequently explained from this level.

With the form of the plan suitably relating to numerous factors, as depicted above, the conceptual plans of Section F were coupled with the finalized form. The result was a plan characterized by an inward emphasis.

A continuous circular route was established, demarcated in red alongside, which ran its course throughout the building, thereby making the route simple and easily identifiable.

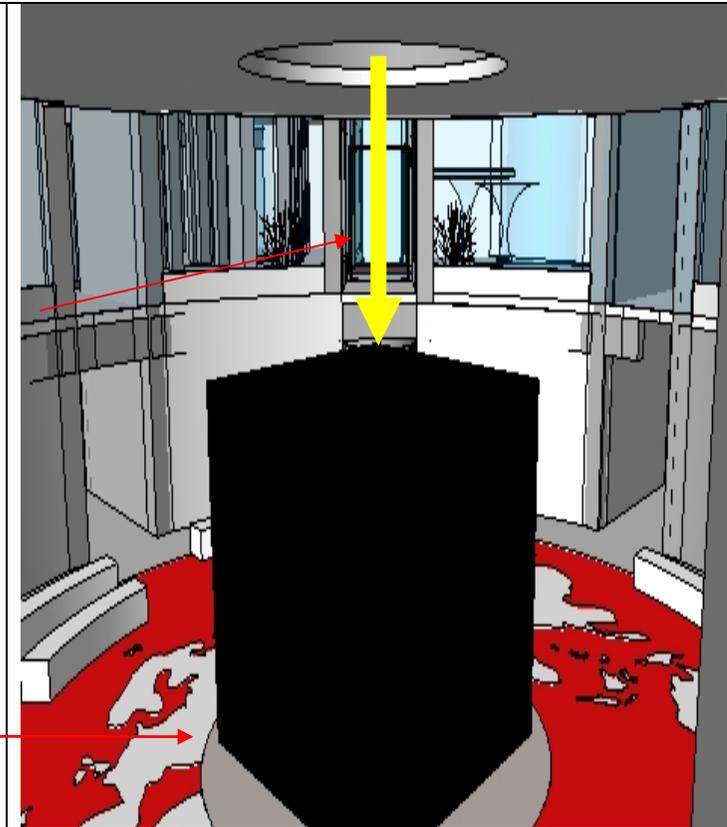
Glass is depicted as blue, and can be seen along the ring surrounding the internal core, thereby enhancing an inward orientation. Repetition of glass shelves along the inner ring creates a theme of rhythm.

Glass has been used as an element to portray rhythm and repetition along the external facades as continuous strip glass panels.

The central core became an important feature in emphasizing the internal world, coupled with the symbolic Ka'ba, placed at the centre of the space, as well as of the tiled world map on the floor. Light was intentionally left to pour onto the Ka'ba, and thereby symbolically, as well as physically light the rest of the interior space.

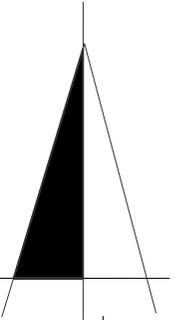
The central space is seen as a space of arrival, with concrete benches placed in a radial manner around the Ka'ba.

Exhibition 10- Early life; Exhibition 11- First revelation; Exhibition 12- The year of sorrow. (Refer to sketches / interpretations - Section-F).

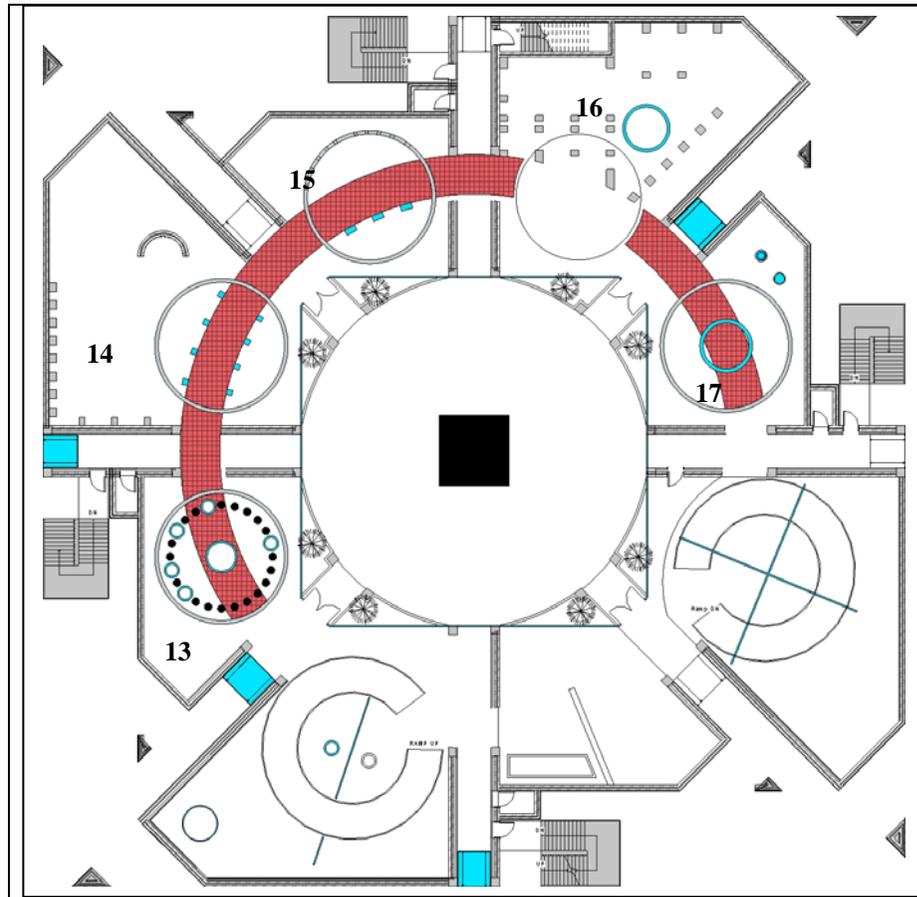


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Left: Fig. 18. 1st Floor Plan
Right: Fig. 19. Ground Floor Plan

Rhythm and repetition of geometric form is clearly visible.

Fire escape routes are placed within a 30m radius of each other, and are also easily identifiable along repetitive cardinal locations.

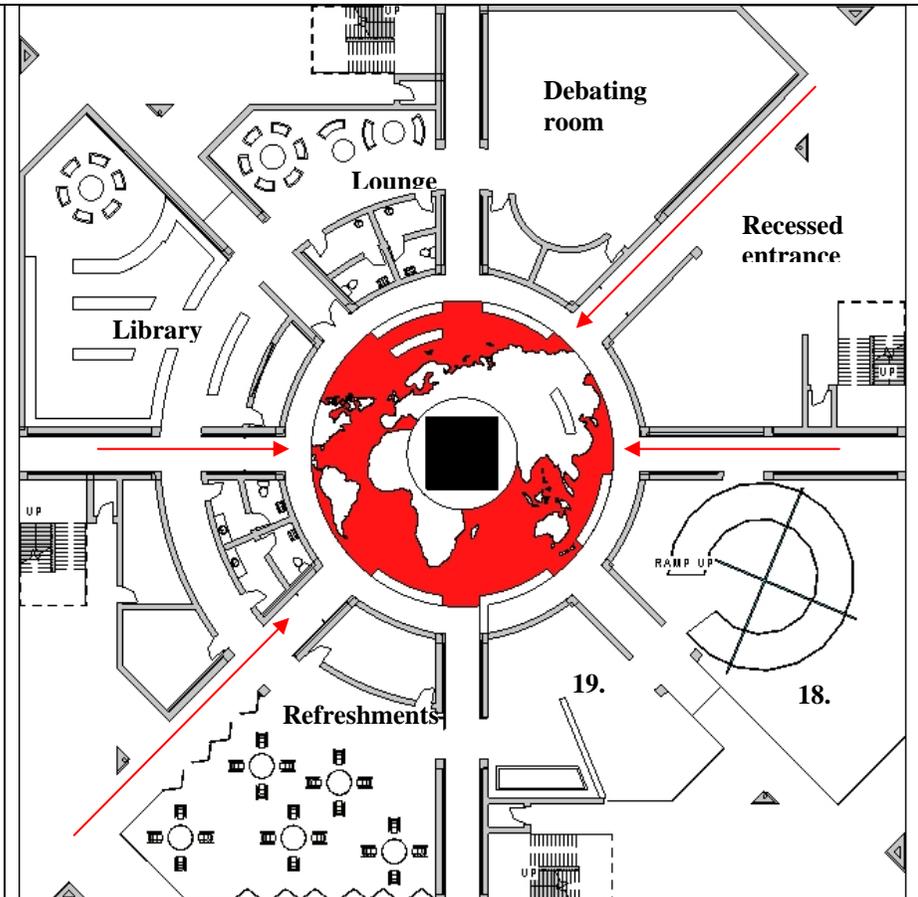
Greenery has been internally implemented along the overhanging slab of the 1st floor level, thereby completing the circular circumference along a square periphery.

The idea of the Ka'ba at the centre of the world is portrayed clearly in the ground floor plan

□ Glazing can be seen as being minimal, since most of the lighting comes from skylights strategically placed on the roof level.

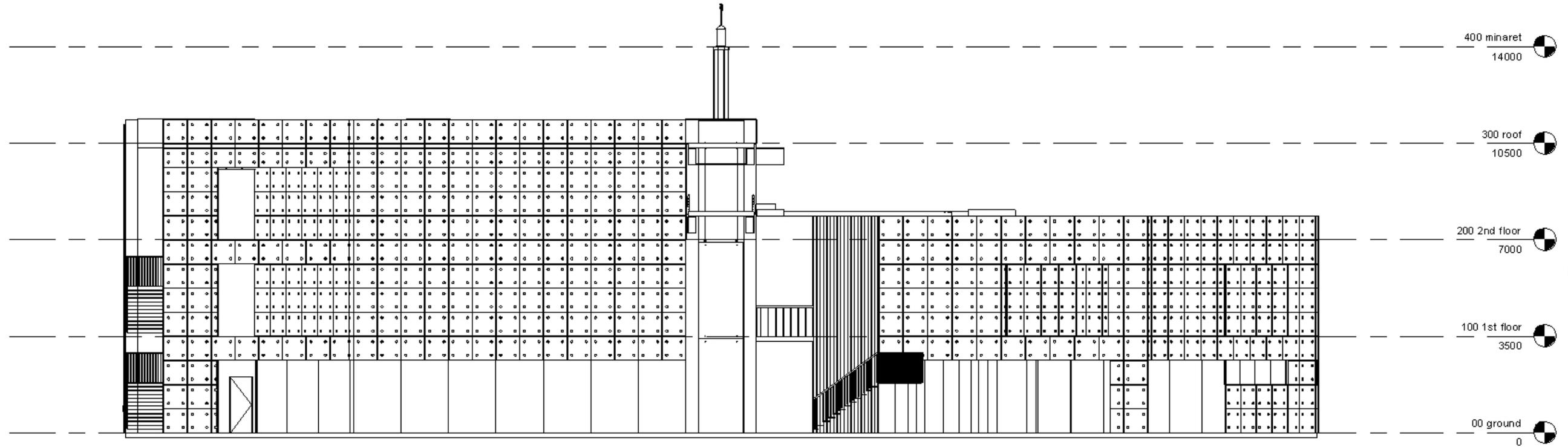
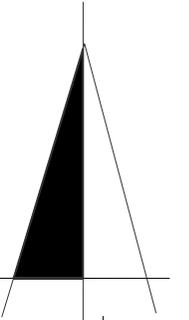
The ground floor promotes socializing and intermingling due its many entrances and open nature within the central void. Entrances are recessed, and placed along the cardinal or diagonal planes of axes. The ground floor further hosts a refreshment area, with a surrounding garden, as well as a library area, which is accessed via the central core.

- Exhibition 13: Me'raj – the miraculous night-journey
- Exhibition 14: Welcome to Medina
- Exhibition 15: Battle at Badr
- Exhibition 16: Battle of the Trench
- Exhibition 17: The Treat and the Conquest of Mecca
- Exhibition 18: Intermediary battles and invitation to Kings
- Exhibition 19: Farewell sermon and demise



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Fig. 20. South Elevation. Floating glass façade on the ground floor contrasts the heaviness of the walls and the panelling. It appears as if the building is floating on glass. Glazed strip at centre permeates throughout the façade. Light-weight stairs hidden by grooved vertical mouldings to emphasize verticality, and a sense of floating.

New glass minaret installed for identification purposes as well as ventilation purposes. Strip glass inserted for aesthetics, lighting purposes and ventilation and thermal control. See minaret and strip glass details.

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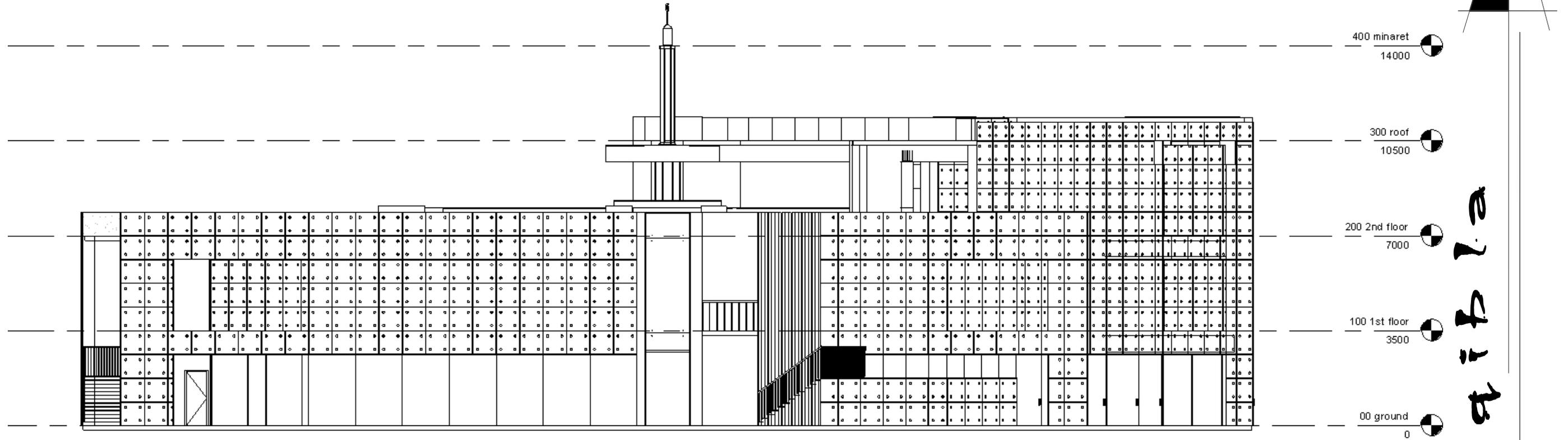
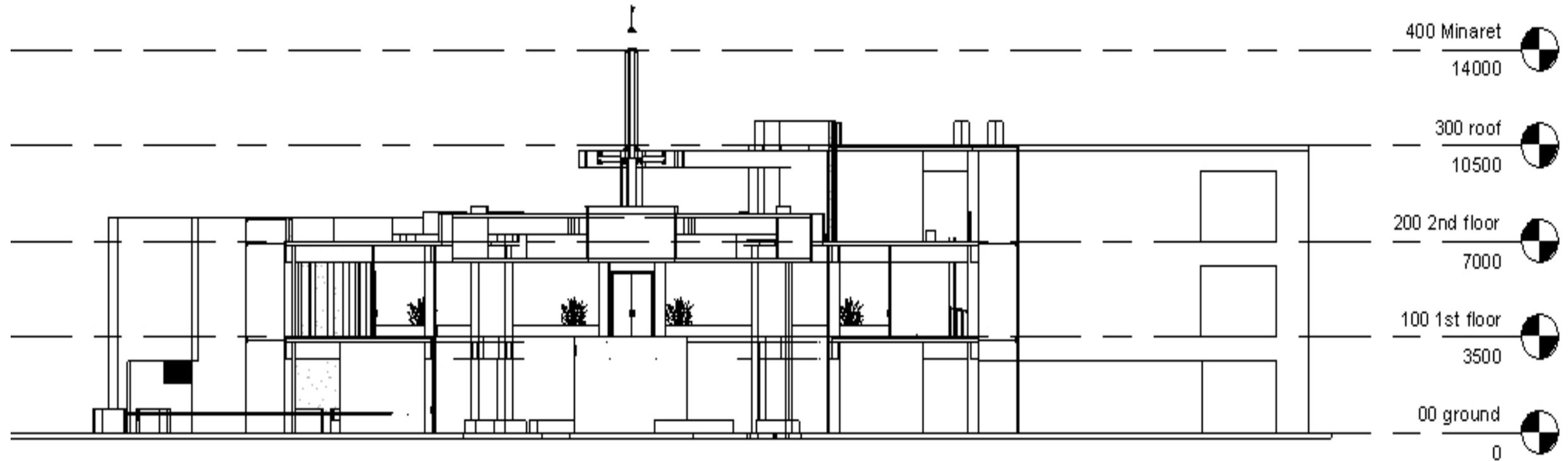


Fig. 21. West Elevation. Elevation depicts the floating feeling, as well as the play of volumes and forms. Structural elements are exposed at their ends, and yet hidden behind panelling at other times. Panelling seen as a form of decorative art and an abstract manner to portray a new spirit.

The form steps up and the minaret's structural elements are exposed.

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Fig. 22. Diagonal Section. Indicates the celebration of the internal world, which is fully glazed to face the central core, thereby contrasting the external world, which is a 'wall' architecture.

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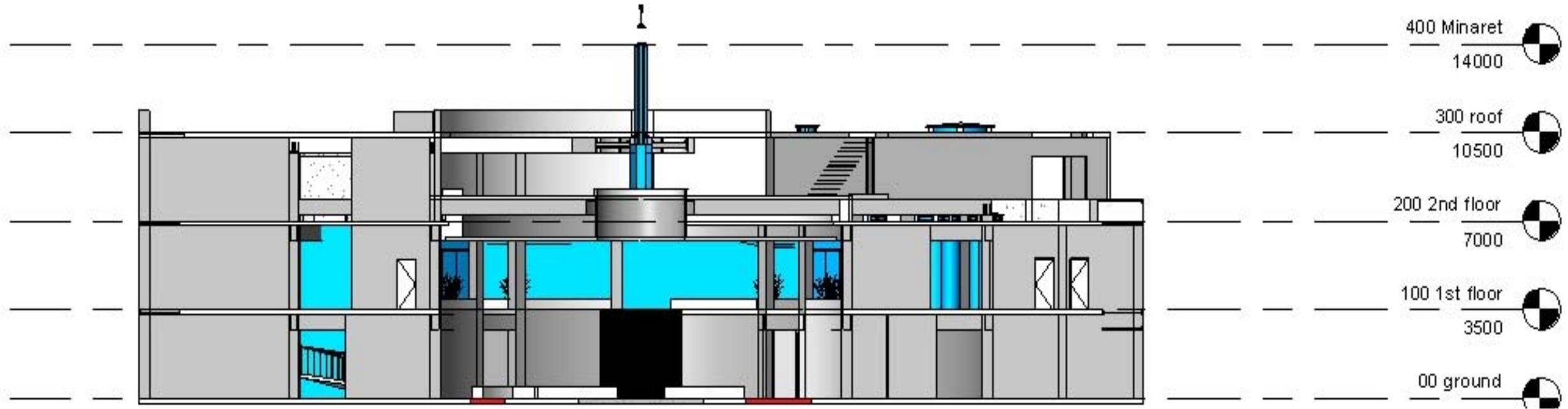
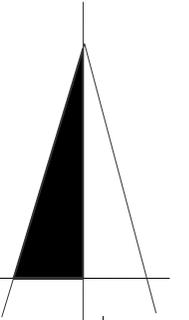
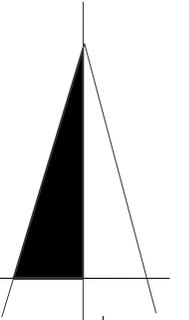


Fig. 23. Cardinal Section. The internal world has a solid ground floor with upper floors glazed. The external facades are directly the opposite, with the ground floor glazed, so as to create a floating effect, with the heaviness of the upper solid walls. This lends to a play with materials, tension and play with structure.

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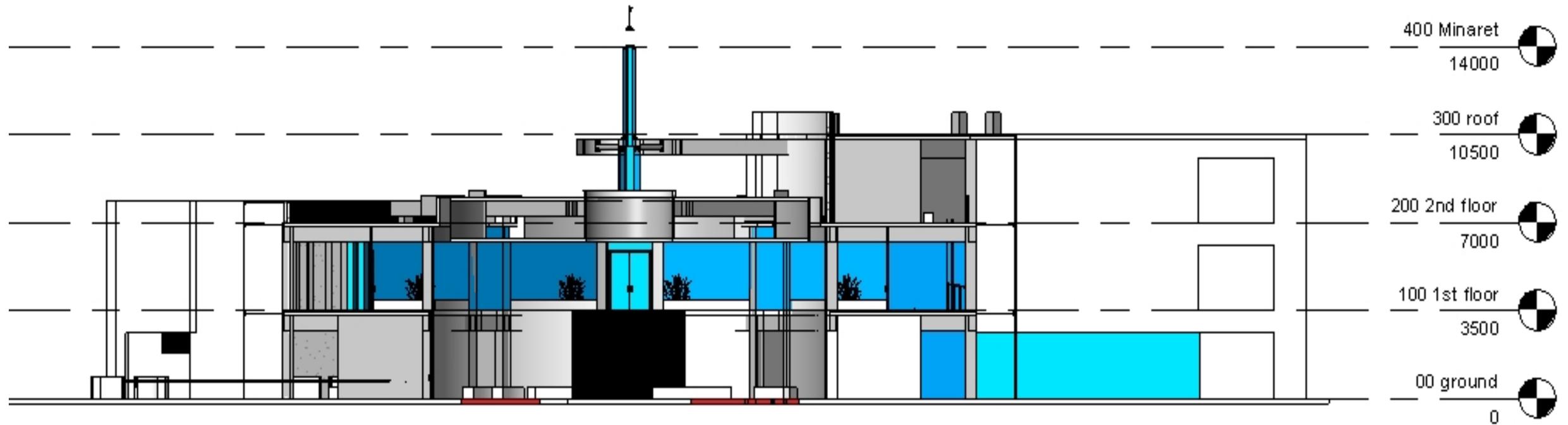
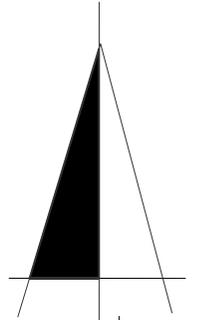


Fig. 24. Diagonal section in colour

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Ventilation and thermal comfort achieved by:

- The placing of a pond in between Building A and B. The pond will always be in the shadow of Building A, and hence this cooler air will maintain a cooler eastern side to Building B. The afternoon sun will shine on the strip-glazed facades, thereby creating heat by radiation. These strip facades will play a role in creating a suction force due to their triple volume spaces. A mere implementation of louvers will vent the hot air towards the surroundings. In winter the opposite will take place, since a fan at the louver end of the glass strips will send the hot air back into the building.
- The glass minaret will be exposed to sun, and will heat up at a quick rate. Extractors amidst the minaret structures will vent all the hot air to the outer surroundings.
- Since passive ventilation will not only be sufficient, a fresh air handling unit with 8 general chillers, which will cool air in summer, and heat air in winter, will sufficiently cater for providing adequate thermal comfort, as well as ventilation.
- The above type of system only consists of a fresh air unit, and a chiller, which effectively costs 20% of a normal air-condition system. To further aid this simple system, night time cooling should be at double the volume in summer. In winter the opposite will happen, with double the hot air pumped in at night. This, together with insulated walls, roofs and exposed strip glass and water cooling principles would create an effective thermal and ventilation environment.

Fig. 25 indicates the passive system to be adopted, with the glazed-strip facades acting as towers with their triple volumes and louvers at the top.

Fig. 26. indicates the type of fresh air system to be used, with the fresh air handling unit, as well as the chillers to be allocated on the roof, and exposed. (Personal interview with Spoormaker and Partners).

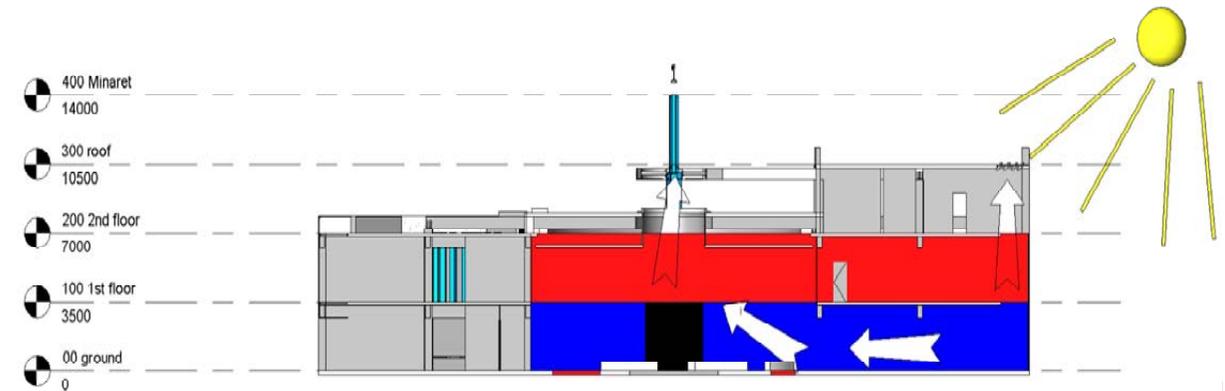
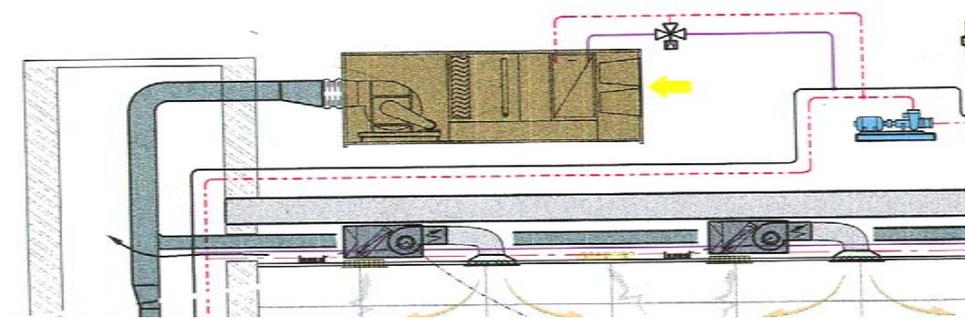


Fig. 25
Fig. 26



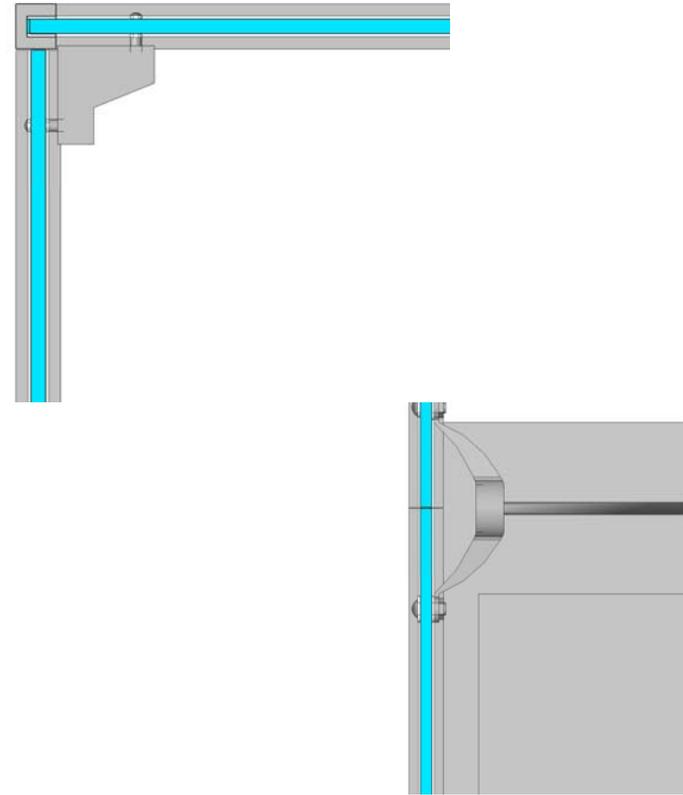


Fig. 27-28. Glass-strip detail

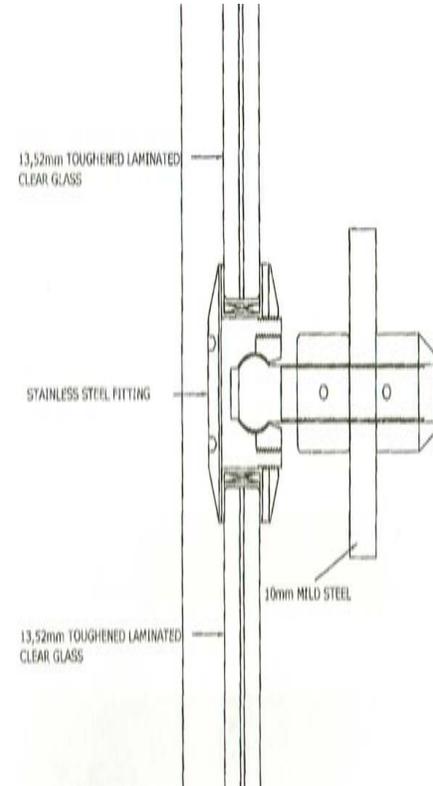


Fig. 29. Steel clip-glass holding detail

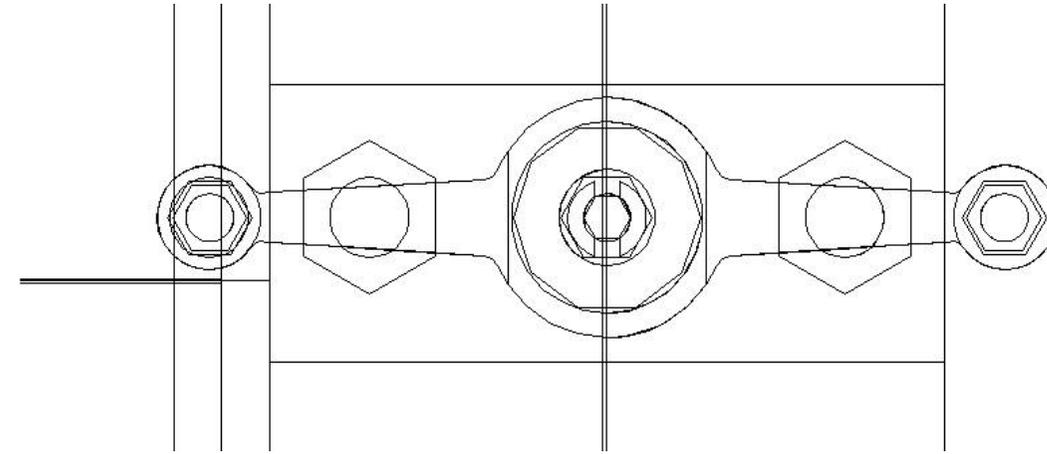
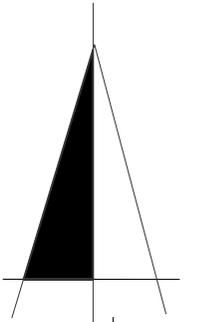


Fig. 30. Front view of clip holding-glass detail



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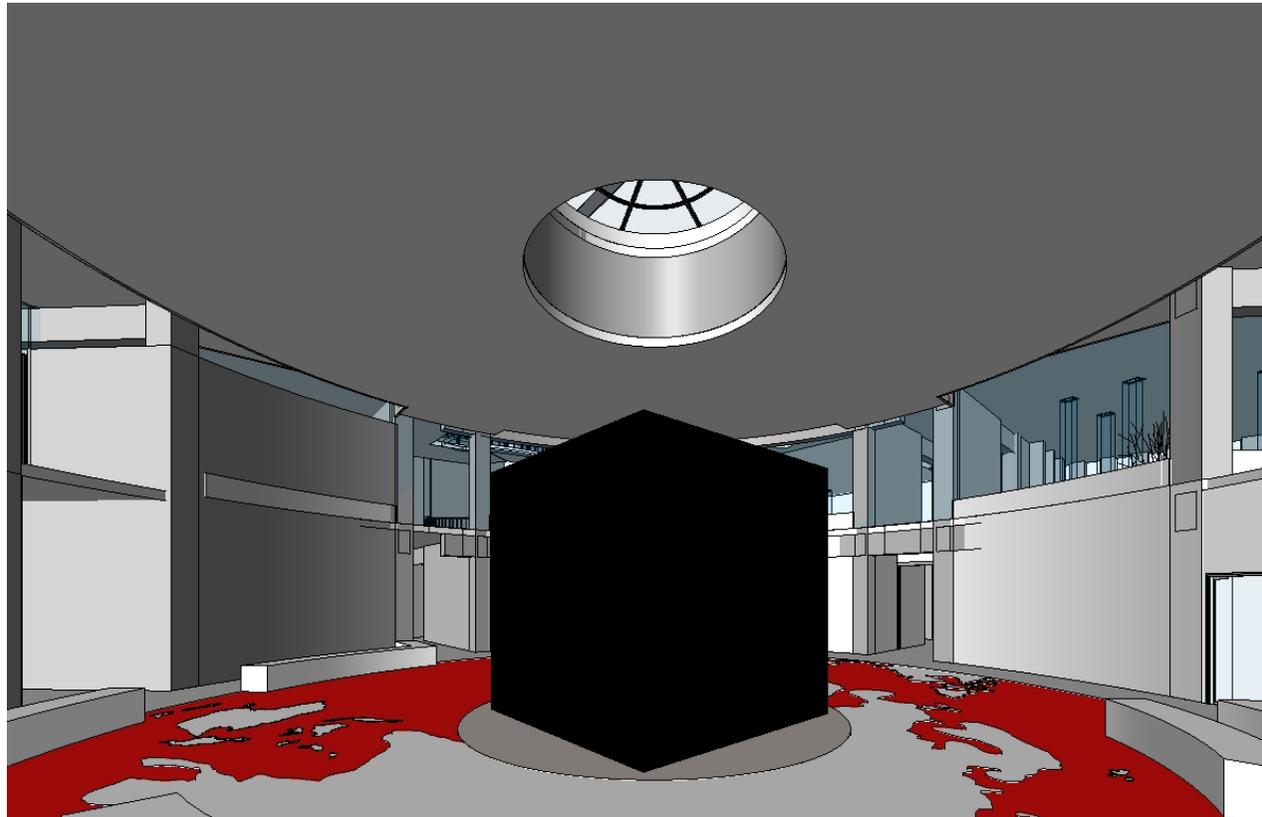
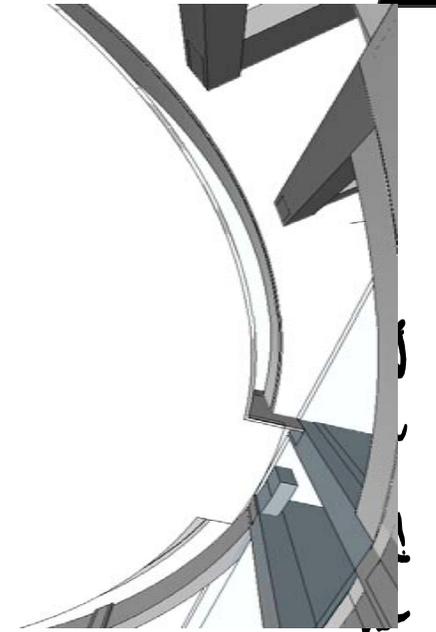
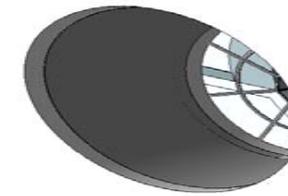


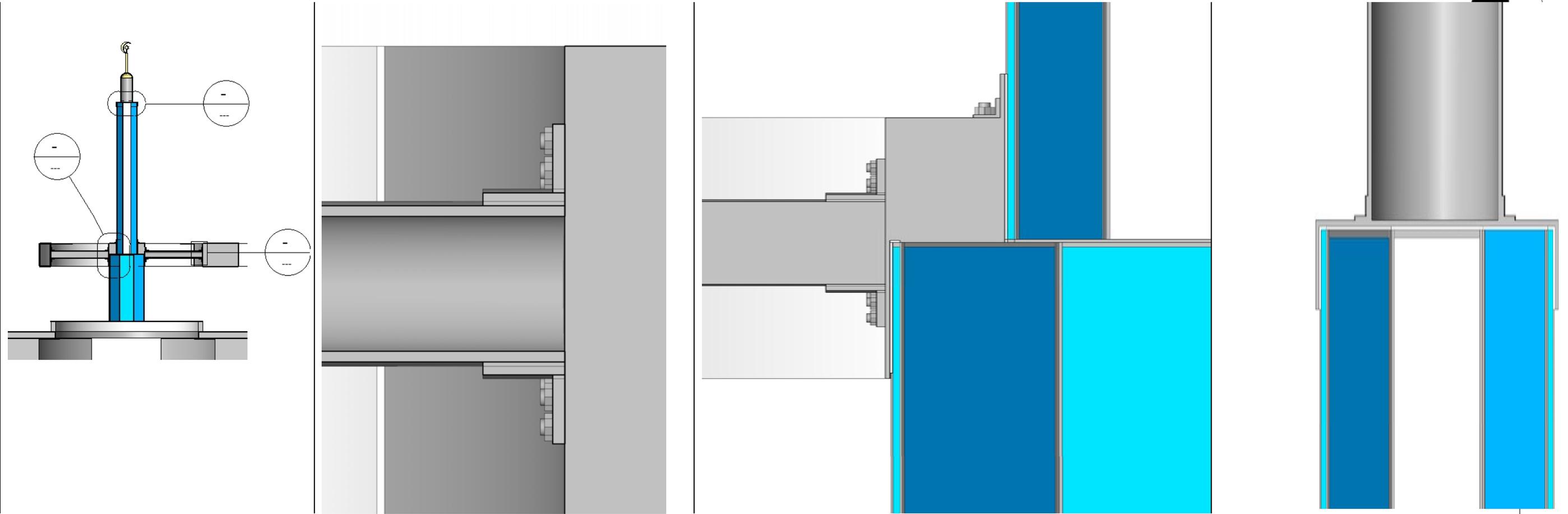
Fig. Depicting the inward-looking arrangement of the upper-storey exhibitions.



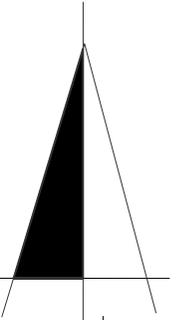
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Fig. Depicts view towards the minaret and floating slab

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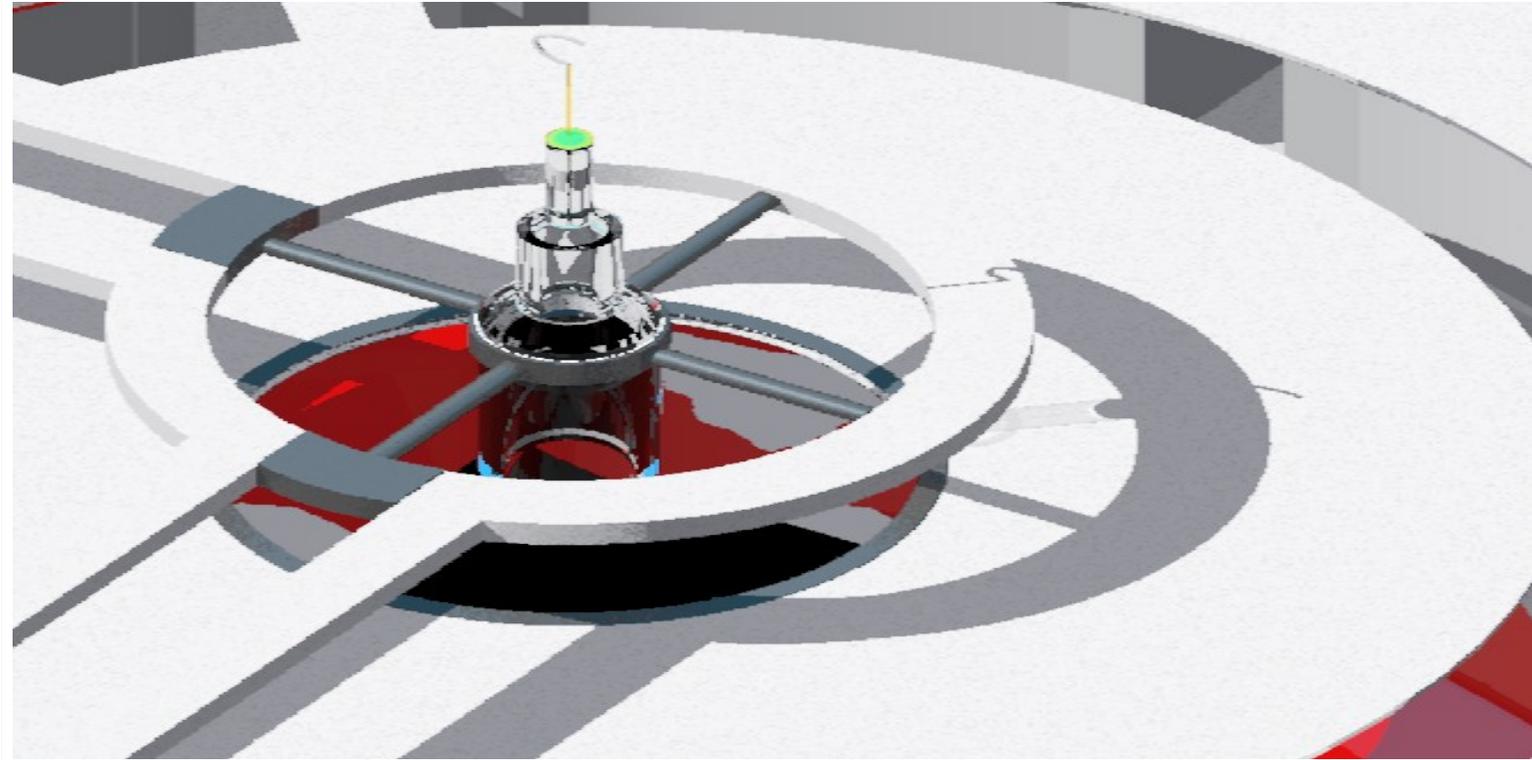
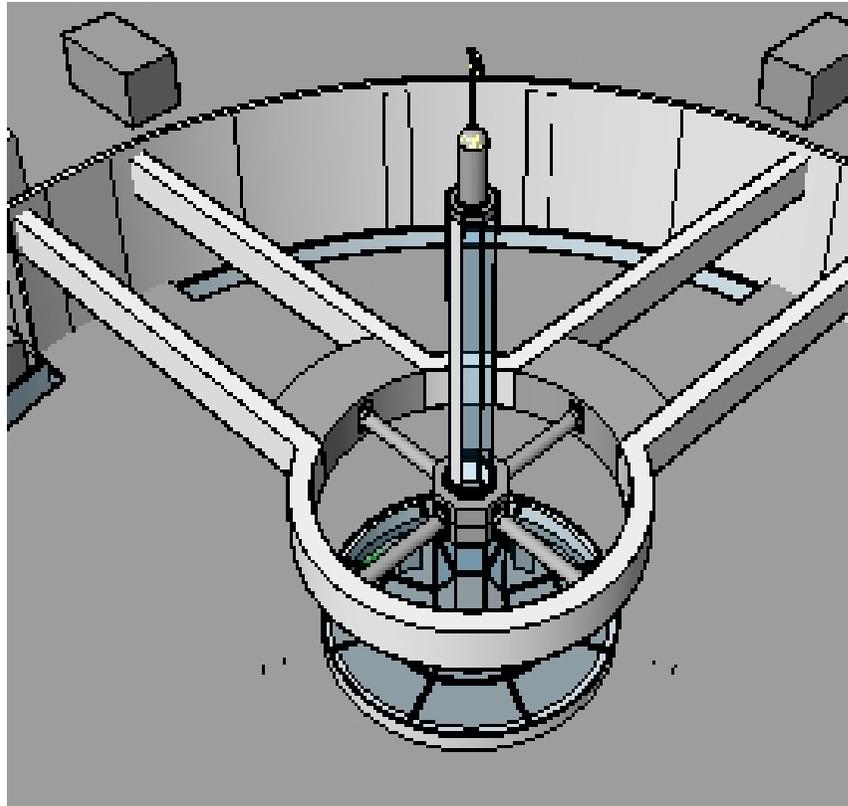


Fig. depicts new form of minaret with glass and steel. The minaret has extractors attached to it for thermal and ventilation purposes.

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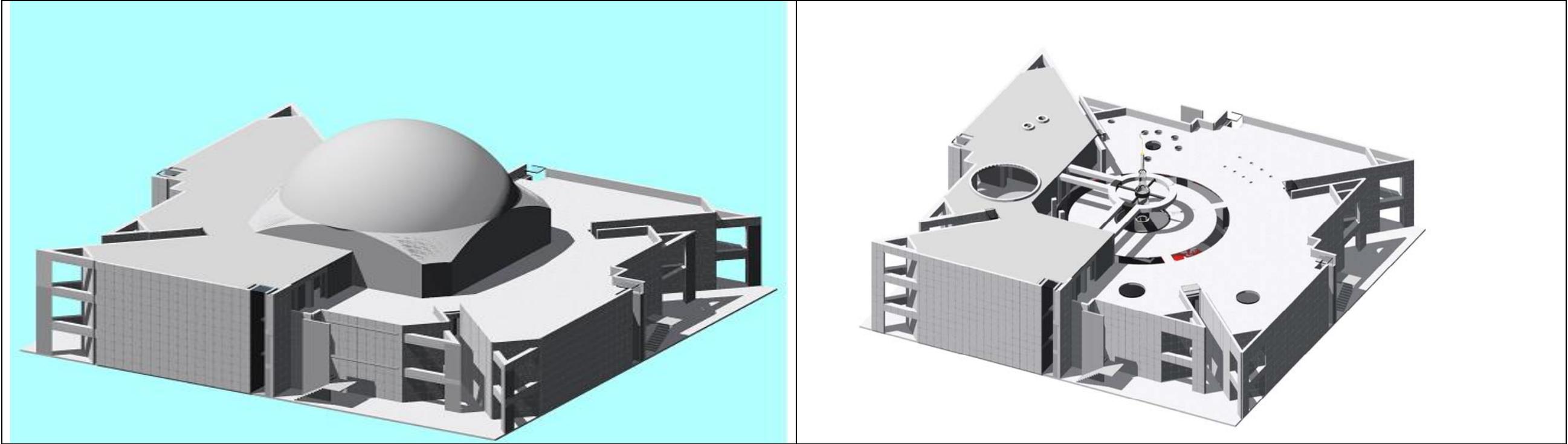
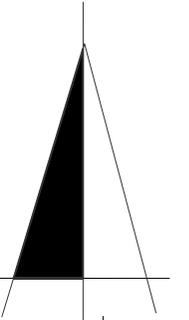


Fig.'s depict old form versus new form. A new spirit is born.

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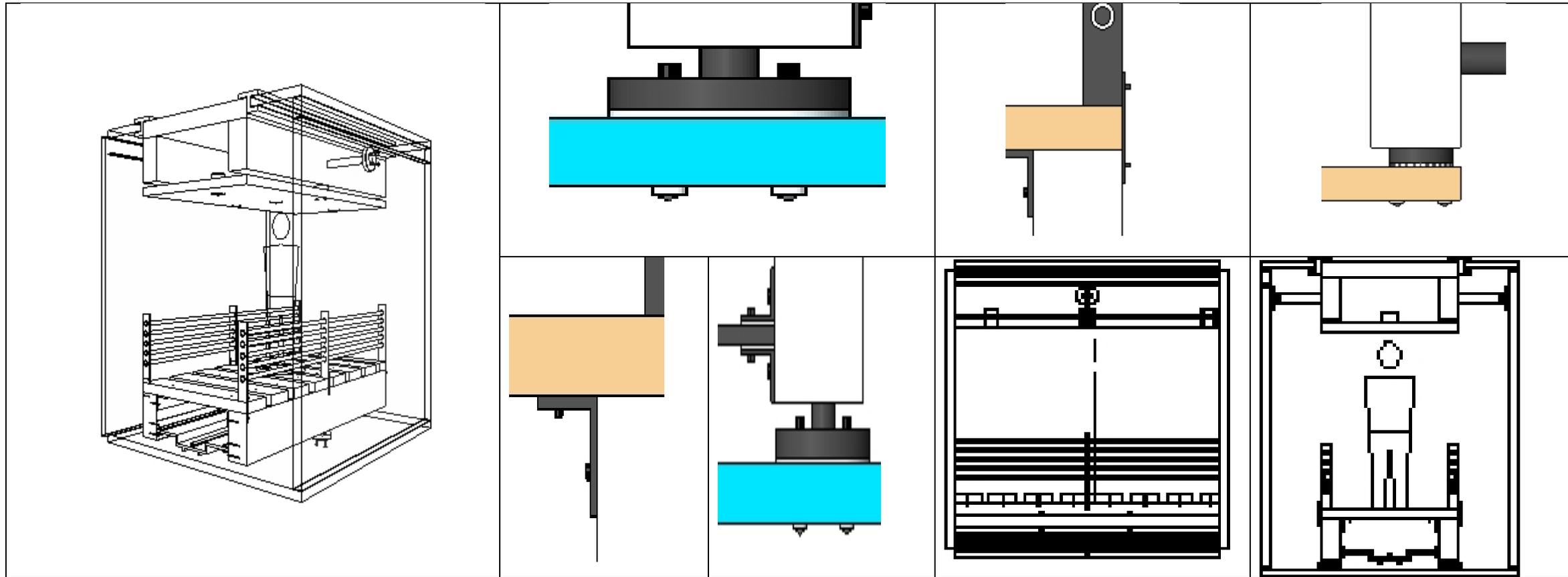
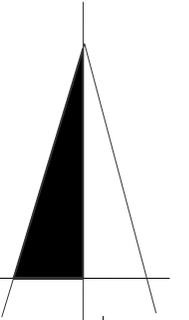
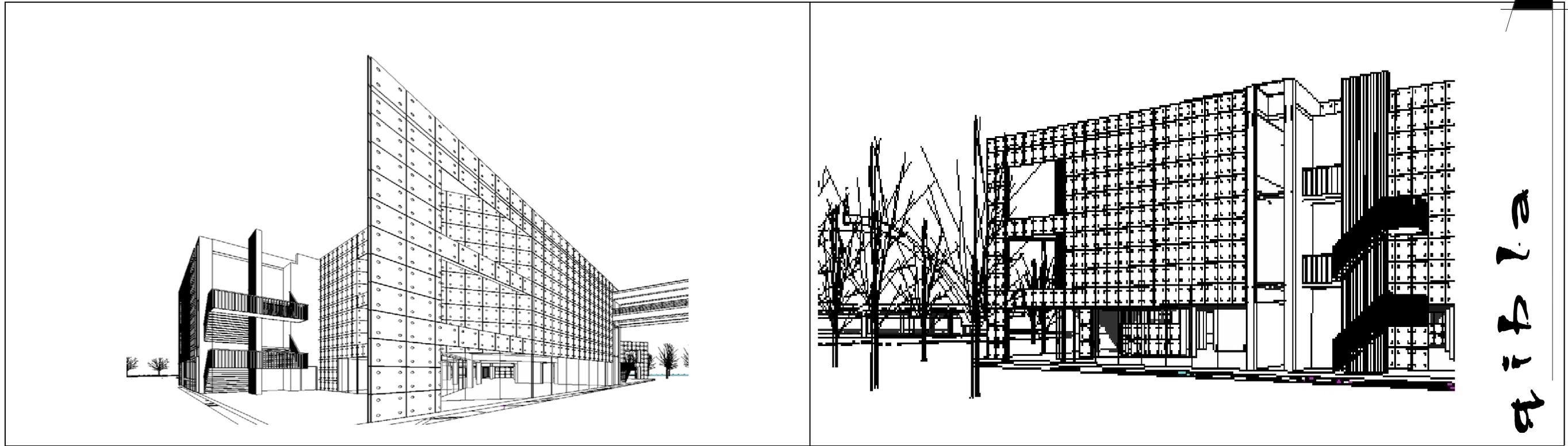
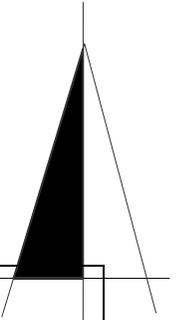


Fig.'s depict Bridge detail between Building A and Building B.



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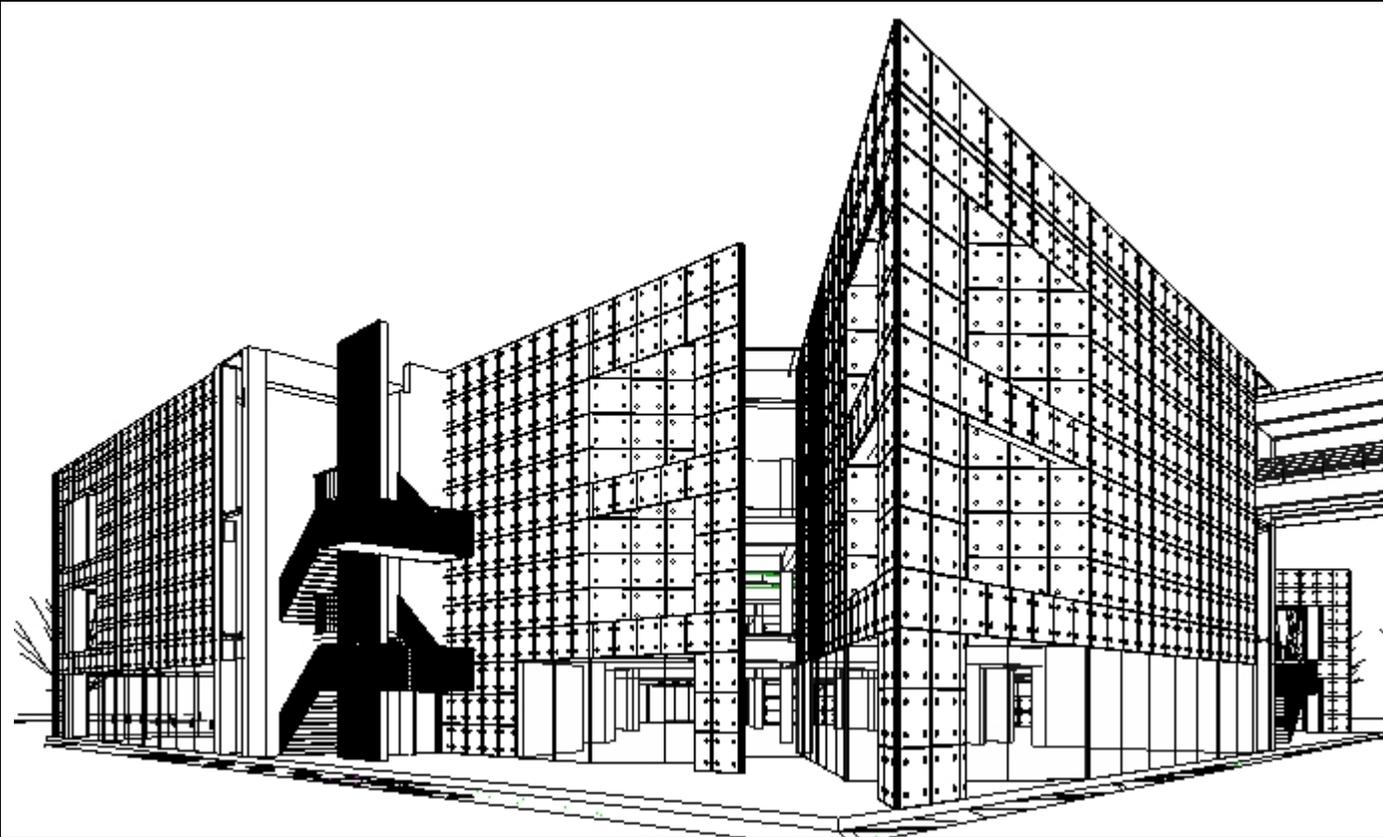
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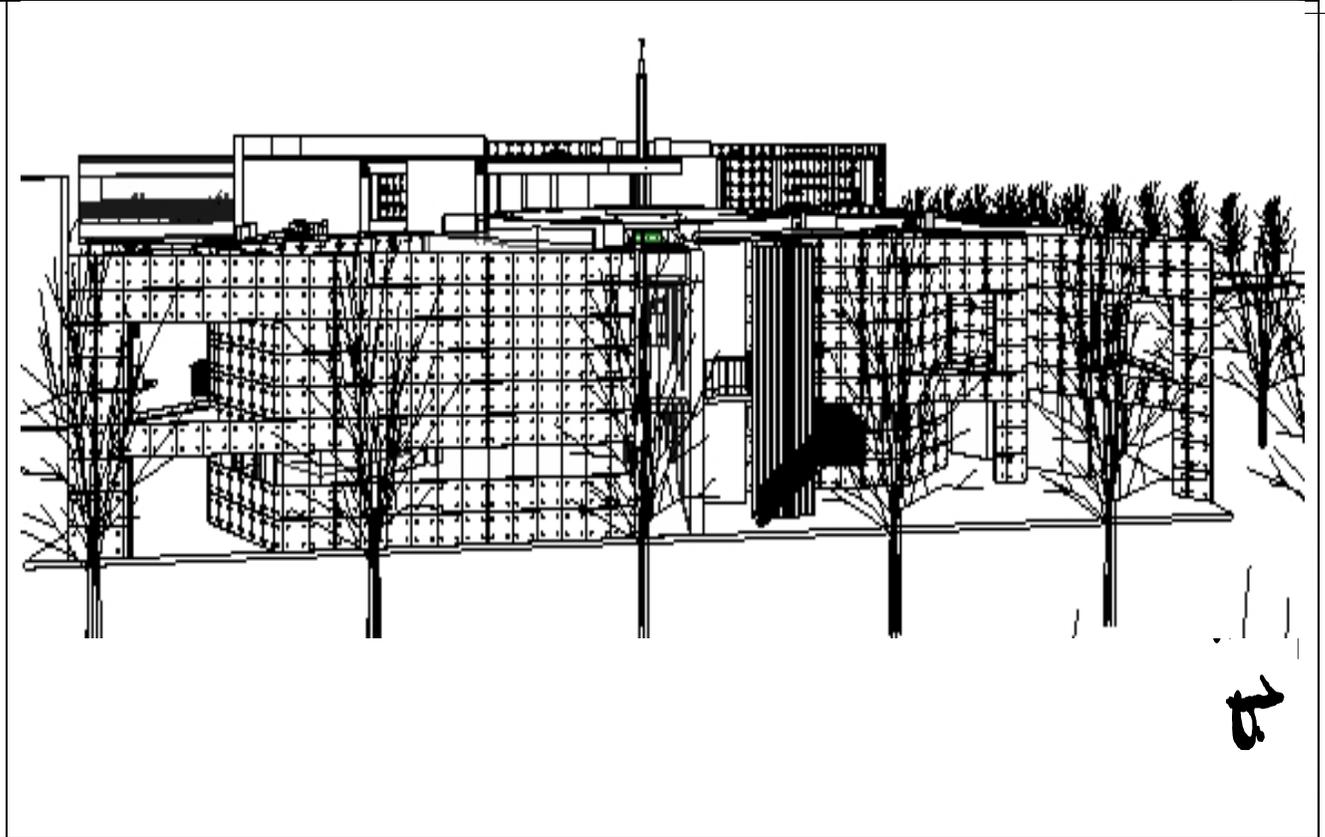
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Fig. depicts a new form and a new spirit for Islamic architecture. A play with structure and volumes has resulted in rhythm and repetition, with fundamental structural elements exposed.

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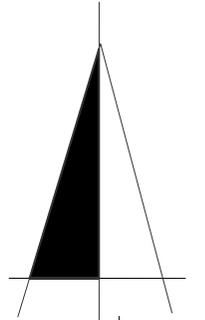


South West Perspective showing view through strip glass and into building, with linking bridge in the background



Northern perspective with minaret in the background

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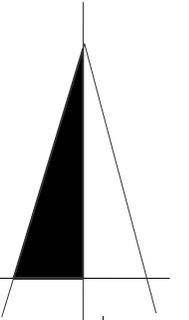
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Index to Section-G

Feasibility Study

| Contents | page no. |
|---|-----------------|
| Introduction----- | 2 |
| Financial feasibility study----- | 4 |
| Appendix A: Professional fees----- | 10 |
| Appendix B: Developers fees----- | 13 |
| Appendix C: Notes to sundries----- | 14 |
| Appendix D: Net income criteria----- | 15 |
| Value of current proposal as opposed to Alternative Investment----- | 19 |
| Conclusion----- | 20 |

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Introduction

For the purposes of this project, I will assume that the cultural resort is a success, and the need for a museum within the parameters of the current resort, has been established. Due to the religious and social nature of the proposed museum, funds can only be made available from community donations. In addition to this, a group of private investors wish to donate a museum for social purposes, such as defining particular mannerisms and culture, and as a landmark to the faith. The board of investors for the resort also wishes to donate a suitable piece of land for this purpose, since the museum will further enhance the cultural environment intended for the resort.

Thus, cost estimation is needed to determine the feasibility of the museum, the impact of the museum upon the resort, and the extent of its ability to cover its on-going maintenance and operating expenses, and perhaps in the long-run, its capital investment layout. Since this is a community museum for a minority group, it cannot be expected to procure the large amounts of profit another service could offer, but it will certainly add value to the resort, being the only museum of its kind in the entire African peninsula. The study will also reflect, in contrast to the proposal of a Museum, what the yield of an alternative solution could create, and the difference between the two will then be highlighted to the investors, in order for them to acknowledge what other financial possibilities are being surpassed at the expense of building a cultural museum.

I have thus defined the parameters within which I propose to proceed, in order to achieve the objectives of the given brief.

Private investors' objectives:

- Create an awareness of the faith and of God, locally and globally
- Create an environment wherein the faith can be 'purely' practiced
- Non-profit organization
- Celebration of the faith, and the Life of the Final Messenger
- Attaining everlasting rewards from God for contributing to the faith
- **The ability of the Museum to cover its own on-going operating and maintenance expenses, once the construction phase is complete**
- Repayment of donation within a period of 50 years

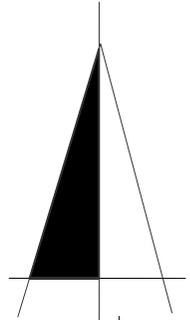
Funding for the proposed Museum:

- Private investors
- Local community donations
- Donations from overseas, (for example, Saudi Arabia's donation of R60 000, 0000, 00 for a Mosque in Houghton, in Johannesburg).
- Donations from the investors of the resort

Functionality criteria of proposed museum:

- Since the museum will be placed at the center of the resort, it would draw maximum attention within the resort, and would complement the theme of the resort
- The museum also would create a sense of uniqueness to the resort, and will have the potential to attract more interest in the resort
- Will allow other cultures to interact and better understand the faith and the object of the resort

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FINANCIAL FEASIBILITY STUDY

Land costs

Current market value of the land as established by the board of the resort is R250/m².

The land required, has been allocated between the prayer centers and the amphi-theater, being 10 000m². Thus the value of the land being donated towards the museum
10000m² x R250/m² = **R2 500 000**

I have included parking as land costs, since it was decided by the board that a portion of the resorts' existing parking area will be donated, together with the land, as part of the total land cost.

Parking requirements by the museum

The museum will have parking facilities made available by sharing a communal parking area with the resort. The museum will have to contribute towards the buying of parking area from the resort at a profit of 25 %, as per agreement with the board.

30 parking bays are required:

2.5m x 5m x 15 bays x 2 rows = 376m² (parking required)
376m² @ R400/m² = R150 400 (rate application)

Circulation contribution:

- **Between parking bays** = 8m x 15m @ R400/m²
= R48 000
- **General percentage usage contribution:**
164 people per day x 365 days = 59860 people per annum
Museum = (22 people per day x 365 days) = 8030 people per annum

Contribution expressed as a percentage of use:
= 8030 / 59860 x 100%

= 13.41 % of total parking cost to the point of museum terminal

= 8m x 15m @ R400/m² x 13.41%

= R6400

Total = (R150 400 + R48 000 + R6 400) = R205 200

Mark-up as per agreement with resort board:

R205 200 + 25% x R205 200 = **R256 500**

Land surveyor costs:

To accurately demarcate the co-ordinates of the site, and re-affirm with surveyor general plans

= **R20 000**

EIA and geotechnical costs:

The land being offered towards the museum has already undergone an EIA, thus this is not required.

Geotechnical test of specified region being 10000m² @ R5/m² = **R50 000**

Town planning, rezoning and transfer cost fees, etc:

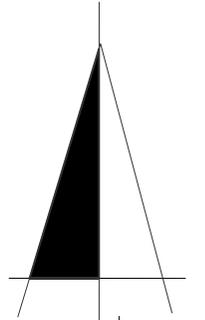
The resort as a whole has already been given a zoning specific to its circumstances, as dictated above. Thus, the museum, which falls within the boundaries of the resort, will assume the same zoning.

Transfer cost fees and duties = not applicable.

Approval of plans, municipal processing, administrative fees; assume 2% contribution of purchase price

= **R55 300**

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Development contribution:

Since council has no part in contributing any services, the resort has become an independent body, fully operating with its own services. The museum thus has only to connect to the main services line running adjacent to it. The resort will sell land as a sectional title, and will be responsible to provide services to the building line of the proposed museum, which is fixed in their sale of the land @ R250/m²

Thus the museum will not have to contribute towards any service installations up to the point of its building line, as declared legally.

Interim municipal tax : Not applicable: peri-urban district

Thus:

Land costs to be donated by the resorts' board:

| | |
|---------------|------------|
| Actual land | R2 500 000 |
| Parking | R256 500 |
| ----- | |
| Total donated | R2 756 500 |
| ----- | |

Land costs to be donated by private body:

| | |
|-------------------------------------|----------|
| Land surveyor | R20 000 |
| Geotechnical investigation | R50 000 |
| Town planning, transfer costs, etc. | R55 300 |
| ----- | |
| Total donated | R125 300 |
| ----- | |

Total for all land costs to be donated = **R2 881 800**

I have indicated above that land worth the value of R2 756 500 will be donated by the resort. This land could have been sold and utilized for alternative investments. Thus, their decision for donating this amount has to be taken into account, and will be reflected in the conclusion of the document.

Estimate of total building expenditure

Area of proposed museum site:

Calculation of design parameters:

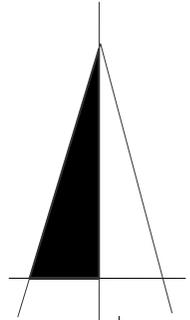
| | | | | | |
|---------------------------|------------------------|-----|----------------------|---|----------------------|
| Dimensions of site | 20m (N-S) | x | 50m (E-W) | = | 10 000m ² |
| Allowable FSR (bulk) | 10 000m ² x | .54 | | = | 5 400m ² |
| Construction area allowed | 10 000m ² | / | 1.85 | = | 5 400m ² |
| Coverage allowed | 42% | of | 10 000m ² | = | 4 200m ² |

The museum divided into three components:

| | | | | | |
|-------------|---|---------------------|---|-----------------------|------------|
| Component 1 | = | The Creator | = | 1200m ² x2 | (2 levels) |
| Component 2 | = | The Messengers | = | 1800m ² x1 | (1 level) |
| Component 3 | = | The Final Messenger | = | 1200m ² x1 | (1 level) |

| | | | |
|--|---|---------------------------|---------------------------|
| | | 1st level | 2nd level |
| Total area for exhibition space | = | 4 200m² | 1 200m² |
| ----- | | | |

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Thus:

Total construction area = 4 200m² + 1200m² = 5400m²
 Landscaping area = 10 000m² - 4200m² = 5800m²

(Parking has been included under land costs, since it will be donated by the resort management board as part of the land purchased)

Estimate of total capital expenditure:

Estimated current building cost @ R3500 / m² for 5 400m² = R18 900 000
 Estimated landscaping cost @ R200 / m² for 5 800m² = R1 160 000

 Total current building cost = R20 060 000

Escalation:

Pre-contract escalation factor: 4months @ 0.80% p.m. comp = 1.0490 (esc. factor)
 Pre-contract period escalation R20 060 000 x 0.0490 = R 982 940
 Building cost at start of construction = R21 042 940
 Construction period esc.factor: 8 months @ 1% p.m. compound = 1.196 (esc. factor)
 Haylett and draw down factor 0.85 x 0.6 x 1.196 = 0.100
 Escalation during construction period 0.1 x R21 042 940 = R2 104 294

Estimated total escalated building cost = R23 147 234

Professional fees established by the consortium of investors @ 15%; (see professional fees section, Appendix A, for professional fess adjustment).

Therefore, **professional fees** = 15% x R23 147 234 = **R3 472 393**

No developer's fees – (see notes on developer's fees: Appendix B)

Sundries – minimal - (see notes on sundry accounts: Appendix C) = **R100 000**

Total cost excluding land cost, cost of capital = R26 719 170

Land cost (see above) R2 881 800 / 1.1 = R2 619 818
 Pre contract period 15% of R2 619 818 4 months = R 130 990
 Construction period 15% of R26 649 170 8 months x 0.6 = R 265 314

Total project cost = R29 735 292

Estimated Net Annual Income:

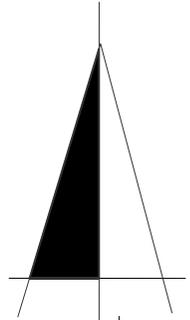
Gross income of museum: (See gross income section: Appendix D) = R919 800
 Less: Non recoverable expenses (assume less 5%) = R45 990
 Total gross income before further allowances (assume less 5%) = R873 810
 Total gross income after allowances = R830 120

Total Gross Income / Total Project Layout
 = R830 120 / R29 735 292 = 3%

The above indicates a 3% return on capital investment.

This is a small return compared to the desirable 10% return on other alternative investments. However, we have to keep in mind that the objective of the proposed museum would be to at least pay off its operating expenses, which it does so comfortably, with

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a 3% profit per annum. The other objective of the museum would be to further enhance the environment of the cultural resort. The impact of this will be discussed below in the section titled "alternative investment".

ADDENDUM A

PROFESSIONAL FEES:

Architects

| | | |
|--------------------------------|---|------------|
| R139 370 + R23 147 234 x 6.25% | = | R1 586 072 |
| Disbursements | = | R3500 |
| ----- | | |
| Total fees | = | R1 589 572 |
| ----- | | |

Divided into 5 stages, as follows:

| | | | |
|---------|-----|---|----------|
| Stage 1 | 5% | = | R79 478 |
| Stage 2 | 15% | = | R238 435 |
| Stage 3 | 15% | = | R238 435 |
| Stage 4 | 40% | = | R635 828 |
| Stage 5 | 25% | = | R397 393 |

| | | | |
|------------|---|------------|--|
| ----- | | | |
| Total fees | = | R1 589 572 | |
| ----- | | | |

Quantities Surveyor

Building cost – electrical installations – mechanical installations

| | | |
|--|---|------------------------|
| R23 147 234 – R7 200 234 | = | R18 947 000 |
| R15 947 000 x 4.15% (as per table adj. between 8-16 million) | = | R661 800 Disbursements |
| | = | R 1 500 |

| | | |
|-----------|---|----------|
| ----- | | |
| Total fee | = | R663 300 |
| ----- | | |

Structural Engineer

Assume 15% on structural cost

Structural costs approximately 18% of total cost

| | | | |
|---------------|-------------------|---|------------|
| Therefore: | R23 147 234 x 18% | = | R4 166 502 |
| | R4 166 502 x 15% | = | R624 975 |
| Disbursements | | = | R 1 500 |

| | | | |
|-----------|---|----------|--|
| ----- | | | |
| Total fee | = | R626 475 | |
| ----- | | | |

Landscaper

Assume 13% on specified landscaped region

| | | | |
|---------------|---|---|------------|
| Therefore: | 5 800m ² @ R200/m ² | = | R1 160 000 |
| | R1 160 000 x 13% | = | R150 800 |
| Disbursements | | = | R1500 |

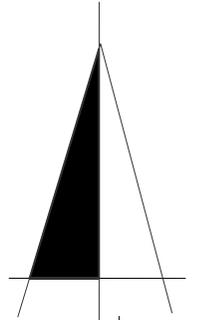
| | | | |
|-----------|---|----------|--|
| ----- | | | |
| Total fee | = | R152 300 | |
| ----- | | | |

Interior designer

Assume 15% on specified region

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| | | | |
|---------------|--|---|------------|
| Therefore: | 5 200m ² @ R1500 / m ² | = | R7 800 000 |
| | R7 800 000 x 15% | = | R1 170 000 |
| Disbursements | | = | R3000 |
| ----- | | | |
| Total fees | | = | R1 173 000 |
| ----- | | | |

Sound and acoustics specialist

Assume 13% on specified region

| | | | |
|---------------|--|---|------------|
| Therefore: | 5 200m ² @ R1500 / m ² | = | R7 800 000 |
| | R18 200 000 x 13% | = | R1 014 000 |
| Disbursements | | = | R3000 |
| ----- | | | |
| Total fees | | = | R1 017 000 |
| ----- | | | |

| | | | |
|-----------------------------|-------------------|-------------------|-------------------|
| Quantities Surveyor | R 663 300 | R222 206 | R441 094 |
| Structural Engineer | R626 475 | R209 870 | R416 605 |
| Landscaper | R152 300 | R51 021 | R101 279 |
| Interior Designer | R1 173 000 | R392 955 | R780 045 |
| Acoustics Specialist | R1 017 000 | R340 695 | R676 305 |
| ----- | | | |
| Total | R5 221 647 | R1 749 254 | R3 472 393 |
| | (100%) | (66.5%) | |
| ----- | | | |

The recommended fees cannot be paid by the investment board, which make it clear that beyond 15% of the total project cost is out of their budget. For this reason I have accordingly adjusted the fees structure by proportionately reducing all the fees by 33.5%, which is acceptable to all the professions. This also then fits into the 15% budget of the investors.

| | | | |
|------------------------------|------------------------|---------------------|--------------------|
| Final fees structure: | Recommended fee | (less 33.5%) | Project fee |
| Architect | R1 589 572 | R532 507 | R1 057 065 |

ADDENDUM B:

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There are no developers' fees, since the developers are a non-profit organization, with purely religious and cultural objectives. They are thus prepared to provide funds which ultimately should be paid back within a period of 50 years,

ADDENDUM C:

- **No rates and taxes:**

The resort falls under peri-urban area. This has certain development implications / restrictions which have been currently relaxed. At present, the council does not have the financial means to provide bulk services, and the newer developments have all been budgeted for along the north eastern end of the town. For council to rezone the resort, it would be liable to than provide bulk services. Since it cannot provide basic services, the resort has built its own water system from the existing boreholes on site. The resort also has access to an unlimited water supply from the Hartbeespoort Dam by merely paying the monthly fee of R500 per month, which is a basic fee for all farmers in the peri-urban district. This thus allows the resort to maintain its green areas cheaply. Furthermore, electricity is obtained directly from ESKOM, which is an independent company. Waste management is taken care by the resort, which collects its own wastes and discharges them to the nearest dump-site on a weekly basis, within the peri-urban district. For these and other reasons, the resort has been granted an agreement unique to its setting, since council could not provide it with its basic services. **Consequently, the resort manages its own affairs, and thus avoids rates and taxes.** If in the distant future, council is somehow able to provide bulk services, the museum and the resort at large will have most probably regained all its capital.

APPENDIX D

Gross operating income

Average occupancy level of 60%, as per statistics of established cultural resort.

1. (INTERNAL) INPUTS ESTABLISHED BY THE RESORT

At 100% occupancy level per week:

| | | | | |
|---------------------------|---|-----------------|---|------------|
| • Residential belt | : | 10 x 8-sleepers | = | 80 people |
| | | 50 x 4-sleepers | = | 200 people |
| | | 30 x 6-sleepers | = | 180 people |
| | | 10 x 2-sleepers | = | 20 people |

 Total number of sleep-over occupants = 380 people

From the above:

100 % occupancy level = 380 people per week

Therefore: 60 % occupancy level = 228 people per week

Therefore: 228 / 7 = 32 people per day on average, since the same people will be residing at their chalets for a period of one week, and will presumably only visit the museum once during their stay.

- **Day visitors, excluding residents and conference attendants, at 20% occupancy level, as per resort statistics**

100% occupancy level = 1000 people

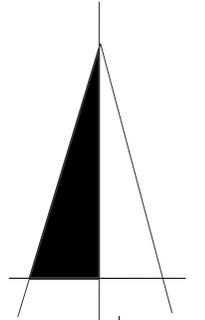
20% occupancy level = 200 people

Therefore: 200 people per day on average.

- **Conference center facilities:**

Estimating two conferences per month as minimum, with a capacity for 600 people, as per conference center statistics for resort:

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800 x 2 occasions = 1600 people per month
 Therefore: 1600 x 12 months = 19200 people per year
 Therefore: 19200 / 365 = 52 people per day on average

40 % of residents attending a conference stay over, as per established statistics of resort. This will have to be subtracted from the total amount of people expected to arrive, since it was calculated twice: once for the residential component, and once for the conference component

| Zone | per day: | overlap of zones as a percentage |
|-------------------|----------------|---|
| Residential | 32 | excludes day visitors; includes conference attendants |
| Day visitors | 200 | individually calculated, excluding residents and conference attendants |
| Conference center | (52 – 20) = 32 | 40 % attending conference are residents |

 Total 264

Assume that out of 264 people per day on average, 95% will belong to the faith.

Therefore, 250 people will frequent the museum every day, being people curious to see what their faith has to offer in the form of a 'museum- exhibit' form.

From these people, assume that people on average come to the same resort 4 times a year. This would ultimately mean that a person would not visit the museum for the following 3 times to come. Therefore we could assume that the museum will at minimum be frequented by (250 / 4 =) 62 people on average per day.

2. (EXTERNAL) INPUTS BASED ON ASSUMPTION AND RISK

Other candidates to view the museum:

- Local schools for excursion purposes to experience a different culture
- Tourists, since the resort is along a tourist route, and is a registered member of SAHRA
- Local tourists, since the resort is close to the Hartebeespoort Dam

Local schools:

10 schools in the vicinity out of which 6 oblige
 3 grades per year of a class of 40 per grade
 Therefore 6 x 40 x 3 = 720 people per year from obliging schools
 Therefore 720 / 365 = 2 people per day on average

Schools within a 150 km radius:

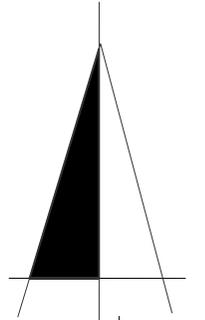
50 possible schools out of which 20 oblige (6 of these comprise of the faith)
 Therefore 20 x 20 x 3 = 1200 people per from obliging schools
 Therefore 1200 / 365 = 3 people per day on average

Tourist statistics:

The Hartebeespoort Dam at minimum sees 250 000 tourists per year, comprising of both locals and foreigners
 Assume 2.5 % are interested in this resort (1.5% of 250 000 which belong to the faith as per Tourism statistics for the Hartebeespoort Dam)
 Therefore 6250 tourists will presumably come to the resort for a day
 Therefore (6250 / 365) = 17 people per day on average throughout the year

| Potential viewers | Average per day |
|-------------------|-----------------|
| Local schools | 2 |

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|---------------------|-----------|
| Surrounding schools | 3 |
| Tourists | 17 |
| ----- | |
| Total | 22 |

Total people per day on average to view museum:

| | | |
|----------------|---|--------------------------|
| Internal input | = | 62 people per day |
| External input | = | 22 people per day |
| ----- | | |
| Total | = | 84 people per day |

Total income generated by museum:
 84 people per day @ R50 per person for 365 days = 84 x R50 x 365
 = **R 1 533 000**

Therefore, total Gross Income for one annual cycle = R 1533 000
 (Most people of the faith will regard the entrance fee as a donation, and will probably donate more than the required fee. Nevertheless, a minimal fee has been calculated so as to assume the worst possible case).

Less: Operating expenses

Assume to be 33% of gross income = R51 100 a month - to maintain a structure which is not a multi-purpose structure, but is an exhibition space, and has few operating expenses, mainly being staff and maintenance.

Therefore: Gross income – Total operating expense
 = R1 533 000 – (R51 100 x 12)
Net Income = R919 800

Value of Current Proposal as opposed to "Alternative Investment"

If an alternative investment were to be considered, with a 10% return, it would generate a profit of R2 973 529. Within a matter of 10 years it would have paid itself off.
 With the museum, we only have a 3% return of R919 800. It would thus take the museum approximately 33 years to pay itself off.
 However, we have to consider the implications of the museum on the resort.

Assume a 10% increase in occupancy level of the resort, due to museum impact:

| | | | |
|---------------------------|---------------------------|---|------------|
| Day visitors | 20 per day x R60 x 30 x12 | = | R432 000 |
| Residents (10% increases) | 66 per week x 52 x R550 | = | R1 887 600 |
| ----- | | | |
| Total impact | | = | R2 319 600 |

Thus, the total impact, direct and indirect, would be:

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$$R919\ 800 + R2\ 319\ 600 = R3\ 239\ 400$$

$$R3\ 239\ 400 / R29\ 735\ 292 = 10.9\%$$

If we now observe the total impact of the museum, we observe a 10.9% return, out of which 3% is directly associated to the museum, and 7.9% could be attributed to the impact it would have upon the resort. From this perspective, it now seems a viable solution to the board of the resort.

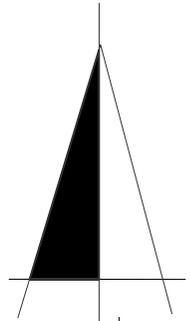
Please do note that in reality, the entire museum would be donated, and its proceeds and impact would ultimately benefit the investors of the resort and the respective community of faith at large.

CONCLUSION

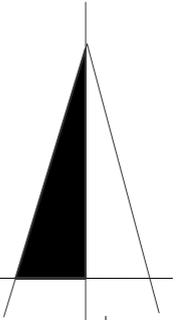
The proposed Museum will manage to run its on-going operating and maintenance costs effectively, with a 3% profit. Its estimated impact upon the resort would be a positive outcome of a 7.9% increase in the proceeds. Besides the land costs of R2 756 500, which the panel of the resort would have to bear, the balance of R26 978 792, will be donated by outside parties. From this perspective, it would definitely be in the interests of the resort to donate the land, in order to gain an asset such as the museum.

From the perspective of the outside investors, the total cost is R26 978 792, and land worth the value of R2 756 500 will be donated. The 3% return would ultimately pay the museum off within a period of 33 years. Their objective was that it should be pay itself off within a period of 50 years; therefore, the project is suitable. The museum would also create the desired cultural objective, and would be an asset to the faith.

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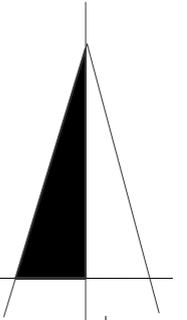


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**Index to Section H:
Appendices**

- Appendix A: Component two: Establishment of a background towards the brief**
- Appendix B: The ninety-nine attributes of Allah**
- Appendix C: List of figures**
- Appendix D: Reference list**
- Appendix E: Note of thanks**

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**Appendix B:
The ninety-nine attributes of Allah**

- | | | | |
|--------------------------|--------------------------------|--|--------------------------|
| The Most Merciful | The Restrainer | The Illustrious | The Unique |
| The Most Compassionate | He who expands | The Perfect | The Omnipotent |
| The King | The Abaser / Humbler | The Capable | The Advancer |
| The Holy One | The Raiser | The Fulfiller | The First |
| The Peace | The Degrader / Subduer | The Last | The Apparent |
| The Trusted | The All Hearing | The Latent | The Ruler |
| The Vigilant | The All Seeing / Discerner | The Beneficent | The Relenting |
| The Almighty | The Arbitrator / Judge | The Avenger | The Effacer |
| The All Compelling | The Justice | The Ever Indulgent | The Equitable |
| The Majestic | The Most Gentle | The Collector | The Sufficer |
| The Creator | The Sagacious | The Prohibitor | The Afflicter |
| The Artificer | The Most Patient / The Clement | The Light | The Guide |
| The Designer / Organizer | The Mighty | The Wonderful | The Everlasting |
| The Forgiving | The Pardonner | The Heir | The Conscious |
| The Dominant | The Grateful | The Most Patient | The King of the Universe |
| The Bestower | The Most Exalted | The Lord of Splendid Glory and Majesty | |
| The Provider | The Great | | |
| The Revealer | The Guardian / Preserver | | |
| The Omniscient | The Maintainer / The Nourisher | | |
| The Noble / The Reckoner | The Honorable | | |
| The Most Generous | The Watchful | | |
| The Respondent | The Enricher | | |
| The Most Wise | The Affectionate | | |
| The Glorious | The Resurrector | | |
| The Witness | The Just | | |
| The Trustee | The Powerful | | |
| The Strong / Firm | The Defender | | |
| The Praiseworthy | The Accountant | | |
| The Beginner | The Restorer | | |
| The Giver of Life | The Bringer of Death | | |
| The Ever Living | The Eternal / Self sustaining | | |
| The All Perceiving | The One | | |

a quest of the spirit



Appendix C
List of figures

Section A

| | pg. |
|---|------------|
| Fig.1-4 Mosque survey: Local Friday Mosques | 11 |
| Fig.5-19 Minarets through history: Global trends | 14-16 |
| Fig.20-28 Mosque survey: Local Friday Mosques | 17 |
| Fig.29-36 Use of gardens and water (From Hattstein: 2001, p.284, 293-7, 315, 492) | 17-18 |
| Fig.37 Mosque survey: State Mosque, Indonesia (Hattstein: 2001, p.593) | 30 |
| Fig.38 Mosque survey: King Faizal Mosque: Pakistan (Hattstein: 2001, p.593) | 31 |
| Fig.39 Form survey: Martyrs Monument, Baghdad (Hattstein: 2001, p.596) | 31 |

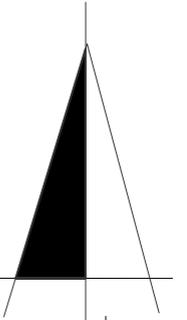
Section b:

| | |
|---|-------|
| Fig.1-3 Location Map (From Debenham: 1990, p.126) | 2 |
| Fig. 4 Location Map (From Madibeng Council Catalogue: 2004. Section JQ8, p.5) | 2 |
| Fig.5-16 Brits in general | 3 |
| Fig.17 The site in context | 5 |
| Fig.18-19 Brits Friday Mosque | 6 |
| Fig.20 The site in context | 7 |
| Fig.21 Aerial view1 of Brits | 8 |
| Fig.22-28 The site in context | 9 |
| Fig.29-30 Possible solutions | 11 |
| Fig.31-34 Model of site with initial concept | 11 |
| Fig.35-36 Existing excavation towards bank of river | 11 |
| Fig.37-72 The site in context | 12-14 |
| Fig.73-78 Important visual links | 15 |
| Fig.79 Links within the community | 15 |
| Fig.80-86 Urban links | 15 |
| Fig.87-93 Framework analysis | 16-17 |

Section d:

| | | pg. |
|--|--|------------|
| Fig.1 Arches (From Porthorn: 1971, p.146) | | 2 |
| Fig.2 Vaults (From Hattstein: 2001, p.492) | | 2 |
| Fig.3-20 Local studies: Laudium and Brits Friday Mosque | | 2-3 |
| Fig.21-26 Minarets through history (From Porthorn: 1976, p.27) | | 4 |
| Fig.27-28 Minaret study (From Hattstein: 2001, p.58-59) | | 4 |
| Fig.29-30 Laudium Friday Mosque | | 4 |
| Fig.30-31 Brits Friday Mosque | | 5 |
| Fig.32 Dome study (From Lari: 1980, p.42) | | 5 |
| Fig.33 The Ka'ba (From Hattstein: 2001, p.13) | | 6 |
| Fig.34-38 Carpet study (From Hattstein: 2001, p.75, 323, 491,531) | | 6 |
| Fig.39-44 Wall study (From Hattstein: 2001, p.191) | | 7 |
| Fig.45-46 Internal lighting study (From Hattstein: 2001, p. 100, 326) | | 7 |
| Fig.47 Lighting: Laudium Friday Mosque, 2004 | | 7 |
| Fig.48-58 Tehran Museum of Glass and Ceramics study (From Lari: 1980, p.116) | | 8-9 |
| Fig.59-60 Kuwait Memorial Museum study (From Lari: 1980, p.155) | | 9 |
| Fig.60-99 Museums by Tadao Ando (From Jodidio: 2001, p.79-85, 160-163,10-107, 102, 116, 122, 86-7, 62-3, 91, 101, 165, 97, 107, 129, 69,108-9, 66, in chronological order) | | 10-13 |
| Fig.100-103 General study: University of Blida (Lari: 1980, p.32) | | |
| Fig.104 General study: Holiday village, Morocco (Lari, 1980, p.1) | | |
| Fig.105 General study: Yarmouk University (From Lari: 1980, p.41) | | |
| Fig.106 National Museum of Kuwait (From Lari: 1980, p.145) | | |
| Fig. 107 Government administrative centre, Riyadh (From Lari: 1980, p.90) | | |
| Fig. 108 Air-defense Headquarters, Riyadh (From Lari 1980, p.92) | | |
| Fig.110-111 Global study: Casbah at Taliouine, Morocco (From Lari: 1980, p.74) | | |
| Fig.112-113 Global analysis: Hotel at Dadus, Morocco (From Lari: 1980, p.70) | | |
| Fig.114 Global analysis: Press and publication building, Amman, Jordan (From Lari: 1980, p.143) | | |

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Section e:

| | | |
|----------|--|-----|
| Fig.1 | Framework development: Initial sketch | 2 |
| Fig.2 | Framework development: Site model | 2 |
| Fig.3 | Framework development: Re-interpretation of the site | 3 |
| Fig. 4 | Framework development: Implementation of axes | 4 |
| Fig.5 | Framework development: Allocating structures onto site | 5 |
| Fig.6 | Framework development: Implementing greenery into the site | 6 |
| Fig.7 | Framework development: Final resolution | 7 |
| Fig.8-12 | Framework development: Sketch perspectives | 8-9 |

Section f:

| | | |
|-----------|---|----|
| Fig.1-3 | Introduction to God: Introspection of sphere | 3 |
| Fig. 4-5 | Introduction to God: Plan and section of sphere | 3 |
| Fig.6 | The origin of creation: spatial resolution | 5 |
| Fig.7 | Heaven: Spatial resolution | 8 |
| Fig.8-10 | Adam (AS): Spatial resolution | 9 |
| Fig.11-12 | Noah (AS): Spatial resolution; The Ark | 11 |
| Fig.13-14 | Abraham (AS): Spatial resolution; The Fire | 13 |
| Fig.15 | Moses (AS): Spatial resolution; plan | 15 |
| Fig.16-18 | Jesus (AS): Spatial resolution; sketch and plan | 18 |
| Fig.19-21 | Overall form: sketches | 18 |
| Fig.22 | Muhammad (SAW): Spatial resolution; plan | 20 |
| Fig.23 | Exhibition 10: spatial resolution | 21 |
| Fig.24 | Exhibition 11: spatial resolution | 22 |
| Fig.25-26 | Exhibition 12: spatial resolution | 24 |
| Fig.27-28 | Exhibition 13: spatial resolution | 25 |
| Fig.29-30 | Exhibition 14: spatial resolution | 27 |
| Fig.31-32 | Exhibition 15: spatial resolution | 28 |
| Fig.33-34 | Exhibition 16: spatial resolution | 29 |
| Fig.35-36 | Exhibition 17: spatial resolution | 31 |
| Fig.37-38 | Exhibition 18: spatial resolution | 33 |
| Fig.39-40 | Exhibition 19: spatial resolution | 34 |

Section g:

| | | |
|------------|---|-------|
| Fig.1 | Concept: Building A | 1 |
| Fig.2 | Concept: Building B | 2 |
| Fig.3-4 | Conceptual sketches | 2 |
| Fig.5 | Search for form | 3 |
| Fig.6 | Plans of Building A towards a later stage | 4 |
| Fig.7 | Design influenced by geometric forms | 5 |
| Fig.8-12 | Application of form | 6-7 |
| Fig.13-15 | Derivation towards a structural composition | 7 |
| Fig.16 | Application of form | 8 |
| Fig.17 | Plan and perspective of 2 nd floor | 9 |
| Fig. 18 | Plan of 1 st floor | 10 |
| Fig.19 | Plan of ground floor | 10 |
| Fig.20 | South Elevation | 11 |
| Fig.21 | West Elevation | 12 |
| Fig.22 | Diagonal Section | 13 |
| Fig.23 | Cardinal Section | 14 |
| Fig.24 | Diagonal Section | 15 |
| Fig.25-26 | Ventilation concept and application | 16 |
| Fig.27-30 | Glazed façade detail with spider clip technique | 17 |
| Fig.31-32 | Internal perspective | 18 |
| Fig.33-38 | Minaret detail | 19 |
| Fig.39-40 | From old to new form | 21 |
| Fig. 41-49 | Bridge detail | 22 |
| Fig.50-53 | External perspectives | 23-24 |
| Fig.54-55 | Fire reticulation | 25-26 |



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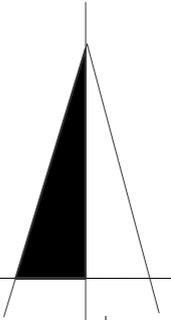
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Appendix E

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| | |
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