

**The Revival of the Architectural Identity:
The City of Arriyadh**

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

Declaration

This Thesis is my original work and has been composed by myself.

Àbdulrahman Bin Mohammed Alàngari

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To My Country;
To My City; and
To My People.

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Abstract

Until the beginning of this century the city was like any other city in the Najd: quiet, with limited physical development, and surrounded by a thick city wall. The city was not very active commercially or economically. Trade was limited, but, most importantly, the physical structure of the city and the architectural style were unique, with a unified residential pattern (courtyard houses) and the streets were narrow and winding, which helped protect pedestrians from the sun. The city had a distinguished core containing the Grand Mosque, the Souq, and the Ruler's Palace. A thoroughfare connected this core with the city gates passing through different residential neighbourhoods. The only mean of transportation were by foot or animals. Social change was limited by the closeness of Najdi society and the limitation of the cultural influence.

With the discovery of oil on a commercial basis in 1938 the city witnessed a rapid development which caused it to spread beyond the city wall. A new transportation technology was adopted with the introduction of vehicles. The inauguration of the railway brought in new building materials and equipment.

From 1953 onwards government agencies were transferred from the western province; as a result, housing projects and ministry buildings were constructed. This action led the government to ask Arab experts to participate in the design of the new structural concepts, in which they used their background knowledge. Up to that time the city had no planning and building codes. In 1968 the Mayoralty appointed Doxiadis of Greece to make the Master Plan for the city. Doxiadis recommended the adoption of the 'set back' building design and the 'grid-iron' planning pattern. Both regulations were incompatible with the needs of the people and the climate of the city. Nevertheless, the government, represented by the Mayoralty went forward with these regulations, not allowing any alternative. This may be considered the main point from which the obliteration of the architectural identity of Arriyadh may be traced.

The first attempt to develop and design schemes that respect regional qualities was in 1972 when the government decided to re-develop the Qasr Alhokm Area. Thereafter other projects arose using the same authentic principles, such as: The Diplomatic Quarter Development and Ministry of Foreign Affairs Staff Housing Project.

The task in this thesis is to trace the evolution of architecture through these different development periods and to identify the architectural and planning pattern that retains the identity of the city by respecting its society, climate, topography, economy, and technology.

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List of Transliteration

This thesis adopted the “Concise Encyclopaedia of Islam” by Cyril Glassé (London: Stacey International, 1989) as the base for the system of Arabic transliteration.

Transliteration	Arabic Letter	Transliteration	Arabic Letter
.	ء	ʿ	ط
b	ب	z	ظ
t	ت	.	ع
th	ث	gh	غ
j	ج	f	ف
h	ح	q	ق
kh	خ	k	ك
d	د	l	ل
dh	ذ	m	م
r	ر	n	ن
z	ز	ah/at	ه
s	س	w	و
sh	ش	v	ي
ṣ	ص	t	ت
ḍ	ض		

short vowels (represented by orthographical signs placed above or below Arabic letters)

a	(above) eg. ba =	بَ
u	(above) eg. bu =	بُ
i	(below) eg. bi =	بِ

long vowels

ā	أَ
ū	أُ
ī	أِ

diphthongs

aw	أَوْ
ay	أَيَّ
iw	أَيَّ
uw	أَوْ

Note: The Islamic era is based on the Hijrah, the migration of the Prophet from Makkah to Almadinah, which took place on the 16th of July 622 CE. The Islamic year is lunar, and has 354 days. There are approximately 103 Hijri years to a Gregorian century; AH stands for Anno Hegira (Hegira being the Latinized form of Hijrah), and CE for Christian Era.

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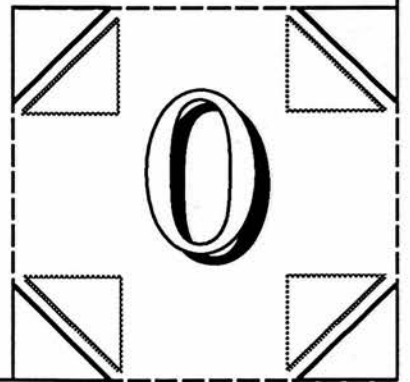
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Introduction



Within the past fifty years our environment has undergone an immense qualitative change. Creeping urbanisation and pollution are the insidious effects and, equally significant, the erosion of those dimensions which allow man a sense of belonging and participation in his social context. The 'meaninglessness' and 'alienation' felt by urban man result as much from his material environment as from the ethical challenges of accelerating civilisation.

The *genius loci* (the spirit of the place) has been rejected and the past abandoned, as our places become increasingly similar and monotony becomes the pervasive aspect of our built environment. Paradoxically, much of our surroundings evokes a deep sense of chaos, the inability to generate reassuring environmental 'images'. These aspects of chaos and monotony may seem to contradict one another, but on more profound examination they are revealed as the related symptoms of a wider crisis, which we may term a 'loss of place'. Commonly read as the overwhelming proof that modern architecture has 'failed', this loss gave rise to the Post-Modernistic call for a 'meaningful' environment and the rejection of a reductive functionalist translation of architectural form into practical, social and economic conditions.¹

The city of Arriyadh, on one hand, had a distinguished built environment that lasted for centuries, in fact until the middle of this century, when foreign people migrated to work in the city, individual wealth increased, and openness to the outside world was extended. These factors participated in the process of changing the building and planning codes for the new development.

The gap between the traditional and the newly developed city was widened when the government appointed Doxiadis of Athens to make the first Master Plan for the city. This implemented the 'set back' regulation for houses and the 'grid-iron' planning pattern for neighbourhoods and the city as a whole. These ideas were alien to the traditional concepts of courtyard houses and narrow winding streets which applied in the old city and served the social and physical needs of the society.

¹ Norberg-Schulz, C., "Towards an Authentic Architecture", The presence of the Past- First International Exhibition of Architecture: Venice Biennale 1980, Academy Editions: London, 1980, p. 26.

The requirement for 'setback'² in all residential areas defied the socio-cultural values of the people. By allowing buildings with 'setback' to have windows which overlooked surrounding dwellings, the concept of privacy, to which the design of traditional houses adhered, was totally disregarded. Mandating the 'setback' also promoted and reinforced the tendency to open to the outside rather than to the inside, a feature that contradicts Arriyadh's climatic conditions. Therefore, the plan actually had no regard for the principles implied by the city's traditional architecture.

By contrast, traditional architecture of the city was a result of people's interpretation of their beliefs. They produced a built form that was suitable for the climate, budget, and social needs. Modern architecture and technology overtook traditional limitations, resulting in the import of all aspects related to the built environment i.e. thoughts and ideas, forms, style, and building materials.

The government adopted the 'set back' and 'grid-iron' regulations and applied them all over the Kingdom, ignoring the basic architectural tenet of respect for topographical and climatical differences. This resulted in the obliteration of the architectural identity of the rest of the cities in the Kingdom. The extensive use of modern technology and facilities to override the regional differences and contributed to ignorance of the traditional prototype and the official adaptation of the new patterns making our cities appear similar.

The recent advances of cultural studies, especially those oriented towards preserving traditional and regional identity, many new insights can be of great benefit in planning as well as evaluating architectural projects. This is particularly so in places where cultural identity is most threatened by alien architectural character under the pretext of unified internationalism. Arriyadh is a good example of a city where the awareness of the cultural identity has recently become acute.

Not until the early Seventies did people try to incorporate modern technology with local needs, respecting social requirements and regional differences. Projects which began to be executed in the city could be seen as a continuation of branches of the

² The idea of the 'setback' originated in France. It function where the land owner has to make a minimum setback from all sides of his plot. This requirement was in front one-fifth of the street width with a minimum of 6 metres, and a minimum of 2 metres from the sides and the back.

traditional culture. The merging of two important streams (tradition and technology) start to develop slowly but surely. The outcome of this thought was seen in many projects, above all in *Tatweer Mantegat Qasr Alhokm* (the Development of Justice[Ruling] Palace District). Qasr Alhokm Area is located on almost the same site as the old city, and the importance of this vital project is based on a number of key factors:

- It is the area which has hosted the seat of government since the Second Saudi State, which was founded by Imam Turki bin Abdullah bin Mohammed bin Saud bin Mohammed bin Moqren in 1824. Thereafter the city witnessed many battles where other powers tried to capture the city (Ottoman Empire and Ibn Rasheed), until 1902 when King Abdulaziz captured the city and used it as the permanent capital for the nation.
- The location of Almasmak palace;
- The location of governmental buildings such as Qasr Alhokm, the Emirate, the Mayoralty, and the Police Headquarters;
- The presence of commercial and business activities; and
- The central location of the area within the city.

This project occupies 45 hectares of the old city centre, aiming to develop and revive the main architectural elements in it: the Grand Mosque, the Ruling Palace, Three Governmental Buildings, Commercial and Residential Developments, and the Restoration of *Almasmak* Fortress. However, since this project is the most important in the city, this thesis will consider in detail the ideas, thoughts, planning policy, and actions that took place.

This thesis concentrates on governmental projects, as government always draws up the policies for the future development of the city, whereas individuals only express their wishes. They have to seek government permission in order to build their projects; without government consent, no project would be executed. This thesis also elaborates on the most important decisions or physical actions affecting the architectural development of the city.

The intentions of the thesis are:

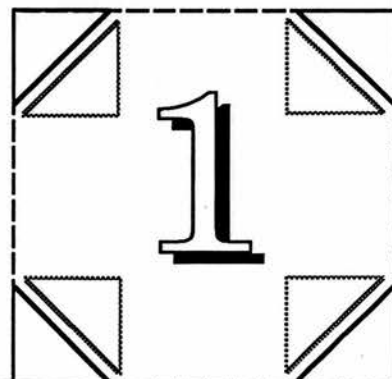
- To establish the architectural and urban qualities of the traditional city, defining the principles which produced such urban form;

- To chronicle the architectural development of the city from the beginning of this century to the present time, shedding light on the most important projects and decisions that affected physical development;
- To examine the theoretical writings of some of the modern scholars who tackle the question of regional architecture or the architecture of place, and to extract the criteria for producing an appropriate architecture;
- To focus on the most important project in the city as a whole 'The Qasr Alḥokm Area Development Project'. To describe in detail the form of the city centre in the 1960s and 1970s?, how the idea of redeveloping the centre emerged, investigating the decision to re-design the whole project with reference to the quality of the traditional architecture, and how this idea has developed through time and through the change of governmental responsibilities towards the project;
- To conclude with what should be done in order to have a coherent architectural identity for the city as a whole.

The thesis seeks to make the following contributions:

- To chronicle for the first time the architectural development of the city of Arriyadh from the beginning of this century when traditional architecture was dominant through to the present time when modern architecture is dominant;
 - To document the 'back stage' discussions and actions that affected the architectural development in the city, especially the development of Qasr Alḥokm Area, by interviewing the decision makers who contributed towards changing the architectural development in the city. This is the first published analysis of the implications of these decisions.
 - Researching into the architectural principles in traditional architecture.
 - Researching modern writings and scholars who support the issue of regional architecture or the architecture of place.
 - Contrasting the latest major projects in the city with the traditional architectural style, which in turn will identify our built environment with an architecture that responds to the people, climate, topography, and economy.
-
- **Note:** All the opinions expressed without attribution are personal assessments.

Literature Review



The capital city of Saudi Arabia - Arriyadh - has experienced extensive growth during the last several decades. Architects, urban planners, engineers, and contractors from all over the world have participated in this process of modernisation. The heterogeneous background of architects has been reflected in their designs. This may be due to the fact that they have come from diverse cultures. Taken individually, certain projects are exemplars in terms of style and execution. However, these projects have represented an incoherent entity. This probably resulted from their lack of reference towards the society and the indigenous character of the region.

In the middle of the 1970s the awareness of this problem increased, as the decision makers in the city came to realise the lack of a unified architectural identity. One of the immediate solutions suggested was to establish a committee to deal with the growth of the city -Arriyadh Development Authority. This committee aimed at supervising and implementing the major developmental projects in the city. The committee soon came to realise the need for delimiting principles to be observed by fellow architects in order to harmonise the architecture of the city. It became evident that more research was needed for defining the main traditional architectural features of the region. This research is to be seen as part of the attempt at further investigating the architectural characteristics of the Najd of which Arriyadh is the capital.

In my preliminary reading it became apparent that it is important to consider some of the recent advances in architectural thinking; more particularly, views on the question of *Tradition and Modernity*. Some of these are presented briefly below.

1.1. Tradition and Modernity

Gould and Kolb (1964) narrowly define the term tradition as denoting the 'transmission' - 'oral or experimental' - of cultural values; whereby modes of activity or taste or belief are handed down from one generation to the next-and thus perpetuated.² Similarly, Nasr (1981) defines tradition etymologically as a transmission of knowledge, practice, techniques, laws, forms, and many other elements of both an oral and written nature.³ Both definitions emphasise the cultural values that are handed over by the transmission of tradition.

The emphasis on traditional architecture was challenged by the rise of modern architecture most particularly in its advocacy of a unified international style based on modern scientific methods that has functional aspects above spiritual and traditional

² Gould, J. and Kolb, W., 1964, p. 723.

³ Nasr, S., 1981, p. 67.

aesthetic values. At the extreme, certain modernist views of architecture have debated the legitimacy of confining architecture to preserving traditional styles. As indicated by Marshall Berman (1982), Bill Bourne, Udi Eichler and David Herman (1987), modern views of architecture have more been inclined to totally new forms, aided in that by the discovery of new buildings materials, or by new advances in the field of construction technology.

The advent of a modern school of architecture triggered a widespread debate about the relation of modern views to traditional values. This debate was initiated by scholars such as Coomaraswamy (1934), and Guenon (1942), who argued strongly for the preservation of the spiritual and cultural values reflected in traditional architecture. Their claims did not gain a wide acceptance during that time which represent the heyday of modernism during which the architectural atmosphere was impregnated with high expectations of modernity. However, the religious aspects of tradition and modernity was strongly emphasised by scholars such as Schuon (1965), Eliade (1959), and Burckhardt (1976).

It was only during the 1950s that their views were exhumed when the debate of modernity in relation to tradition intensified. By then the impact of modernisation had become more evident. Jacobs (1961), criticised certain architectural projects were modern concepts were solely considered as being rejected rather than re-built. According to her certain high rise housing schemes has to be demolished because of their rejection by the professionals and laymen for whom these projects were designed. The rejection was occasioned by the scale of social problem that had been created by the design of those schemes. Since then, the awareness of the social aspect of architecture has become more evident.

During the 1970s the concept of modernity was subjected to a great deal of scrutiny. This brought about a wide disillusionment of the earlier values which took no notice of the social and even spiritual values of the community. MacEwan (1974) claimed that modernity has in most cases ended in crisis. Brolin (1976) blamed modernist architecture for creating a schism with the past by ignoring the value of tradition as a stabilising factor in human relations. For these reasons he claimed that modern architecture which does not take these traditional values into consideration will eventually fail.

This debate has resulted in the recognition of the need to modify modern architectural designs, in order to accommodate social as well as traditional factors by either modernising traditional architecture or traditionalising modern architecture.

Consequently, this has led to the necessity of defining more precisely what is meant by terms such as tradition and modernity in order to avoid confusion. The need for reconciling the modern aspects of architecture with traditional characteristics was to be acknowledged by architects of all persuasions.

In the Arab world this trend is to be seen in the work of Besim Hakim, a modern scholar who has worked on extracting planning and building principles which shaped the traditional Arab-Islamic cities. These ideas were published in his book "Arab-Islamic Cities" in which he tried to close the gap between current practice in the Arab and Islamic world and traditional practices. Hakim used the old city of Tunis as an example for his research, where he concluded that with minor changes and adaptations the features of the old city suit to our contemporary needs and could create a worthwhile built environment.⁴ These recent studies have led to the revival of interest in regionalism in architecture.

1.2. The Issue of Regionalism

The history of regionalism is described in Kenneth Frampton article "Prospects for Critical Regionalism", *Perspecta*, vol. 20, 1983a. The article describe how Critical Regionalism been introduced to the world, who the architects are that fought for its principles and criteria.⁵ The work of Regionalist architects around the world is summarised in this essay. Scholars and architects who have contributed to the concept of regional architecture in many ways are: Luis Barragan (Mexican, 1947), Bohigas (1951-Possibilities for a Barcelona Architecture), Bruno Zevi's (Italian, 1953), J.A. Coderch (Barcelona, 1952-54), Aalto (1957), Oscar Niemeyer, Alfonso Reidy, and Amancio Williams (Argentina, 1959), Carols Raoul Villanueva (Venezuela 1945-60), Paul Ricoeur (1961-Universal Civilisation and National Culture), Ricardo Bofill (Catalonian-Spain, 1964), Alvar Siza Viera (Portugal, 1965), Mathias Goertiz (1967), Raimund Abraham (New York, 1972), Neutra, Schindler, Weber and Gill (Los Angeles), William Wurster and Hamilton Harwell Harris (founders of Southern California School)⁶, Andrew Batey and Mark Mack (Napa Valley area in California), Harry Wolf (North Carolina), Gino Valle (Italy), Ernst Gisel in Zurich, Jorn Utzon in Copenhagen, Vittorio Gregotti in Milan, Gino Valle in Udine, Peter Celsing in Stockholm, Mathias Ungers in Cologne, Sverre Fehn in Oslo, Aris Konstantinides in

⁴ Hakim, B., "Arab-Islamic Cities", London: KPI Limited, 1986, p. 11.

⁵ Another format is written in another article by Kenneth Frampton "Modern Architecture and Critical Regionalism" RIBA, *Transaction*, vol. 2, no. 3, 1983.

⁶ No-one has perhaps expressed the idea of a Critical Regionalism more discretely than Harwell Harris in his address, "Regionalism and Nationalism" which he gave to the North West Regional Council of the AIA, in Eugene, Oregon, in 1954. (Reference: Frampton, 1983, p. 153.)

Athens, Ludwig Leo in Berlin, Carlos Scrapa in Venice, Mario Botta in Switzerland, Tadao Ando in Osaka-Japan, Galfetti, Carloni, Schnebi, Dimitri Pikionis and Susana Antonakakis (Greece), Alexander Tzonis and Liane Lefaivre (The Grid and The Pathway-1981)⁷, and Kontantinidis (Greece).

At the heart of the debate between modernity and tradition is the question of universalism versus regionalism. The awareness of this issue dates back to as early as Piacentini (1922)⁸ who questioned the antithetical posture of these two terms. He saw the possibility of reconciling these two concepts of architecture by advocating a form of architecture adhering to modern standards, while at the same time respecting local vernacular styles, while Mumford (1928) suggested the introduction of the specialised study of regionalism in order to highlight the necessity of restoring the language and the independent cultural life of Provinces.⁹ Mumford (1927) summarises the main thesis of Regionalism as follows:

To recognise regional wholes is the business of the geographer and the sociologist; to plan for their development and better relationship is the task of the regional planner; to live in and through the region itself; to make the most of its possibilities and to bring it up to the highest pitch of appropriate culture-this is the effort of Regionalism.¹⁰

Mumford's views Regionalism more in cultural and geographical terms than in architectural ones. However he emphasised the importance of the architects taking the cultural and geographical factors into consideration. He suggests architects can work in co-operation with, or make use of studies made by scholars from other fields, in order to define the particular characteristics of regions.

Ensuing discussion by Giedion (1958) defines 'new regionalism' as the "*... respect for individuality and a desire to satisfy the emotional and material needs of each area.*"¹¹ He suggests that the term 'New Regionalism' as the most proper name for the methods employed by the contemporary architects when they had to solve a specific regional problems. He also argues that this new approach could satisfy both the cosmic and terrestrial conditions of a region and meet its greatest problems in the

⁷ This article was written on the work of the Greek architects Dimitries and Antonakakis (Architecture in Greece, 15/1981).

⁸ From William Curtis paper, 'Towards an Authentic Regionalism', *Mimar* no.19 Jan-March 1986, p. 24.

⁹ Mumford, L., 1928, p. 135.

¹⁰ *ibid.*, p. 279.

¹¹ Giedon, S. , 1958, p. 145.

so called underdeveloped areas such as India, Cuba and other tropical countries.¹² Rapoport (1990) identifies two basic ingredients of regionalism: the intellectual concept of 'region', and the concrete manifestations of distinctive areas with different attributes,¹³ while Odum and Moore (1938) claim for regionalism the role of a stabiliser in an unstable world. They see the society as an organic unit of diverse, yet interrelated parts.

The progressive and stable development of an organism is directly related to harmony among its parts.¹⁴ In a similar way, Dimock (1938) points to the fact that regionalism is a multidimensional in its aspects. As he sees it:

... a clustering of geographic, economic, sociological, and governmental factors to such an extent that a distinct consciousness, the recognition of a separate identity within the whole and the desirability of autonomous planning, cultural peculiarities and administrative freedom are theoretically recognised and actually put into effect.¹⁵

The unification of folk, work, and place into a living whole was demanded and inspired by Geddes (1922).¹⁶ Such recognition of the mutual influences between people, their work and the location where they live and work became one of the ideological bases of regionalism. The regional consciousness was shown in Geddes's concept of the '*valley section*' which is a survey of different occupations in the valley. However, his writings about regionalism have much in common with other writers, such as Mumford (1934 & 1938) who employs similar phraseology and developed many aspects of Geddes's thinking.

However, Rawlyk, Hodgins and Bowels (1979) sees the notion of the region as also a comparative one. One of the important notions of regionalism, as he claims, is that one's regional consciousness only became apparent when it was compared to that of people in other regions. Therefore, "*Regionalism can only be defined as the expression of the values, interests and concerns of people living in a particular area to others who do not live in the same region.*"¹⁷ By employing the term regionalism, there is no assumption of an absolute homogeneity of styles and identifications within

¹² Ibid., pp. 148-149.

¹³ Rapoport, A., 1990, p. 274.

¹⁴ Odum, H. and Moore, H., 1938, p. 5.

¹⁵ Marshall Dimock, quoted in *ibid.*, 1938, p. 276.

¹⁶ Geddes, P., 1922, p. 196.

¹⁷ George Rawlyk, Bruce Hodgins and Richard Bowels, 1979, p. 7.

the region. Rather, it represents the fact that by comparison with those in other regions, each region has its own distinctive identity. Towards the end of the 1970s, Regionalism was to gain more acceptance by architects in all parts of the world as people gradually began to find out that most new approaches in architectural development have weaknesses either in their practical application, or their theoretical basis, as a result of ignoring regional factors.

The launch of the Aga Khan Award for Architecture in 1977 contributed immensely to the development of consciously Regionalist approaches in the Islamic world. One of the most important contributions was the orientation of the award towards not only the aesthetic quality but also the socio-cultural implications of the culture of a region. One of the Aga Khan's other contributions was the publication of the journal *Mimar* (first published in 1981)¹⁸ devoted to exploring the built environment in the developing world with an unprecedented emphasis on both regional and regionalist architecture.¹⁹

The overwhelming problem of finding an identifiable authentic regional architectural approach has been dealt with from different perspectives by many scholars in many recent studies. This has led to the branching out of Regionalism studies into more specified fields of research, such as the 'Critical Regionalism' first coined and mentioned by Tzonis and Lefaivre (1981), and then developed by Frampton (1983a)²⁰. and the 'Authentic Regionalism' suggested by Curtis (1986), inter alia. Tzonis and Lefaivre (1981) argue that 'Critical Regionalism' "*is a bridge over which any humanistic architecture of the future must pass, even if the path may leads to a completely different direction.*"²¹ Frampton (1983a), on the other hand, asserts that 'Critical Regionalism' asserts itself as a deliberate method of deconstructing universal modernism in its forms according to locally cultivated 'autochthonous elements following models of local authenticity.'²² Curtis (1986) argues that authentic Regionalism "*stands out against all hackneyed and devalued versions of culture whether these stem from the international economic order, from nationalist*

¹⁸ Unfortunately, the publication ceased about the end of 1992 for the lack of funds.

¹⁹ *Mimar* and the Aga Khan Award for Architecture published number of books that criticise Regional architecture these books are: *Regionalism in Architecture* (1985), *Architecture and Identity* (1986), *Hassan Fathy: Architecture in Egypt* (1985), *Geoffrey Bawa: Architecture in Sri Lanka* (1986), *Charles Correa: Architecture in India* (1987), *Tropical Urban Regionalism* (1987), *Mimar Houses* (1987), *The Architecture of Housing*, (1990), and *Expression of Islam in Buildings* (1990).

²⁰ Frampton's have call for the idea of 'Critical Regionalism', it first appears in his speech in RIBA on December 1982; the content of his speech has been revised and published in different Magazines later on.

²¹ Alexander Tzonis and Liane Lefaivre, 1981, p. 178.

²² Frampton, K., 1983a, p. 18.

propaganda or, more recently, from Pan-Islamic clichés."²³ Similarly Frampton (1983a), is also selective in his choice of buildings for discussion, though his scope is wider than that of Curtis.

Basically, Regionalism of all types has developed out of opposition to universal contemporary forms of architecture, especially those conditioned by optimised technology, since under such circumstances the potential of any architect to create an appropriate and humane architecture will become extremely limited. Moreover, according to Frampton (1983b), for those who are in favour of Regionalism, the schism in today's architectural practice is increasingly polarised between, "*on the one hand, a so-called 'high-tech' approach predicated exclusively upon production and, on the other, the provision of a 'compensatory facade' to cover up the harsh realities of this universal system.*"²⁴

1.3. Critical Regionalism

Kenneth Frampton in his essay entitled "Prospects for a Critical Regionalism"²⁵ underlines that, the architectural process of universalisation may well be an instrument of mankind's progress, but at the same time it has also proven an insidious devastation of humanity's individual values and its cultural mores. Therefore a considerable crisis is faced by those nations which are currently transforming into developed states. In stimulating the social impetus towards modernisation, must they also, crucially, abandon the old cultural history which has been the practical heart of their nation's existence? The cultural dilemma is clear. A firm basis for development must be sought in the past, to create a nationalistic fervour, and a sense of proud cultural and spiritual redemption in the post-colonialist era; however, the necessity to engage in modern civilisation often demands a wholesale abandonment of the national cultural past, in favour of a severe rationalising scheme that is political, scientific and technical. Few cultures can survive the upheaval of encountering modern civilisation, or successfully incorporate its innovations - that is the self evident truth, and the centre of a paradox: the quest for modernity must follow the source-paths of the traditional culture; must revive that ancient, passive civilisation and still participate in the new civilisation that is international yet generic.²⁶

²³ Curtis, C., 1986, p. 24.

²⁴ Frampton, K., 1983b, p. 17.

²⁵ Frampton, K., "Prospects for a Critical Regionalism", *Perspecta*, no. 20, 1983a, The Yale Architectural Journal, p. 148.

²⁶ *ibid.*

In the view of Frampton, in defining the term critical regionalism, one must note that it does not aim to express a vernacular art. This last is a much more spontaneous phenomenon which arises from the fusion of a singular environment, cultural technique and talent. In defining the term regionalism it becomes important to consider those recent regional 'schools' that have endeavoured to address the defined 'cultural cantons' in which they are based, in order to find a critical manner of representing and nurturing those constituencies. The very definition of this form of regionalism exploits a dual political consciousness, a fluid dialogue between the ethos of a human community and the practice of the architectural community. For such critical regional expression to flower, the prerequisites are the economic success of the community and a collective drive to affirm its developing identity.²⁷

Thus Frampton stresses that it is vital to differentiate between critical regionalism and the simplistic evocation of a nostalgic or cynical vernacular: the latter being a recent sentimental passion for the vernacular, promoted as an overdue reintroduction of the mores and aesthetic of popular culture. Unless this line is clearly drawn the distinction will be blurred between Regionalism, which resists by incorporating changes, and Populism, which tends to impose its view tyrannically. While Regionalism aims to arouse a fresh, critical perception of reality, by contrast, the ultimate function of Populism is to provide a communicative or instrumental sign (in the semiotic sense) which takes the desire for immediate, unadulterated experience and sublimates that fresh impulse by providing clear information. With this tactic Populism may achieve by effective and economic means, a calculated state of gratification in behaviourist terms. In this respect it seems no mere coincidence that Populism shares with advertising a dimension of sophisticated imagery and rhetorical manipulation.²⁸

As a mode of expression Critical Regionalism takes the dialectical form. That is, it uses as its de-constructive tool an antithetical confrontation between universal modernism and locally nurtured cultural ethos and imagery. While the former is deconstructed, the latter rooted elements are transformed by the introduction of outside cultural and aesthetic structures to create a final synthetic form of expression.

Moreover, Frampton highlights the strong regionalist tendencies that have always been exhibited by Switzerland, which is culturally dissected by complex patterns of language, nationality and an emphatically cosmopolitan tradition. If by

²⁷ *ibid.*

²⁸ *ibid.*, p. 149.

strong regionalist tendencies Frampton intended to describe the whole of Switzerland as different parts and regions, the strongest aspect of these differences is the background of the people. Considering Switzerland as one region, the major differences between the three main parts (French, German, and Italian) - in people's background, food, clothes, language, topography, and last but not least architecture - become crucial.

In the case of Saudi Arabia, there are five main regions. There are a significant differences between them in terms of topography, climate, social background, food, and clothes, so *traditional* architecture as an outcome was completely different in terms of form and building materials. But when modern architecture invaded the country it disregarded all architectural differences between the different regions, so the outcome was a single architecture stereotype distributed around the country. If we take modern building technology as a factor, first introduced to the country to overcome certain constructional and technological issues, we should not omit topography, climate, nature, and social norms (clothes, food, accent, and marriage ceremony). So, what we seek now is a regional architecture that respects these major changes between the different parts of the country, and incorporates modern technology to expose the qualities of the different cultural backgrounds.

In Switzerland the model of the Swiss canton, with its intricate processes of admission and exclusion, has proved fertile, encouraging a density of cultural expression within defined, limited boundaries. However, while the cantonal system may uphold local culture, the larger federal structure smoothly sanctions outside influences, which may then be assimilated.²⁹ An example of the capacity to retain the essence of a region's artistic potential while simultaneously incorporating and reinterpreting the external cultural influences, thereby reinforcing provincial culture, can be seen in the work of Mario Botta. There is a concentration in his work on themes that apply overtly to a distinct region and its manner of drawing on and adapting the varied universal techniques of Rationalism. Two further preoccupations are evident in his work. First, his complete aesthetic involvement with *building the site* and further, his profound certainty that now, when the historical city as a complete cultural entity is lost, architecture can only partially compensate through the re-creation of fragments.³⁰

²⁹ *ibid.*, p. 156.

³⁰ *ibid.*, p. 156.

As Frampton points out, Botta's houses and large-scale projects appear as such explanations. They stand with self assurance, and rise distinctively (figure 1.1) At the same time they communicate with the environment to which they belong; a dialectical relationship is created which reveals the landscape for what it is. Botta himself over and over again emphasises this aim. Thus he defines architecture as the "*taking possession of a particular place.*"³¹ He does not mean dominance in the phrase taking possession, rather it implies a rediscovery of the site and the memories connected with it. Vernacular buildings always served this purpose, but in our time we tend to get alienated from our environment and as a sequence lose our own identity. "*I think that above all man must look for his roots and his condition of being within his cultural and historic domain, in his own country.*"³² The words 'in his own country' denote a concrete "*establishment of a rapport between man and the elements of nature, of the countryside, of the different seasons, the values of the cosmos, the values of the sky.*"³³ Hence Frampton's comment: "*His works demonstrate that this rapport does not imply passive adaptation. Rather it means a promotion and reinterpretation of the environmental values.*"³⁴

We have already pointed out that Botta is concerned about reinterpretation rather than nostalgic protection, and in fact he above all considers himself a modern architect. his modernism is however different from the abstract utilitarianism of late-modern architecture. The basic aim is evidently to revive what is essential and timeless, that is, to reveal creatively what Louis Kahn has called the beginnings.³⁵ In which he learned to ask: "*What does the building want to be?*"³⁶ The answer is "*It is not what you want, it is what you sense in the order of things which tells you what to design.*"³⁷ Among other examples of buildings showing the critical regionalism, cited by Frampton is the Bagsvared church by Jørn Utzon.³⁸ His description of the elegance of its structural parts and spaces shows an expansive poetic insight (figure 1.2). He further comments that it provides an excellent illustration of the possibility of distinguishing between Critical Regionalism and the concurrent Populism, that sentimentally evoked the vernacular.³⁹

31 Norberg-Schulz, C., "Introduction", *GA Architect 3: Mario Botta*, 1984, p. 8.

32 *ibid.*

33 *ibid.*

34 *ibid.*

35 Botta worked for Kahn in 1969.

36 Norberg-Schulz, C., "Kahn, Heidegger and the language of architecture", *Oppositions* 18, 1979, pp. 29-31.

37 *ibid.*, pp. 29-31.

38 For more information see, Kenneth Frampton, "Modern Architecture and Critical Regionalism", *Architectural Design Profile*, 1982.

39 Frampton, K., "Modern Architecture and Critical Regionalism", *Transaction*, vol. 2, no. 3, RIBA: London, 1983, p. 16.

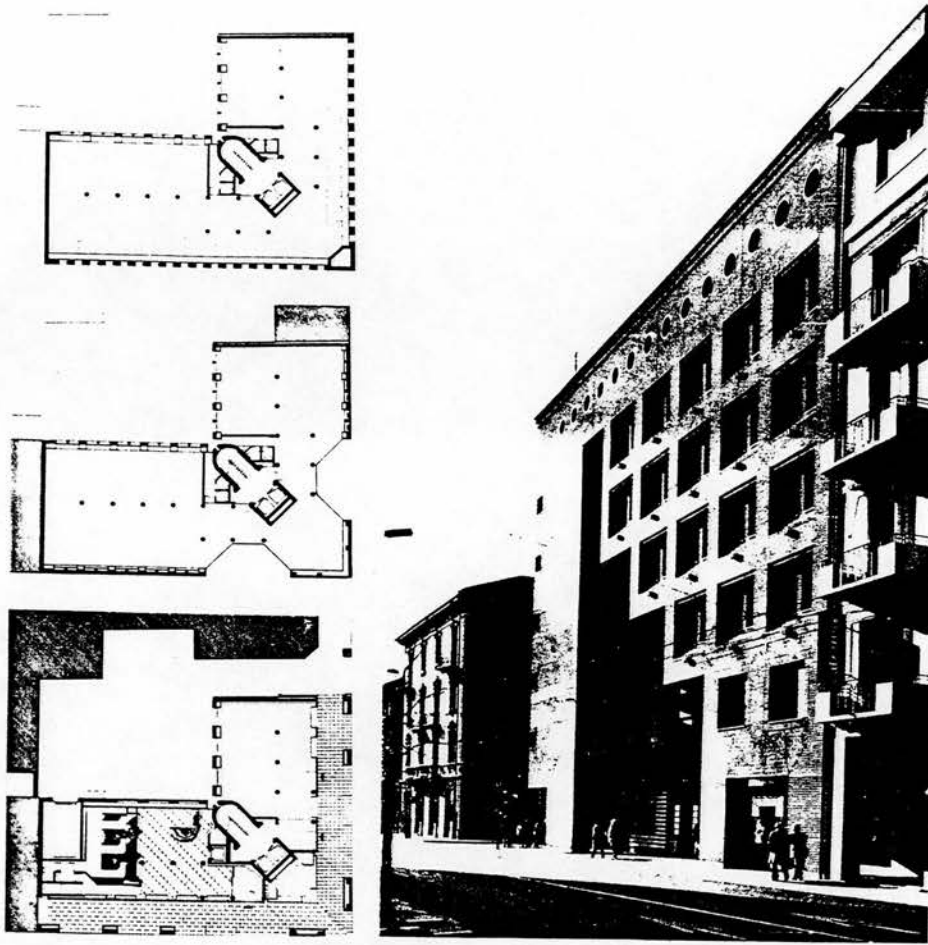


Figure 1.1: One of Mario Botta projects, office building at Lugano, Switzerland, 1985.
 (Source: Pizzi, E., *"Mario Botta"*, Barcelona, Spain: Editorial Gustavo Gili, 1991, p.121)

Frampton' highlights the work of Tadao Ando, as the one whose theoretical writings set out most clearly those principles identified as Critical Regionalism. One of the most regionally conscious influences in Japan, he bases his work in Osaka rather than Tokyo. His location illustrates the conflict he perceives, between encroaching universal modernisation and the individual singularity of his root culture. *"I suppose it would be possible to say that the method I have selected is to apply the vocabulary and techniques developed by an open, universalist Modernism in an enclosed realm of individual lifestyles and regional differentiation."*⁴⁰ The context of his work was a fast-changing one (figure 1.3), he notes, due to the rapid economic growth of the post World War II period. This irrevocably changed the people's value criteria, destroying the intrinsically feudal family structure, concentrating labour and forms of information in new urban contexts, overpopulating the agrarian villages and towns.

⁴⁰ *ibid.*, p. 21.

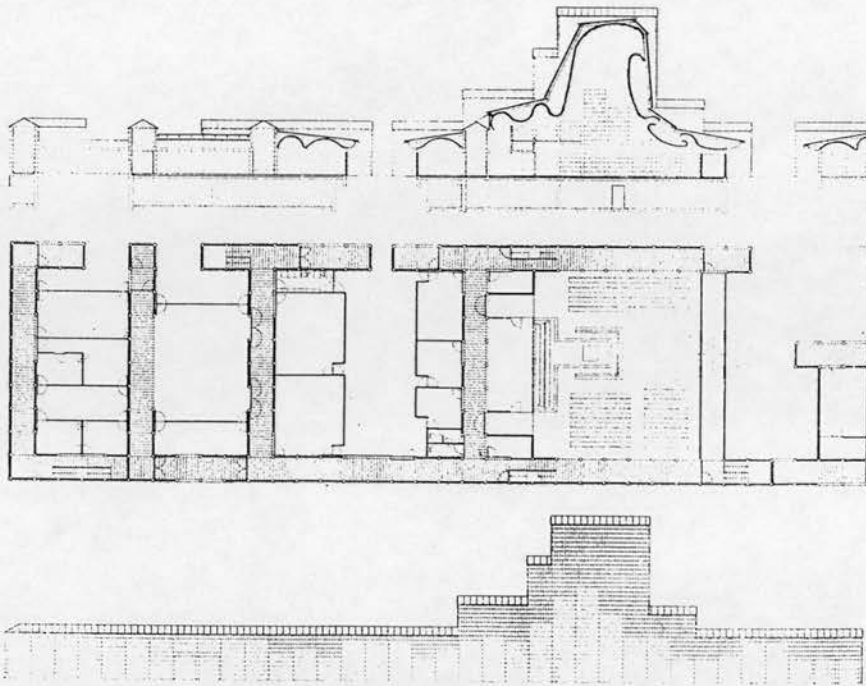


Figure 1.2: Jørn Utzon's Bagsvaerd Church, Copenhagen, 1976.
(Source: von Meiss, P., "Elements of Architecture...", p.176)

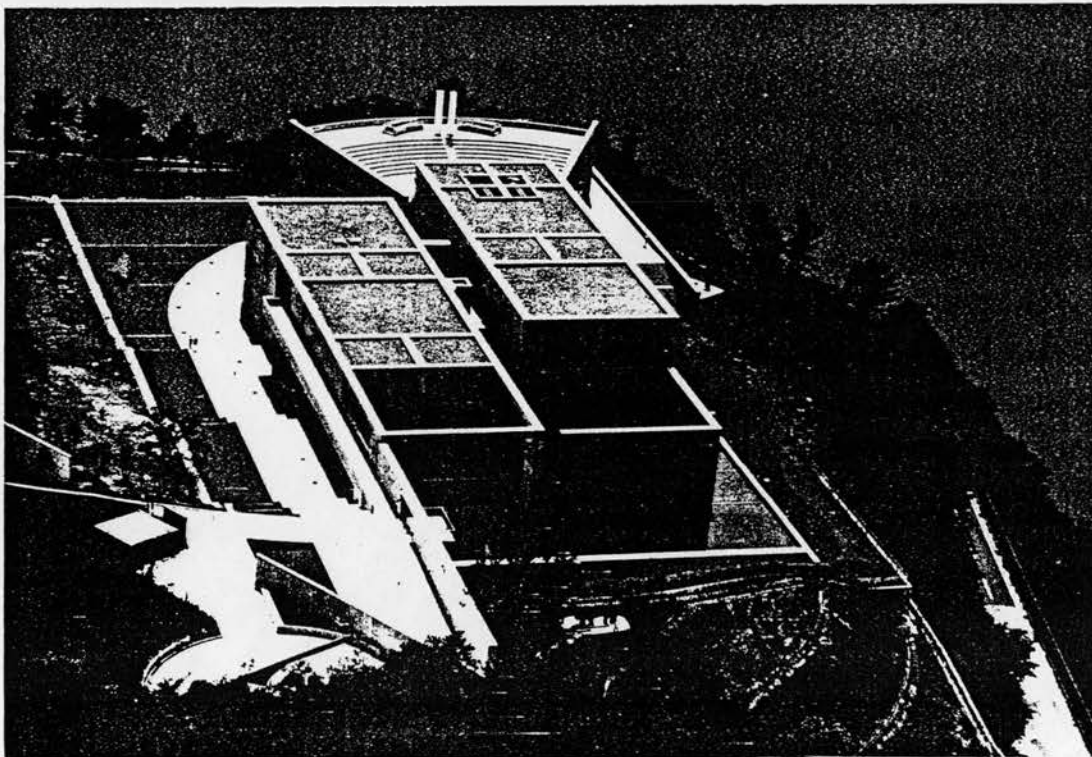


Figure 1.3: Tadao Ando, the museum of modern art, Osaka, Japan.
(Source: Frampton, K., (ed.), "Tadao Ando", The Museum of Modern Art, New York: Allied Painting Services Inc., 1991, p.55)

This was arguably a problem with universal cultural consequences in that period, and the tension which results from Ando's efforts to compensate is evident in his essay, "From Self-enclosed Modern Architecture Toward Universality"⁴¹: "... it seems difficult to me to attempt to express the sensibilities, customs, aesthetic awareness, distinctive culture, and social traditions of a given race by means of an open, internationalist vocabulary of Modernism."⁴² The extreme density of urban and suburban populations, he stresses, pronounce a death sentence on the greatest characteristic of Japanese residential architecture, the intimate and open relationship that it had with the natural world. His solution has been "what I refer to as an enclosed Modern Architecture", that is "a restoration of the unity between house and nature that Japanese houses have lost in the process of modernization."⁴³

Frampton tried to designate a set of points to implement and enhance the capabilities of resisting the dominance of the materialistic international architectural style, these rules are described in his essay, *Towards a Critical Regionalism: Six Points for an Architecture of Resistance*⁴⁴. The synthesis of the critical thought and the criteria he provides are fundamental to an understanding of this movement.

In the mid 1970s a number of Saudi architects started to make a clear definition towards identifying our built environment with architectural models related to the regional quality. Such was the main aim of Ali Alshuaibi⁴⁵ and Abdulrahman Alhussaini when they founded, in 1975, an architectural consulting office later known as Beeah: Planners, Architects & Engineers. They had one central objective to participate in designing new examples which retain the regional architectural quality. Examples of such work can be seen in Chapter Four part 4.14.2.1. The name of their office 'Beeah' -meaning environment- reflects their prime objective. Other Saudi architects followed including: Basem Alshuhabi⁴⁶, Mohammed Alsabeq⁴⁷... etc.

⁴¹ Ando, T., "From Self-enclosed Modern Architecture Toward Universality", *Japan Architect*, Tokyo, May 1982, pp. 8-12.

⁴² Frampton, *Modern Arch.*, *ibid.*, p. 21. {originally published in Ando, Tadao. "From Self-enclosed Modern Architecture toward Universality", *Japan Architect*, Tokyo, May 1982, p. 8.}

⁴³ *ibid.*, p. 23.

⁴⁴ Frampton, K., "Towards a Critical Regionalism: Six Points for an Architecture of Resistance", From Foster Hal. (ed.), *Anti-Aesthetic*, Bay Press, Port Townsend, USA, 1983.

⁴⁵ Ali Alshuaibi is a Saudi architect who graduated from King Saud University in 1973, and in 1975 finished his Master's degree in Urban Design at MIT, Cambridge, USA. He then practised architecture and, with Abdulrahman Alhussaini, founded the 'Beeah Group'. The office made its breakthrough by winning the design competition for the Diplomatic Quarter Central Area, where they won a number of international prizes for their efforts to authenticate the built environment with an architectural quality that responds to the region.

⁴⁶ The owner of Omrania architectural firm in the city of Arriyadh. A recognised architect, who has designed many projects in the city and all over the Kingdom.

⁴⁷ The owner of Mohammed Alsabeq architectural firm in the city of Arriyadh where he participated in the design of numerous projects in the city and all over the Kingdom.

Awareness of the need to change the planning and the building codes introduced by Western planners was growing. A number of Arab scholars have researched these issues from different points of view; among these are: Dr. Saleh Alhathloul⁴⁸, Dr. Besim Hakim, Dr. Jamel Akbar, Rifat Chadirji, Professor Mohammed Makiya... etc.

1.4 Culture and Civilisation

In his essay, *Towards a Critical Regionalism: Six Points for an Architecture of Resistance* Frampton points out that contemporary architecture seemingly exhibits a severe polarity between “a so-called ‘high-tech’ approach predicated exclusively upon production” and, on the other, the provision of a “‘compensatory facade’ to cover up the harsh realities of this universal system”. The inherent schizophrenia of this is shown emphatically in Michael Graves’s ‘Portland Building’, Oregon 1980 (figure 1.4). As Frampton views it, “the constructional fabric of this building bears no relation whatsoever to the ‘representative’ scenography that is applied to the building both inside and out.”⁴⁹ The problem serves to illustrate the contemporary dilemma which Ricoeur identified: “how to become modern and to return to sources”. Society must retain its singular ‘myth-ethical nuclei’ - the problem is that such source nuclei of individual cultures are being overwhelmed by the highly destructive force of modernisation, and eroded by the violent rapidity of development.

The schism between progress and conserving the source may be traced to the philosophical period of the Enlightenment. Since then, the productive systems of human reason have been the first priority of civilisation. On the other hand, *culture* has concerned itself with specific human expression, with such issues as the realisation of being, with developing a subjective reality which may be collectively experienced. Today, civilisation’s interest in productive reason has degenerated into an endless series of management goals, ‘means and ends’.⁵⁰

⁴⁸ Saleh Alhathloul is a Saudi scholar who graduated in architecture in 1973 at King Saud University. In 1981 he took his PhD. at MIT. He then worked as Assistant Professor in the department of architecture at King Saud University and around 1985 he worked for the Ministry of Municipalities and Rural Affairs, where he currently holds the post of Deputy Minister for Town Planning. He wrote many articles and papers about Arab cities and the way to improve its urban and architectural qualities.

⁴⁹ *ibid.*, p. 17.

⁵⁰ *ibid.*

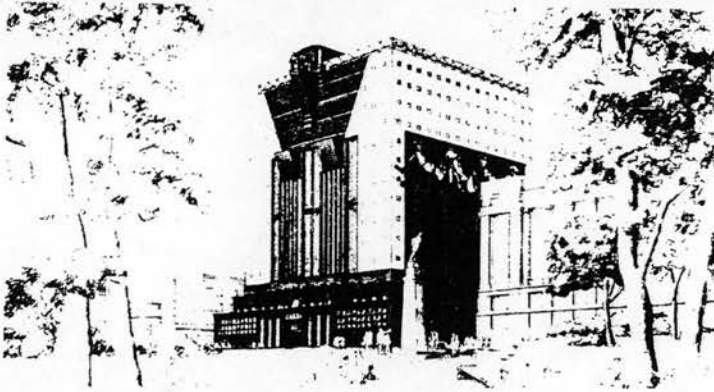
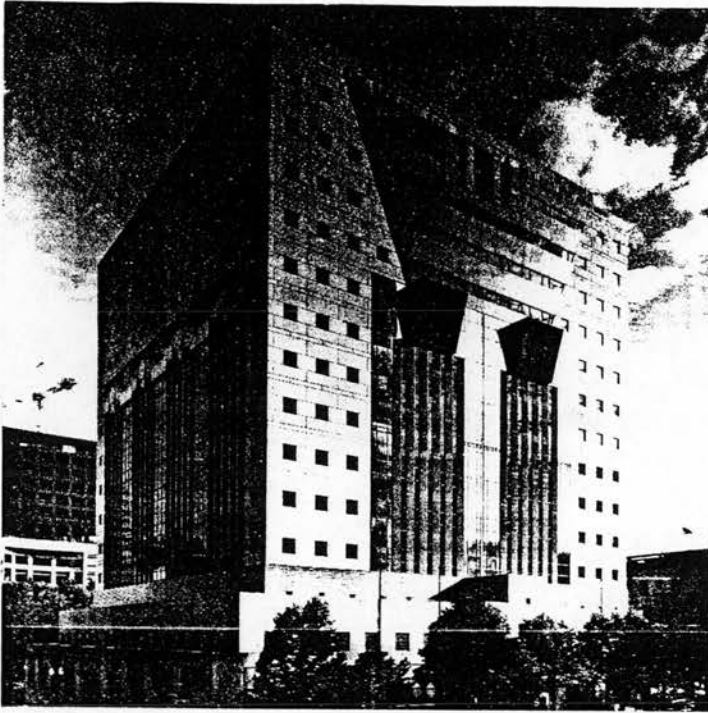


Figure 1.4: Michael Graves, the Portland Building, Portland, Oregon, 1980.
(Source: Heyer, P., "American Architecture: Ideas and Ideologies in the Late Twentieth Century", New York: Van Nostrand Reinhold, 1993, p.220)

1.5. Towards an Authentic Architecture

As 'design for life', modern architecture wanted to offer an answer to the demand for meaning. Unfortunately, it failed. The reason was that it failed to develop an adequate understanding of the life-world, and instead it relapsed into quantification and formalism. In the works of some protagonists, however, a new authentic architecture has been realised. Without completely losing sight of the 'new tradition', it is fundamental to recall some of the most important contribution.⁵¹

⁵¹ Norberg-Schulz, C., "Towards an Authentic Architecture", The Presence of the Past: Venice Biennale, London, 1980, p. 28.

Frank Lloyd Wright, in attempting to explain his approach to architecture, said: “*I was born an American child of the ground and of space.*”⁵² With these words, he implied a life-world that is complete and vital. In it, exists the wide natural expanse of the great American prairies, along with the 'frontier' as an embodiment of human conquest. However it also contains the impulse to settle the land and put down deep roots. Under these freeing impulses Wright 'destroyed the box' and revolutionised the house into a construct of vertical and horizontal planes. These functioned as guide to the spatial extension and intermediary between the land-plane and sky.⁵³

Such a vision of the world apparently did not exist in European rationalism, with its compulsive observation and analysis, but instead in an experience of another kind. The direct, sensuous apprehension of 'meanings', or as Wright described it, “*a hunger for reality*”. Wright was the supreme guardian of the experience, the ultimate translator of it into built form. He was by no means alone in his authentic approach; also gathering and translating their understood life-world were Mackintosh, Gaudi, Saarinen, Horta, Guimard, Olbrich and Behrens - all of them preoccupied with the fabric of a new epoch, but being locally rooted, each arrived at different and individual interpretations. Thus at the dawning of the modern movement we encounter bodies of work which guarantee a newly re-unified thought and feeling, and may recognise the emergence of a genuine *art nouveau*.⁵⁴

Between the two Wars, that is during the subsequent stage of the development, the new architecture nonetheless underwent a metamorphosis to become 'international'. Instead of accepting the immediate context as a point of departure, there was a fresh focus of attention on the definition of a new, universally valid, language of architecture,⁵⁵ and the 'five points' of Le Corbusier are representative of this search.⁵⁶

Despite its failure to give due attention to local conditions and traditions, it would be wrong, we recognise, to dismiss works of the 'international' phase of modern development. A movement may be circumstantial and general within architecture, and produce works of great architectural value, even if certain parameters are excluded. The strength of the early works of Le Corbusier, Gropius and Mies van der Rohe in fact lies in such an exclusion.⁵⁷

⁵² *ibid.* (originally published in Wright, F.L., “The Natural House”, New York, 1954.

⁵³ *ibid.*

⁵⁴ *ibid.*

⁵⁵ In general see Geidon, “Space, Time and Architecture”, 1967.

⁵⁶ Norberg-Schuls, C., *ibid.*, p. 28.

⁵⁷ *ibid.*

However, it was not the intention of many that architecture should persist in this exclusive generality. Gropius, for instance, constantly dismissed the concept of an 'international style', while in his later works Le Corbusier evinced a developing interest in factors local and circumstantial. To create true places clearly assumes that buildings should be 'rooted', meaning that the general is adapted to the situation, and this was already being demonstrated in the preoccupation of those at work.⁵⁸

Already in the Thirties there existed a conscious need for a synthesis of the general and the local. In this phase of the modern development the great originator was Alvar Aalto. Aalto, originating from a country replete with powerful local character, was from the beginning determined to create a regional modern architecture. In accordance with his goal, he metamorphosed the universal openness of modern space into complex organisms, opening and closing even as they extend, mimicking the continuous patterns of the Finnish forests and lakes, visualising the standing and rising of the local rocks and trees as his built form. Thus Giedion said: "*Finland is with Aalto wherever he goes. It provides him with that inner source of energy which always flows through his work. It is as Spain is to Picasso or Ireland to Joyce.*"⁵⁹

Such evocation of authentic places has been continued in the work of the 'third generation' of modern architects so that one may now find a regionally valid modern architecture in many countries, from the 'Finnish' works of Pietilä, to the 'British' building of Stirling, the 'Dutch' lay-outs of van Eyck, the 'German' projects of Ungers, the 'Catalan' inventions of Bofill, and the 'American' houses of MLTW. Particularly in this context, three architects deserve special mention. Robert Venturi, with his employment of 'conventional elements' and his understanding of the wall as where architecture 'takes place', has paved the way for a more subtle interpretation of the new spatiality. Portoghesi has also employed his interest in the articulation of the facade as a manifestation of being between land and sky, thus his curved walls combine essential traditional Roman characteristics with modern openness, and he has decorated similar walls with coloured vertical stripes to convey the lift of building from the ground to receive the light of the sky. His most fundamental contribution was his 'system of places', a concept developed theoretically in terms of interesting buildings.

⁵⁸ *ibid.*

⁵⁹ Giedion, S., "Space, Time and Architecture", Harvard, 1967, p. 620.

Also deeply preoccupied with spatial problems was Jørn Utzon. His counterpoint of solid and hovering roots expresses a true understanding of existence between earth and sky.⁶⁰ This juxtaposition forms a general theme in Utzon's work, one which he varies, however, according to the local context. It represents a good deal more than a metaphor of rocks and clouds, its real significance lies in the way that it re-presents to life the basic 'dimensions' of architecture. Through his platforms, Utzon makes the earth become alive again: early functional architecture condemned the floor to an abstract quality, but here this gave way to a concrete *ground* which endows man with a feeling of security and a potential for movement. He also returns to the root the role of creating space. While early Modernism mainly conflated the roof into an abstract horizontal plane, Utzon's roofs celebrate man's being under the sky. These general concepts have been used by Utzon in his projects to create true places which reclaim the figural essence of a 'thing' in its relation to an understood landscape.⁶¹

Whereas the construction of a new formal language was the achievement of architects previously mentioned, Louis Kahn confronted the need for an authentic architecture in a more complete philosophical manner. While his ideas appear in aphoristic form, they still embody a cogent 'theory'. Therefore he attacked the problems of provision of room and embodiment of character by considering the spatiality of human institutions. His integral approach is concentrated through the simple formula of his famous question: What does the building want to be?⁶²

This method creates rich and varied spatial and formal resolutions, as Kahn has shown in his building projects - thus demonstrating that a meaningful, authentic architecture will never arise from a combination of codified 'signs' or 'archetypal elements', but rather from revelation - the revelation of the spatiality of the life - a word which implies that the works are original as well as old. In general, Kahn developed the concepts of 'open space' and 'clear construction', and for this reason he belongs to the 'new tradition'.⁶³

Modern architecture is fundamentally alive. Its essential goal has always been to heal the dissociation of thought and feeling, and this clearly recommends the creation of places which permit meaningful human orientation and identification. In the contemporary field we are able to draw a distinction between the valid contribution

⁶⁰ Norberg-Schuls, C., *ibid.*, p. 28. (Originally published in: Utzon, J., "Platforms and Playeaus", *Zodiac*, vol. 10, 1962, pp. 112-140.)

⁶¹ Norberg-Schuls, C., *ibid.*, pp. 28-29.

⁶² *ibid.*, p. 29.

⁶³ *ibid.*

to this goal, and the abstract, 'functional' planning which is responsible for the destruction of our environment. We further recognise that rationalism and materialism are forms of human alienation, and that an authentic architecture rather presupposes a return 'to the things themselves', in other words, a poetic approach to essential reality. This approach has always been at the basis of modern architecture, and today it comes forth once again, in the work of architects such as Robert Stern, Stanley Tigermann, Michael Graves and Ricardo Bofill. Architecture is recovered as a circumstantial embodiment of a general language. Although they protest against degenerate Modernism, these architects belong to the new tradition, and their artistic creations satisfy the demand for meaning.⁶⁴

With regard to the future, it is important to note that the appearance of a building derives mainly from the use of appropriated motives and solutions - that should not mean simply copying forms from the past and therefore, the genesis and development of architectural forms become of great interest. The issue as to why certain forms are incorporated or jettisoned at certain times takes on central significance. Generally forms gain acceptance or are rejected because of their inherent meaning. We may need to analyse traditional schemata in their original and actual meaning, as well as to investigate their 'history'. Generally it is motives which are appropriated and re expressed in new ways.⁶⁵ Thus the issue arises: how are schemata transformed, combined and melting together?⁶⁶ Such examinations should not strive for objective results, but as with architecture in general, should manifest solutions of public value, carry out common tasks through methods open to perception and participation. Particularly central are those aspects which transform the solution into a common symbol.

Architecture has reached the point of choice between arts and science: as a work of art, its coherence can have its internal logic, recognised neither by the science nor by construction. A figure, even if it is abstract, has other characteristics than its edges and thus we can compose it of parts which combine to give the effect of the whole. This principle of wholeness is reinforced by repetition, similarity, proximity, common enclosure, symmetry and orientation of the parts. Rather than consider the relationship between form and content, but it is important to point out that semantic unity can reinforce and sometimes even replace factors of formal coherence which are omnipresent and fundamental to architecture and urban design.

⁶⁴ *ibid.*

⁶⁵ We may, for instance, take over a building type but vary the details (e.g. the early Christian, Romanesque, Gothic *basilica*), or we may take over a motive and change its meaning (e.g. the dome).

⁶⁶ Norberg-Schulz, C., "Intentions in Architecture", Universitetsforlaget, Oslo, 1966, p. 183.

Part of the pleasure and difficulties we experience with the built environment can be quantified by how easy or difficult we find it to mentally grouping different elements from the visual field into synoptic units. When one studies integration in an existing grouping, these phenomena require the closest attention. Architecture is an art which acts on the dependence between elements to establish coherence.

The reality, however, is often more complex; most briefs and schemes imply both a contribution to public identity and a space for private identity. Sometimes a conflict arises from the contradictions between the demand of a public face and individual requirements. Our architectural task appears once more as an art of compromise: to define places which serve the urban identity whilst retaining a margin capable of accommodating places where private identities can be expressed.

Clearly there is a difference between seeing and perceiving. This is true whether we only perceive a fragment, or when the figure charged with meaning is blurred. A Bedouin is able to perceive a herd of camels in the distance where others see only a desert of sands. For the former, the issue is his survival; he has learnt to see. Similarly, the student of architecture learns consciously to perceive the essence of landscapes, towns and buildings. He evolves an ability to see and recognise signs in the environment which allow him to make a sharper, more distinct judgement between order and chaos, equilibrium and lack of balance, proportion and disproportion, solidity and brittleness, all forms which have meaning and those that are accidental, without meaning.

With this capacity to see what few others immediately perceive, the architect bears a heavy responsibility. He may construct what others barely see, he can erect what shocks or what pleases. He can contemplate that one day the public will uncover at least a portion of his aims, by merging them into its memory. Whatever the outcome, the architect with his plans plays a significant public function: a 'didactic' role which helps others to perceive with greater subtlety and enjoy the built environment.

*The City of Arriyadh:
Social, Economical, and Physical Constraints*



2.1. Location, Topography, Geology, and Climate

Arriyadh is located on the great Najd plateau, bounded by the sand seas of the *Nafud*⁶⁷ and Empty Quarter to south. It is separated from the Eastern region and the Gulf coast by the long sand ridges of *Addhana*. To the West the plateau is bounded by the mountains of the *Hijaz* and *Ásir*. Arriyadh plateau extend to the west to the *Tuwaiq* mountains, and to the *Addhana* sand belt on the east. Arriyadh is situated at latitude 24° 38` North and longitude 46° 43` East (almost at the geographical centre of the Arabian Peninsula) at a height of approximately 600 metres above mean sea level (figure 2.1). Archaeological and historical studies reveal that the city of Arriyadh stands on the site of an ancient city once known as Hajer, which was the centre of Alyamamah region.

Arriyadh is situated on the eastern bank of *Wadi Hanifah*.⁶⁸ It runs north-west to south-east, between *Jabal*⁶⁹ *Tuwaiq* and the escarpments of *Arrumah* and *Jubail* to its east. There are other wadis in the region such as *Nimar*, *al-Aysan*, and *Albatha* (figure 2.2); these contribute to the water resources of the area, which have encouraged palm trees and gardens to be cultivated, and that is how it acquired the name Arriyadh, plural of *Rowdah*, meaning gardens or orchard. The city stands on limestone. Philby⁷⁰, on his first visit to the city, wrote: “*The city of Riyadh is built on a low platform of limestone rock shelving down on all sides from a central eminence, ...*”⁷¹

The climate in the whole of the Najd region is almost the same. The main feature is that it is hot and dry in the summer (May-September) when the maximum daytime temperature may often exceed 45° C,⁷² with much lower temperatures during the night. This diurnal range in temperature shows that nights are relatively cool during the summer time (continental climate) (figure 2.3).

⁶⁷ Plural of Nafd meaning sands.

⁶⁸ Although the Wadi is dry most of the year, but in the winter, in the rain season, it may fill the Wadi with rain water, to be absorb by the soil to in rich ground water level.

⁶⁹ Plural of Jabal meaning mountain.

⁷⁰ St John Philby travel into central Arabia was very significance to document the city at that time, he was sent by Sir Percy Cox, who was the High Commissioner for Great Britain in Kuwait. He became the British representative to the Kingdom, Philby also was the first one to draw detailed map for the town of Arriyadh, where he published his observations for the first visit in 1917-18 to Arabia in a book published in 1922 titled “*The Heart of Arabia*”.

⁷¹ Facey, W., “*Riyadh the Old City*”, p. 226, quoting Philby 1922 vol. 1, pp. 68-70.

⁷² These statistics where taken by SCET-International/SEEDS in 1976 for their second assessment for the master plan of Arriyadh, and reviewing Doxiadis master plan, giving short range planning advice and implementation proposals. So, from 1976 to this time the physical built structure of the city has far extended. The rabid growth of the city and the consequent increase in heat emitted by buildings, Asphalt roads, cars pollution, air-condition units, therefore all previous factors would increase the ambient temperature in the city.

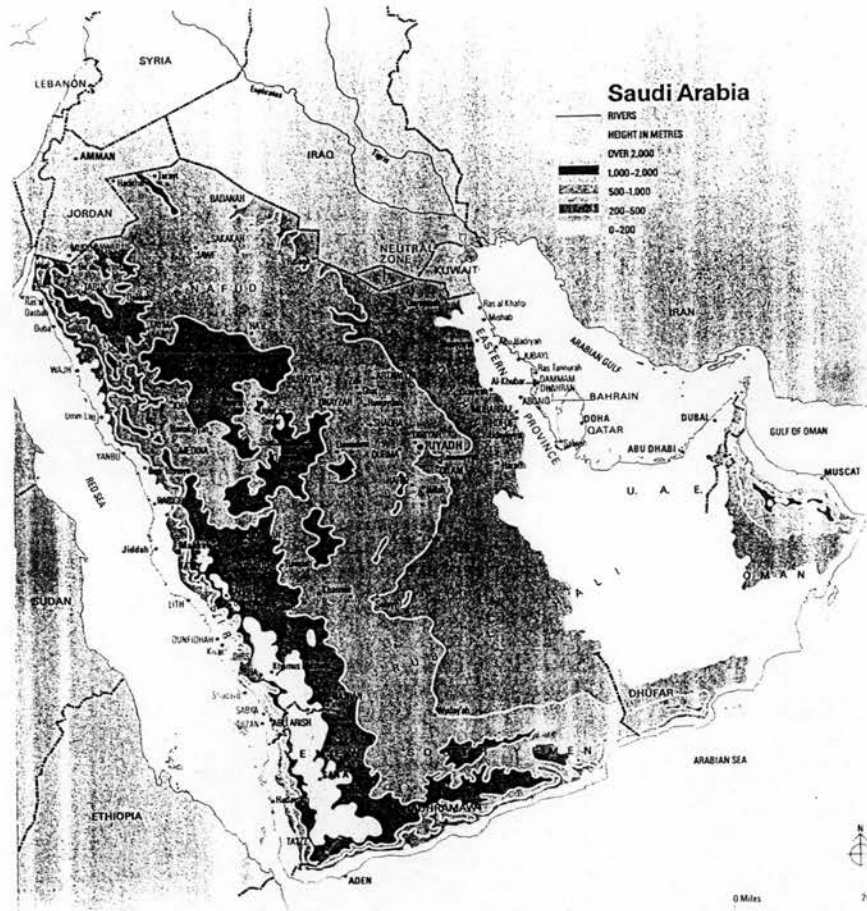


Figure 2.1: Map of Saudi Arabia.
 (Source: Facey, W., (ed.), "The Kingdom of Saudi Arabia", 8th ed., Stacey International, 1990, p. 8)

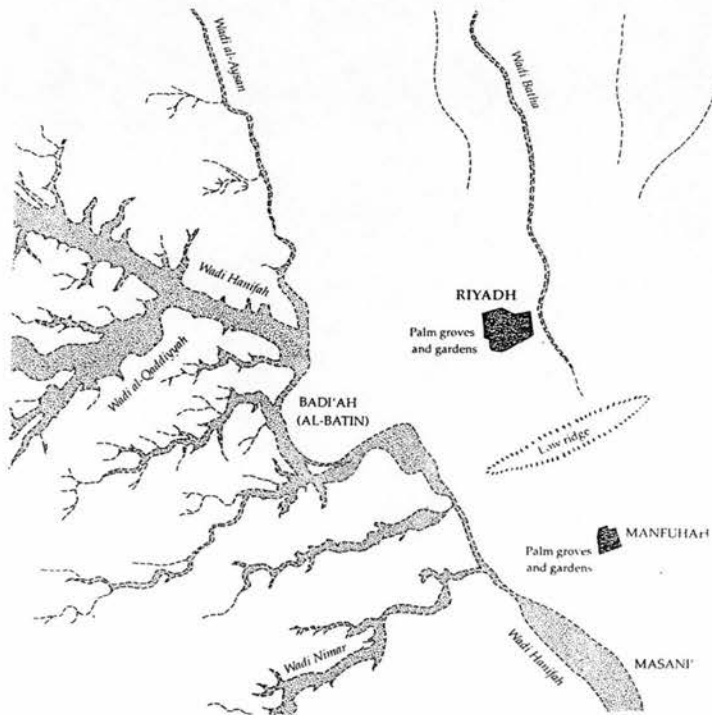


Figure 2.2: The topographical setting of the city.
 (Source: Facey, W., "Riyadh the Old City", 1992, p. 14)

The winter (December-February) is cool and less dry; the average temperature is 15° C., but during the night, the temperature may fall below 0° C. In the spring and autumn (March-April and October-November) the weather is mostly pleasant, with temperatures in the range of 25° C (figure 2.3).⁷³

The annual average rainfall around Arriyadh between the years 1966 and 1977 was 131.2mm⁷⁴, which is far below the annual amount of 250mm at which farming without irrigation would begin to be possible (figure 2.4). The rain that falls is typical of the desert; heavy rain may occur on any day. It is possible that most of the year's rainfall may occur on a single day.⁷⁵ Drought in Arriyadh has caused wells to be dry and farming to become impossible, which has resulted in famine and disease, causing migration to other parts of the peninsula or into other countries in the Islamic world.⁷⁶

During the summer the average relative humidity is about 20%, and 50% during the winter season, with an average of 35% throughout the rest of the year (figure 2.5). This figure of low humidity and high temperature during summer time makes living conditions bearable. If the high temperature in summer were accompanied by high humidity, living conditions would be very difficult.

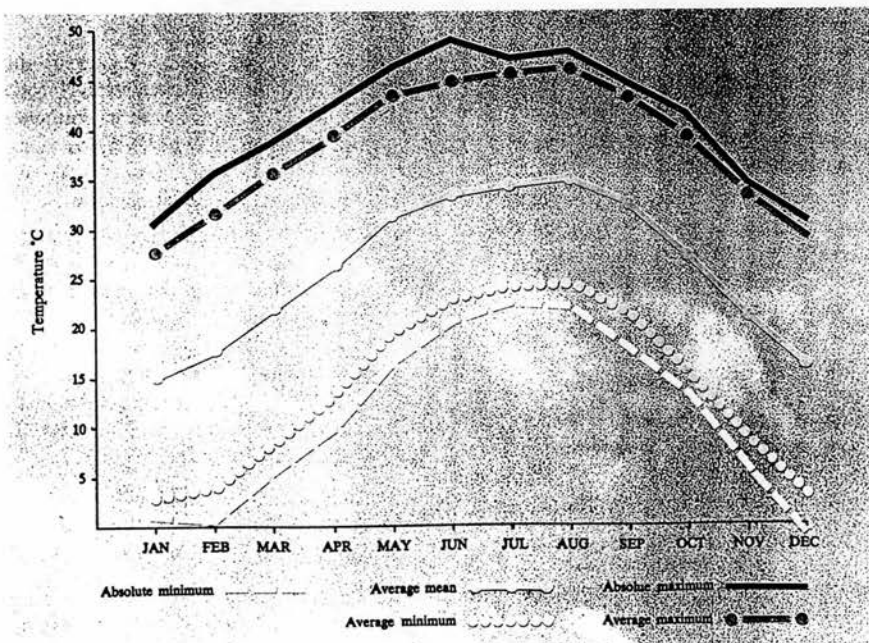


Figure 2.3: Temperature records from 1966-1977.
(Source: Daghistani, p. 26)

⁷³ Daghistani, A., "Ar-Riyadh Urban Development and Planning", 1985, pp. 25-26.

⁷⁴ Although, there are annual variation in rainfall, the lowest was 15.5mm, and the highest was 257.7mm, five of the twelve years experienced less than 100mm.

⁷⁵ Daghistani, A., *ibid.*, pp. 26-27.

⁷⁶ Facey, *ibid.*, p. 23.

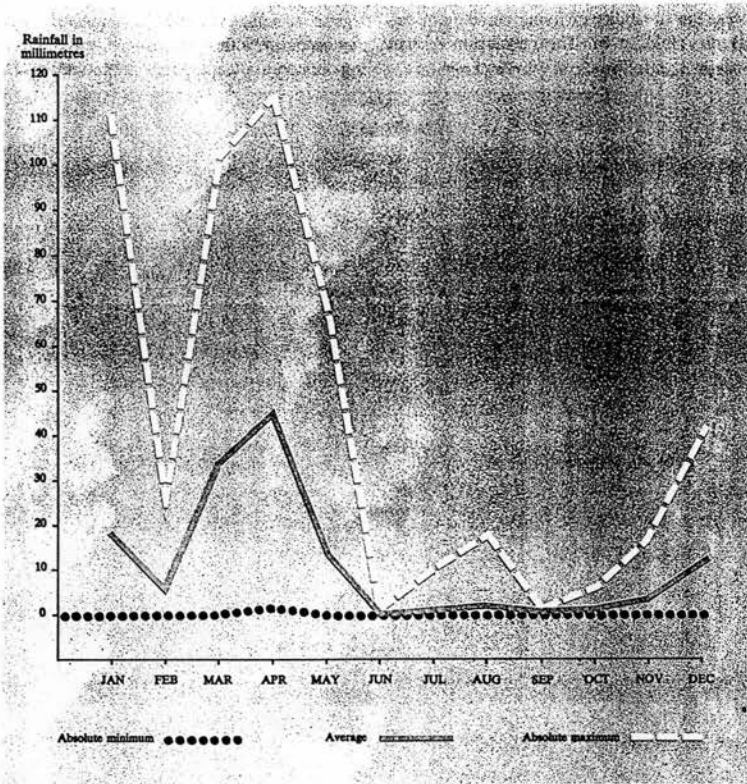


Figure 2.4: Rainfall data.
(Source: Daghistani, p. 27)

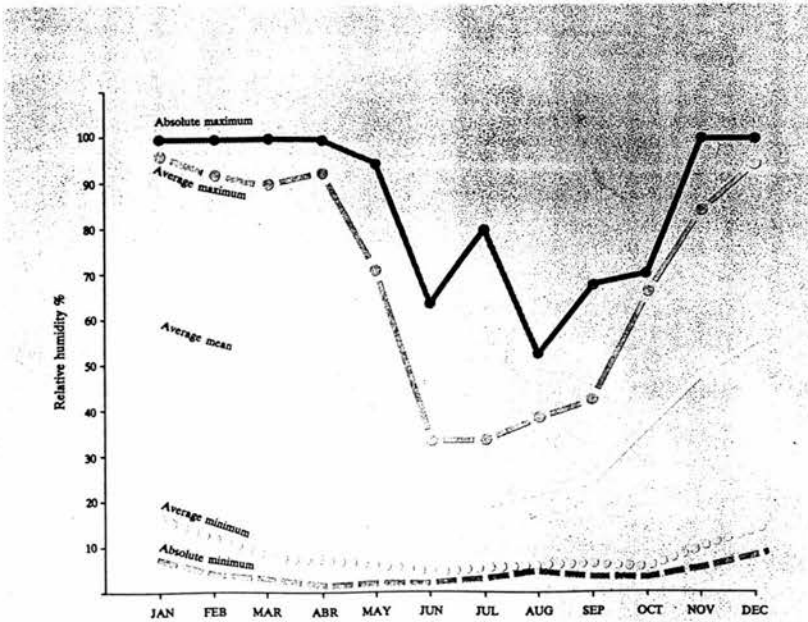


Figure 2.5: Relative humidity.
(Source: Daghistani, p. 28)

2.2. Culture and Society

William Facey⁷⁷ identified the main reason for the isolation of Najdi society: *“Due to the forbidding nature of the barriers between Najd and the outside world, it has produced societies which have been little exposed to outside influences. The poverty of its resources and the aridity of its climate have generally combined to make it an unattractive prospect for invaders.”*⁷⁸

Women are always segregated from men. Saudi society has developed a notion of complete separation between the male and female sexes. Men are the working section of society; their duty is to work and provide for their families. Women, are queen in their own Kingdom; they are responsible for the children and the house. This clear separation between the two sexes, each with their own special functions, made their responsibilities clear. All social acts and reactions are extracted from the *Sharièh* law, which strongly supports the rights of each sex. Children know their role from an early age, either by watching their parents or by education. Young boys would help their fathers in the field, or in construction, so inheriting their fathers' duties. Girls would help their mothers with the housework i.e. cleaning, cooking, arranging, and taking care of their younger brothers and sisters.

The region and the city of Arriyadh was never under any foreign influence and it was cut off from the outside world. The severity of the weather and the harshness of the desert dissuaded travellers from crossing these mountains of sand dunes. The camel was the only means of transportation which could handle such journeys. The only recorded visitors to the city were the people who were invited by or sent to the King. The three recorded attempts of invasion in the 19th century by the Egyptians were for retaliation and not for economic reasons. The local chronicler Dari Ibn Rasheed said: *“Najd is like the Chinese proverb: if there are many soldiers in it, they get hungry, and if there are few, then they perish”*⁷⁹

Therefore, the city did not come under any foreign cultural influence. Citizens of Arriyadh did not have the money to import building materials. This can be seen in King Àbdulaziz's palace (Imam Turki Bin Abdullah palace). There were minor changes in the architectural detail of the palace between the beginning of this century and the 1920s, mainly because of the increase of wealth and the migration of builders

⁷⁷ William Facey an historian of the Arab world wrote a book about the history of the city of Arriyadh titled *“Riyadh the Old City”*. He has worked since 1974 in Saudi Arabia as a museum consultant, where he developed his interest in the archaeology, history and society of the country.

⁷⁸ Facey, pp. 23-24.

⁷⁹ Facey, p. 24.

and craftsmen to the newly formed capital. All these skills were translated and may be seen in the Almurabaà palace. Other reasons for immigration to the capital are to be seen in the unification of the different regions in Saudi Arabia under one government. Regional differences were reduced, so people have felt secure travelling from one region to another for work. The discovery of oil in the Eastern province, and moving the governmental agencies from Hijaz (Mecca and Jeddah) to Arriyadh led to the immigration of great numbers of people to the Eastern province and Arriyadh, creating a sudden and extensive need for housing after the middle of the century.

The people of Arriyadh were naturally influenced and dominated by religion and traditional rules; and their limited income did not allow any significant change in the inherited way of life. This pattern has changed in the last half century as a result of the increase in wealth and the cultural influence of foreign visitors, and telecommunications. These changes can be seen in many things but particularly in the following:

1) Women in the past were rarely seen at all, and if they were seen it would be in the market, where they would be covered from head to toe. Now foreign women walk and wander unveiled in the Souq or in the streets of the town, and the local women have compromised their dress codes, sometimes being seen unveiled and wearing trousers or skirts;

2) Western clothing for men also was never seen in the old city. Even foreign travellers would wear the Arabic *Thoub* when they walked in the town. But now, western clothing can be seen everywhere. The uniform of some Saudi professions is now completely western i.e. police officers, doctors, mechanics, and military officers and troops;

3) Smoking was absolutely prohibited and forbidden by society, to the point where a smoker would be ostracised by the rest of the society. But now cigarettes can be bought everywhere e.g. in supermarkets, corner shops, and even from vending machines.

All these changes were entirely foreign to regional culture. Other cultural and social influences were seen in education, as the majority of school teachers were from Arab countries already been influenced by western occupation i.e. Egypt, Palestine, Syria, and Lebanon.

2.3. Economy

The sudden boom in construction and civil development was a reaction to the change in the economy. Oil was discovered on a commercial basis in 1938, but its exploitation was very limited as a result of the Second World War. From the year

1950 onwards there were annual increases in oil production and revenues. The following tables show the growth in oil production⁸⁰:

Year	The income in million dollars
1946	10.4
1950	56.7
1951	113.6
1952	210.7

Table 2.1: Oil revenue in millions in the 1940's and 1950's.

(Source: Abul-Ela, M.T., "Some Geographical Aspects of Al Riyadh: Saudi Arabia", *Bulletin de la Société de Géographie D'Égypte* 38, 1965, p. 49)

Year	The income in Billion Dollars
1972	2.7
1973	4.3
1974	22.6
1975	25.7
1976	30.8
1977	36.5
1978	32.2
1979	48.4
1980	84.5
1981	102.1
1982	70.5

Table 2.2: Government Oil income: notice the sharp increase after 1973.

(Source: Safran, Nadav., "Saudi Arabia: The ceaseless quest for security", Corneal Uni. Press, Ithaca or London, 1988., p. 221)

2.4. Food

Food is directly related to the structure of society. People in the recent past used only dates, wheat, and milk as their basic foods. Chicken and meat were luxury items consumed only on important occasions. But now with the increase in individual incomes, and the ready imports from all over the world, eating habits have been revolutionised. New foodstuffs and habits were also imported with foreign people. This has made society exposed to new eating habits.

⁸⁰ Abul-Ela, M.T., "Some Geographical Aspects of Al Riyadh: Saudi Arabia", *Bulletin de la Société de Géographie D'Égypte* 38, 1965, p. 49.

Despite this, there are differences between the main dishes used in different regions in Saudi Arabia. The families in Najd region tend to eat lamb and chicken with rice as their main daily meal, whereas people in the eastern and western regions use fish as their staple food.

In the past people always ate inside their houses, and it was considered a bad habit to eat in the streets. But now different kind of restaurants are found all over the city (i.e. Chinese, Italian, Lebanese, Egyptian, American, and French), including even fast food outlets, where one finds people eating in the street.

Society has learned to incorporate more dishes into their diet. Rich families have employed chefs to make different kinds of food, which has introduced new trends in society.

Entertainment in the past was provided by story-telling, dance and folk song at national events and celebrations. The only source of news was by word of mouth. But now the modern technology media are reliable sources of information, news, and entertainment. The satellite channels are found in almost every house, and satellite dish receivers are seen on top of many buildings around the city, which adds to the visual disturbance.

2.5. Clothing

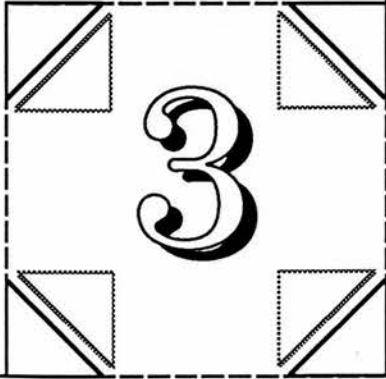
Saudi clothing was designed to overcome the harshness of the environment. The wide dress (*Thoub*) helps ventilate the body and minimises body perspiration. Also, the head cover (*Ghotrah*) helps to protect the head from the sun and the face from the sandy winds. Those who use western clothes would appreciate the advantages of the *Thoub*, especially during summertime.⁸¹

Women in the past would cover themselves from head to toe, but now they follow the latest international design houses and dress almost like western women. But when walking in the street or in public places they normally cover their faces with a veil and their bodies with the *Àbaya*⁸². Inside their houses or when visiting female friends they dress freely.

⁸¹ Abul-Ela, *ibid.*, p. 38.

⁸² A long piece of black fabric function to cover the women body not to be seen by male.

*Traditional Architecture:
Its Elements and Principles*



The traditional architecture of the city of Arriyadh reflected the faith, culture, and philosophy of generations of people; their continuous interpretation of the different rules and principles led them to adopt an urban form which met their physical needs, although, the harsh climate of the Najd region had forced people to adapt certain forms or building arrangements to protect themselves to the best of their economic ability and local resources. People maximised their use of local materials, and this in-turn blended the natural and physical environment and gave a regional identity to their environment.

However, the physical configuration of the traditional city of Arriyadh was also organic and active. The urban character contrasted solid and void, light and dark, with green-shaded intervening spaces. Viewed from above the city was an animated succession of contrasting cubical forms: the overall effect was one of urban homogeneity and the city was always perceived as a single entity (figure 3.1). The city's physical structure is a complex of cul-de-sacs and narrow twisted thoroughfares often covered by structural projections (figure 3.1). The lower floors of houses are hidden from pedestrian gaze. Windows are obstructed by gratings, screens, or shutters, assuring privacy from the exterior, while at the same time allowing the inhabitants to look out, without being seen. Only fleeting shadows can be perceived within the narrow depths of the passageways. The extraordinary human density of the city can easily be overlooked, because of its intense silence and the peacefulness of the residential areas.

Before 1940s the architectural development of the city was slow and limited. This limitation was a result of many factors, which were mainly the product of cultural influences; scarcity of financial resources; and the difficulties of transporting building materials into the region which limited choice of materials, helping to blend the architecture of the city and give it a strong visual identity.

Generally speaking the use of local building materials and local construction techniques helps to harmonise the natural and the built environments, minimises the cost of constructing new buildings and reduces the cost of building maintenance and repairs. Another advantage is the improved ecological balance due to the re-use of building materials after demolition.

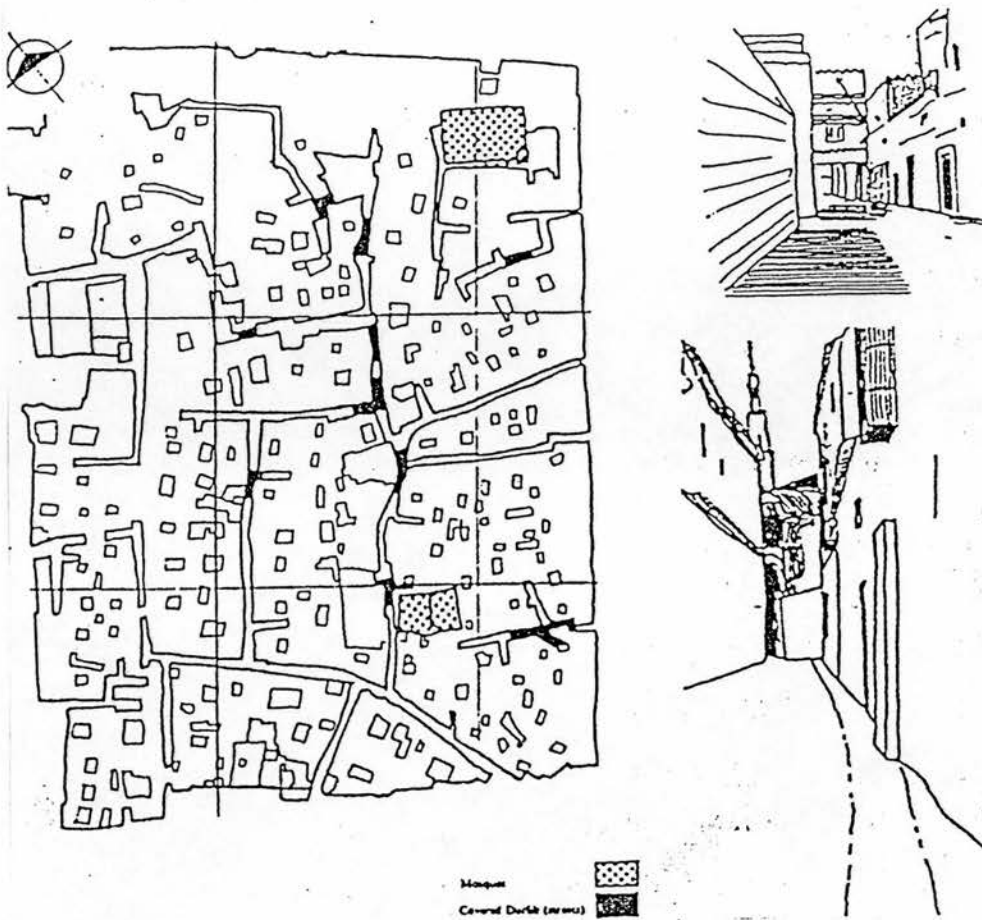


Figure 3.1: Residential neighbourhood at Arriyadh with different views showing the street pattern. (Source: Fadan, Y., “Traditional Houses of Makka: The influence of socio-cultural themes upon Arab-Muslim dwellings, in *Islamic architecture and urbanism*”, 1980, pp. 315-316.)

The city of Arriyadh was the product of a complex amalgamation of principles and guidelines arising from different sources (e.g. *Alsharièh* law, social requirements, response to the natural environment, climatic requirements, economic status, and construction methods and techniques). The balance of all these factors generated a coherent and homogeneous built environment.

This Chapter questions the fragmentation of the urban built environment of traditional settlements in general and in particular focuses on the city of Arriyadh, to examine the general effect of *Alsharièh* and climate on shaping the city of Arriyadh, to discuss the general physical components of the city, and to pinpoint the principles and characteristics of the traditional built environment, which has given the traditional city of Arriyadh its coherence and identity.

3.1. The Discontinuity of Urban Form

Traditional settlements around the world, whether in China, Italy, Persia, Arabia, or elsewhere (figure 3.2) persisted for centuries meeting people's local needs without radical change. The planning of the city and the design of individual buildings was determined by people's faith, tradition, culture, economic status, and their natural environment; but a common feature in all traditional cities is a strong visual unity and coherence. However, the visual coherence of the traditional city of Arriyadh was mainly the product of social coherence. The way people lived in one part of the city was the same as in other parts. They shared the same values and life style, the same economic and political status, and the use of the same building materials and techniques.

The traditional architecture of the city of Arriyadh is specific and local, which of course applies to most traditional settlements around the world where they display unity and homogeneity. Sometimes they actually share the same architectural elements (city walls and gates, streets, city centre, and neighbourhoods) depending on their political status, economy, social structure, and natural setting. This is due to a number of factors:

- a) In a homogeneous society every one shares the same beliefs;
- b) Changes and development are slow;
- c) Outside cultural influence is limited;
- d) Transporting building materials is expensive; and
- e) Most importantly, financial resources are limited.

In a later stage the unity of these traditional settlements was challenged by modern technology and new social conventions (cars, steel, concrete, air-conditioning, communication technology, ...etc.), the acceptance of individuality and the great influence of other cultures and societies. People were more exposed to ideas from other cultures; transporting building materials was easier which made the choice much greater; and last but not least, the increase in individual wealth gave people freedom of choice in building materials and construction techniques. All of these factors broke down the unity and homogeneity of traditional settlements.

Arriyadh was one such traditional city. It had its own building style and character. In the 1950's with the increase of wealth following the discovery of oil in commercial quantities in 1938, the impact of other cultures was inevitable. Engineers and architects from the Arab world started to practise in the region, and transport of materials was

facilitated by the railway between the Eastern province and Arriyadh in 1951 and by the opening of the airport in 1953. It was at this point that the homogeneity of the city started to break down, reaching a peak in the late 1970's when most of the city planning and design bore no relation to other traditional parts of the city.



Figure 3.2: The old town of Prague; the defensive wall of 1235 was demolished in 1760 to form the line of east-bank inner-ring boulevard. Notice the similarity in the planning principles with the city of Arriyadh Figure 3.4, particularly in the southern sector where Renaissance planning has not over ridden the medieval street pattern.

(Source: Morris, A., "History of Urban Form Before the Industrial Revolution", 3rd ed., 1994, p. 230)

3.2. Traditional Built Environment of the City

Many factors shaped the city of Arriyadh, but in order to limit the scope of this study, I shall concentrate on the most important social factors, and then describe the main architectural elements of the city.

3.2.1. The Influence of *Alshari'ah* in Shaping the City

In Islamic *shari'ah*, all acts, including planning and design decisions, are evaluated in terms of *masalih* (public interest) and *mafasid* (public harm). There is a hierarchical order for *masalih* - *daruriat* (absolute necessities),- *hajiyat* (social needs which alleviate

hardship) and *taḥsiniyat* (refinements for the benefit of society). The implication of the *sharièh* values in planning land use, planting, and so forth, are not made merely on the basis of profit, but they also must provide positive benefits to society. However, in judging between conflicting interests, Islamic law dictates that the wider interests of the entire society must take precedence over the interests of the individuals.

Besim Hakim in his book entitled “Arab-Islamic Cities” extracted the principles and behavioural guidelines that existed in the old Arab-Islamic city.⁸³ Most important issues were:

- a) Harm: the main essence of Muslim rights were that their actions should not affect or harm other Muslims;
- b) Privacy: as the private and personal domain for people. It has been accentuated on many verses of the Quran and the Sonah (the Saying of the Prophet) that individuals should respect other peoples private physical space. This includes visual and acoustic privacy;
- c) *Alsharièh* also gives right to original and earlier usage by people; and
- d) The other physical action clearly defined by *Alsharièh* is the 'preemption' which gives individuals the prior rights to buy neighbouring land or houses when offered for sale. Such action protects house owners from potential harm.⁸⁴

There are number of physical examples and actions that was listed by Hakim showing how *Alsharièh* transformed certain rules to be used as guidelines for the planning of the cities; some of these are:

- i) The functionality of the physical design of the city as shown in the design of the street. The street should not be less than seven cubits in width (3.23-3.5 metre) which allow two loaded camels to pass;
- ii) Public thoroughfares should not be obstructed;
- iii) Rights to public supplies of water should be respected; and
- iv) Sources of unpleasant smell or noise should not be placed next to the mosques.⁸⁵

Alsharièh and good practice maintained building principles and guidelines that gave an identity to Islamic cities. Its principles stress the importance of satisfying the

⁸³ Hakim used the Imam Malik school of law as a reference for his analysis. The Imam Malik school of law was established during the decade before the death of the Prophet in 11 AH or 632 CE in the city of Medina (the Prophet city) in Saudi Arabia. According to Hakim the dominant school of law in the Islamic world is the Maliki school of law.

⁸⁴ Hakim, B., “*The Arab-Muslim Cities*”, London: KPI Limited, 1986, pp. 19-20.

⁸⁵ *ibid.*, pp. 20-22.

individual without harming others. The Quran and the Sonah forbid *israf* (wasteful extravagance). According to a Hadith it is not acceptable to waste water while washing for prayer, even by an abundantly flowing river. These prohibitions teach Muslim society to minimise the waste of all resources.

Until the middle of this century the financial resources of the people of Arriyadh and Najd region were minimal, and this was reflected in their architecture. The architecture of the city at that time was simple and economic: simple because *sharièh* law does not encourage people to waste or to show-off their wealth to their neighbours; and economic because the limitation of financial resources determined the use of cheap, local building materials to give shelter.

3.2.2. The Influence of Climate in Shaping the City

Climate was the main determinant in shaping the physical structure of the city. Therefore, the main physical characteristic of traditional Najdi cities was a compact overall volume with narrow winding streets and closed vistas (figure 3.3). This street pattern helps to regulate the temperature by retaining the cool night air during the day. If the streets were wide and straight, the cool air would heat up after sunrise, or be blown away by the wind. Moreover, this irregular and narrow street pattern creates a large amount of shade which protects people from the direct hot sun. Insulation at ground level is therefore much reduced. A common feature of the built environment in the city is the use of party walls between neighbours which minimise exposure to the direct sun, and assist financially by limiting building expenses. The only disadvantage of sharing walls is the lack of acoustic privacy.

Traditional Najdi buildings used a number of typical local methods to moderate the effects of the hot climate: thick walls, which help keep the inner rooms cold during the summer and warm during the winter; small openings which minimise the access of hot air into the rooms; orientation towards the prevailing winds to provide ventilation; and utilisation of the ground floor rooms as sleeping quarters in the winter, the roof terrace being used in the summer.

3.2.3. The Main Elements of the City of Arriyadh

Arriyadh, like most Islamic-Arab cities is made up of a number of main elements: city walls and gates, streets, *masjid jamiè*, main *saha* (square), *Souq* (market), and neighbourhoods (figure 3.4), the relationship between these elements determining the

unique character of the city. In the case of the old town of Arriyadh, a strong relationship between these elements gave a special identity and coherence to the city.

The gradual change in status from public to private space is common in the city, the hierarchical sequence showing the coherent structure of the city fabric, viz.:

- A) House-> narrow streets-> neighbourhood centre-> wider streets-> city centre-> main street-> city gates->wide open space;
- B) Private spaces-> semi private spaces-> semi-public spaces-> public spaces->free land;
- C) Cul-de-sac-> local road-> access road-> main street.

Philby's plan of 1919 (figure 3.4) shows no details of the town but the aerial photograph of the centre of Arriyadh in 1967 (figure 3.5) with the line of the old city's walls superimposed (where they are known to have run) shows it in accurate detail, and from this photograph we can envisage the physical setting, and cross-refer to the map.

In the early 20th Century the total area of the city did not exceed 9 sq. km with a strong defensive wall and nine gates; the main entrance was the *Thumairi* gate which was connected to the city centre by a straight wide street⁸⁶, on which we found the *masjid Jamiè*, the main *saha*, the main Souq, and the King's palace. The city was largely surrounded by an oasis of Palm trees, under which a wide variety of crops was grown.

Gerard Leachman, a British traveller, arrived in Arriyadh on December 1912. He described the physical setting of the town and its surroundings... “ *This town ... lies in a depression 100 feet below the surrounding plain, and, together with its suburbs and date gardens, stretches for 2 miles north and south, while its southern extremity touches the Wadi Hanifa, here known as el Batin. The town, which is completely embedded on three sides in dense date gardens, is also surrounded by a massive wall of recent construction with towers every few hundred yards, some of them commanding the various gates of entry. On the north-west is situated an extensive cemetery traversed by the great roads leading to Mecca and to Hasa.*”⁸⁷ Leachman continued by describing the gates, the main streets, the main *saha*, and the King's palace: “... *Entering the town by a high gateway having iron-studded wooden doors, we passed through a number of quiet by streets and then suddenly emerged into a broad square with a bazaar in which business was at its height at this noontide hour of the day; as we passed through many curious eyes were*

⁸⁶ *Thumairi* street was the main street in the town.

⁸⁷ Facey, W., “*Riyadh the Old City*”, pp. 196-197, quoting Leachman, 1915, pp. 515-518.

*fixed on us, and then we came to a large open space flanked on the right by a lofty castle, which proved to be the palace of abd el Aziz ibn Saud, the Wahabi Emir of Nejd.”*⁸⁸ Leachman described people looking at his party when they entered the city in 1912, showing that the local inhabitants were not accustomed to seeing foreign visitors to the town. It is clear that external cultural influence was very limited.

The name Arriyadh means 'the garden' and it is interesting that Leachman's description for the natural setting of the town refers to its being surrounded by palm gardens. The recently constructed city wall mentioned by Leachman was the one which had been rebuilt by King Ábduláziz in 1902 when he conquered the city.⁸⁹



*Figure 3.3: One of the streets near the King's palace. (Rendel's collection, 1937)
(Source: Facey, "Riyadh the Old City", 1992, p. 290.)*

⁸⁸ *ibid.*, p.197, quoting Leachman, 1915, pp. 515-518.

⁸⁹ King Àbduláziz conquered the city of Arriyadh in 1902. His first action was to re-build the city wall as a defence against attackers.

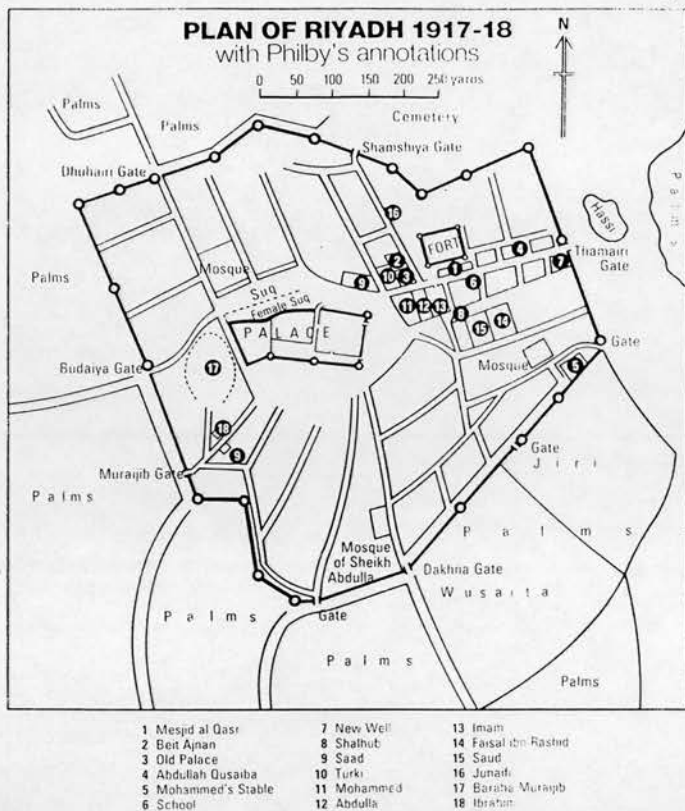


Figure 3.4: Philby's plan of Arriyadh in 1919⁹⁰ showing the main elements of the city. (Source: Facey (ed.), "The Kingdom of Saudi Arabia", 8th ed., 1990, p. 82.)

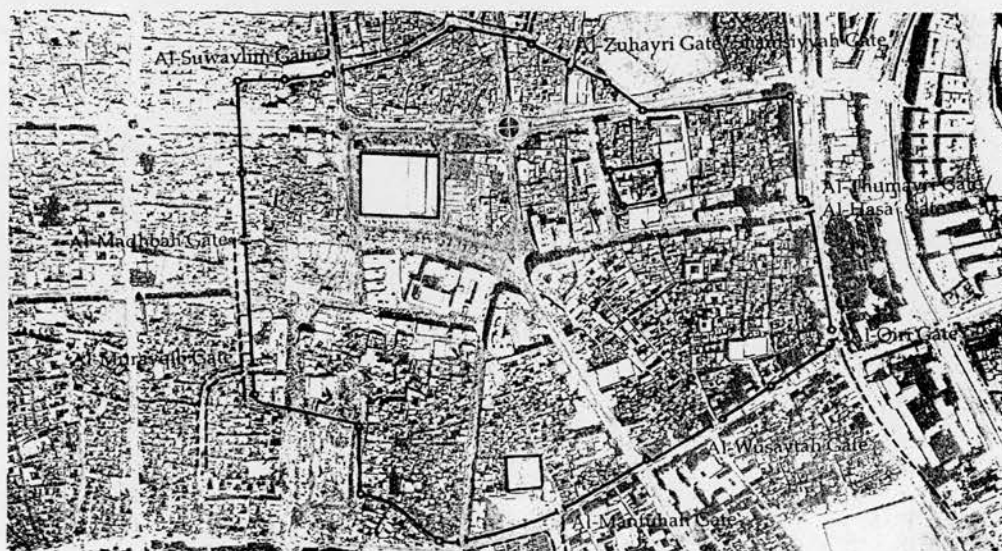


Figure 3.5: Aerial photograph of the centre of Arriyadh in 1967, with the line of the old city's walls superimposed where they are known to have run. Notice the similarity with figure 3.4. (Source: Facey, "Riyadh ...", p. 228)

⁹⁰ The first recorded plan of the city was in 1863 by William Palgrave. It was published in a book entitled "Personal Narrative of a Year's Journey Through Central and Eastern Arabia:" 1862-1863, London: Mc Millan, 1868. (This book was republished under: "Central and Eastern Arabia", Personal narrative of a year's journey through Central and Eastern Arabia: 1862-1863, London: Darf Publishers Limited, 1985.) Comparing Palgrave's plan with Philby's we find Philby's plan to be much more accurate, bearing in mind that the city could not have changed much since 1860s as a result of the limitation of the increase in the population and the limitation of financial resources.

3.2.3.1. *Alsur and Albawabah (The City Wall and Gate)*

Most Islamic-Arab cities had a fortified city wall with city gates to regulate visitors. The main function of the city wall was defence. The city of Arriyadh has nine gates (figure 3.4). These gates were always shut at the time of prayer and after sunset, to be re-opened at sunrise. Of the city's nine gates, the most important was *Bawabat Al-Thumairi*. From this gate there is a direct and wide street⁹¹ leading visitors to the heart of the town where the grand mosque, the *Souq*, the *saha*, and the king's palace are situated. Philby⁹² describes his impression of the *sur* (city wall) when he first visited Arriyadh in 1917; “*The city is completely encircled by a thick wall of coarse sun-baked mud-bricks, about twenty-five feet in height and surmounted by a fringe of plain shark's-tooth design at frequent intervals. Its continuity is interrupted by imposing bastions and guard-turrets, circular for the most part and slightly tapering towards the top but some few square or rectangular, varying from thirty to forty feet in height and generally projecting slightly outwards from the wall-line for greater facility of defence.*”⁹³ (figure 3.6)



Figure 3.6: View of the western city wall taken by Philby in 1917. Notice the different shapes of towers. (Source: Facey, “*Riyadh ...*”, p. 223)

Philby's description of the city wall and the gates continues: “*The perimeter of the wall is pierced in nine places by gateways [figures: 3.4 & 3.5], some of which have ceased to be in regular use except as means of access to the walled palm-groves in their vicinity; of the others the most important are the Thumairi and Dhuhairi gates, the first situate on the east side of the city and serving as a regular outlet to the main tracks to the north and east and also to the southern road towards Manfuha, while the other at the*

⁹¹ *Bawabat Al-Thumairi* is the most important gate in the town, the street connecting the gate with the city centre is also the most important street in the town. In 1862 Palgrave named the street as the Great Street. Shakespeare and Philby also called it the main street.

⁹² St. John Philby's travels into Central Arabia was very significant in documenting national development. He was the first to draw a detailed map for the town of Arriyadh. Later Philby became the British representative to the Kingdom.

⁹³ Facey, *ibid.*, p. 227, quoting Philby 1922, vol. 1, pp. 70-71.

north-west corner gives access to the north-western route to Washm and the Qasim and to the western pilgrim road to Mecca; ...”⁹⁴ (figure 3.7)



Figure 3.7: Photo of one of Arriyadh's gates. (Steineke's collection, 1937)
(Source: Facey, “Riyadh...”, p. 280)

Most of the gates of Arab cities were not just simple doorways, but substantial architectural structures. Their scheme sometimes called for structures of double composition; the first, external gate permitted access to a *maidan* (plaza). Across from this *maidan*, a second, internal entrance allowed direct passage to the city. Each gate in itself is monumental, having a great volume and complex twisted floor plans (figure 3.8).

⁹⁴ Facey, *ibid.*, p. 229, quoting Philby 1922, vol. 1, pp. 71-72.

The *bawabah* arrangement of the classical Islamic-Arab city functioned as a gigantic vestibule, where visitors were received. It was the device which articulated the city's exterior space. For that reason, the *Souq* was sometimes located in the vicinity of these entrances. It also had another function which was to hold caravans on arrival so that they could be checked and controlled before admission. Often the *maidan* or uncovered area between the outer and inner gate played the role of public square. Such an urban function still exists in some cities, as for instance the *Bab Doukakala* of Marrakech which leads to the *Souq el-khamies* where people watch snake charmers, hear story-tellers and bards, and listen to musicians and singers.⁹⁵

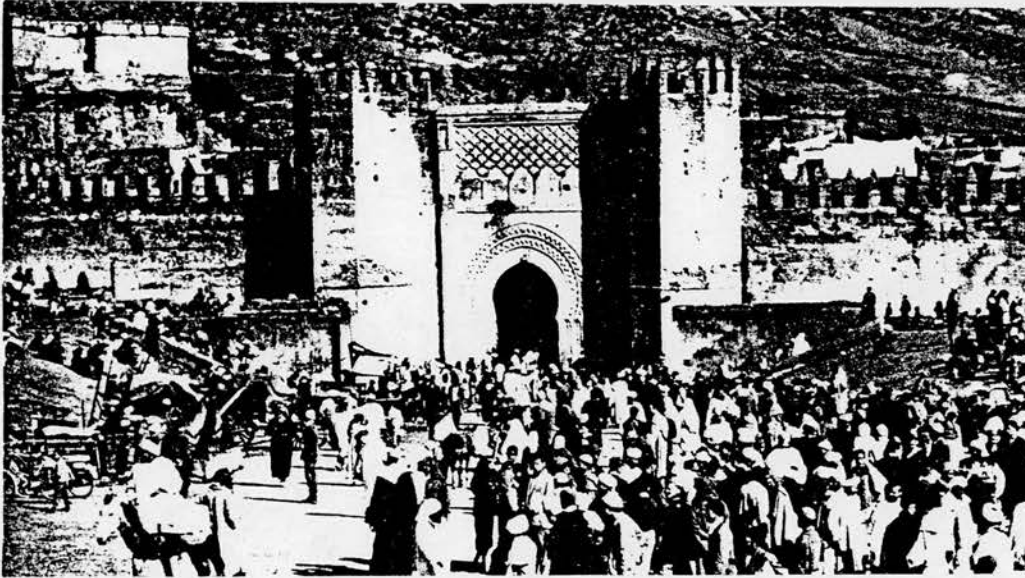


Figure 3.8: The farmers and the live stock market placed outside the city walls, Fez-Morocco. (Source: Brown, L.C., "From Median to Metropolis", New Jersey: The Darwin Press Inc., 1973, p. 36)

3.2.3.2. *Alshariè* (The Street)

There is a hierarchy in the design of the streets in the Arab city (figure 3.9). According to function, it is usually divided into four levels. The first is the main street (*tareeq nafeth*) which connects the city centre to the main gates, passing by different *haratt* (neighbourhoods). It is usually the widest. Other types branch off this. The second type is the *sikkah* (access road). This type is a branch from the *tareeq nafeth*, which connects the neighbourhood centre to the main thoroughfare; the third type is the *darb* (local road). This type is much smaller than the others and functions as a branch from the *sikkah* that leads either to houses or other *sikkak*; the last type is the *tareeq ghair nafeth* (cul-de-sac). This type is the most common serving an average of about ten houses.⁹⁶

⁹⁵ de Montequin, F. A., 1983, p. 55-56.

⁹⁶ *ibid.*, p. 172.

However, the distinctive function of the cul-de-sac is its semi-private usage by residents, which strengthens the social collaboration and encourages them to utilise the spaces in any way they wish, as long as they do no harm to other residents. Furthermore, it is also used as a gathering place for women in the morning and they can watch their children at play while their men are at work.

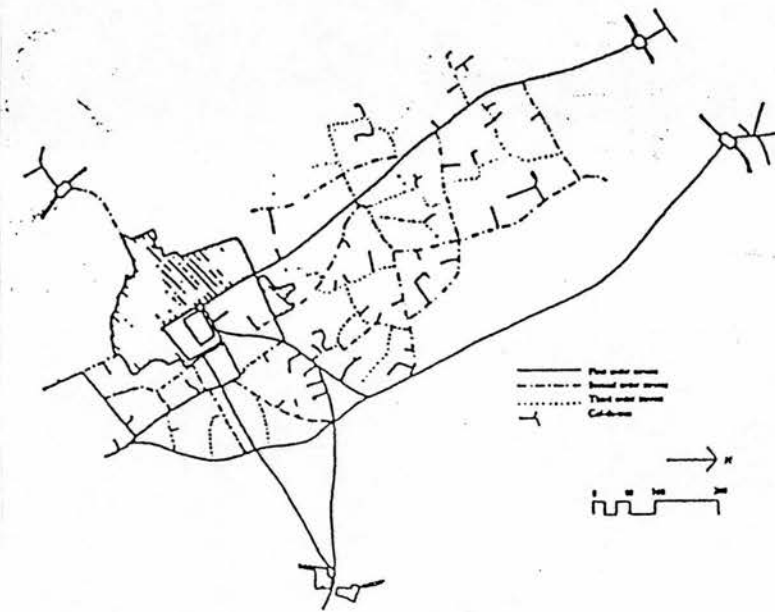


Figure 3.9: Street hierarchy in the city of Tunis. (Source: Hakim, "Arab-Islamic...", 1986, p. 66)

The planning of streets in the city was mainly the result of climatic, whilst also reflecting the circulation patterns. The principal physical characteristic of traditional Najdi cities was the narrow winding streets with closed vistas (figure 3.2). As Facey mentions in his book "Riyadh the Old City"; Amin Rihani⁹⁷ believed that the streets of old Arriyadh were much the same as other Arab cities.⁹⁸ Philby confirmed that saying: *"The internal arrangement of the streets is without symmetry except for the natural convergence already mentioned of all main traffic lines on the central enclave; the chief street is that which leads in a straight line from the Thumairi gate to the palace and thence through the market-place to the Budai'a outlet, with a branch going off from it at*

⁹⁷ Amin Rihani was a Christian Lebanese who promoted Arab unity by travelling into the Arab world meeting Arab leaders. He wrote a book published in 1924-1925 "Muluk al - Arab" (Kings of the Arabs); his trip to Arriyadh was of magnificent experience which he documented in a book published in 1928 titled "Tbn Sa'ud of Arabia- His People and His Land".

⁹⁸ Facey, W., "Riyadh the Old City", p. 249.

right angles from the western end of the Souq to the Dhuhairi gate.”⁹⁹ (figures: 3.4, 3.5 & 3.10) Moreover, the streets in Arriyadh played an important social role, where people met, and talked. It was common to see old people sitting in the morning and in the afternoon at the side of the local roads talking with friends; passers-by also usually would talk to them.



Figure 3.10: Street scene near the palace. (Rendel's collection, 1937)
(Source: Facey, "Riyadh...", p. 289.)

⁹⁹ *ibid.*, p. 229.

3.2.3.3. *Markaz Almadinah (City Centre)*

The city centre of old Arriyadh was its most vital and important part. It contained many focal elements i.e. the *Souq*, the *masjid jamiè* and the King's palace (figure 3.4). The centrality of these elements within the city gave residents a limited travelling distance from the different neighbourhoods.

3.2.3.3.1. *Almasjid Aljamiè (Central Mosque)*

The word *masjid* in Arabic derived from *sajada* (bow down). The literal meaning of *masjid* is the place where a person prays or bows down in worship. The *masjid* plays an important role in all Islamic cities, and the Medina mosque is the earliest mosque in Islam. It was a centre for worship, a court of justice, intellectual and educational centre, and administration centre during the establishment of Islam. Such a complex institution, serving so many purposes, had to be in a central location corresponding to its importance. This affected the urban form of the city, causing all main roads to focus upon it.

Since Arriyadh was small town by comparison with other Arab cities, the minaret was correspondingly small. To some extent this reflects the simplicity of the local style (figures 3.4 and 3.11). Philby describes the *masjid jamiè* and its architecture as follows:

The Great Mosque or Jami'a of Riyadh is a spacious rectangular enclosure about sixty yards by fifty in area, whose main entrance faces the Suq through a gap in the row of shops lining its southern wall [figure 3.11], while the Qibla or prayer-direction, by which the whole building is oriented, is marked by a very slight south-westerly bulge in the longer western face, near which as also on the east side is a subsidiary entrance. The internal space is divided into three sections, of which the central one forms an open court occupying about a quarter of the whole building, while the other two are covered by low flat roofs supported on several rows of massive stone pillars to form Liwans or cloisters for the convenience of worshippers during the hot hours of the day; the inward faces of these cloisters towards the central open court form colonnades of pointed arches of typical Wahhabi architecture and of considerable merit [figure 3.12], though the workmanship is rough and simple; the Liwan on the Qibla side occupies about half of the whole enclosure, leaving the remaining quarter to the other; the roofs are without ornamentation, being encircled by a low parapet with a low stepped structure of very ungainly appearance near the centre of the north side to serve as a minaret, for

minarets of the types known to other Muslim countries are anathema to the puritan Wahhabis [figure 3.11], who regard any embellishment of their praying-places as the work of the devil. A similar but much smaller projection adorns the south-eastern corner of the building, while the Qibla niche also projects slightly above the level of the roof.¹⁰⁰

Another structure found in Najdi mosques is an underground prayer space called *Alkhalwah*. This may occupy almost the entire space beneath the prayer hall. This space is used for prayer in the winter time because of its warmth. Facey refers to Amin Rihani who says of this space in his description of the mosque, “*under the mosque is a replica of the surface structure for the winter.*”¹⁰¹ This was an example of how people in Najd region developed structural solutions to meet their needs. Although the architecture is very simple they developed different architectural solutions for different problems. The simplicity of the mosque design was derived from the simplicity of people, and from the injunctions of the Quran which encourage worshippers not to be extravagant in building and finishing mosques.

In the city there is only one *masjid jamiè*. There are of course other mosques which are much smaller and simpler in design (figure 3.13):- *masjid aljumàh* (Friday mosques); and *almasjid almaḥali* (local neighbourhood mosques). However, the essential design of the Riyadh mosques has two main praying areas. One is outdoor (open courtyard) and is used during the summer time (early morning and evening prayers), and the other part is covered to be used for day time prayer in both summer and winter. There is no clear information on how many mosques there were in the town, but it is more likely to be at least 12 mosques.¹⁰²

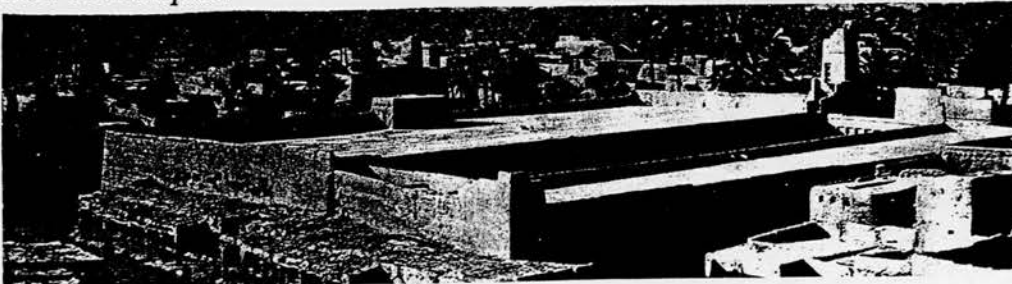


Figure 3.11: View of the great mosque in 1918 showing the modest size of the minaret. The main entrance is located at the left bottom of the photo through the colonnades of the Souq built against the wall. (Source: Facey, “Riyadh...”, p. 220, Philby's collection, 1918)

¹⁰⁰ *ibid.*, pp. 231-232, (quoting Philby 1922 vol. 1, pp. 73-74).

¹⁰¹ *ibid.*, pp. 252.

¹⁰² Al-Hussayen, M., “Traditional Architectural Pattern of the City of Arriyadh”, 1993, p. 16.

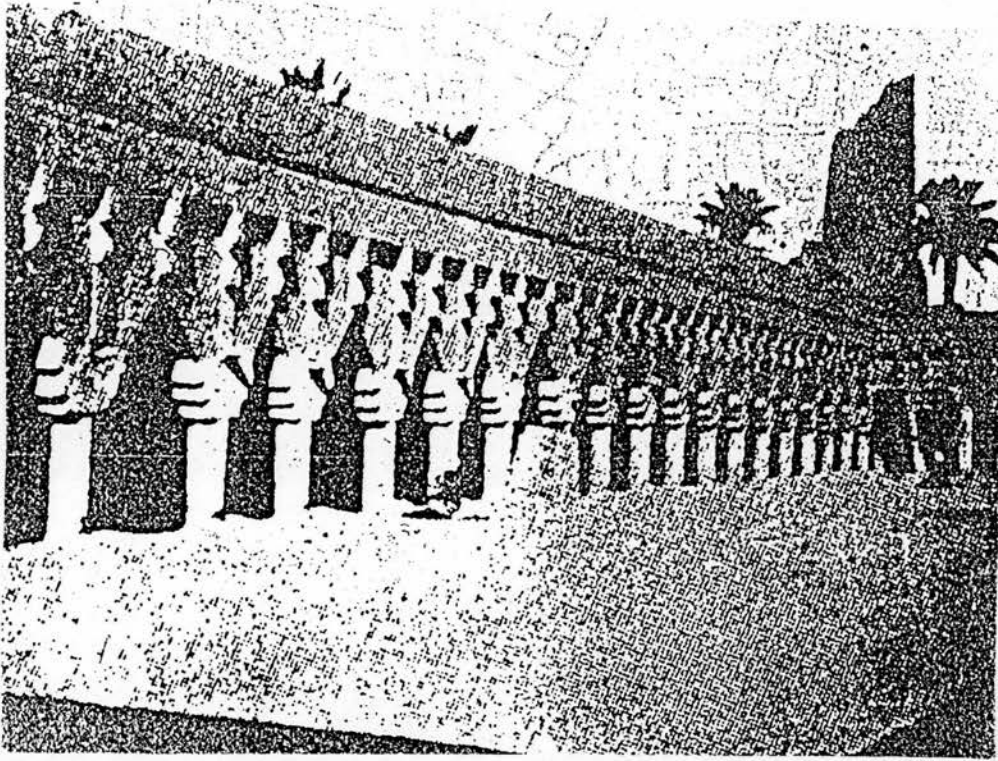


Figure 3.12: The *masjid jamiè* internal courtyard, showing the simplicity of the architectural style and a closer view to the minaret. (Source: Al-Hussayen, M., "The Traditional ...", 1993, p. 55)

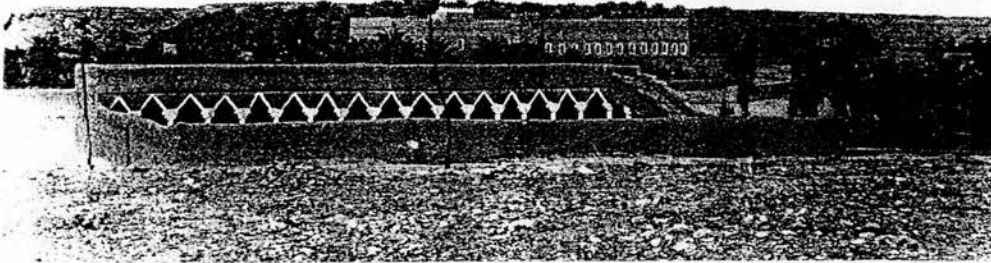


Figure 3.13: The simplicity of mosque architecture shown in this small mosque (foreground) located near the King's summer palace (Badiáh palace) shown in the background. (Rendel's collection, 1937) (Source: Facey, "Riyadh...", p. 291)

3.2.3.3.2. *Alsouq* (Market)

The *Souq* is a place for buying or selling goods and other necessities. Its urban integration, and characteristics are a unique contribution to the Islamic city.

Since the city of Arriyadh was a political capital and not a trading town the size of the *Souq*, compared to that of other major cities in Najd region, was relatively small (figure 3.14). In Arriyadh, the palace, rather than the *Souq*, was the principal engine of

the economy, and this was noted by Leopold Mohammed Weiss¹⁰³ in the following terms:

The market in Riyadh is smaller than the one in Buraydah, even smaller than the one in Hail [two large towns in Najd region], despite the fact that Riyadh is a much more important city. But it is only the capital and not a trading centre. Its whole being derives from its destiny as the centre of a great realm, residence of the King and main artery for all political decisions. ... The market is also the Palace yard. It stretches -an oblong square- along the main front of the royal Palace; a low row of one-storey shops, each consisting of a tiny room with a single door but no window [figure 3.15]; but then the door is always open. Between these shops and the front of the palace there is another parallel row of shops on both sides. At the eastern corner of the market place there is a camel market; at the opposite, western corner another double row of shops in which you will mainly find sandal-makers. At the extension of the market is a great number of traders who cannot afford their own shops; usually they make do with a blanket spread on the ground where various small goods are offered for sale.¹⁰⁴ (figure 3.16)

Weiss also describes how the women's *Souq* has its own private realm where women can trade in privacy from the men's *Souq*. "... A little distance away, close to the Palace walls, is the women's market; it is hidden from view by a row of butchers' shops. Here the women sit next to baskets full of eggs and vegetables spread on palm leaves ..."¹⁰⁵ However, Weiss's description makes it clear that the market in Arriyadh was small by comparison with those in other main cities in Najd region. But the main principle and structure of the market being attached to the mosque remained constant in most Najdi cities. Nevertheless, the women's market is a distinguishing feature of the city (figure 3.17). Moreover, the *Souq* in the city is organised so that each commodity has its own particular section. This enhances trade; buyers know where to find the goods and this also controls smell and noise. The architecture of the *Souq*' was very simple-for many reasons: first- the simplicity of society; second- the limitation of finances; and third- the limitation of cultural influences. (figures: 3.14, 3.15 & 3.16)

¹⁰³ Leopold Mohammed Weiss was a German Muslim who visited Arriyadh in 1930 by invitation from the King. He published his impressions on the city in an article published that year in a German magazine called *Atlantis*.

¹⁰⁴ Facey, W., "*Riyadh the Old City*", p. 260.

¹⁰⁵ *ibid.*



Figure 3.14: View from the King's palace showing: the grand mosque, the *Souq*, and the open spaces. (Walter's collection, 1949)
(Source: Facey, "*Riyadh ...*", p. 307)



Figure 3.15: View of the main *Souq* showing the simplicity of the structure and the width of the road to allow people to trade freely in the open space. (Rendel's collection, 1937)
(Source: *ibid.*, p. 285)





Figure 3.16: The open spaces used as a trading place for people who can not afford to rent a shop. (Steineke's collection, 1937)
(Source: *ibid.*, p. 287)

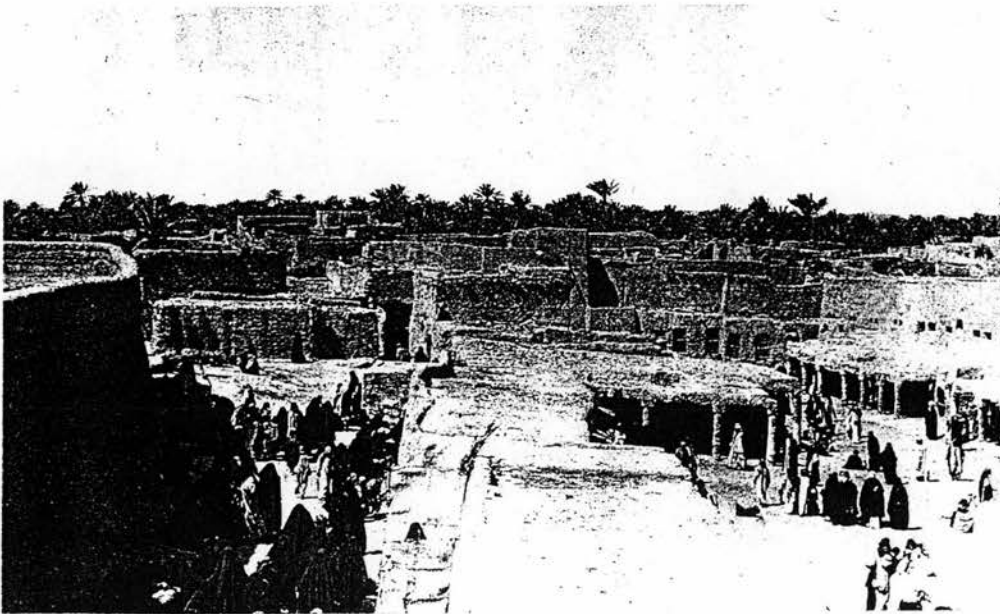


Figure 3.17: View from the palace looking to the Souq. Notice the sharp division between the men's (right) and women's (left) market. (Shakespeare's collection)
(Source: *ibid.*, p. 211)

Generally the main *Souq* in other Muslim cities is located near the *masjid jamiè* as these two elements together create a central gathering point. The traditional *Souq* usually has the specific name of each commodity (e.g. *Souq alzal* - the carpet market; *Souq althahab* - the goldsmiths market, ...etc.). This sub-division is one of the main features of the Arab *Souq*, and the location of each group is determined according to a coherent framework. In a later stage, with the continuous development of cities, newly planned structures were added to existing spontaneously founded *Souq* such as the *qaysariah*¹⁰⁶ .

According to Hakim, there are a three hierarchical levels when placing certain *Souq* in relation to the *masjid jamiè*. At the first level are goldsmiths, clothing, perfumes, and book shops, which are encouraged close to the *masjid jamiè*; at the second level are shops placed further away from the *jamiè*, because of their smell or noise (e.g. copper making, smithing, sheep market, ...etc.); the third category is the product of trade such as, household products. These are located with relative freedom within the hierarchy.¹⁰⁷

3.2.3.3.3. *Alsaħa* or *Almaidan* (The Plaza)

The *saħa* refers to any square or public space. The *saħa* in the traditional city of Arriyadh was developed as a public space between the King's palace, the mosque, and the *Souq*. It is called the open market (figure 3.4), where traders can exhibit and sell their merchandise (figure 3.14). The other function for the main *saħa* is as a gathering space for people who come to greet the King or listen to his speeches in front of the palace (figure 3.18). The *saħa* is noticeably smaller than those in other Arab cities, and that was for two main reasons: firstly, because the city of Arriyadh itself was small; secondly, since the weather in the Najd is very hot, large open spaces are avoided.

In other Arab cities the main *saħa* was often used as an entertaining space for the city. It had clowns, conjurers, jugglers, and story- tellers, as can seen in the *saħat alfina* in Marrakech, Morocco.¹⁰⁸

¹⁰⁶ Usually it takes the form of a double row of shops opening onto a passage or court. It is usually roofed, and does not carry as wide a range of merchandise as the *Souq*.

¹⁰⁷ Hakim, B., 1986, p. 81.

¹⁰⁸ Ismail, A., 1969, p. 160.

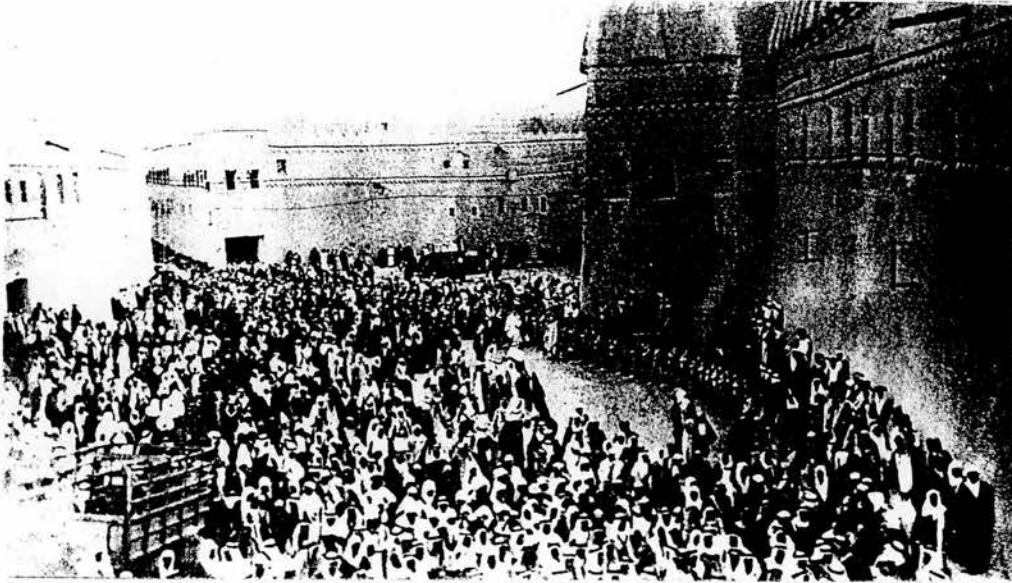


Figure 3.18: A photo of people gathering after the Friday prayer in the main *saha*. The king's palace is on the right. (De Gaury's collection, 1935)
(Source: Facey, "Riyadh...", p. 284)

3.2.3.3.4 *Qasr Alhokm* (The Ruling Palace)¹⁰⁹

Qasr Alhokm in Arriyadh was not an ordinary building; it was a centre of the government, an administration headquarters, a defence headquarters, and a treasury. Housing all these functions and activities within the same premises shows how effective a well planned traditional ruling palace can be. It also shows how large the traditional buildings in Arriyadh can be (figure 3.4.). The King's palace was the largest building in the city. (figure 3.19)

Qasr Alhokm and *Almasjid Aljamiè* together form the administrative heart of the city. Their direct relationship was found in most Islamic cities to allow the ruler direct access to *Almasjid Aljamiè* through a connecting bridge or door. the location of *Qasr Alhokm* next to *aljamiè* made it accessible for people who came for a variety of reasons, such as meeting the ruler or paying or receiving *Zakah*¹¹⁰ from the Treasury House.

¹⁰⁹ The Ruling Palace was the most important building in the city of Arriyadh. The progressive development and enlargement of the palace was pivotal in understanding how traditional building form can accommodate new functions. Most important was the elasticity of the form, being extensible in any direction. Since this thesis concentrates on the architectural development of the city of Arriyadh, I give a full description of this important building.

¹¹⁰ *Zakah* is the money paid by rich people to the government treasury house to support other poor families.

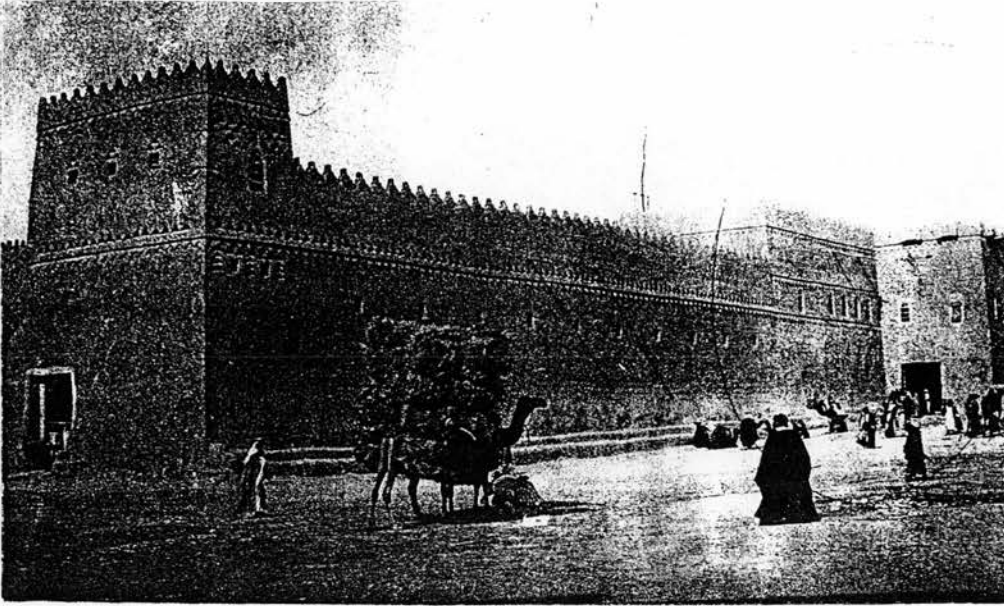


Figure 3.19: *Qasr Alhokm* of Arriyadh in 1917, a massive fortified structure, showing the simplicity of the building. (Philby's collection)
(Source: Facey, "*Riyadh ...*", p. 220)

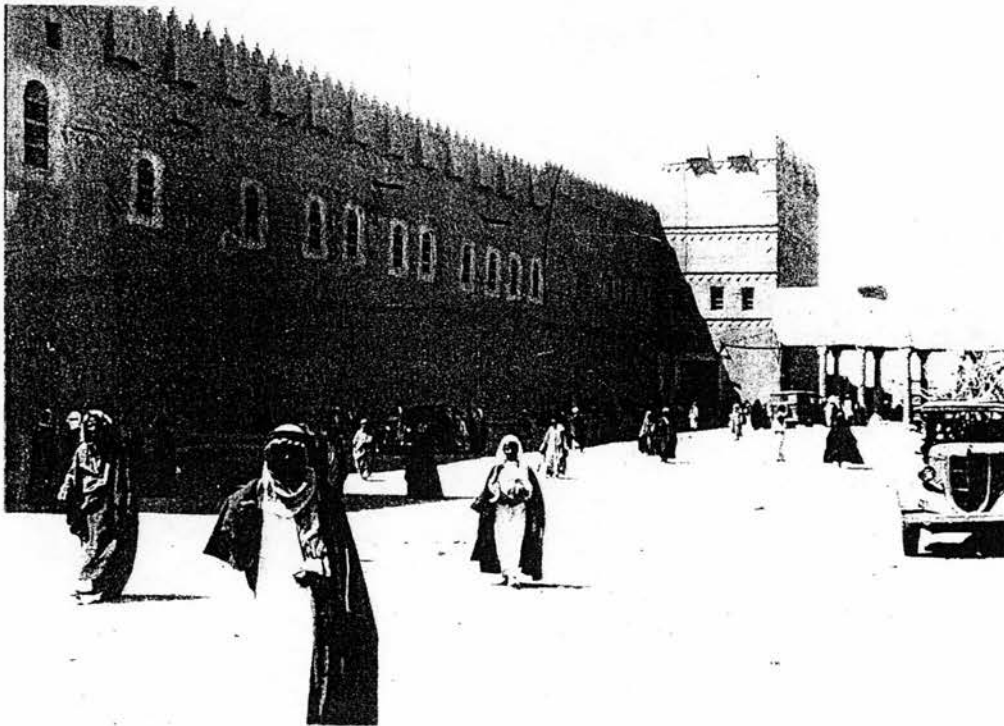


Figure 3. 20: The same view for *Qasr Alhokm* in 1937, notice the addition of the window openings and the facade decorations, also the addition of the bridge which connects the palace with the treasury building and the repeated box structure(*Turma*) located at the top level of the palace to be used for defence. In 20 years the palace had been enlarged to almost twice it is size, but the form and the building character remain consistent. (Rendel's collection, 1937)
(Source: *ibid.*, p. 282)

In 1918 Philby praised the palace: “ ..., there is, with the possible exception of the fort at Buraida, no building in all his [King Àbdulaziz's] territories so splendid in its proportions, so beautiful and so representative of all that is best in modern Arabian architecture as the royal palace of Ibn Sàud. Its merits lies in its superb simplicity of design and in an almost complete absence of ornament so appropriate to an edifice intended to provide not only comfort but security for those dwelling within its walls.”¹¹¹

Philby continued, describing the architectural details of the palace courtyard as, “whitewashed with gypsum-lime to a height of about ten feet, the top line being surmounted with a frieze of delicate stepped pinnacles, which they call Sharaf, and believed to be of great antiquity. The bare brown clay above the frieze is roughly moulded in various designs-inverted fleur-de-lys, arches in low relief, leaves and the like, while pious texts are everywhere daubed upon the walls. Some of the doors too are highly decorated with confused patterns of red, yellow and blue spots, varied here and there with burned patches.”¹¹² (figure 3.21)

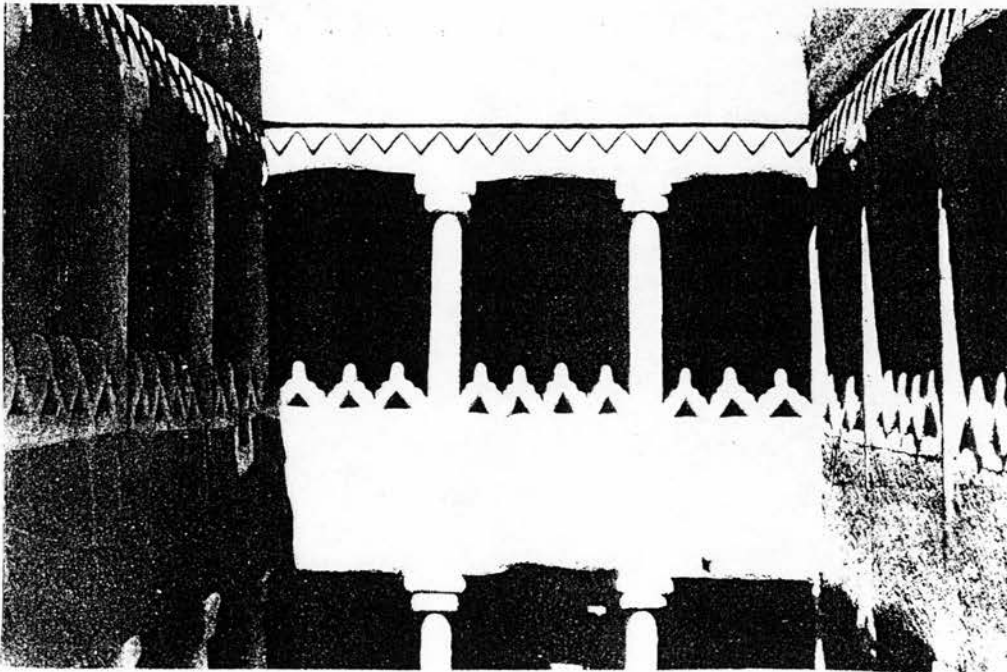


Figure 3.21: The courtyard of the King's summer palace (Badiàh palace); notice the decoration at the top of the second floor and roof parapet (Sharaf) where its function to break the monotony of the masses. (Rendel's collection, 1937)

(Source: Facey, “Riyadh ...”, p. 292)

¹¹¹ Facey, W., “Riyadh the Old City”, pp. 234-235.

¹¹² *ibid.*, p. 237, (quoting Philby 1928 , p.65).

Facey also quotes Rihani's description of the finishing of the palace reception interior walls as, "*the wall, after being plastered, is covered with another layer into which the designs are cut. The reception hall in the palace is an excellent example of this art; its walls, which are decorated in zones and panels from the floor to the ceiling, the white plaster over a fawn-coloured ground, look as if they were covered with Valenciennes lace.*"¹¹³

Development of the city after the unification of the nation caused King Àbdulaziz to enlarge his palace in March 1937 adding more spaces and decoration, to accommodate the new responsibilities. Sir George Rendel and his wife¹¹⁴ visited Arriyadh at this time and expressed their admiration of the architecture of the palace; "*King Ibn Saud's palace is a high, fortified building with two massive towers, and a simple line of perforated decoration across its great wall. Unquestionably beautiful in its own style, it was a revelation to me of how fine in line and proportion modern Arabian architecture can be. It is surrounded by a network of smaller palaces occupied by the King's many sons. These palaces are connected with the Royal Palace by archways and passages, and the entire area covered by Royal residences must be a very considerable part of the city.*"¹¹⁵ (figure 3.20)

We can see how Rendel was impressed and admired the palace architecture, which demonstrates the uniqueness of local Najdi architecture shown in this fine example. However, this uniqueness was a result of the compactness of the masses, the integration of building colour with the surrounding natural colour, the texture derived from local materials, and the peculiarity of the internal spaces. All these factors distinguish local Najdi architecture.

Throughout his reign King Àbdulàziz enlarged his palace (the Ruling Palace) a number of times. This was a natural result of the increase in the country, wealth, responsibilities, administration, and the increase in the size of his family. The most important point was that the architectural form and details did not change despite changes in the palace size, spaces, furniture, and decorations (figures: 3.4 & 3.20).¹¹⁶

¹¹³ *ibid.*, p. 249.

¹¹⁴ Sir George Rendel -Head of the Eastern Department of the Foreign Office- arrived in Arriyadh with his wife in 1937.

¹¹⁵ Facey, W., "*Riyadh the Old City*", p. 277, Originally published by Rendel 1938, p. 170.

¹¹⁶ As we see in (figure 3.4) the size of the palace is very large in contrast with the size of the city.

The development of local architecture was a continuous process, and that was clearly shown in the enlargement of the *Qasr Alhokm* of Arriyadh. A comparison of the two photographs of the palace in 1917 and 1937 (figures: 3.19&3.20), taken from almost the same view point, shows the addition of upper floor windows (*turma*) and loopholes while the decorations demonstrate the evolution of the local architecture. Although some of these elements and decoration were copied from other parts of the region, the palace retained the same form. Even when King `Abdul`aziz furnished his *Badi`ah* palace (summer palace) European furniture was incorporated in the local form. (figure 3.22)

3.2.3.4. *Almaskan* (The House)

The *Maskan* (house) is the main unit in all cities. A group of houses would create a neighbourhood, and a group of neighbourhoods would form a city. Therefore the more the architecture of the typical house reflects the identity and character of society, the more coherent is the character of the whole city.

The term *Maskan* is derived from *sakinah*, meaning peace and tranquillity. The *Maskan* also has other names: *dar* from *dara* (surround), which is a place surrounded by walls; *manzel*, meaning the place which someone inhabits; *bayt*, from *bat*, which means to stay overnight. However, the house in Islamic-Arab society refers to the ultimate private place where people live.

The house in Arriyadh is the basic cell in the city. It is also the basic unit of any city. The size of the house may vary from one family to another, but nevertheless, there are certain general principles and rules. The whole form is derived from the need for a private secure living environment. The courtyard house is therefore an introverted form, reflecting this crucial need.

In the family house the gradual transition of spaces from the private (family quarter) to the public (men's) quarter is a continuation of a larger order manifested on the city where the private realm is the house and the public realms are the streets, the *Souq*, and the mosques. However, the houses in Arriyadh are always progressive in size. As each extended family grew, so did the house. Thereby, it represented the accumulated history of family growth. If any part of the family became financially independent or there were no more space in the house they would build a new unit.

The structure of the house starts with the head of the family building a wall round a designated area, dividing the land into different parts according to need bearing in mind future expansion.¹¹⁷ The courtyard perimeter defines the boundary of the house, and the potential for expansion.

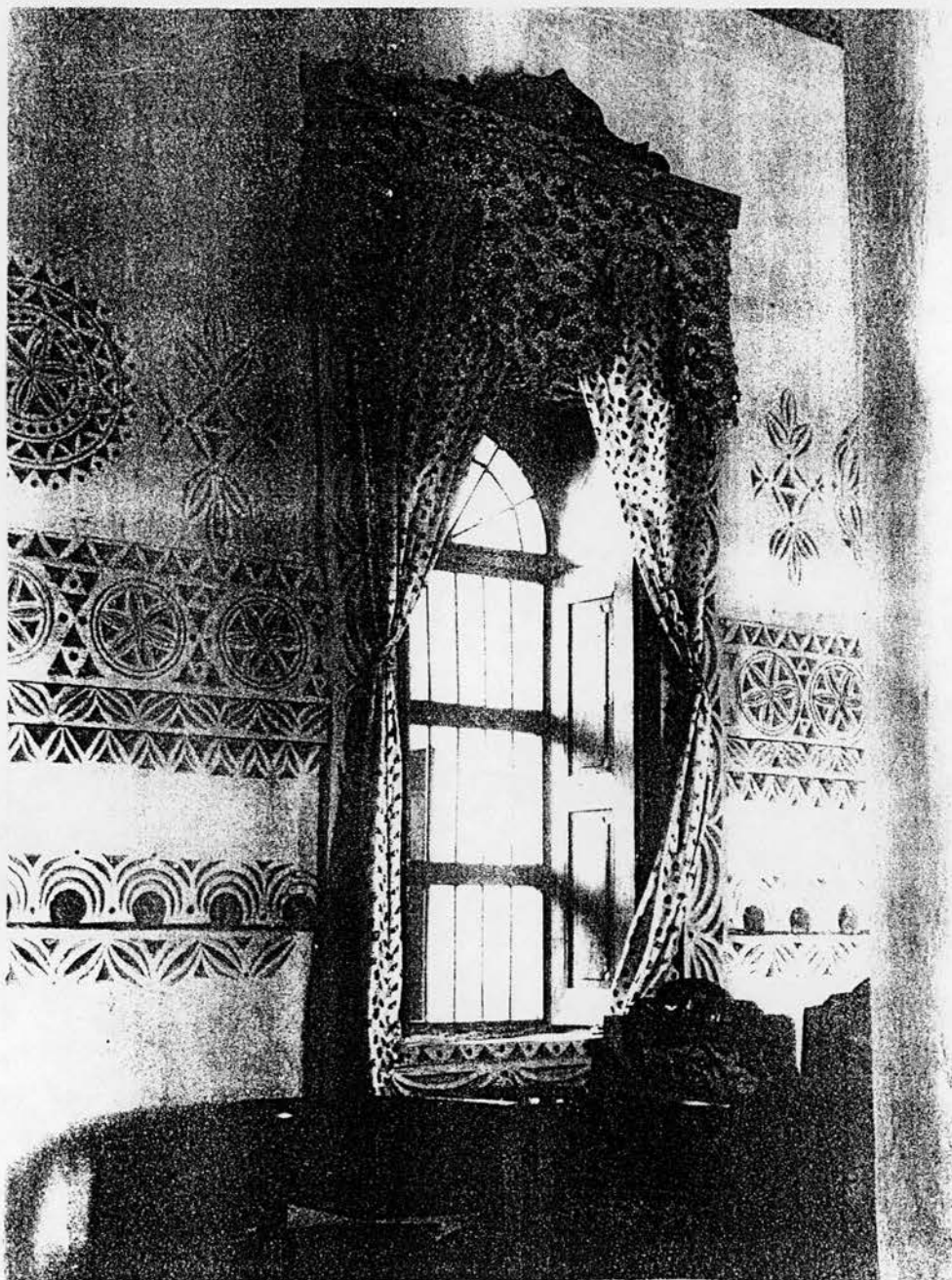
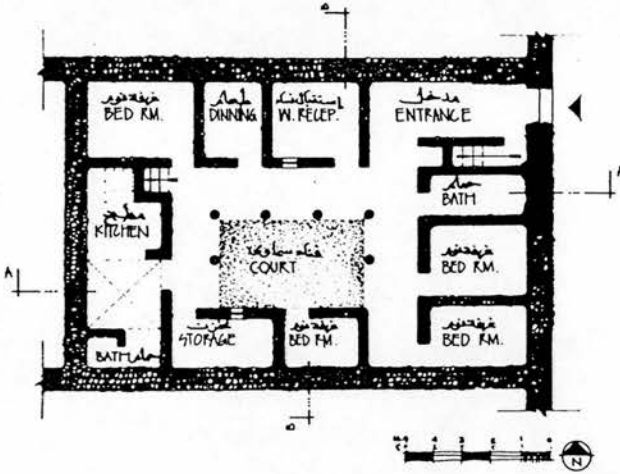


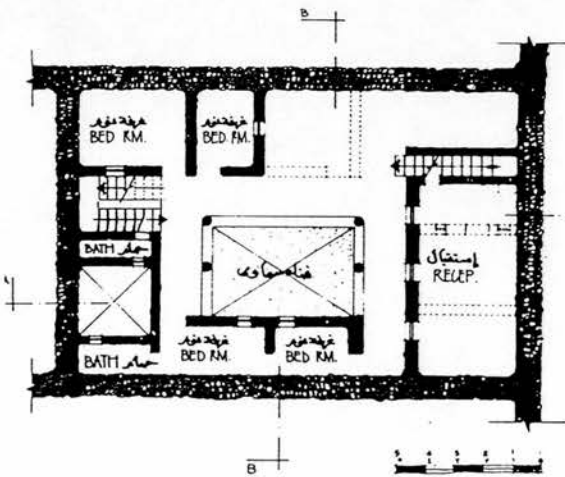
Figure 3.22: The interior of the main reception room in *Badih* palace showing the local art and decoration in the walls and the use of European furniture.(Steineke's collection, 1937)
(Source: Facey, "*Riyadh ...*", p. 293)

¹¹⁷ Akbar, J., 1981, p. 167.

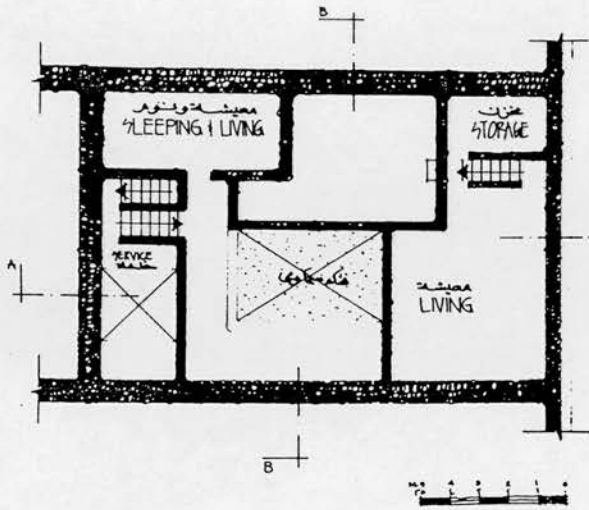
The *maskan* in the city of Arriyadh is divided into different parts. Each of these parts by themselves create a complete unit where the articulation of the relationships creates a coherent whole. The different parts of the house are: *Almadkhal* (the entrance); *Almajlis* (the reception room); *Alfina* (the courtyard); *Aldaraj* (the staircase); the rooms and the roof; the openings; and the walls. (figure 3.23)



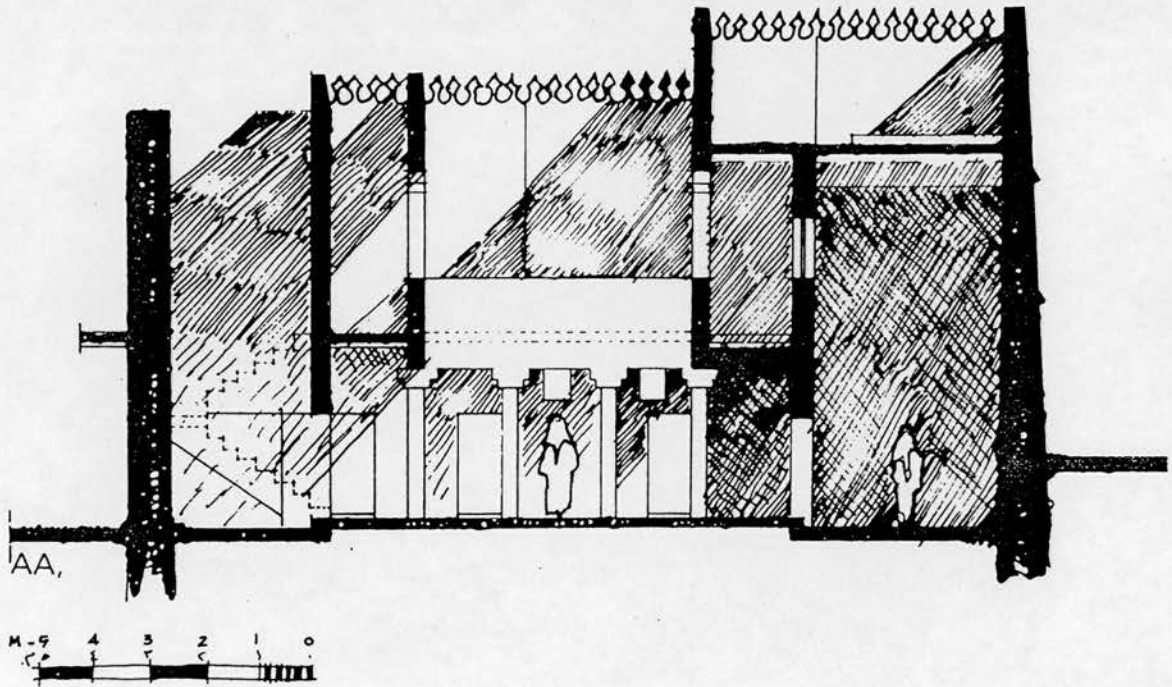
A) Ground floor plan; showing the location of the entrance, the staircase near the entrance for guest use to reach the men's reception room, the different rooms, and the courtyard for family entertainment and their private realm.



B) First floor plan showing the location of the men's reception room, the second staircase to be used by the family to provide the ultimate privacy, and the different sleeping areas.



C) The roof plan showing the complete isolation of the men's quarter from the family ones.



D) Section A-A showing the different levels of the house.

Figure 3.23: The plans (A, B and C) and section (D) of typical Arriyadh houses showing the different rooms and spaces.

(Source: Mousali, ..., "Understanding the ...", 1977, pp. 30-31)

3.2.3.4.1. *Almadkhal* (The Entrance)

The word *madkhal* is derived from *dakhala* meaning entering (a place). The significance of the *madkhal* is often emphasised by highly decorated doorways with an overall pattern of incised floral and geometric designs (figure 3.24: A). A solid and heavy entrance door emphasises the precise line between the external public and internal private realms (figure 3.24).

A house in Arriyadh usually has a single entrance, but for privacy a second door may be used by womenfolk. The location of the entrance is usually at the furthest point of the plot, which provides maximum privacy for residents. Entrance doors do not stand opposite others. The use of a bent entrance of the main doorway is the most important step in designing the entrance to provide privacy and protection from the outside. (figure 3.23: A). For the same reasons, the entrance door is designed to open onto a blank wall to interrupt the view of the interior. Moreover, the relationship between the entrance and the men's reception room is intended to maintain direct access to male visitors without interfering with the private realm of the house.¹¹⁸

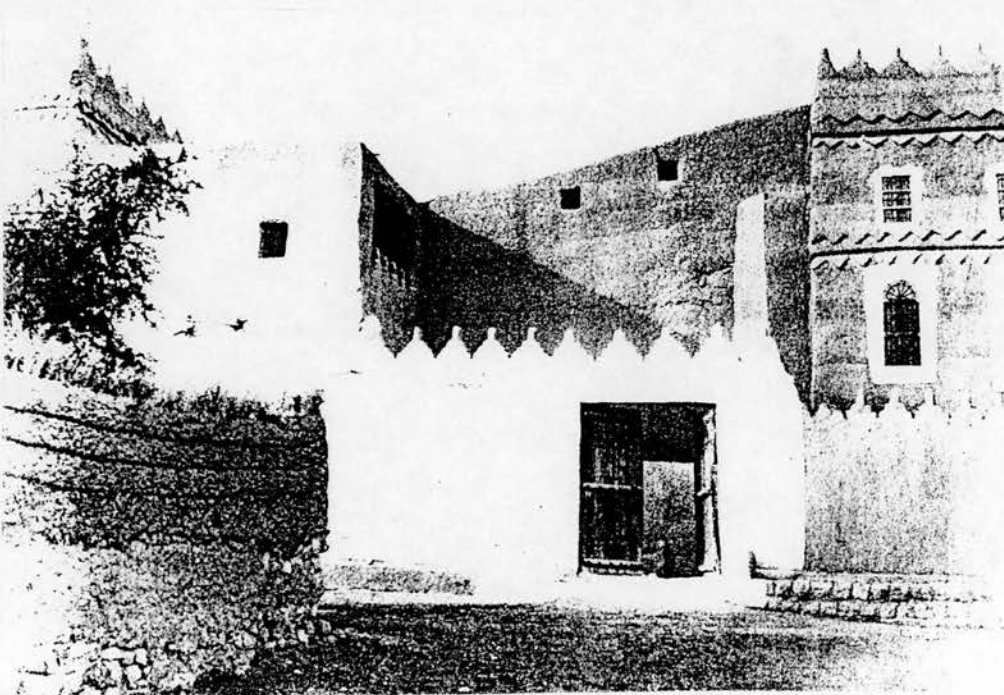


Figure 3.24: The main door of one of Arriyadh houses.
(Source: Facey, "Arriyadh...", p. 294)

¹¹⁸ *ibid.*, pp. 162-176.

3.2.3.4.2. *Almajlis* (The Reception Room)

The word *majlis*, derived from *jalasa*, denotes setting. *Majlis* is the most important and decorated room in the house symbolising the economic status of the household and usually being furnished with the most expensive possessions of the family.¹¹⁹ (figure 3.22) The *majlis* has to be adjacent or to have a direct access to the entrance lobby (figure 3.23: A). Every house should have at least one reception room, and it has to be large enough to accommodate and entertain guests (figure 3.23: B).¹²⁰ It also functions as a sleeping room for guests. Sometimes a separate w.c. is incorporated and a stair, which leads to a roof terrace.

The most honoured part of the *majlis* is the hearth for coffee and tea.¹²¹ It is usually situated in a corner. Above it there is a cupboard (*kumar*)¹²² used to accommodate coffee and tea accessories. According to Islamic custom, guests have to be seated as one group in an arrangement that allows each to hear the others. However, for reasons of respect, there is a difference in levels between the shoe rack area and the main *majlis*. The shoe rack area is always at a lower level, at the entrance of the *majlis*.¹²³

3.2.3.4.3. *Alfina* (The Courtyard)

The *fina* is found widely in the Arab house. Its main purpose is to create an acceptable micro-climate within the house by shutting out the dusty hot air while giving access to fresh air. In some cases, in addition to plants, a fountain or pool would be incorporated when water is available. This helps to create a cooler atmosphere. The size of the courtyard was determined by the wealth of the family. It might contain interior gardens, it is usually paved with stone or tiles, and planted walkways raised above ground level divide the areas.¹²⁴ Hassan Fathy describes the house and the courtyard thus:

The house is a hollow square, turning blind, windowless walls to the outside, with all its rooms looking inwards into a courtyard from which only the sky can be seen. This courtyard becomes the owner's private piece of sky. The space enclosed by the rooms of his house can, at its best, alone induce a feeling of calm and security that no other

¹¹⁹ Petherbridge, G., 1978, p. 198.

¹²⁰ The men's reception room is usually the largest room in the house.

¹²¹ It is called *Qadr almajlis* (the reception room focal point).

¹²² The *kumar* is the most decorated element in the *majlis*. It usually houses many shelves, made of wood to hold coffee and tea accessories.

¹²³ *ibid.*, p. 168.

¹²⁴ Petherbridge, G., 1978, p. 200.

architectural feature can, while in every case the sky is, as it were, pulled down into intimate contact with the house, so that the spirituality of the home is constantly replenished from heaven.¹²⁵

The *fina* fulfils an important function as a private place for the family, and a safe playground for children under direct supervision of their parents. The importance of the courtyard and the relationship between its area and height differ according to the region and the degree of affluence of its builders. Despite such variations, the plan of the courtyard is basically square or rectangular. The courtyard is usually surrounded by paths for circulation and a row of rooms (figure 3.23: A). All rooms other than the male majlis have direct access to the courtyard. Another functional contribution of the courtyard is to provide acoustic privacy to the inhabitants, reducing the amount of external noise. It also provides natural lighting and ventilation to all rooms with openings facing the courtyard.¹²⁶ Another important contributions is it gives a high density city, requiring a shorter city wall.

3.2.3.4.4. The Rooms and *Alsateh* (The Roof Terrace)

Flexibility in using the internal spaces and rooms is one of the characteristics of the houses. There is no specific function for each different room and this allows residents to re-use these spaces at different times of the day all year round; for example people in Arriyadh use men's and women's reception rooms as sleeping quarter when there are no guests in the house.

The main use of the *Sateh* is as a sleeping area for the family during part of the year. It is often divided into different sections. This division may be made in terms of different levels for the private use of the family and guests (figure 3.23: C). Its also a good place to accommodate celebrations of important occasions, such as weddings, births, and annual feasts. It is important that no terrace rises higher than its neighbour-and this gives an even height for the whole neighbourhood.

¹²⁵ Fathy, H., 1973, p. 56.

¹²⁶ Al-Fawaz, S., 1991, p. 26.

3.2.3.4.5. *Aldaraj* (The Staircase)

Usually there are two staircases in the house which maximise privacy and secure freedom for the family to use their quarter without being disturbed by guests: One, next to the entrance is used by male guests; the other, towards the back of the house, is used by the family. If the *majlis* is located on the second floor, the staircase near the entrance leads directly to the guest roof (figure 3.23: A & B). In some cases, for acoustic and visual reasons, the staircases do not run from the ground floor directly to the roof terrace; they lead from ground level to first floor and then change position to carry through to the roof.

3.2.3.4.6. Openings

Fenestration has a great effect on peoples lives. It may provide a unique connection between the user and the life of the street. The heavy price paid is in loss of privacy. If the user wants to see out the passer-by can see in. This is why ingenious solutions were created to overcome these problems. These solutions have varied from one region to another in the Arab world. For example, for social and climatic reasons, windows in Najd region are few and small. That is why the form of the courtyard provides ventilation at the same time as maintaining privacy of the family; But in the Hijaz the need for larger windows to overcome the climatic problems was paramount. Therefore windows were covered with a lattice screen (*Mashrabiah*).

Minimal fenestration is a common feature of Arriyadh architecture. Openings are mainly located in the upper level of the building facade. The only room in the ground floor that may have openings is the men's *majlis* (figures: 3.19&3.20). Therefore all ground floor rooms need windows or doors into the courtyard, which is the main source of natural lighting and ventilation. Windows are usually rectangular with two solid wood panels, and usually they are covered with steel bars for security reasons (figure 3.21).

Most houses in Arriyadh have a wooden box structure (*alturma*) over the entrance, which allows women to see and recognise visitors before answering them (figure 3.25): In the King's palace the *turma* is placed in the top floor of the building, and that is due to the need for defence. By this means one can have access to the exterior without being in direct contact. (figures: 3.18 & 3.20). Window openings are usually also surrounded by white gypsum paint (figure 3.20) and other triangular openings are used for ventilation (figure 3.19)

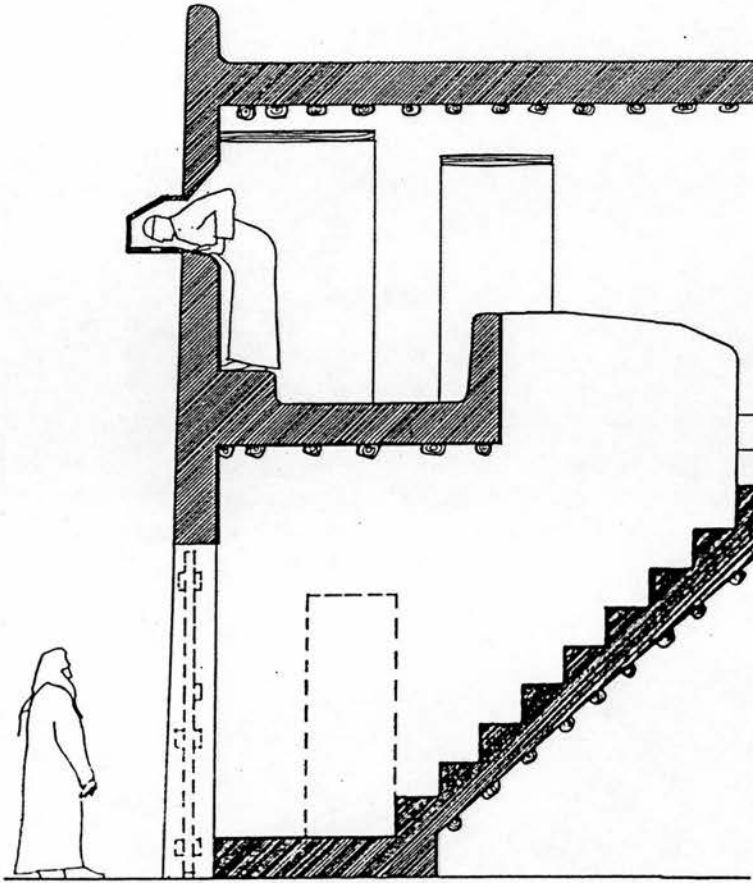


Figure 3.25: Illustration showing the function of the turma.

(Source: Fayez, Z. & Associates, Antony Walker and Partners, and the Architectural and Planning Partnership, "Addiriyah Development Project: Preliminary design", ADA, 1987, p. 25)

3.2.3.4.7. Walls

The external appearance of the buildings of Arriyadh is heavy. Massive volumes are characterised by a continuous compact and solid appearance. To break the monotony of the mass and for facade decoration a common feature in Najdi architecture is a band of triangular projections all around the building, emphasising the floor level. It also protects the end of the joists by throwing water clear of the wall. (figure 3.26). On the top of the parapet (*sharaf*) another type of decoration is used. Its main function to break the rigidity of the silhouette (figure: 3.20, 3.21&3.26). The structure of the wall consisted of layers of mud brick covered with a mud rendering. The width of the wall varies from 35 cm. to 100 cm. at ground level becoming thinner and approaching 20 cm. at the parapet.¹²⁷ The wall height varies between 3 and 12 metres, it is always a natural sandy colour, and the rough texture reflects the character of the building material.

¹²⁷ There is an aesthetic objective in the cuesting above the parapet. It also provides privacy for people using the roof terrace.

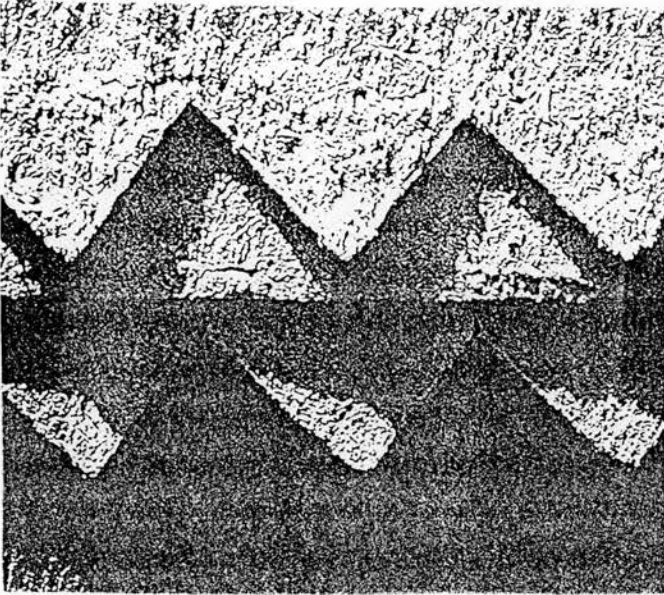


Figure 3.26: Detail of architectural bands.
(Source: SaudConsult, Study of the Traditional Architecture At Alqaseem Region, Riyadh, n.d.)

3.3. Principles to be Derived from the Traditional Built Environment

There are many factors and principles that shaped the traditional built environment of the city of Arriyadh. All these are integrated to create a coherent, vivid, and contiguous scheme. A hierarchy arises in the use of these principles. The wider interests of society always dominate, and the general rule adopted is “*la darara wa la derar*” (no harm and no harming) meaning that actions should not harm or interfere with public or private interest.

The following principles are a summary of the points made earlier in this chapter; and for clarity these principles can be divided into three parts:

- Individual building design;
- City planning; and
- Natural environment.

3.3.1. Building Level:

- 1 • Compact overall volume is the most distinctive feature of the houses of Arriyadh.
- 2 • Elastic and flexible building structure allows people to extend their building when they need to.

- 3 • Respect for Privacy; privacy is an important and highly respected factor in designing the family house. The whole form and arrangement is focused on maintaining privacy and the following points show how it is respected and satisfied:
 - Normally there is no window opening in the ground floor facade except, on occasion for the *majlis* (reception room);
 - The private entrance and the formal entrance are totally separate;
 - The formal entrance lobby is arranged to prevent visitors looking into the family quarter;
 - In most houses two staircase maximise the freedom of access to the upper levels of the house without direct contact;
 - Different sections or levels of roof for sleeping guests separately from the family;
 - The courtyard is made secure as a private open space for family gatherings;
 - Most windows open into the courtyard to ensure that no windows overlook neighbouring buildings. At the same time neighbouring buildings have no visual access into the family courtyard.
- 4 • Most of the family's wealth is shown by the size, furnishing and decoration of the *majlis*.
- 5 • The *finā* (courtyard) is the domain of the family which provides:
 - Private space for the family to enjoy without being disturbed by neighbours;
 - A safe playground for children under direct supervision of their parents;
 - Windows opening towards the courtyard to avoid infringement on neighbours;
 - A courtyard of a size determined by the wealth of the family;
 - Reduction of noise pollution;
 - Natural ventilation for the house; and
 - Natural lighting for the rooms.
- 6 • Entrances follow certain rules:
 - They should not stand opposite each other, but they can be near each other on the same wall;
 - They will always be at the house corner, and it is possible to determine the beginning or the end of the building from the location of the doors;
 - Doors are usually highly decorated with an overall pattern of incised floral and geometric designs or in low calibre houses by designs composed of spots and splashes of colour.

- 7 • Generally, Arriyadh house has no specific allocation for its individual spaces. This maximises the usage of the rooms. Even the roof terrace is used as a sleeping quarter in the summer time and as a sunny sitting place in cold weather.
- 8 • To break the rigidity and the monotony of the facade and for aesthetic reasons there is usually a band of triangular projections around the buildings. It also functions as a protection to the ends of the joists by throwing water clear of the wall.
- 9 • Thick adobe walls (35-100 cm) help overcome the severity of climate by thermal inertia.
- 10 • Outside openings are usually small in size and they have a square or triangular shape with a decorative gypsum plaster frame.
- 11 • For security reasons a small structural projection called *Turmah* is located above the entrance allowing women to see before answering the door.
- 12 • The parapet at the top of the building is made in a simple saw tooth pattern out of mud. The saw-tooth crenellations can be traced back to Parthian times.
- 13 • Water spouts (gargoyles) called *Merzab* made out of tree trunks cut transversely and hollowed out to form channels for draining rain water.
- 14 • The only decoration found in the house is usually located in the men's reception room. This decoration consists of geometric patterns made in gypsum. The roof of the reception room is usually covered with wood trunks decorated with blue, white and red earth colours.

3.3.2. City Level

- 1 • All buildings are oriented to the internal courtyard.
- 2 • The courtyard house gives a high density, requiring a shorter city wall.
- 3 • Simplicity in architectural style is a common feature in Arriyadh houses, but major buildings like the mosque or the King's palace tend to have a special architectural treatment. One example is that the mosque has a triangular arcades with a fixed proportion, whereas in houses arcades are flat.

The gradual sequence of changing spaces from public to private is common in the city of Arriyadh. This hierarchical sequence in spaces shows the coherent structure of the city fabric and its organised order:

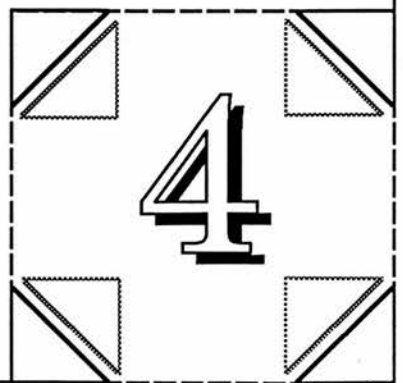
- a) House-> narrow streets-> neighbourhood centre-> wider streets-> city centre-> main streets-> gates> wide open space;
- b) Private spaces-> semi private spaces-> semi-public spaces-> public spaces> free land;
- c) Cul-de-sac-> local road-> access road-> main street.

- 4 • Privacy was evident in planning *Souq*, the location of the women's Souq being set apart from the men's.
- 5 • The location of certain commercial commodities within the city depends on public interests and environmental impact.
- 6 • The irregular street plan of the city helps to regulate the temperature by retaining the cool night air.
- 7 • *Alsharièh* requires that the wider interest of society must be superior to the limited interest of individuals.
- 8 • *Alsharièh* stresses minimisation of waste.
- 9 • The limitation of financial resources caused people to maximise the use of local building materials which harmonise with the natural environment.

3.3.3. Environmental Level

- 1 • Attached buildings reduce the number of external walls minimising exposure to direct sun and producing cooler inner spaces.
- 2 • The use of the same building material and colour helps to harmonise the built environment, with the surrounding natural environment.
- 3 • The use of local construction techniques and local building materials promotes:-
Harmony with natural environment;
- Cheaper construction cost;
- Cheaper maintenance and repair.
- 4 • Construction materials and techniques respond to local financial resources.
- 5 • Integration between natural resources and their usage is always equal. There is no break in the ecological system. Most of the materials used in the built environment can be recycled (building materials re-used after demolition).

The Evolution of Architecture:



Chapter Three was concerned with the traditional built environment of the city of Arriyadh. We concluded that the traditional city had a coherent and identifiable quality generated from: Sharièh laws, convenience, defensive practice, social norms, economic status, climatic conditions, and the natural setting of the city. However, the traditional built environment survived mainly because of the limitation of external cultural influences.

It is not the intention of this study to detail the architectural evolution that took place in the capital from the 1930s to the present time, but to shed the light on the most important decisions or projects that affected the evolution of the architecture of Arriyadh.

4.1. The Introduction of Vehicles

It is believed that by the end of 1930s the number of vehicles in the capital was around 300 (figure 4.1). A garage had to be established and consequently drivers and mechanics were needed.¹²⁸ By the end of the 1950s the number of cars had increased to around 5000.¹²⁹ Most of these drivers and mechanics, plus the servants of the Royal household, settled in an area close to the government garage in the walled *Qiri* quarter in the south-eastern part of the city. This site was called *Hillat Al-Ábeed* (the slaves' quarter).¹³⁰ The first street to be widened was *Thumairi* street, the main street linking the *Thumairi* gate with the city centre. This can be seen as the first physical act in breaking down the coherence of the traditional built environment.¹³¹

Thereafter other streets needed widening. This in turn increasingly broke down the coherence and general balance of proportion between building heights, street widths and human scale. These proportions were at the heart of Arriyadh's built environment. (figures: 4.2 & 4.3). Prince Fahad Bin Faisal Al-Farhan¹³² and Saàd Bin Sultan¹³³ have confirmed that the first paved compacted street was the street linking *Almurabaà* palace (The King's residence) with the Justice Palace (The King's workplace). The street was 2.5-3 metre in width and workers from Egypt built the road

¹²⁸ Facey, W., "*Riyadh The Old City*", 1992, p. 272.

¹²⁹ Facey, *ibid.*, p. 301.

¹³⁰ Facey, *ibid.*, p. 301.

¹³¹ In the old city the relationship between building heights, street width and the size of the people is balanced; but when the government started to widen some streets to allow vehicles to move smoothly, the proportion of the building heights, street width and people size was broken and therefore the coherence of the built environment fragmented.

¹³² In 1953 King Saud issued a Royal order appointing Prince Fahad Bin Faisal Al-Farhan as the chairman of the Riyadh Municipality, he remained in the post for 13 years, and during his time the major architectural development took place. Also during his time the size and responsibilities of the Municipalities had enlarged, which led the government to change the Municipality into Mayoralty. (This information was given during an interview with Prince Fahad Bin Faisal Al-Farhan in the 23rd of April 1993).

¹³³ This information was given during an interview in the 8th of April 1993. Bin Sultan was one of the people who witnessed the development of Arriyadh at that time. He also worked for long time as the Deputy Governor of Arriyadh.

using cement, gravel, and sand.¹³⁴ Then in 1954-55, the first asphalted street was King Àbdulaziz Road (Albaṭḥa and Almaṭar Road) (figure 4.4).

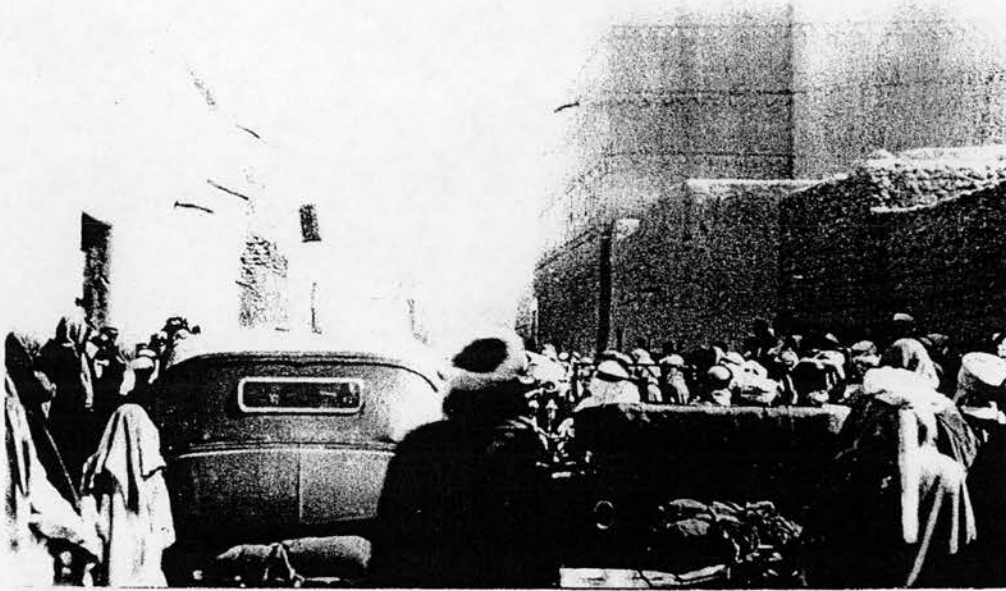


Figure 4.1: A Photograph taken in 1930 by Philby shows a crowd of people surrounding a car. For them it was a unusual object to see and touch.
(Source: Facey, "Riyadh the Old City", 1992, p. 269)



Figure 4.2: The devastating effect on the city's physical structure caused by widening streets for cars. This is either Alzuhaira or Alàtaif street, 1940.
(Source: "Arriyadh... Alames" [Arabic], last page figure, n.d.)

¹³⁴ This information was given in a personal interview with Prince Fahad Bin Al-Farhan on the 18th of May 1993 at his house in Arriyadh.



Figure 4.3: The loss of proportion and balance in the new development.
(Source: Facey, *ibid.*, p. 309.)

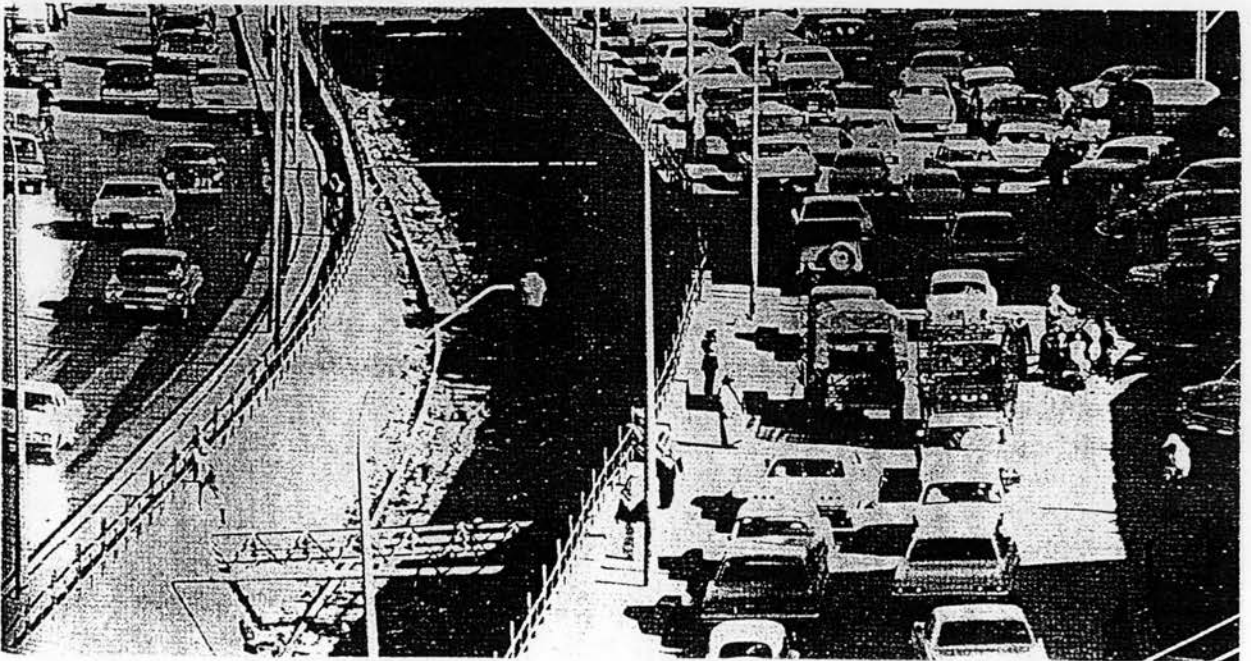


Figure 4.4: King Abdulaziz Road at Albaṭha in 1965: It is believed that this was the first street to be asphalted.
(Source: Daghistani, A., *“Ar-Riyadh Urban Development and Planning”*, 1985, p. 155.)

Vehicles also had other effects on people; by allowing great distance to be travelled in less time and more comfort by contrast with camels, donkeys or horses. This new technology allowed people to build their houses and palaces outside the city wall. Additionally, after unification of the Kingdom in 1932, the level of security had increased and the city wall lost its original function.¹³⁵

4.2. *Almurabaà* Palace Complex

From the time that King Àbdulaziz Al-Sàud took over Arriyadh, in 1902, the city was the King's permanent residence. It eventually became the capital of the Kingdom, though Mecca (the religious capital), continued to house most Government Agencies until the 1950s.¹³⁶

Arriyadh preserved its size during the first thirty years of the King's reign. In 1938 the King took a major step affecting the city's physical development when he decided to move outside the city wall, by building the *Almurabaà* palace complex¹³⁷, on a site located 1.5 miles to the north (figure 4.5). The palace was a large complex of residential and administrative buildings for himself and his entourage.¹³⁸ The complex covered an area of approximately 16 hectares with an average height of fifty feet above ground level (figures: 4.6, 4.7, 4.8 & 4.9).

Built in 1936-38, the Palace was designed and supervised by Moàlem¹³⁹ Hamad Bin Qabaà¹⁴⁰ and his son Ibrahim (from Najd region). Bin Qabaà was the chief architect and builder of the palace and there were more than 4,000 craftsmen and labours working under his command. He divided the complex into zones and allocated other Moàlemeen to supervise the different buildings and parts of the complex, these supervisors were: Moàlem Nasser Bin Yaeèsh, Moàlem Òthman Bin Hatem, Moàlem Bin Hodaib, Moàlem Bin Jadaàn, Moàlem Abdullah Bin Nouh, and Moàlem Bin Hedian. Other Najdi experts participated in the finishes, in particular Moàlem Bin Rusaies and Moàlem Alshoodokhi, who helped in executing all carpentering work and preparing all the painting needed for doors, walls, and ceilings.¹⁴¹ All building materials used in the palace (sand, mud, tree trunk, gypsum, and palm tree leaves) were local.

¹³⁵ See Chapter 3.

¹³⁶ Al-Jasir, H., "*Madinat Ar-Riyadh Àbar Atwar Al-Tariekh*", Ar-Riyadh, Dar Al-Yammamah, 1966, pp. 94-95.

¹³⁷ The reason for building the new palace was the increase in the number of official visitors as a result of the consolidation of the Kingdom. The town palace had become too small to accommodate the new expansion in political influence and administration. The old palace remained the centre of Government, and the new palace was the King's residence.

¹³⁸ Philby, J., "Riyadh: Ancient and Modern", *Middle East Journal*, 13, no. 2 (Spring 1959), p. 133.

¹³⁹ Moàlem means master in any building fields: Design, construction, and finishing.

¹⁴⁰ Hamad Bin Qabaà was the Moàlem who designed most of the big palaces in Arriyadh at that time.

¹⁴¹ Ministry of Education, Department of Antiquities, "*The Historical Report: Almurabaà Palace*", p. 8.

The construction of the palace complex took two phases: phase one from 1936 to 1941 when most of the mud-brick buildings were built using traditional local methods. This comprised 6 buildings:

- 1) Qasr Almurabaà, known as Qasr Um Talal (The palace of Prince Talal mother);
- 2) Qasr Um Bandar;
- 3) Qasr Um Fahad;
- 4) Qasr Um Badr;
- 5) Qasr Um Majid;
- 6) Alšchiah building.¹⁴²

The second phase was from 1942 to 1946 when modern building materials (cement and steel) were used. The contractor was Bin Laden. Most of these buildings were actually parts of main buildings, such as the reinforced concrete part of the main Qasr Almurabaà, the stone house in the main courtyard in Qasr Almurabaà (known as the treasury house); the lift shaft, and the two-part extension of Qasr Um Bandar. The process of building Almurabaà complex took almost ten years. This whole small city was surrounded by a main wall and controlled by square (Murabaà) towers. Hence the complex acquired the name Almurabaà palace.

Although the palace was built using local craftsmen and materials, and the style was derived from Najdi architecture the project affected the built environment by allowing people to see that the city wall was no longer a barrier to expansion; so the homogeneity began to fragment, especially when other houses and palaces were built outside the city wall. Facey summarised this change saying:... *“Despite the mushrooming development of the city outside the walls, traditional methods of construction continued to be employed. The focal architecture had to be adapted to the creation of buildings for government and the royal family on a scale hitherto unimagined by local craftsmen. As an architectural flourish by traditional Najdi builders it was magnificent. But it was a magnificent swansong. For, with the approach of the 1950s, the age of concrete was at hand.”*¹⁴³ Nevertheless, the traditional way of building continued in the new development, which still harmonised the newly built houses with the houses inside the city wall.

¹⁴² The building took this name after being used by one of the king's Doctor (Physician), Dr. Medhat Fakhery Sheikh Elardh.

¹⁴³ Facey, *ibid.*, p. 302.

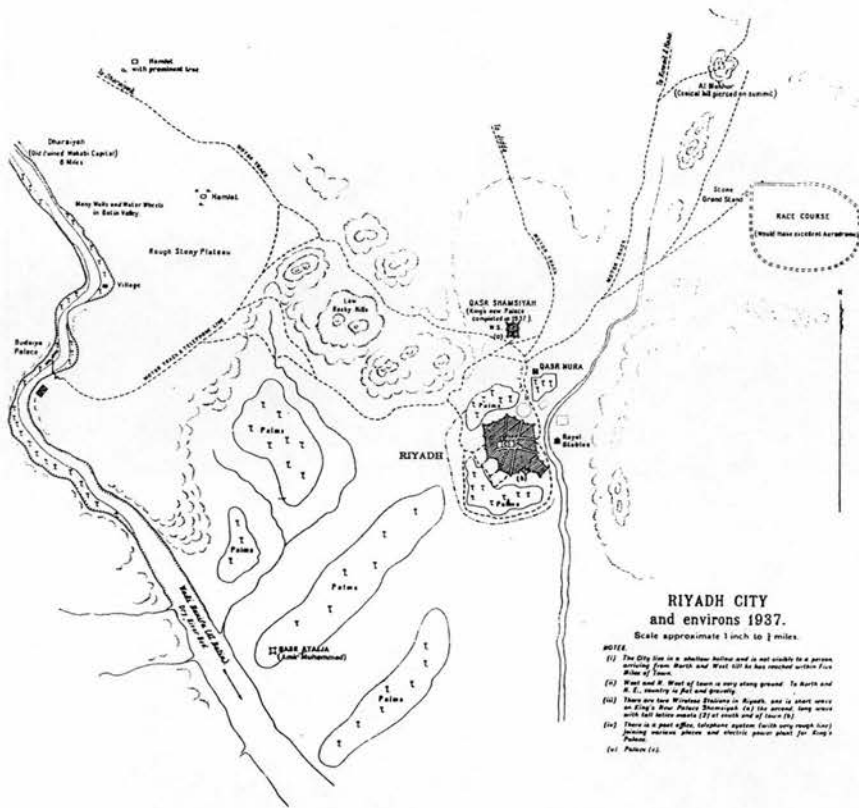


Figure 4.5: Sketch-map of Arriyadh in 1937 showing its size and the other palaces, drawn by Dickson. 144
 (Source: Facey, *ibid.*, p. 297.)



Figure 4.6: Almurabaà complex site plan.
 (Source: Doxiadis, 1971: DOX-SAU-A2, p. 291)

144 The Dicksons visited Arriyadh in 1937 after Mr. Dickson had retired as Political Agent in Kuwait.

Almurabaà preserved the general characteristics of Najdi architecture, which could be seen in the courtyard form, the continuity of its solid masses, its cover and narrow streets, and the repetition of the rectangular theme in the palace general layout and through its detailed constituents (figures: 4.6, 4.7, 4.8 & 4.9).

Almurabaà palace had a unique quality of Najdi architecture and craftsmanship. Its architectural detail was quite specific. The palace shows how local Najdi architecture developed with the increase of the financial resources of the country. The furniture was modern (figure 4.10), but nevertheless the architectural style, details, and decorations were purely local. Facey expresses his respect and admiration of the palace architecture saying; *“In the first phase of its realisation in the late 1930s it was a tour de force of local architecture, a huge square compound with its circuit wall punctuated at regular intervals by square towers. The buildings within, some tall and some low, represented a new phenomenon in Najdi traditional architecture: large-scale planning on a regular ground plan. In contrast to the seemingly haphazard, 'organic' look of traditional Najdi towns, it had a regularity and consistency of treatment which was novel. It was mud architecture planned on the grand scale, and built by Najdi craftsmen- cheap, moreover, and in harmony with local technical capabilities.”*¹⁴⁵

However, this quotation gives us an indication of the size of the project, and confirms the flexibility of local architects in executing large scale projects¹⁴⁶. Furthermore, it proves that the cultural influence was the main factor behind adopting new architectural forms (1950s onwards) and building techniques in the heart of Arabia.

The old palace in the town remained the centre of Governmental activities until the end of 1949 when arthritis had affected the king's mobility. He then decided to use *Almurabaà* palace as the centre of government, where a lift was to be installed.¹⁴⁷

¹⁴⁵ Facey, *ibid.*, pp. 311-312.

¹⁴⁶ When the government decided to build the new Ministries buildings along the King Abdulaziz Road, it was claimed that local architects and builders were unable to execute such projects. The *Al-Murabaà* palace was much larger.

¹⁴⁷ Facey, *ibid.*, p. 312.

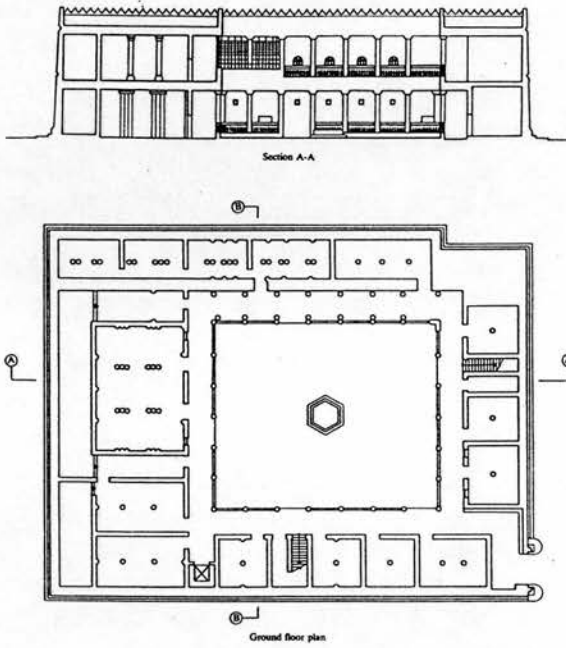


Figure 4.7: a) Almurabaà palace ground floor plan & section A-A

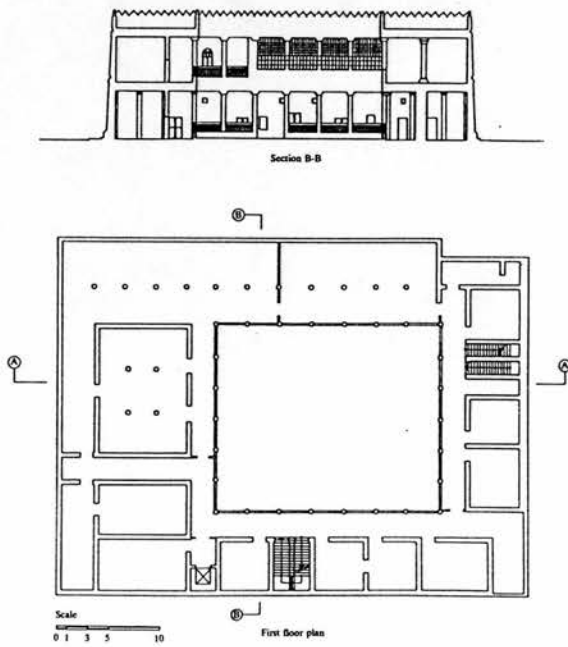


Figure 4.7: (b) Almurabaà palace first floor plan & sections.
(Source: Daghistani, *ibid.*, pp. 66-67)

Almurabaà stands out as an example which shows that traditional processes and building techniques can be continued while at the same time providing modern facilities. Within the complex provision was made for automobile access, for electricity, and for modern bathroom facilities. However, throughout the new building program, the traditional architecture of Najd region was adhered to, and the expanding town continued to preserve its characteristic core.¹⁴⁸

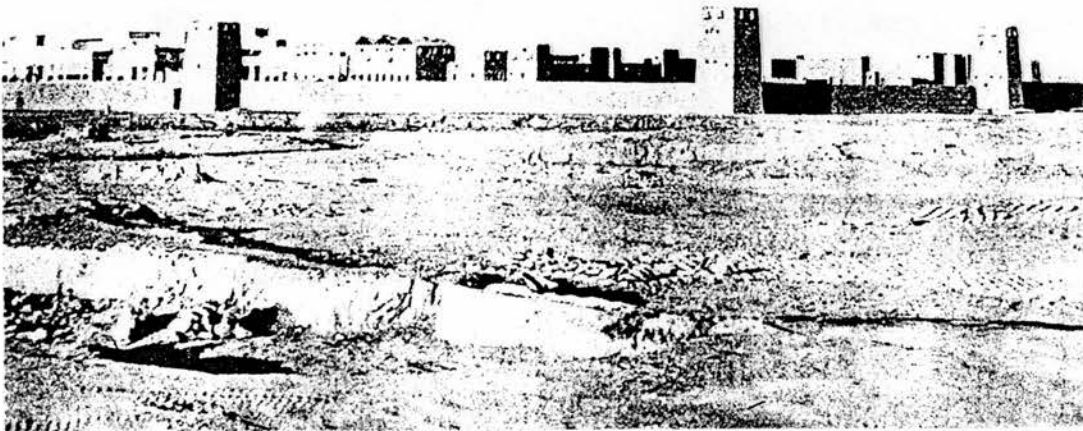
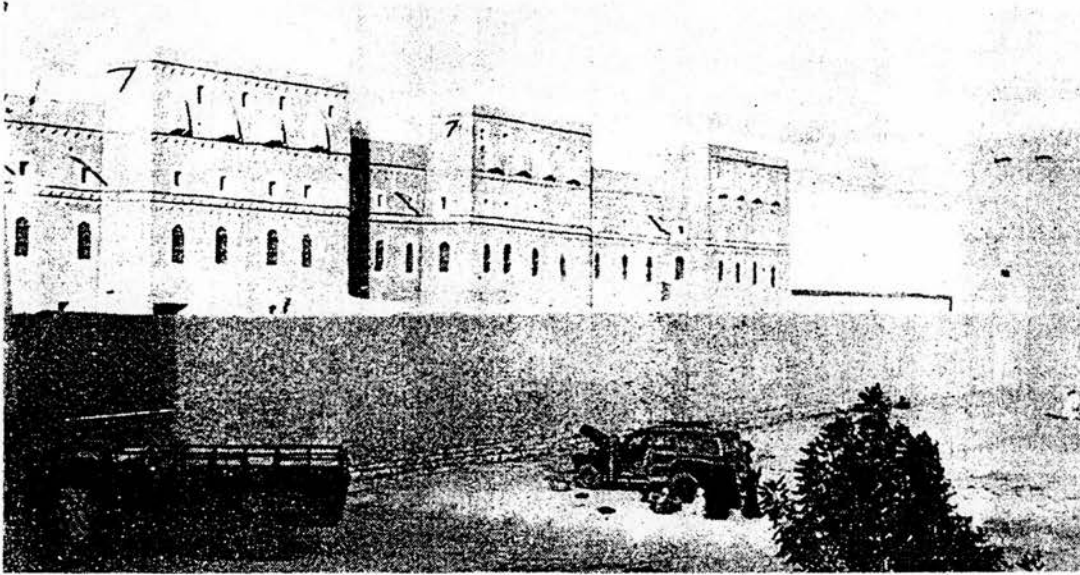


Figure 4.8: Photos of *Almurabaà* palace taken by Van Der Meulen, showing its size and character. (Source: Daghistani, *ibid.*, pp. 68-69).

¹⁴⁸ Al-Hathloul, S., "Tradition, Continuity and Change in the Physical Environment: The Arab-Muslim City", PhD. Thesis submitted at MIT, Cambridge, 1981, pp. 156-159.

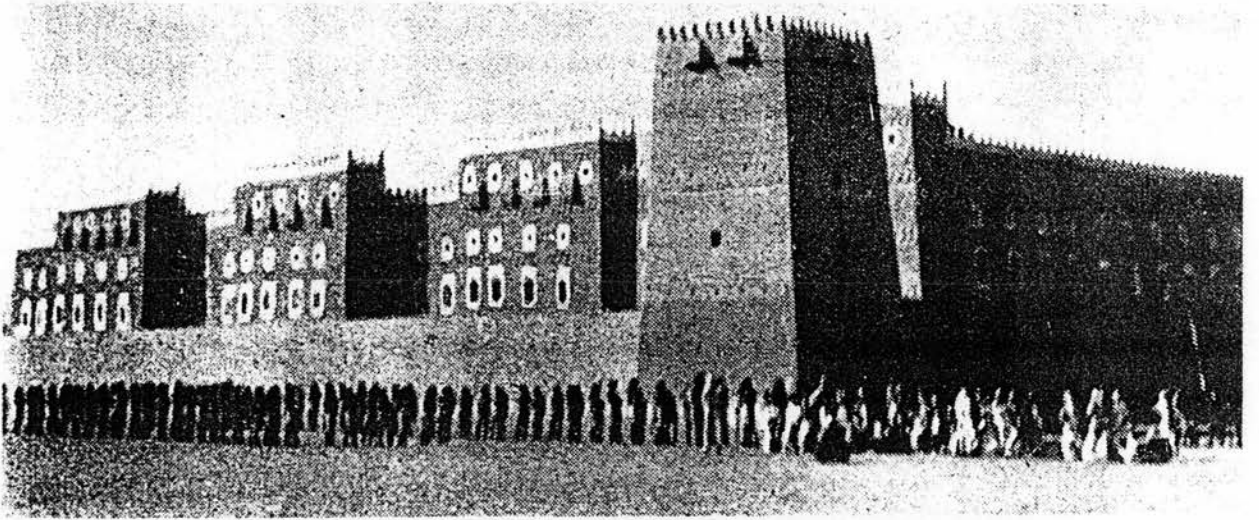
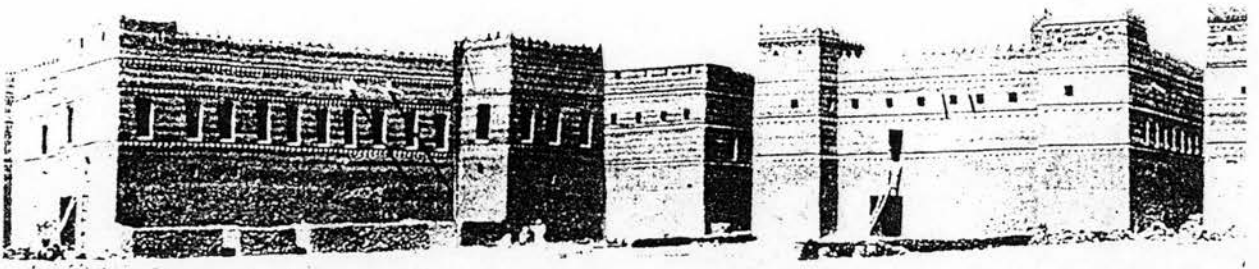


Figure 4.9: De Gaury (top), and Dickson (bottom) showing the size and character of the palace.
(Source: Daghistani, *ibid.*, p. 69).

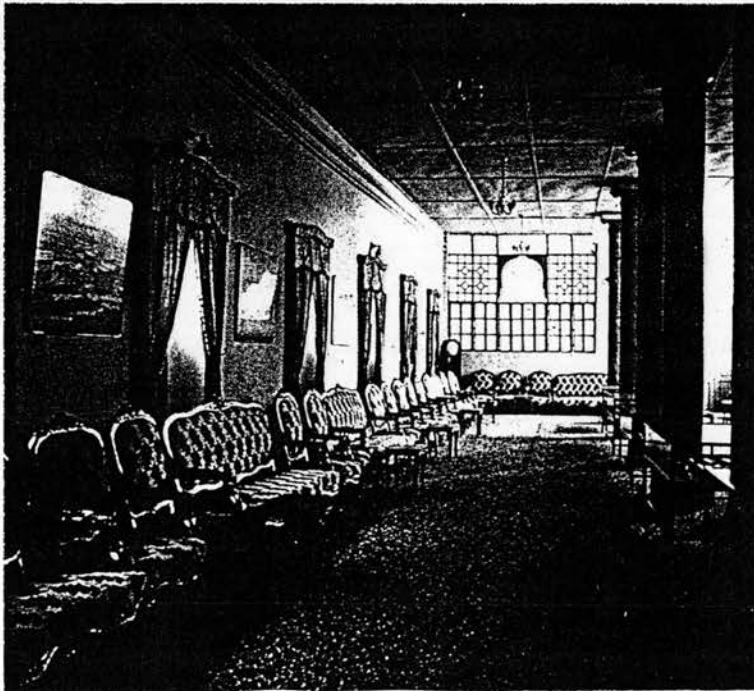


Figure 4.10: The interior of the main reception room, showing the Western furniture.
(Source: Facey (ed.), *"The Kingdom of Saudi Arabia"*, Stacey International, 1990, p. 88)

4.3. The Development of New Suburbs Outside the City Wall

After the discovery of oil on a commercial basis in 1938 there was an evident increase in the national income. People from Najd region, and other parts of the Kingdom started to come to the capital seeking work. The construction sector was one of the main sectors to flourish during this period. People from *Alqaseem* area in the Najd were very skilled in construction. They established a new quarter in the southern-eastern part of the city which was named after them -*Hillat Alqusman*. They were attracted to Arriyadh "by the prospect of a booming market for the building and interior decorating skills for which they were well-known in Najd..."¹⁴⁹ Other quarters were also established i.e. *Hillat Aldawasir*, *Manfuha*, ... etc. Development of the city accelerated and people started building new residential units. That development was mainly in the north of the city where rich families built houses; and to the south and the east where middle income people settled. The development continued outside the city wall, since the wall no longer restricted settlement. The wall was demolished in 1954.¹⁵⁰

4.4. Establishment of the Municipalities

In 1932, when the Kingdom was unified, only five Municipalities existed and all had been set up in Turkish times. These Municipalities were Mecca, Jeddah, Almadina, Taif, and Tabuk. These Municipalities were attached to the Viceroy of Hijaz, as were most of the Ministries and major Government bodies.¹⁵¹

In 1938 the Government issued the first law of Municipalities, clarifying their functions as:

- Organisation and cleaning of the city;
- Lighting and supervision of construction, paving and widening the roads;
- Setting up systems for water supply and sewage disposal;
- Preparing a map for the city preventing infringement on land;
- Registration of real estate;
- Location of areas for business and parking; and
- Control of prices and weights, and provision of fire fighting services and cemeteries.

¹⁴⁹ Facey, *Ibid.*, p. 301.

¹⁵⁰ Facey remarks: "It is generally thought that, by 1950, most of the old city wall had been demolished. Yet some sections of the old wall undoubtedly lingered on. One visitor to Riyadh in 1952 was able to refer to the eastern wall as if it was still intact." (Facey, p. 310).

¹⁵¹ "Riyadh the City of the Future", p. 76.

1944 witnessed the first organised planning of the city when the municipality began to divide the area to the south of the city known as *Manfuha* into residential plots 8 metres square with street width not exceeding 8 metres (figure 4.11).¹⁵² According to Facey, the *Manfuha* neighbourhood was used for low income settlers who migrated to the city at that time; the neighbourhood was divided up with grid-iron pattern and traditional mud construction was used for the buildings. The architectural style was neither traditional nor modern, but tended to preserve the eastern style. 93% of these houses were built of mud brick and only 16% were supplied with water and electricity.¹⁵³ Not until 1958 when a specialised central government body in municipal affairs was established, when the Municipalities Department was set up as part of the Ministry of the Interior. In 1962 a Royal Order was issued setting up a Deputy Minister-ship for Municipal Affairs and all the Municipalities in the Kingdom were attached to the Deputy Minister of Interior for Municipal Affairs. In 1975 The Ministry of Municipal and Rural Affairs was established.¹⁵⁴

When the Government transferred its Agencies from the Western province to Arriyadh in 1955, the size of the city expanded, the number of people increased, and the duties of the Municipalities extended.¹⁵⁵ In the same year a Royal Decree was issued raising the standing of the Municipality to Mayoralty, thereafter the number of employees was doubled to keep up with the increasing duties and responsibilities.¹⁵⁶

According to Prince Fahad Bin Faisal Al-Farhan, at a later stage development was carried on all over the city, new suburbs were planned and the Municipality ordered people not to use sun dried mud brick for construction. Their reason was that the material was structurally not strong enough for building¹⁵⁷, and therefore concrete materials were to be used in new buildings which led to a widening in the gap between natural resources and the built environment.

¹⁵² *ibid.*, p. 32.

¹⁵³ Facey, *ibid.*, p.322. And Abul-Ela, M.T., "Some Geographical Aspects of Al Riyadh: Saudi Arabia", *Bulletin de la Société de Géographie D'Égypte* 38, Cairo, Egypt, 1965, p. 62.

¹⁵⁴ "*Riyadh the City of the Future*", p. 76.

¹⁵⁵ In 1956 Prince Fahad Bin Farhan (The Mayor) visited Cairo-Egypt. He met Albagdadi the Minister of Municipality in Egypt and asked him to recommend 10 engineers for different specialities (Architects, civil, electrical, telephone, sewage, and water supply). From that point the municipality in Arriyadh started to create different departments. The most important department was for surveying. Its main task was to prepare a complete survey for the city to prevent land encroachment.

¹⁵⁶ "*Riyadh the City of the Future*", p. 86.

¹⁵⁷ The majority of Almurabaà palace was built of sun-dried mud brick. The palace is still standing and it is in the process to be transformed into a public museum.



Figure 4.11: The new planning pattern showing in Manfuha neighbourhood.
 (Source: Al-Hussayen, M., "Urban Pattern of Riyadh City 1950-1985", *Urban and Rural Profiles in Saudi Arabia*, Chapter 11, Brontraeger, Berlin, Stuttgart, 1989, p. 132)

4.5. *Alnaṣeriah* Palace

In the early 1940s, *Alnaṣeriah* was a small estate owned by King Ṣaud, who was a Crown Prince at that time. It comprised a well and four acres of gardens. By the late 1940's, King Ṣaud decided to develop it as a summer residence, new deeper wells were dug out, the area was extended to 40 hectares, and a huge two-storey country palace was built. In 1953 when the King came to the Throne he ordered the demolition of the existing palace and a new one built. The area also was extended to approximately 250 hectares, and it was planned according to a grid-iron pattern with several smaller palaces, boulevards and gardens. The project was completed in 1957 when it comprised the Royal *Diwan*, The King's private palace, the palace of the King's mother, the guest palace, four smaller palaces, thirty two large villas, thirty seven smaller villas, a museum, a library, a school for boys, another one for girls, a hospital, a recreation area, and a zoo. It had its own electric generators (figure 4.12).

New construction materials were used to build the *Alnaṣeriah* palace; reinforced concrete as opposed to the local materials of clay, sun-dried mud bricks and wooden roofs. Its impact on the public was limited as it was surrounded by high walls with its own gates. Only those who were invited were able to see the palace and the new technology. Thus the public image was no more than the abstract idea - the Royal Palace. As such, no one could really aspire to imitate it.

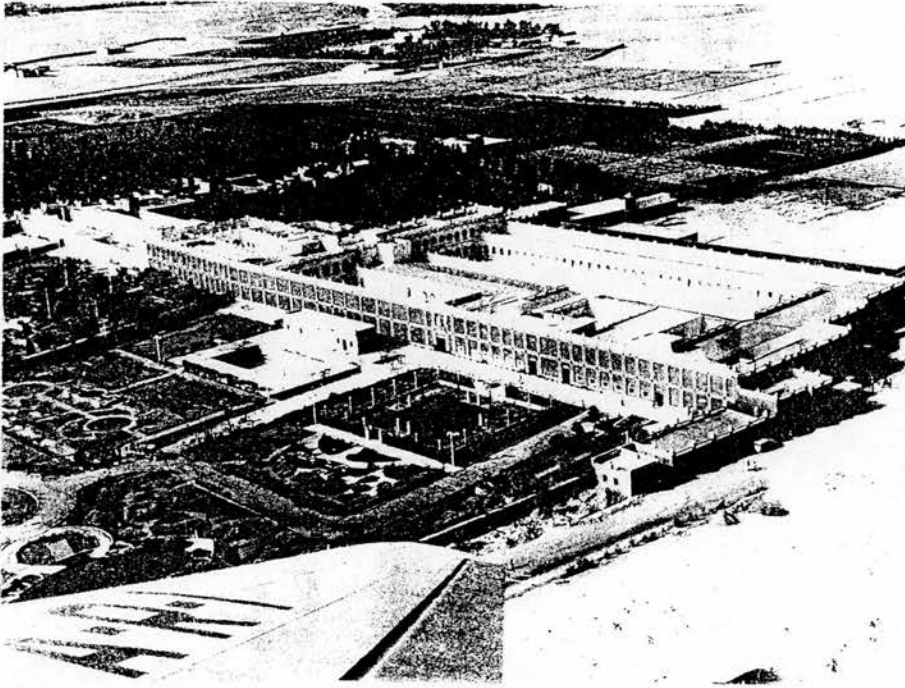


Figure 4.12: Aerial view of *Alnaṣeriah* palace taken in 1953, notice the modern planning, design, and landscape, in contrast to *Almurabaà* palace. This palace was demolished when King Sàud came to the Throne and he built another palace in the same site finished in 1957. (Source: Facey, *ibid.*, p. 321)

The main physical impact on the city by *Alnaṣeriah* palace was that it stretched the city west-ward by four miles, thereby necessitating another elaborate road program (King Sàud Road), to link it with *Almurabaà* palace and the town.¹⁵⁸

4.6. The Invigorating of the Economy

Oil was first found in 1923, but it was not until 1938 that it was discovered on a commercial basis. In 1944 oil production stood at a mere 30,000 barrels/day. By 1946 this figure had reached 164,000 barrels/day, giving the government an oil income of \$10 million and in 1950 the government achieved \$56.7 million from oil income. Following the increase in the government stake in the oil companies in 1950 the government earned \$113.6 million.¹⁵⁹ (See table 1, Chapter 2)

1944 witnessed the first organised government allocation of some of these moneys for defence and education. It was the base on which the Ministry of Defence was set up. In 1951 a Ministry of Interior with responsibility for Health and Municipality was established.¹⁶⁰ However, this sudden wealth encouraged other people from other parts of the Kingdom to migrate to the capital seeking work and further increasing the population and widening cultural influences on the city.

¹⁵⁸ Alhathloul, pp. 159-162.

¹⁵⁹ Facey, *ibid.*, p. 305.

¹⁶⁰ Facey, *ibid.*, p. 305.

4.7. The New Transportation Technology

4.7.1. The Inauguration of the Railway

October 1951 witnessed the inauguration of the railway¹⁶¹ (figure 4.13) connecting Arriyadh with Dammam in the Eastern province allowing materials, technology, and people to be transferred easily from the East coast to the capital. The railway began a new phase in the development of the city. The cost of transporting building materials was much reduced, allowing the government the option of using modern materials.

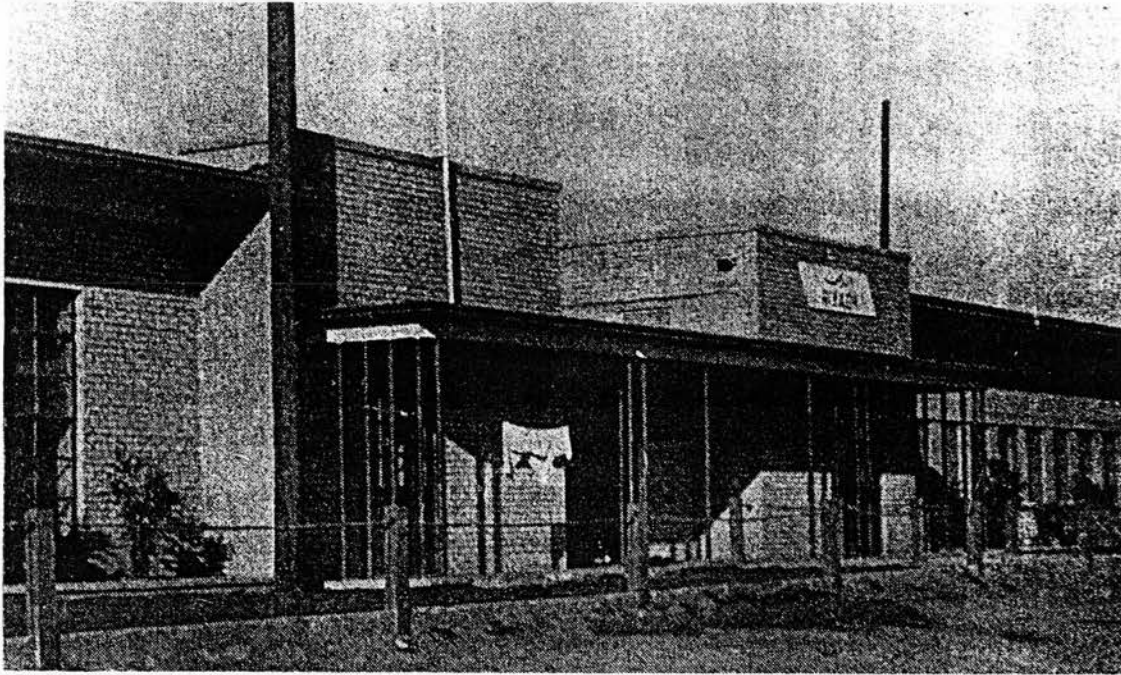


Figure 4.13: The new building, Railway station in 1951. (de Gaury Collection)
(Source: Daghistani, *ibid.*, p. 76)

4.7.2. The New Airport

Until 1953 a landing ground located two miles to the east of the city was used for aeroplanes, but with the increasing size and population of the capital a new airport was required. A site was selected 7 miles north of the city centre.¹⁶² The new airport made the capital the aerial gateway to the nation and opened up the heartland of the Kingdom.

¹⁶¹ Facey, p. 312. {Originally taken from: Abul-Ela, M.T., "Some Geographical Aspects of Al Riyadh: Saudi Arabia", *Bulletin de la Société de Géographie D'Égypte* 38, Cairo, 1965, p. 49.}

¹⁶² "Riyadh the City of the Future", p. 32.

4.8. The New Buildings for Ministries and *Almalaz* Housing Project

By 1957 the Government offices had been transferred from Mecca and Jeddah to Arriyadh. Thousand of buildings had to be constructed to accommodate government employees and they built the Ministry buildings along the road linking the city with the airport (King Àbdulaziz Road). This street was chosen for the following reasons:

- The need to group the Ministry buildings to allow the public to move readily from one to another;
- The central location between the airport and the city centre; and
- The ease of providing central services to the area.¹⁶³

After considering these important actions (the increase of wealth, building of the railway, the inauguration of the Airport, and transferring government agencies from the western province to Arriyadh and the need to built new ministries and hundreds of houses). Arriyadh now extended in several different directions, 12km. from north to south and 8 km. from east to west. Major developments were seen on the sides of the main paved roads linking these major projects with the old city.¹⁶⁴ King Àbdulaziz's palace (*Almurabaà*) located 1.5 km. to the north and the new airport located 9 km. to the north determined the northern extensions; King Saud's palace (*Alnaṣeriah*) located 3 km. west-north-west- from the old city determined another line of extension; the railway station and the horse racing field (*Almalaz*) located 4.4 km. away determined the eastern extension; the *Badieàh* palace and *Wadi Hanifah* were located 3.6 km. to the west; and *Manfuhah* town¹⁶⁵ and *Almansouriah* palace (Prince Mansour bin Saud, the king's son), located 12.5 km. from the old city, determined the expansion to the south.¹⁶⁶ (figure 4.14) According to Prince Fahad Bin Farhan (the Mayor), the first Ministry building to be constructed was the Ministry of Interior in 1954 (figure 4.15), and the architect who designed it and most of the other Ministry buildings along the airport road was Sayed Kuraiem from Egypt. Figures: 4.15, 4.16 & 4.17 shows how alien the new building style was to the street, the neighbourhood, and to the character of the town.

¹⁶³ *ibid.*, p. 33.

¹⁶⁴ Abul-Ela, M.T., "Some Geographical Aspects of Al Riyadh: Saudi Arabia", *Bulletin de la Société de Géographie D'Égypte* 38, Cairo, Egypt, 1965, p. 50.

¹⁶⁵ This suburb was newly built (1950's). The architectural style was neither traditional nor modern, but they tend to preserve the eastern style. Which shows that even though they change the architectural style, but they still used the local construction methods and they did not utilise the modern services provided by the government. (Source: Abul-Ela, *ibid.*, p. 62) Abul-Ela assumes that these families are either poor to handle the cost, or they have not developed yet the fondness to use these modern services.

¹⁶⁶ Abul-Ela, M.T., "Some Geographical Aspects of Al Riyadh: Saudi Arabia", *Bulletin de la Société de Géographie D'Égypte* 38, Cairo, Egypt, 1965, p. 50.

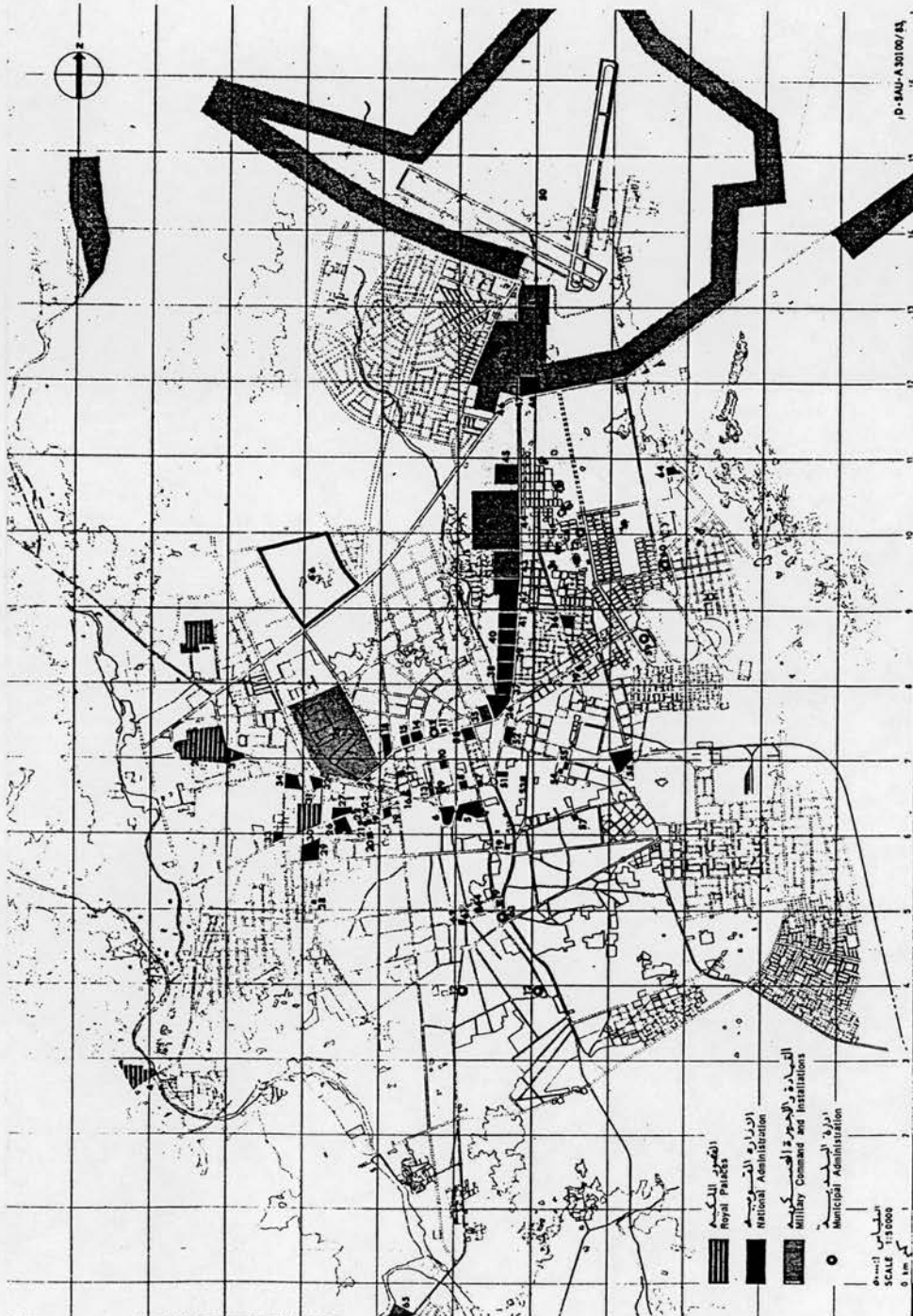


Figure 4.14: Plan of the city showing the size and the important buildings.

1) The King's Palace; 2) Ibn-Saud Palace; 3) Royal Guest House; 4) Summer Palace; 5) Royal Bureau and Protocol; 6) Council of Ministers; 7) PTT Office; 8) Supreme Court; 9) Royal Army; 10) Gen. Control Office; 11) Dep. Of Min. of Interior; 12) Fire Station; 13) Military Off.; 14) Passport Off.; 15) Min. of Public Work; 16) Traffic Police Office; 17) Police; 18) Min. of Pilgrimage; 19) Gov. Services; 20) Water Dep.; 21) Planning Office; 22) Tech. Dep. of Municipalities; 23) Army; 24) Min. of Agriculture; 25) Royal Guard; 26) Min. of Information; 27) TV Studio; 28) Chief Judge; 29) Min. of Foreign Affair; 30) Min. of Civil Defence; 31) Royal Garage; 32) Guest House; 33) Gen. Intelligence; 34) Min. of Interior for Municipalities; 35) Royal Airforce; 36) Min. of Commerce and Industry; 37) Min. of Health; 38) Min. of Education; 39) Min. of Agriculture and Water; 40) Min. of Communications; 41) Min. of Interior; 42) Min. of Defence.

(Source: Doxiadis, "Riyadh Existing Conditions", Final report, DOX-SAU-A2, 1968, pp. 328-329)



Figure 4.15: Ministry of Interior building finished in 1955.
(Source: Daghistani, *ibid.*, p. 77)



Figure 4.16: The Ministry buildings along King Abdulaziz Road.
(Source: DOX-SAU-A2, 1968, p. 163.)



Figure 4.17: The site plan of the new development along King Abdulaziz road showing the new planning pattern.

(Source: Al-Hussayen, M., "Urban Pattern of Riyadh City 1950-1985", *Urban and Rural Profiles in Saudi Arabia*, Chapter 11, Brontraeger, Berlin, Stuttgart, 1989, p. 136)

As a consequence of these developments, a need arose for housing Government employees. There were no government offices dealing with housing, nor there were any Saudi architects. A few architects were practising in the city, having come mostly from the Arab world and being mainly Egyptian, Syrian, Palestinian, and Lebanese. The government sought expert assistance from the U.S. Corps of Engineers¹⁶⁷ to design a complete housing project for the Government Employees (*Almalaz* Housing Project)¹⁶⁸. It was undertaken in a small office and non of the experts was Saudi. This office was *Almaktab Alhandasi* - a newly established office supervised by *Maslahat Amlak Aldawlah* (The Department of Government Properties) under the Ministry of Finance and National Economy (MOFNE). The function of this office was ... "Providing technical advice and recommending specific building materials, supervising construction processes, adjusting working specifications, making minor design alterations in given design models, and controlling the overall building construction according to a given layout plan of the entire project."¹⁶⁹

¹⁶⁷ The relationship between the Saudi and American government was strong through Arab American Oil Company (ARAMCO).

¹⁶⁸ Originally was called Arriyadh Aljadidah (the New Arriyadh), thereafter this name has transformed into *Almalaz* meaning the horse racing field which was located there.

¹⁶⁹ Fadan, Y., "The development of Contemporary Housing in Saudi Arabia (1950-1983): A study in cross-cultural influence under conditions of rapid change", Ph.D. Thesis, MIT University, 1984, p. 132.

Almalaz site was located 3 miles north-east of the city centre. The project envisaged 754 detached dwelling units (villas) and 3 apartment buildings containing 180 apartments for married employees, and 160 apartment units for single employees (figure 4.18).¹⁷⁰ Detached dwellings were sold to employees on a long-term payment plan while the apartments were rented on a long-term basis.¹⁷¹

The *Almalaz* project contained a public garden, municipal hall and public library, schools (later to become University of Riyadh which then changed its name to King Saud University), a race course, football (soccer) field, public zoo, market, and clinic. The physical pattern of the project follows a grid-iron plan with a formal geometric hierarchy of streets.¹⁷²

Evidently *Almalaz* had more effect on the residents of Arriyadh than *Almurabaà* or *Alnaṣeriah*. Saleh Alhathloul, in his PhD. thesis "Tradition Continuity and Change in the Physical Environment: The Arab-Muslim City", investigated why *Almalaz*, rather than *Almurabaà* or *Alnaṣeriah* became the prototype of the future residential units in Arriyadh as well as in other cities in the Kingdom, concluding that: firstly, the project was sponsored by the government for its employees, it was therefore an authoritative statement by the government on how a modern neighbourhood should be planned. As such it reflected the Government's vision and point of view on how the fast-growing city must appeal to the people, and hence was the solution for the country's other cities.

Secondly, *Almalaz* was seen as a symbol of modernity, in sharp contrast to tradition. It was the new as opposed to the old Arriyadh. This was unfortunate since, it was the only residential project to use new materials and modern techniques, no modern alternative being available for the residents of Arriyadh to see, compare, admire and then imitate.

¹⁷⁰ This new concept of a grid-iron pattern was first introduced in 1951 by ARAMCO in the Eastern province when the company felt the need to re-settle its Saudi employees. The government provided the land to the employees, then subdivided it into plots. The company gave an interest free loan, but the terms of the loan state that the employee could choose his own design amongst several that the company architects had prepared, and his own contractor. But in order to qualify for the loan, he had to submit the design without any major changes. At that time there were no Saudi architects, so the company's foreign architects were in charge. They were not aware of the cultural background and tradition of the region. Consequently the quality of design relied on the architects' background. (Source: Al-Hathloul, *ibid.*, 1981, pp. 165-166).

¹⁷¹ Al-Hathloul, Al-Hussayen, and Al-Shuaibi, "Urban Land Utilization- Riyadh, Saudi Arabia", Educational research program, USD, (Cambridge: MIT, 1975), p. 38.

¹⁷² Al-Hathloul, S., *ibid.*, 1981, pp. 162-163.



Figure 4.18: Layout of Almalaz neighbourhood. A new planning premeditation and a new residential units design.
 (Source: Al-Hathloul, S., "Tradition, Continuity and Change in The Physical Environment: The Arab-Muslim city", PhD. Thesis, Cambridge: MIT, 1981, p. 164).

Thirdly, in contrast to the Royal residence of *Almurabaà* and *Alnaṣeriah*. *Almalaz* was built for Government employees who were members of the public. Government employees were highly regarded by other segments of the society, and their lifestyle was desired, so when they moved to *Almalaz*, with its villas as well as the wide streets with trees planted on the both sides, most of the locals dreamed of settling into new and similarly planned neighbourhoods.

Most importantly, we can conclude that the main reason that this project ignored traditional form and character was that the designers were not familiar with the social needs of society and the climatic problems of the region. From the social point of view, the new villas failed to accommodate the social and physical needs of the family: at a later stage the owners made internal alterations by moving doorways or walls, or adding space to accommodate increasing numbers. Figure 4.19 clearly

shows this dilemma, where the owner changed the layout entirely, in order to have new space in accordance with his needs.¹⁷³

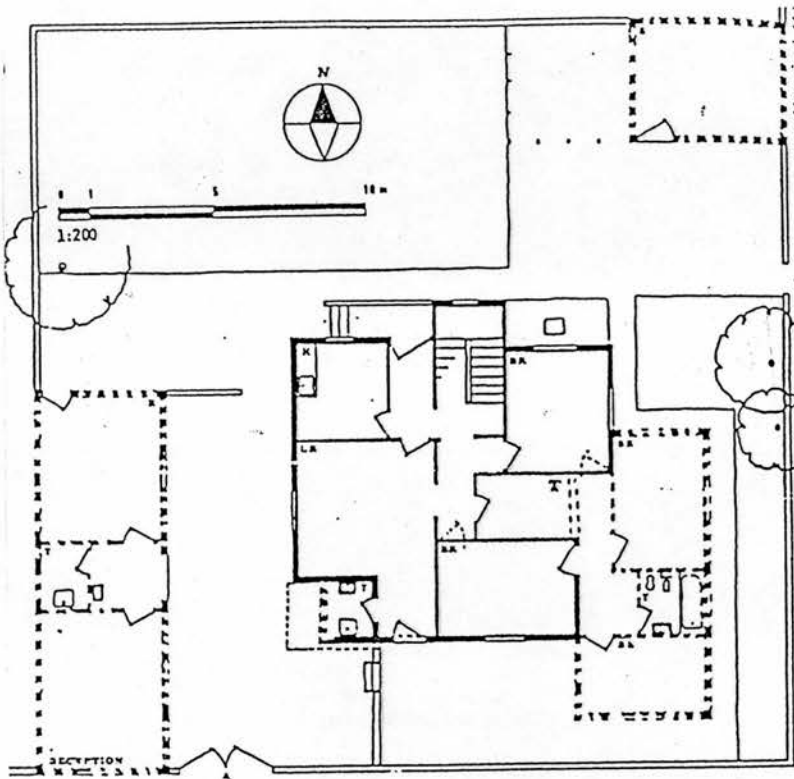


Figure 4.19: A typical floor plan for a residential unit (villa) in *Almalaz* project. The dotted lines indicate the owner's changes of the internal space to suit needs originally ignored by the designer. (Source: Al-Hathloul, *ibid.*, p. 170).

It is important to mention that this newly built suburb (New Arriyadh) was not built entirely of modern materials. Modern stone and cement houses constituted only 53% of the total buildings, clay houses constituted 13%, and finally huts and tents constituted 34%. Only 42% of these houses benefited from water and electricity and 45% of the total buildings did not have the benefit of water and electricity services. Of the remaining 13%, 10% of houses were connected with electricity only and 3% were connected only with water.¹⁷⁴

¹⁷³ For more information on the development of modern houses in the Saudi cities see: Fadan, Y., "The Development of Contemporary Housing in Saudi Arabia (1950-1983): A study in cross-cultural influence under conditions of rapid change", Ph.D. Thesis, MIT University, 1984.

¹⁷⁴ Abul-Ela, M.T., "Some Geographical Aspects of Al Riyadh: Saudi Arabia", Bulletin de la Société de Géographie D'Égypte 38, Cairo, Egypt, 1965, p. 64.

4.9. The First Master Plan

Haphazard development and un-organised traffic continued in the city until the year 1968 (figures: 4.20 & 4.21). As the Mayoralty at that time did not have sufficient technically qualified staff to undertake a planning job, an international competition was set up, won by a Greek company called *Doxiadis Associates-Consultants on Development and Ekistics*. By the year 1971 Doxiadis had finished the Master Plan¹⁷⁵ and in 1973 the Ministries Council approved the Master Plan.¹⁷⁶ The need for the Master Plan was summarised in Doxiadis report saying:

There is no official Government Act or Decree establishing the plan of the city as such. The various areas under development or planned for development have been established by separate decisions or decrees, initiated not only by the Ministry of Interior for Municipalities or the Municipality itself, but by other Ministries or Government Agencies as well. Such, for example, are the development in Malaz area, initiated and implemented by the Ministry of Finance, the development along Matar road by the Ministry of Defence, the Industrial Estate by the Ministry of Commerce and Industry, while other development proposals were made by the Municipality and the Town Planning Office.¹⁷⁷

From this quotation we can see that there was no general framework to organise the city development. Each Governmental organisation took their own decision to develop its own projects with no reference whatsoever to other Governmental Agencies.



Figure 4.20: Traffic congestion and ugly buildings.
(Source: DOX-SAU-A2, 1968, p. 187)

¹⁷⁵ Doxiadis did a thorough study for the city covering all aspects as the lack of information about the city.

¹⁷⁶ "Riyadh the City of the Future", p. 33.

¹⁷⁷ Doxiadis Associates- Consultants on Development and Ekistics, "Riyadh Existing Conditions- Final Report", DOX-SAU-A2 July 1968, p. 147.

The Master Plan was prepared with the aim of guiding the growth of the city until the year 2000 (figure 4.22). A total area of 304 square kilometre was designated [The area is now estimated to be 2000 square kilometres], with 172 square kilometres designated for residential use. The following are some of the most important aspects of Doxiadis' guidelines:

a) A flexible pattern suitable for any growth rate and expansion over land without any major natural obstacles;

b) An appropriate distribution of services and the application of a hierarchical order for residential areas.

c) Horizontal expansion in a northern and north-western direction with an open ended section including a central backbone to accommodate the commercial and the central administrative functions. This arrangement of functions was to allow for expansion in accordance with population increase and general economic development. It would also help in decentralising some of the functions concentrated in the city centre (*Al-Dira*);

d) Development of highway communications with the major cities, such as Dammam with the Hijaz, and Dammam with Al-Kharj, thereby avoiding the passage of heavy vehicles through the centre of Arriyadh;

e) A successive series of residential quarters to organise the internal composition of the city, and control the population density so that all the necessary services could be made available at various different levels;

f) Provision of housing appropriate to the various income groups with the help of Government, if necessary;

g) Designating sites for administrative and political functions in the areas located to the north-north-west of the city;

h) Development of industrial enterprises in the area located to the south-east and reserving them for industrial purposes;

i) Construction of an external 90 kilometre Ring Road, with six lanes, surrounding the city to be used for inter-Peninsula east-west and north-south traffic and facilitating movement between the different parts of the city;

j) Establishment of a detached network of small footpaths in the residential areas to minimise mishaps involving pedestrians and vehicles.

As a result of this study an urban development pattern came into being which spread towards the north-west of the city, along with a network of streets. Development also extended along Wadi Hanifa in harmony with the few natural obstacles.¹⁷⁸

¹⁷⁸ These points were taken from, "Riyadh the City of the Future", pp. 37-39.

In his thesis, Alhathloul identified an important issue, showing that Doxiadis Associates contradicted their own planning policies in relation to 'set back'. "*Doxiadis regulations require setbacks throughout all residential areas of the city*"¹⁷⁹, whereas their statement regarding the guidelines states:

The distinctive character [of older Riyadh] which reflects a rich historical and cultural tradition, is a valuable asset. This character should, as far as possible, be preserved and its principles, which reflect the social life and customs of the people and the physical conditions in Riyadh, should be used to inspire the design of the new public zones and residential communities to be built in the city.

Many of the newer parts of the city are constructed in a manner that has paid very little tribute and attention to the design and aesthetic quality of traditional architecture. If this were to continue, Riyadh would rapidly become a city of no character.¹⁸⁰

From the previous quotations we see how Doxiadis theoretically points at the importance of developing the traditional architectural style of the city in order to keep the architectural identity of the city. But with their implementation of the 'setback' regulation they force people to adopt a form that has nothing to do with the traditional form and style, leading to the conclusion "..., *Riyadh would rapidly become a city of no character.*" The decision makers of the Mayoralty also shared a great deal of responsibility as they authorised such regulations. It should be noted that most the consultants and engineers working for the Mayoralty were foreigners.

At that time (1968) the number of houses and other architectural developments in the city was small compared with the present time. If Doxiadis had implemented the preservation of the original architectural style of the city, and developed an architectural form with the use of modern technology and facilities, the city would have had a better chance of keeping its original architectural identity. Ali Shuaibi¹⁸¹ share this thought saying:

It is often assumed that the old attached mud house as a form is no longer acceptable; it has been replaced by the villa-that is, a single isolated structure in the middle of a lot (an idea copied from Egypt, but transformed by Western, mainly French, influence). If people were made to choose between traditional houses and new villas, so the theory goes,

¹⁷⁹ Alhathloul, *ibid.*, 1981, p. 207.

¹⁸⁰ After Alhathloul, pp. 207-209. Originally taken from: Doxiadis, "*Riyadh Master Plan*", A-19, p. 11.

¹⁸¹ A Saudi architect who was working for long to establish a new architectural style that related strongly to the quality of the people and the region. He won a number of international prizes for his work.

they would pick the villa every time. But we discovered that this preference, though it exists, had nothing to do with form. The reason people prefer villas to traditional houses is that the villas are always better equipped and serviced. People have never been given a choice between a villa and a well-equipped traditional house. Designers only supply the villa.¹⁸²

However, Doxiadis Master Plan was not fully adhered to because of some obstacles:

a) The Master Plan was completed before the economic boom which started in 1974 and led to a wave of construction development in the city which surpassed all expectations, since the estimate of that time anticipated only moderate economic development. The plan was formulated on the basis of moderate economic growth rates.

b) The Master Plan envisaged a rectangular shaped city. Much of the development occurred outside the area covered by the Master Plan, especially on the main highways leading to the city such as the Hijaz Road, Khurais Road, Al-Kharaj Road, and Salboukh Road;

c) A disparity existed between the forecast population density in the various areas of the city and the population density as it actually existed. The Master Plan tried to relieve the density in the city centre by distributing population over the residential areas, whereas in fact the density of population in the centre of the city increased because of the growth of commercial activities;

d) The recommendations of the Master Plan were never implemented in respect of residential areas, and in no quarter are there the public utilities and services recommended in the Plan;

e) The commercial areas proposed by the Master Plan did not include the actual business areas in existence in 1968. These areas witnessed a huge development since commercial activities grew up in new locations. The Master Plan did not take account of the fact that major highways attract business activities;

f) In the period between 1968 and 1976 the population doubled and the number of vehicles quadrupled. This number greatly exceeded the forecasts of the Master Plan. During the same period the paving or building of streets was less than was expected in the Master Plan, which explained the density in the city centre;

g) The plans for various kinds of public facilities (drinking water supply, drainage network, electricity, telephones) followed the main designs of the Master Plan, but the phases of execution were not suitably co-ordinated. Each party

¹⁸² Shuaibi, A. and Alhathloul, S., "The Justice Palace District, Riyadh", *"Design in Islamic Cultures 4: Continuity and Change"*, The Aga Khan program for Islamic Architecture, Massachusetts, 1984, p. 38.

concerned chose the most suitable time for them without considering other bodies. The consequent lack of administrative organisation and co-ordination in executing these networks caused many difficulties.

h) The pressures created by the development in the central area and the ever increasing price of land on the major streets forced the authorities to permit a doubling of the height of buildings and that corresponded to the increase in density of population. This affected the regulations governing the sub-divisions of the city into areas as defined in the Master Plan. The lack of detailed planning in the areas outside the scope of the Master Plan resulted in the growth of uncontrolled sub-divisions.

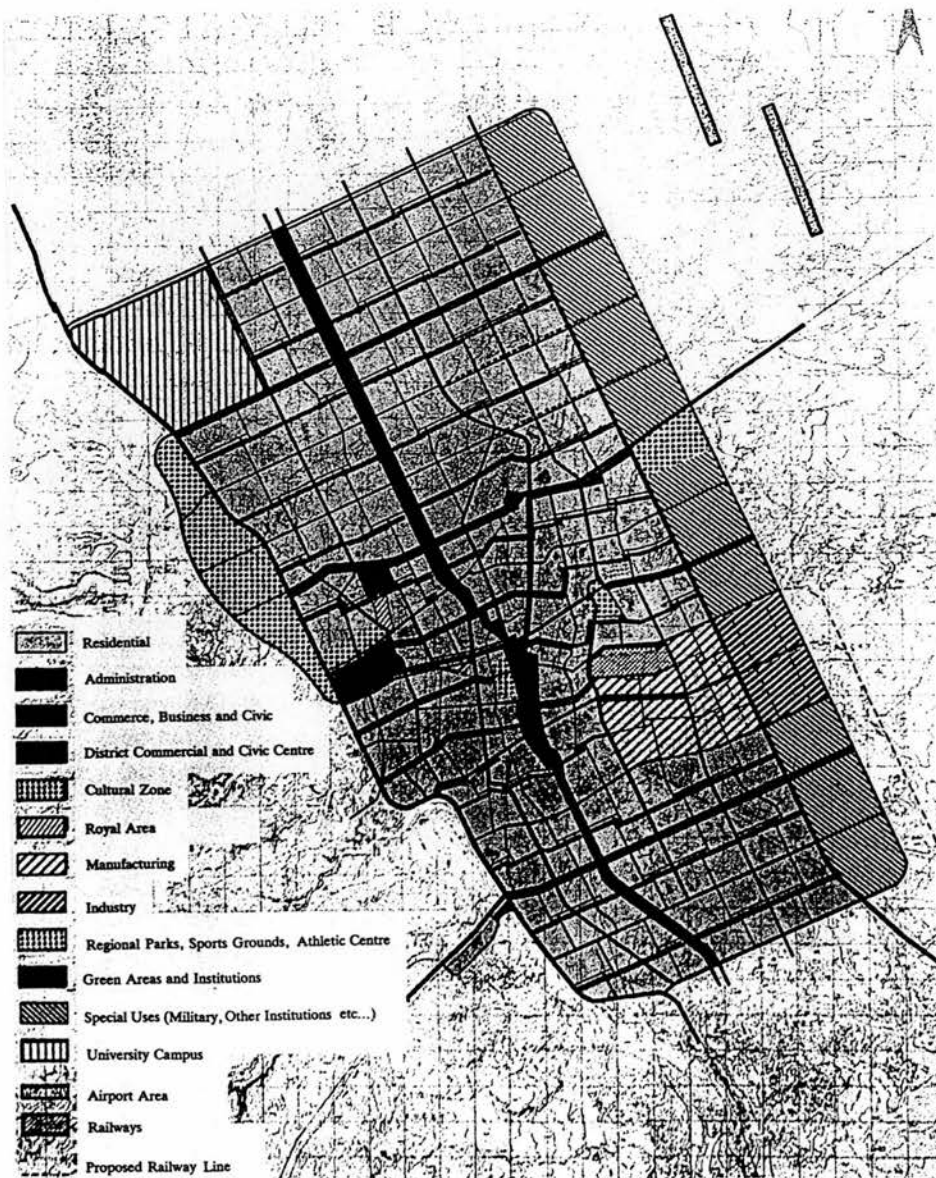


Figure 4.22: City development layout to the year 2000 by Doxiadis.
 (Source: Daghistani, p. 158)

4.10. The Booming Architectural Development

In 1974 the government decided to establish a Real Estate Development Fund (REDF) to solve housing shortage problem by giving the public a free interest financial loan¹⁸³ *“To finance the private sector investments in the construction of private residences and residential buildings.”*¹⁸⁴ The loan also covered investment in building projects (i.e. showrooms, offices, parking lots and apartment blocks). The REDF *“has thus been able to share in a very practical way in helping to gradually overcome the housing crisis and there has been a gradual fall in rents for houses, villas, and apartments.”*¹⁸⁵ The consequent pressure of house-building resulted in some of these villas being built outside the city boundary.

Solving the housing crisis was the positive side of the REDF, but the negative side was the quality of house design. REDF rules and regulations required the land owner to submit all drawings to the planning department at the REDF. The layout was required to adopt the setback imposed by the Master Plan. Thousands and thousands of units were built in the 1970s widening the gap between the traditional form and the newly adopted designs. (figure 4. 23)

Even so the housing problem was not fully solved by the REDF. In 1971 the Government established the General Housing Department (GHD)¹⁸⁶ under the Ministry of Finance and National Economy (MOFNE) to supervise housing programmes in the Kingdom. The department was very small, and had insufficient employees and expertise to handle the task of supervising the newly approved housing projects. In 1975 the GHD was enlarged to form The Ministry of Public Work and Housing (MOPWAH). Its main task was to assume responsibility for the projects that the GHD had started.¹⁸⁷ The establishment of the MOPWAH was to ensure the implementation of the government housing policies. These huge housing complexes were built for people of limited income or *“Whose dwellings were appropriated by the Municipality for public work.”*¹⁸⁸ (figure 4.24) It may be added that the first projects were delayed and after finishing were not fully utilised. Other projects were never used because they were high-rise flats in contrast to the single family dwellings that locals were used to and wanted.

¹⁸³ A loan of 300,000 Saudi Riyal (£ 50,000) (£1 = approximately SR. 6).

¹⁸⁴ *“Riyadh the City of the Future”*, p. 309.

¹⁸⁵ *ibid.*, p. 309.

¹⁸⁶ The department was very small to carry out such a responsibility, especially when the MOFNE signed a contract with a Belgian consulting company to prepare studies on housing problems in Saudi Arabia. The company's recommendation was to start immediately building housing projects in the main cities in the Kingdom.

¹⁸⁷ For more details on the public housing issue see, Fadan, Y., *“The Development of Contemporary Housing in Saudi Arabia [1950-1983]: a study in cross cultural influence under conditions of rapid change”*, A Ph.D. Thesis, University of MIT, Michigan, pp. 221-254.

¹⁸⁸ *“Riyadh the City of the Future”*, p. 309.

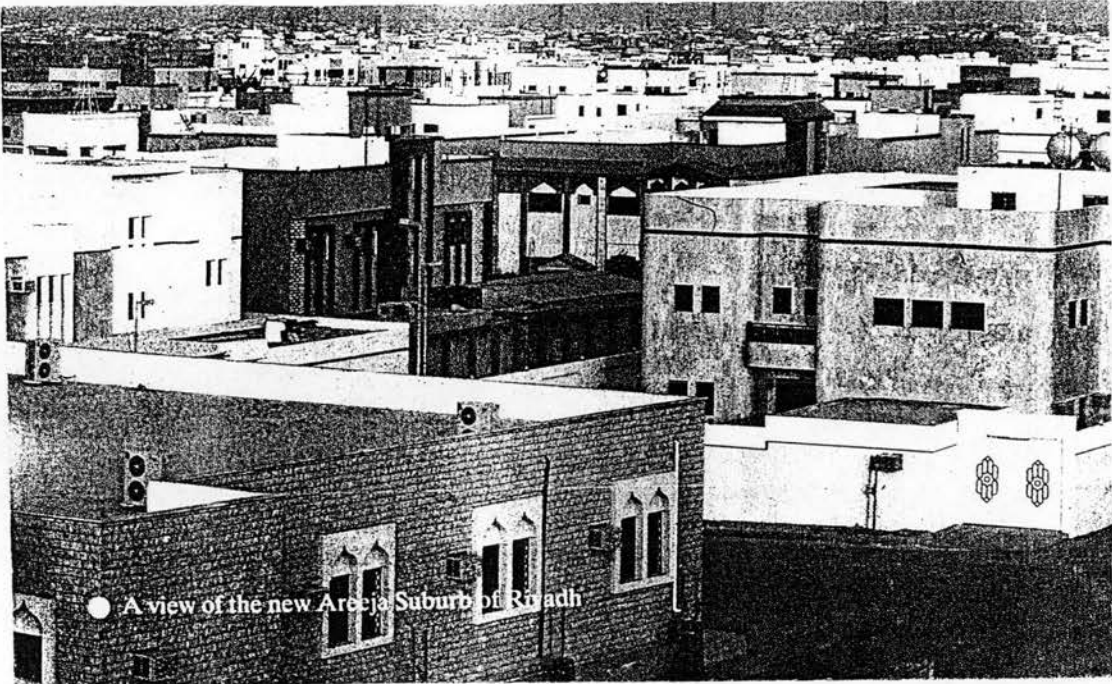


Figure 4.23: View of Al'araja neighbourhood, one of Arriyadh's new suburbs, built with loans from the REDF. Notice the architectural diversity of each individual unit. There is no architectural relationship whatsoever between neighbouring buildings. (Source: Riyadh Mayorality & The Arab Urban Development Institute, "Riyadh the City of the Future", Riyadh: King Saud University Press, n.d., p. 49)



Figure 4.24: Almad'ath Road housing showing the massiveness of the project in relation to the neighbourhood. (Source: *ibid.*, p. 66)

However, architectural development went on and on, development spread in all directions, and the city became the centre of the national economy, politics, and industry. This massive development did not respect the architectural quality of the whole town. Each one of hundreds of projects had merit as individual buildings but they did not respond to their neighbours, causing a great loss in the architectural quality of the city's built environment. (figures: 4.25, 4.26 & 4.27)



Figure 4.25: Another view of King ʿAbdulaziz Road. Notice the diversity of architectural quality. (Source: “Riyadh the City...”, *ibid.*, p. 104)



Figure 4.26: Alsiteen Street showing that the whole city is designed for cars. (Source: *ibid.*, p. 105)



Figure 4.27: King Fahd Road, showing the diversity of architectural styles.
(Source: *ibid.*, p. 107)

4.11. The Establishment of the High Commission for the Development of Arriyadh (HC)¹⁸⁹

The development of the city was progressing fast. The lack of co-ordination between the different governmental institutions was apparent and this caused the government to think about establishing a governmental organisation that could function as a co-ordinator between the different institutions for the development of the city.¹⁹⁰ The Council of Ministers issued a resolution no. 717 on the 19th of June 1974 establishing the High Commission for the Development of Arriyadh (HC). *“The Government was keen to prepare its organisations, on all planning, technical and executive levels to face all responsibilities resulting from this expansion. To achieve this end the Government established the ‘High Commission’ to act as the City Brain, the planner for its future development and to be the supervisory body for the execution of its policies, to draw its plans and follow up the execution of its major projects.”*¹⁹¹ There were 10 members:¹⁹²

¹⁸⁹ The Commission was constituted according to decision from the Cabinet of Ministers no. 717 dated 29.5.1394 AH (1974 CE.). The Minister of Interior issued the statutes guide decision no. 212/4 dated 20.1.1395 AH (1975 CE).

¹⁹⁰ For full details on the reasons behind the establishment of the HC and thereafter an evaluation on its role as a government agency on the development of the city, see Zahir Othman PhD Thesis, Edinburgh University, 1992, pp. 121-129.

¹⁹¹ *“Riyadh the City of the Future”*, p. 79.

¹⁹² According to Zahir Othman, the main aim for establishing the HC was to follow up Doxiadis Master Plan.

1. Governor of Arriyadh region	Chairman
2. Deputy Governor of Arriyadh region	Deputy Chairman
3. Mayor of the city of Arriyadh	Member and Secretary General
4. Deputy Minister of the Interior for Municipalities Affairs	Member
5. Deputy Minister of Finance	Member
6. Deputy President of the Central Planning Agency	Member
7. Chairman of the Municipal Council	Member
8. Director General of City Planning	Member
9. Director of Engineering Department in the Municipality	Member
10. Deputy of an Agency with a topic to be discussed at the HC meeting	Member

The duties of the supreme board were set out as follows:

- a) To draw up the main policy of the development of Arriyadh;
- b) To approve all the statutes which define the execution system of the Master Plan Projects, and also to approve all the reports;
- c) To approve the Development Plans for the City within specified programme for all Ministries, Government Departments, General Corporations and private establishment projects, which are related to public benefit;
- d) To approve the programme for the execution of the plan;
- e) To approve programme of services and its financial requirements and budgets;
- f) To approve the area which should be expropriated for roads and public utilities;
- g) To approve ways and means for the construction of the private sector in the development programme and the utilisation of Saudi and non-Saudi expertise and facilities in this area; and
- h) To develop and suggest alterations and modifications in the City Plan, as the need arises.¹⁹³

On 1st of February 1975, the Council of Ministers (COM) issued a resolution no. 212/4 which gave the Minister of Interior powers to establish the guiding regulations: i.e.

- I- 1) Draw up the policy for the development of Arriyadh.
- 2) Approve all the statutes which define the execution of the master plan.

¹⁹³ These points were taken from: "Riyadh the City of the Future", p. 79.

- 3) Approve the development plans for the city within specified programmes for all ministries, government departments, general corporations and the private establishments projects which are related to public benefit.
- 4) Approve the time schedules for the execution of the plan in compliance with the development plans and existing financial commitments.
- 5) Approve programmes of services and the financial requirements and budgets.
- 6) Approve the areas that should be expropriated for roads and public services.
- 7) Approve means of involvement of the private sector in the development programmes and the utilisation of expertise and facilities in this area.
- 8) Approve the implementation of the plan by the municipality of Arriyadh.
- 9) Suggest alterations and development to the city master plan as the need arises.

II- Delegate some of the above mentioned responsibilities to the municipality of Arriyadh.

III- Restrict funds for the development projects to those approved by the HC.

IV- Establish an office for the secretariat of the HC in the municipality of Arriyadh.¹⁹⁴

4.12. The Revision of the Master Plan

In 1976 the Doxiadis Master Plan was seen to have failed to accommodate the booming physical development of the city which took place after the sharp increase in oil prices in 1974 (table 2, Chapter 2). Available funding caused the Deputy Ministry of Town Planning of the Ministry of Municipal and Rural Affairs to hire a French consultant (SCET International in association with the local firm of Àbdulaziz Samkary, Town Planner) to revise the Master Plan and to review its planning policy. The SCET Plan was completed in 1982 with a proposed development of the city until 1990 (figure 4.28).¹⁹⁵ This revision took the title of 'Arriyadh Action Master Plan'. The main feature of the Plan was to produce "*Detailed guidelines for action and development which is to take place in the medium-to short-term.*"¹⁹⁶ Therefore the aim "*Was to produce a plan which filled the gap between the very long term planning represented by the original Master Plan [Doxiadis], and the short-term annual planning undertaken by the Ministries and agencies in preparing and implementing their budget proposals. The revised Master Plan therefore covers only a twelve year period-from 1978 to 1990 (1398-1410 A.H.)- and much of the emphasis in its proposals is on short-term implementation.*"¹⁹⁷ (figure 4.29)

¹⁹⁴ Othman, Z., pp. 123-124.

¹⁹⁵ *ibid.*, p. 136.

¹⁹⁶ Daghistani, *ibid.*, p. 164.

¹⁹⁷ *ibid.*, p. 164.

4.13. The Establishment of Arriyadh Development Authority (ADA)¹⁹⁸

The High Commission (HC) needed an executive arm to control the development of the most important projects in the city. The COM issued a decree no. 221 on 2/9/1403 accepting the recommendations by HRH The Governor of Arriyadh and the chairman of the HC, to merge the QAADO with the Office of the Development of the Diplomatic Quarter Project, in one office called Arriyadh Development Authority (ADA). At that time there were two important projects which became the nucleus of the ADA. These projects were:

- The Development of the Justice Palace District (JPD)¹⁹⁹;
- The Development of the Diplomatic Quarter (DQ).

In order to provide administrative and technical support for the HC, ADA developed human resources in various fields, and the Authority also developed an advanced Urban Intelligence Service. Furthermore, the ADA undertook the responsibility of preparing a study on the urban limit of the city, and implementation policies were formulated. In addition to comprehensive studies of the city's transportation network, the ADA with the Ministry of Transportation participated in managing the design and the execution of King Fahd Expressway²⁰⁰. The ADA also participated in the cultural development of the city, by implementing:

- The development of Arriyadh Public Park which provides recreational, cultural and scientific facilities for the city;
- The renovation of the city's older district i.e. Manfuha; and
- The renovation of part of historic Addiriyah.²⁰¹

The other environmental issues for which ADA is responsible are: the development of Althumamah park, the Management of Wadi Hanifah, and the Rising Ground Water Control Programme. In the field of economic development, the ADA prepared an economic development strategy for the city aimed at broadening the economic base by increasing the number of productive economic sectors.

¹⁹⁸ For more information on the ADA development see: "Arriyadh Development Authority... March of Development", 1990. Or "Arriyadh the City of the Future", pp. 79-84. Or Zahir Othman PhD thesis, pp. 129-135.

¹⁹⁹ See below (Chapter 7) for further comments on the historical development of the JPD.

²⁰⁰ King Fahd Expressway is the most important street in the city. It runs from the north to the south passing through the city centre. The construction of the project started in 1987 and was completed by 1990.

²⁰¹ The city of Addiriyah located around 20 km to the north-west of the centre of Arriyadh. Its apogee was between 1745 until 1818 when it was the capital of the First Saudi State. It is not the intention of this study to cover the architectural heritage of this important town. For more details about the city see: Facey, W., "Dir'iyah and the First Saudi State". London: Stacey International, 1997. This fully illustrated publication demonstrates that while the technology and construction practices used in Addiriyah were continued in the city of Arriyadh this subsequent development was distinctly different in style from the city built in the mid eighteenth century and abandoned in 1818 after the disastrous war with the armies of Mohammed Ali. The distinct difference in style between the earlier Addiriyah and the later Arriyadh may have derived from the arrival of builders from the different cities in Najd region i.e. Borayidah, Onaizah, and Hail. An example of such difference can be seen in figures 31.9 and 3.20 in comparison with Addiriyah palaces seen in Facey's book.

4.14. New Trends in Architectural Style

A number of projects executed in the city had no relation whatsoever to their neighbouring buildings in terms of architectural style, colour, and building height, creating visual incoherence. Not until the 1980s did Government and individuals start to question architectural quality. Thereafter, individual examples began to prove that it is possible to create an architectural style that harmonises with needs, climate, nature, and economy.

The following are some of the projects that had a strong influence on raising public awareness and showing our ability to develop a built environment with a powerful link to the people and to the region.

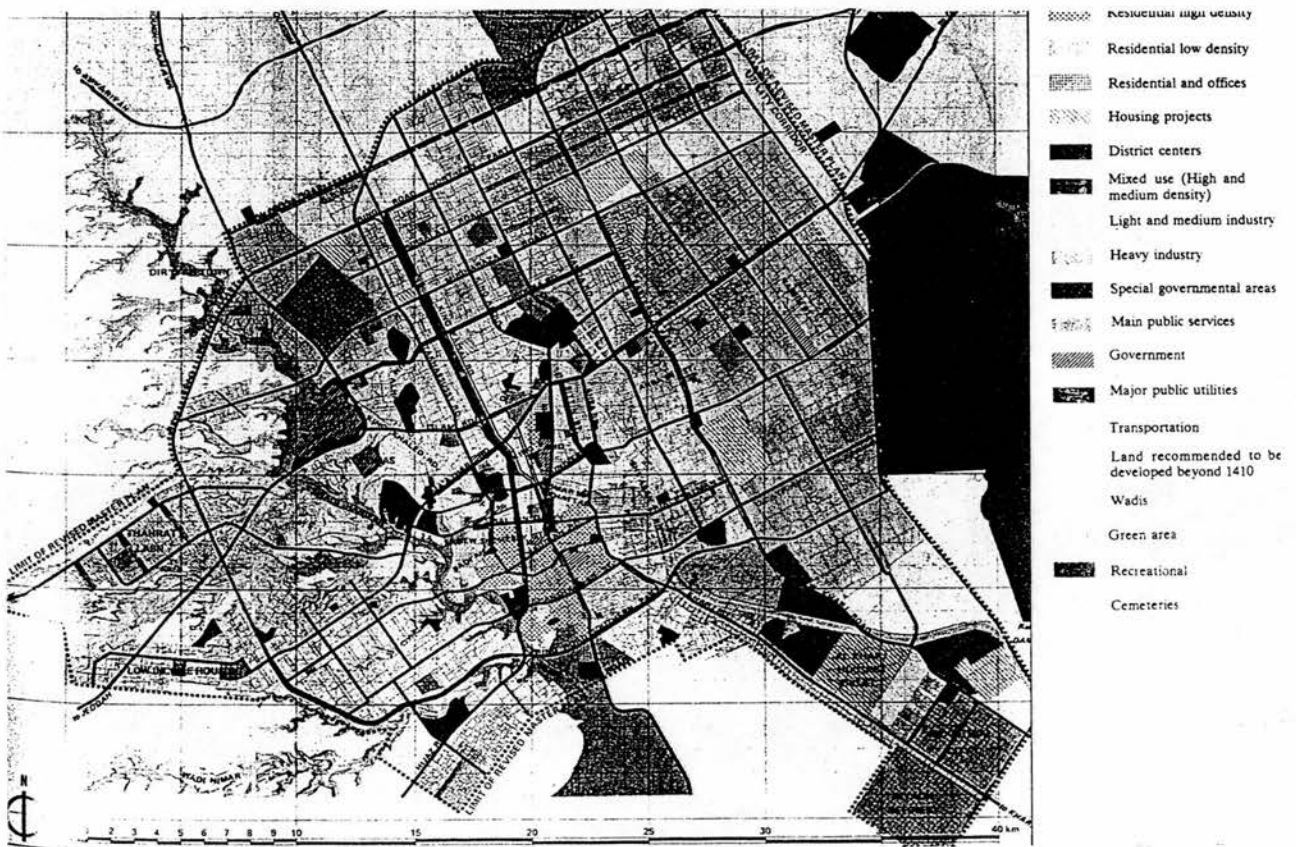


Figure 4.28: Propose land use by SCET-International-SEEDS.
(Source: Daghistani, *ibid.*, p. 169)

The reason for choosing these two examples (Ministry of Foreign Affairs Staff Housing Project and The Diplomatic Quarter Project) are:

- Each project can be seen as one entity completely developed using one set of regulations and building codes which integrate the end product creating a coherent whole.

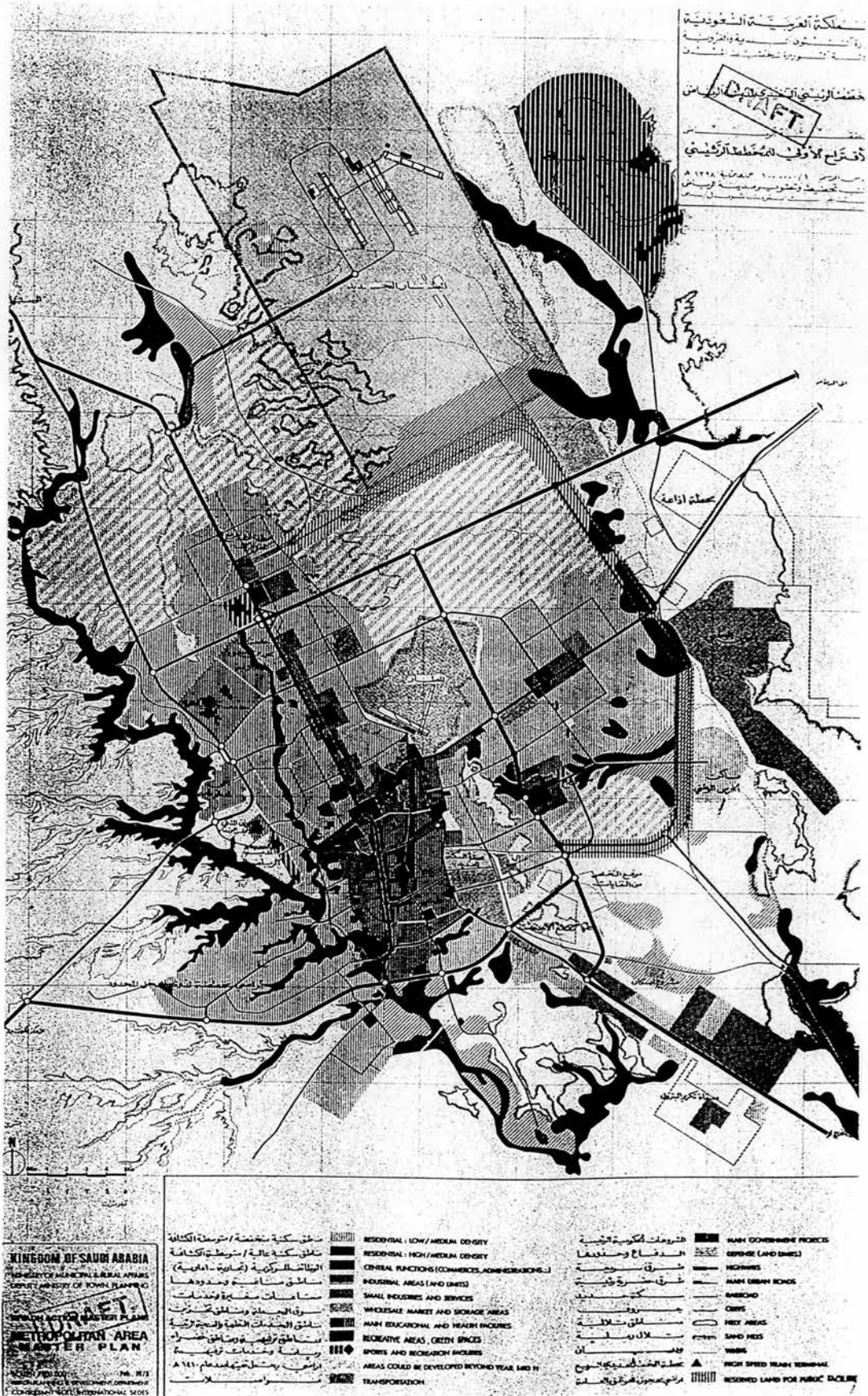


Figure 4.29: The Revised Master Plan by SCET-International-SEEDS. (Source: *ibid.*, p. 168.)

- The use of one set of regulations and building codes creates a diversity within unity, meaning a diversity of building forms and designs. It also creates an identified coherent whole, showing in building colour (matching the natural colour of the area), textures, openings (which respond to climatic and social needs), heights, and the landscape (using a local vegetation).

-Both projects were sponsored by Government Agencies, showing government orientation towards new urban and architectural development.

- Both developments cover the entire range of modern requirements- small houses, big villas, apartment buildings, markets, schools, clinics, sports centres, banks, offices, fire stations, government buildings, embassies, public open spaces, and landscape.

4.14.1. Ministry of Foreign Affairs Staff Housing Project (MOFASHP)

The MOFASHP Master Plan was a result of a team effort: urban planners, designers, architects, landscape architects, and engineers, in which the following consulting companies participated: Speerplan Regional- und Stadtplaner GmbH of Frankfurt, and CRS Design Association Inc. Architects, Planners, Engineers of Houston, together with their sub-contractor.

The following goals and objectives are taken from MOFASHP Master Plan Report submitted to the High Executive Committee-Bureau of the Project of Ministry of Foreign Affairs and Diplomatic Quarter in 1979:

- To develop a residential community to house all staff members and their families brought from Jeddah;
- To redevelop a residential community responsive to the social and cultural needs of all staff members;
- To provide housing opportunities in the latitude required for the wide range of social profiles, household size and income levels that characterise the MFA staff population, present and prospective;
- To provide all necessary social, cultural, educational and recreational facilities needed for a community of this type and location, as well as public facilities and services;
- To make the housing and community facilities attractive for all social groups and for the community as whole to provide a sense of identity for each inhabitant;
- To recognise in the planning and development of the new community the development in the vicinity;

- To respond in the design of spaces and facilities to the specific environment into which they are to be built. This relates both to the cultural and climatic aspects of the setting;
- To plan the new community in such a manner that it can function from the outset, implying a level of self-sustainment, yet capable of change as the community grows and matures in the future; and
- To provide for a development that is sufficiently unique to create an image and identity; to fully exploit the attractions the site location offers for physical planning and design; to consider factors of economy in building, operation and maintenance.²⁰²

A 39 Hectare site located 8 miles to the north of the city centre was designated for the MOFASHP. The project was completed in 1983. It was designed to accommodate 3,600 inhabitants in 612 residential units consisting of villas and multi storey apartment buildings, plus all public services and activities i.e. schools, mosques, shopping centre, ...etc. (figures: 4.30 & 4.31)

One of the principal goals and objectives governing the design process was to *“take care in the design of the complex that it would be both unique and distinguished, bringing out the cultural and environmental characteristics of the urban development plans”*²⁰³ (figure 4.32) The principal social and climatic points were implemented in the scheme by ensuring *“that the buildings would be constructed in groups which would be interconnected by well-landscaped courtyards and squares full of trees and plants. It was felt that this type of design would ensure the personal character of each individual house and at the same time provide adequate protection from the climatic conditions. These internal open spaces would also create an atmosphere for fostering good social relation among neighbours and thus strengthen good neighbourliness among the residents of the complex.”*²⁰⁴ (figure 4.33)

²⁰² Speerplan Regional ..., “Ministry of Foreign Affairs Staff Housing Project, a report submitted to the High Executive Committee-Bureau for the Project of Ministry of Foreigner Affairs and Diplomatic Quarter”, Riyadh, 1979, p. 1-1.

²⁰³ “Riyadh the City of the Future”, p. 470.

²⁰⁴ ibid., p. 470.

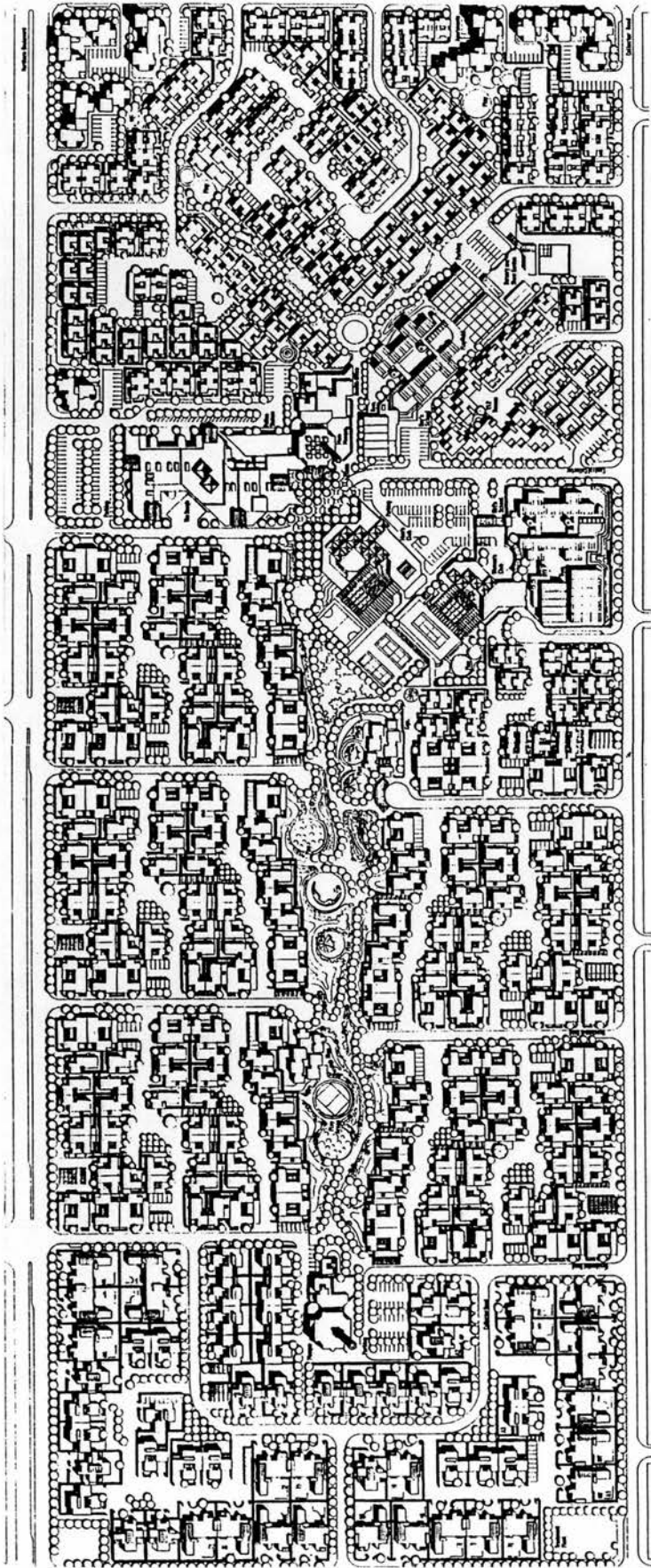


Figure 4.30: The MOFASHP site plan.
(Source: Speerplan ... "Ministry of Foreigner Affairs Staff...", Riyadh, 1979, p. 4-31.)

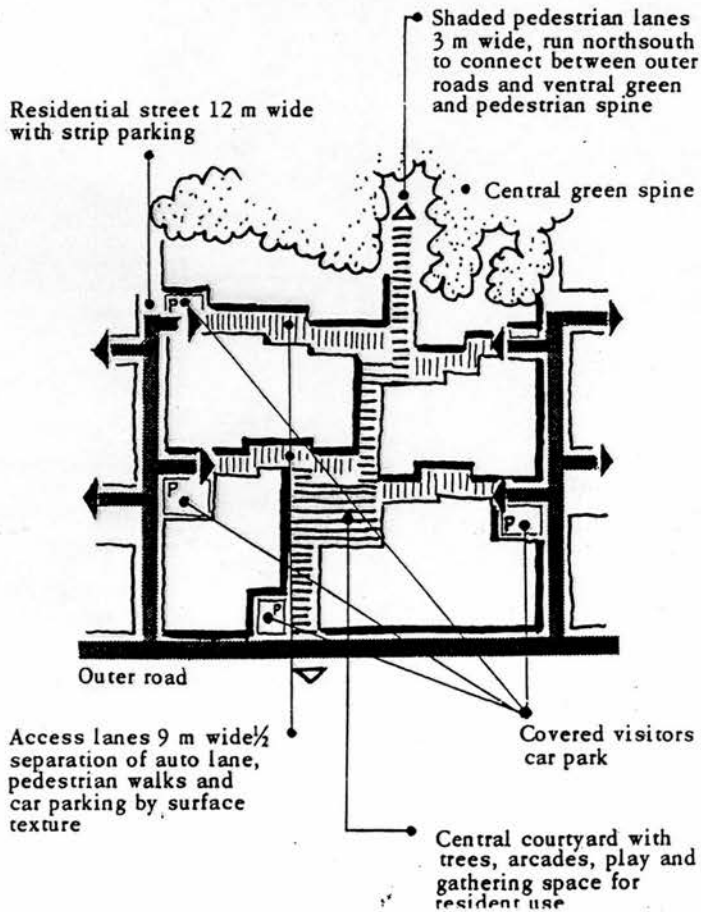
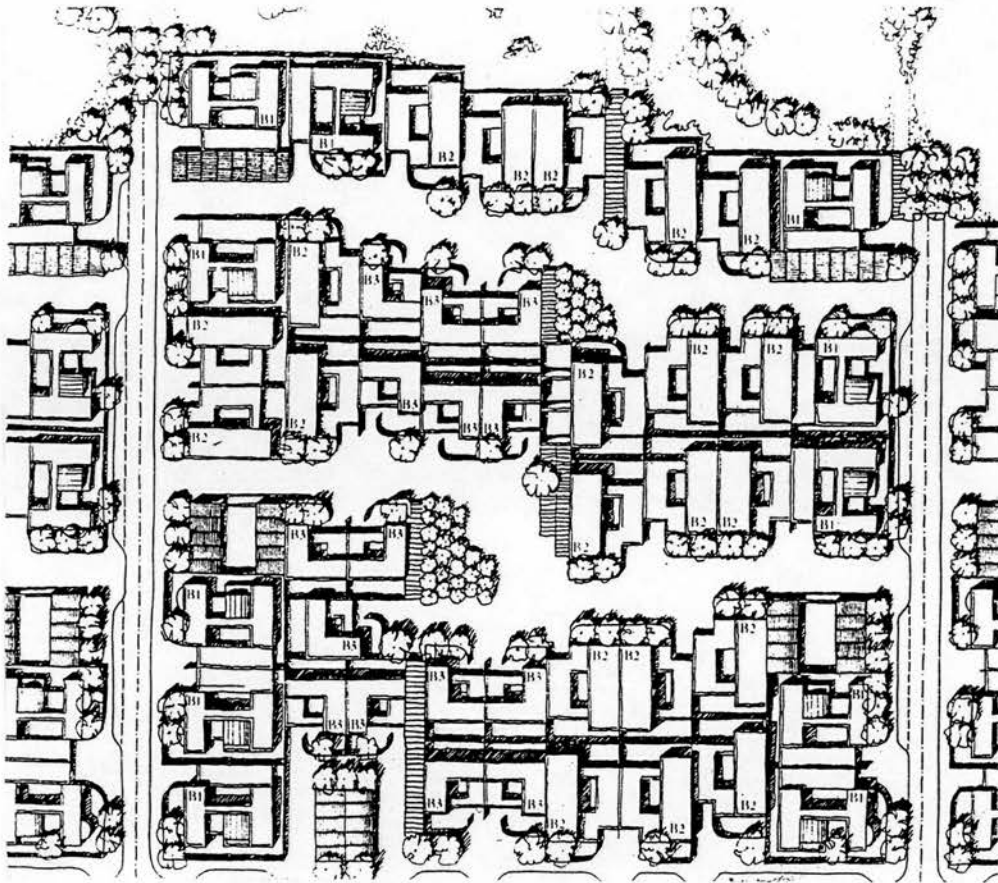


Figure 4.31: Middle density housing cluster & detail scheme for the circulation analysis. (Source: *ibid.*, pp. 4-32 & 4-33)



Figure 4.32: View of the MOFASHP residential area.
(Source: "Riyadh the City of the Future", ibid., p. 476)

The architectural richness of this project was complemented by the chosen building colour (responding to the surrounding natural colour and tolerant of the effect of dust), heights, forms (providing maximum privacy for residents), texture, minimal openings (to deal with the natural environment: sun and dust), and the landscape. The urban richness was seen in the integration of pedestrian and vehicular movement, parking spaces, pedestrian paths along the length of the project, the playground areas, and the centrality and convenience of the public places.

This project was a step towards proving to people that it is possible to build residential units using up-to-date modern technology, which do have a strong architectural quality -a quality that identifies with and distinguishes our built environment. Furthermore, this project proves that in order to have a unique built environment we can develop our planning and design regulations to achieve a level of urban quality of which we can be proud.

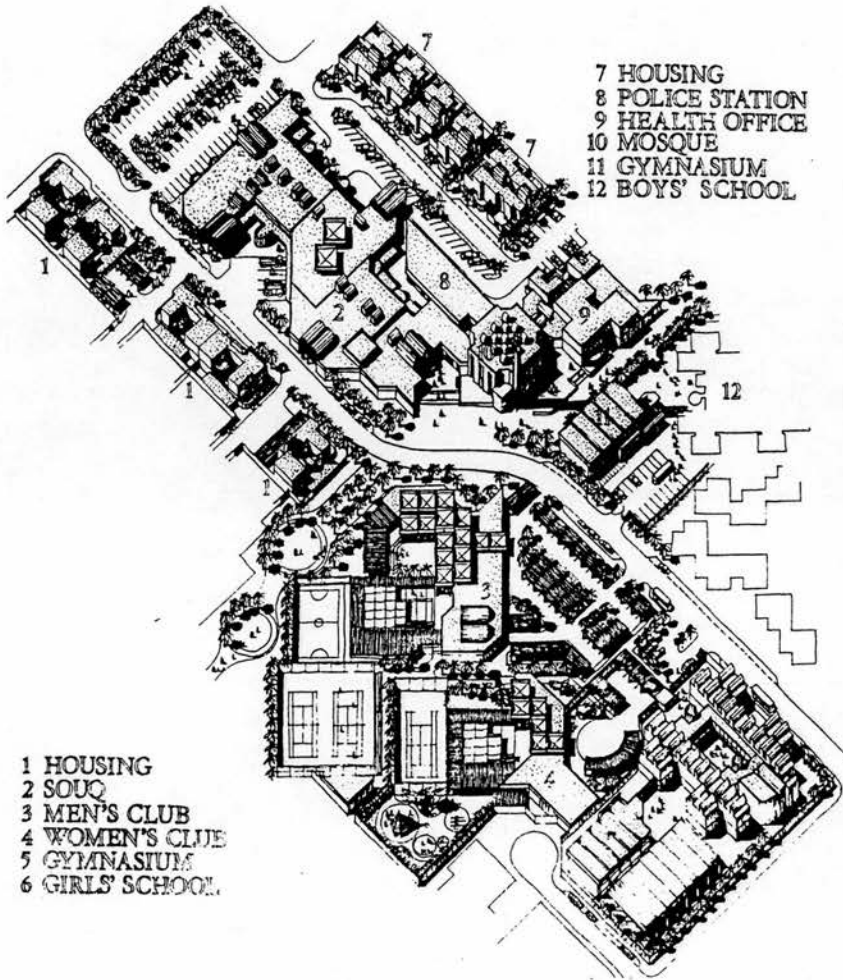


Figure 4.33: Axonometric drawing of the central area.
(Source: Speerplan, *ibid.*, p. 4-40)

4.14.2. The Diplomatic Quarter (DQ)

The DQ Master Plan was also the result of a team effort: urban planners, designers, architects, landscape architects, and engineers. The following consulting companies participated in this project: Rhein-Ruhr Ingenieurgesellschaft GmbH, Speerplan GmbH, and BBW & P Landschaftsarchitekten GmbH.

Work at the DQ started in 1977 with the preparation of the preliminary studies and the Master Plan. The Diplomatic missions were to be transferred from Jeddah by 1983. This action was delayed until 1987 when Diplomatic missions started to settle in the DQ.²⁰⁵

The location of the project on the Eastern bank of Wadi Hanifa with its distinct land contours inspired the designers to incorporate these elements into the design of the project. This respect for the topography created a site plan incorporated within the surrounding natural setting, adding another factor of distinction to the built

²⁰⁵ For more information on this issue see: Othman, Z., "Development of City ...", PhD. Thesis, 1992, p. 235.

environment by its respect for the natural environment of the region. This aspect was emphasised: *“The existing land-form of the plateau site proved to be most influential in shaping the form of the plan. The central spine on which the embassies and the core of the district are located follows the contours of the site, staying on flat terrain for the major urban land uses and main circulation routes.”*²⁰⁶

The main concept of the quarter is based on two parallel roads linking the project with the city (figure 4.34); the first is King Khalid expressway on the eastern boundary; the other on the southern boundary connects the project with Mecca expressway. Between these two roads is a central multipurpose area *“designed as a strong pole of public and community life and a true focus for the entire community, attractive also to the surrounding city population, which feature a dense mix of uses, i.e. offices, embassy buildings, cultural, administrative, educational, commercial and recreation facilities. It is placed in the middle of the site where the slopes are gentle and the land generally flat.”*²⁰⁷ (figure 4.35)

Surrounding the central area are five residential neighbourhoods, accessible by circular collector roads. From them other small roads lead to cul-de-sacs. This design minimises the entry of traffic into the residential areas providing safety and privacy for residents.



Figure 4.34: DQ Master Plan.

(Source: ADA, *“Arriyadh Development Authority: March of Development”*, 1990, p. 54)

²⁰⁶ Beech Group Consultant, *“Riyadh Diplomatic Quarter: Central Area Development: site brief”*, p. 6.

²⁰⁷ *ibid.*, p. 6.

The DQ authority maintained architectural quality through the enforcement of strict architectural design recommendations handed to the different architects who were assigned by the different diplomatic missions the task of designing the individual units. These recommendations are²⁰⁸:

1) *Architectural styling should avoid elements alien to this region. Northern Islamic facade styles should be as much avoided as purely Western elements of facade design.*

2) *Exterior building design must respond effectively to climatic factors such as heat, aridity, dust and glare. For example, the following specific measures are recommended:*

- *Avoid large external openings in the form of windows and loggias;*
- *Shade windows with screens, overhangs and recesses;*
- *Proportion outside openings vertically with a width of no more than half the height of openings;*
- *Make extensive use of pergolas, plants and screen walls to protect facades from exposure to the sun;*
- *Choose light colours for outside walls and facades, and employ a textured finish to avoid excessive glare through reflections;*
- *Design external walls of buildings to provide good insulation from both heat and cold; and*
- *Use flat (as opposed to pitched) roofs.*

3) *Design open spaces with climatic constraints in mind and with particular regard to the scarcity of irrigation water. For example, it is recommended that Diplomatic Missions encourage their design teams to:*

- *Seek adaptive landscape designs which keep water and maintenance needs low;*
- *Use tree planting widely, since trees achieve a maximum shading and micro-climatic effect while requiring only minimal irrigation water;*
- *Keep lawns small and use other form of planting to create a cool, well-landscaped atmosphere for embassy buildings, and particularly at entrance areas;*
- *Minimise asphaltting and tiling of surface areas in order to counter heat radiation.*

4) *A range of recommended plants is described in a Plant Catalogue which is available from the Bureau on request.*²⁰⁹

²⁰⁸ These architectural design recommendations were taken from "Riyadh Diplomatic Quarter-Design Brief: Embassy E38/R", no page number.

²⁰⁹ "Riyadh Diplomatic Quarter-Design Brief: Embassy E38/R", no page number.

Moreover, these guidelines were strictly followed up by the Bureau to ensure their implementation. Individual buildings were designed differently from the others, but the general effect creates a homogeneous architectural pattern making the whole DQ to be seen as one unit. This balance was seen in the unification of: building colour, building texture, minimisation of openings in facades, handling of solid and void of building form, building height, and the landscape²¹⁰.

However, some individual buildings were designed differently from the rest of the development and by using different colour scheme they appear to contrast the homogeneity of the development. For example the design of the culture centre at the DQ was different in term of colour and void treatment resulting in a unique individual building, but it does not blend with the rest of the development (figure 4.35). Although the architect tried to incorporate a small triangular openings in the facade to match the neighbouring buildings, but the building colour and the facade language were much stronger leading to the feeling that this building is out of context. Anyhow, the DQ was an excellent start in raising public awareness, showing them how effective modern planning and design could be improved in the Najd region.

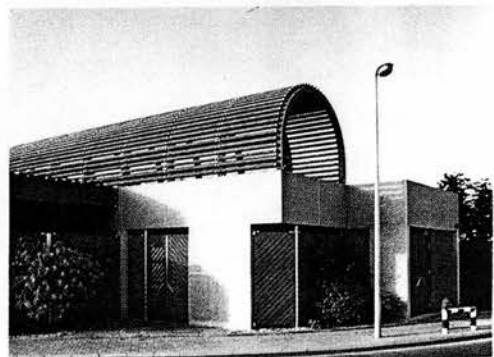


Figure 4.35: Examples of buildings in the DQ. Notice the contrast in colour and facade treatment, making the buildings appear out of balance to the built environment. (Source: *ibid.*, p. 58)

²¹⁰ The extensive usage of palm trees throughout the whole DQ creates a visual link between the different parts of the project. It also breaks the rigidity of blank buildings surfaces, creating a gradual visual transmission from the solid floor surfaces into the skyline.

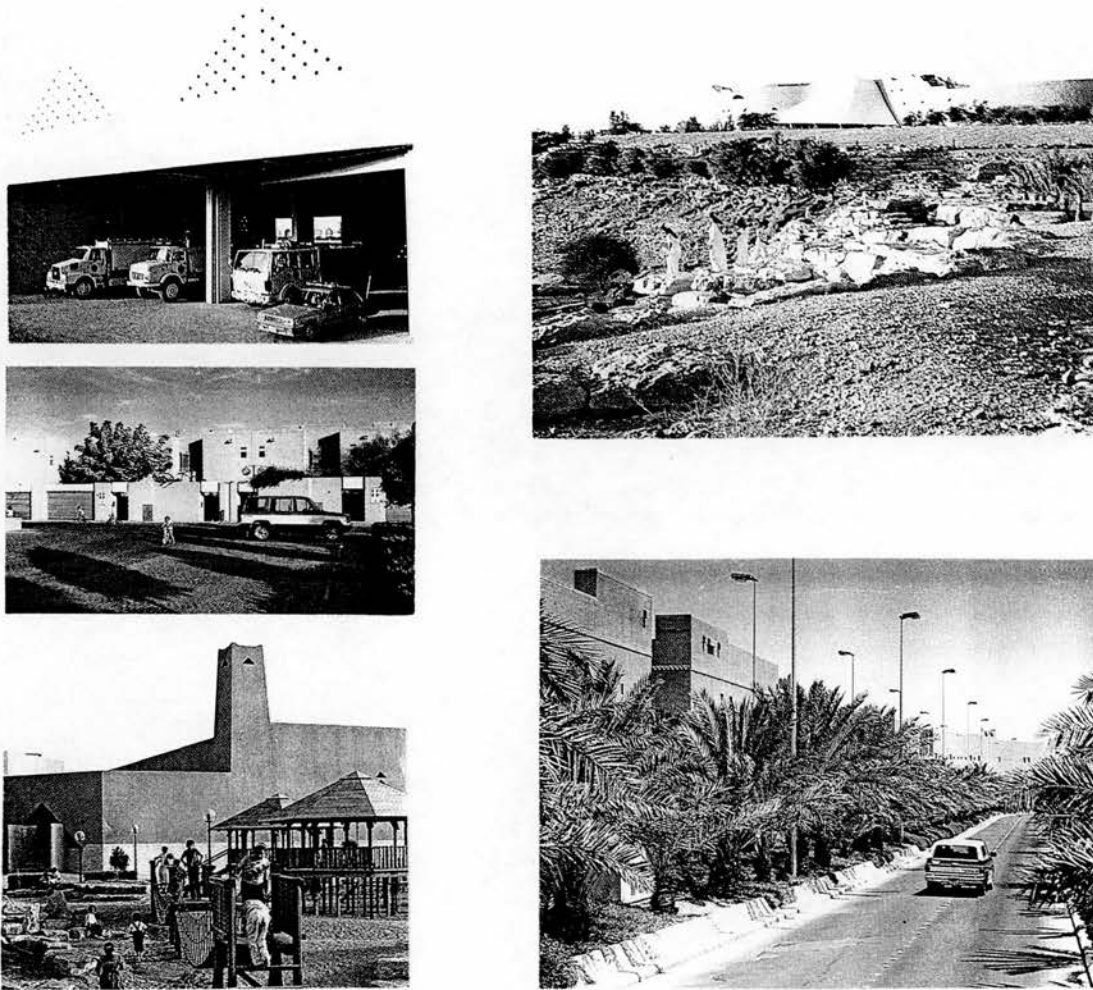


Figure 4.36: Different views of the DQ, together giving an overall picture of the project, showing its integration with natural settings and landscape. (Source: *ibid.*, pp. 54-57).

4.14.2.1 The DQ Central Area

The vibrating heart of the DQ is its central area- a strip of buildings covering an area 1200m long and 150m in width (figure 4.38) housing the main public buildings and services for the DQ and the city.

The central area was designed by Beeah Group and the design theme of the central area was based on features used in traditional Najdi cities (gates, small streets, saḥaat, mosques, Souq, and buildings).²¹¹ The design of a hard edge of buildings along both sides of the central area (figure 4.37) promotes the sharp line boundary between the public spaces and, the semi-public and private spaces. It is also another distinguishing feature in the traditional building pattern of old Arriyadh. The urban pattern consisted of a continuous row of buildings with a series of open spaces plazas and landscape areas providing public spaces, and courtyards which provide light and ventilation to the buildings' interiors.

²¹¹ See Chapter 3.

The Centre of the DQ central area development occupies an area of 26,000 sq.m. and comprises the Jamie Mosque, residence of the Imam and Mouthen of the mosque, library, government service complex, plaza (*Saḥat Alkindi*)(figure 4.39), Souq, parking spaces, and the central facilities (figure 4.40).

The open spaces are planned in a harmonious hierarchy in which the *Saḥat Alkindi* is the largest open space for public gathering. Surrounding the *saḥa* are the project's main functional buildings, all of which have direct access to it; the main mosque, considered to be the focal point of the project, emphasised by the distinguishing size and style of its minarets; two large gates linking the project with the other activities in the DQ; *Souq* arcade; and the Arriyadh Development Authority office building. (figure 4.41)

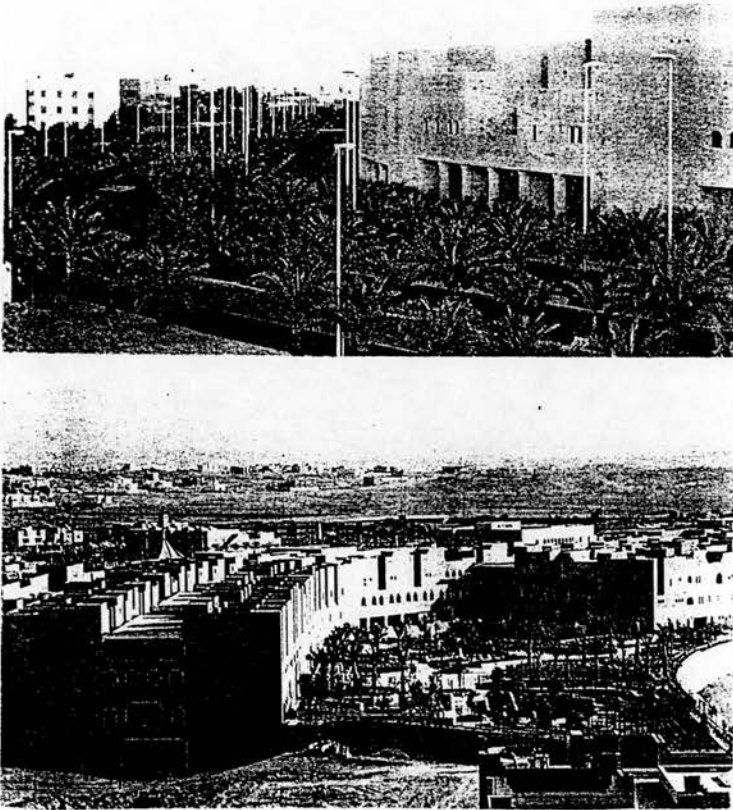


Figure 4.37: View of the central area from the main boulevard showing the hard line of the building facade along the boulevard.

(Source: "Beeah- Architectural Experiment", Dammam, Al-Wafa printing press, 1989, p. 30)

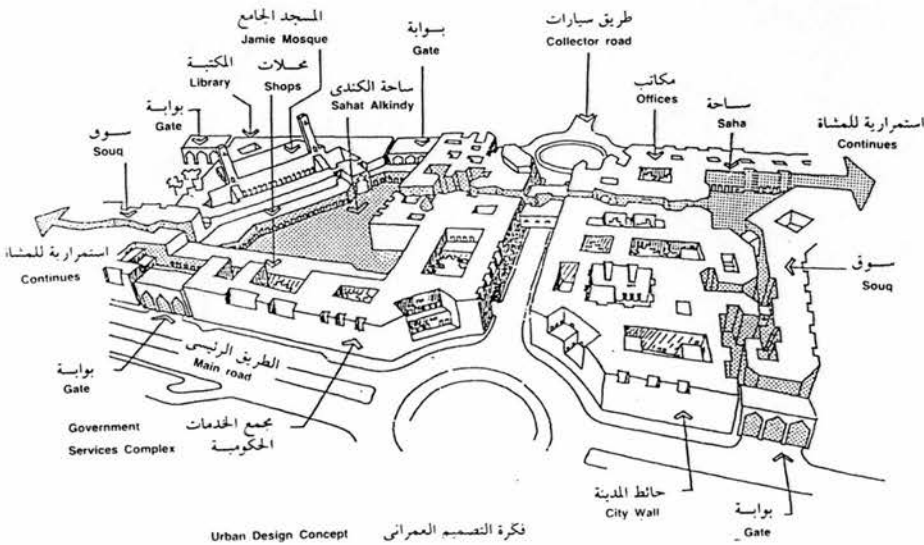
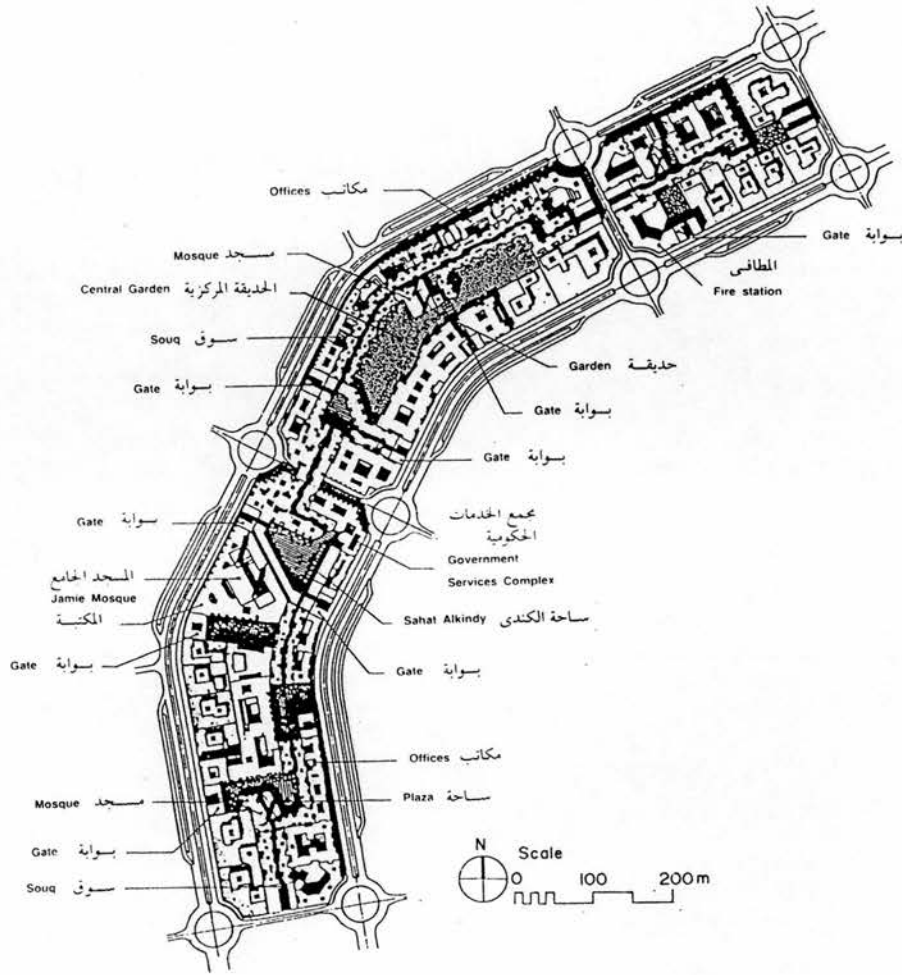


Figure 4.38: The DQ central area site plan & urban design concept. (Source: *ibid.*, p. 25)

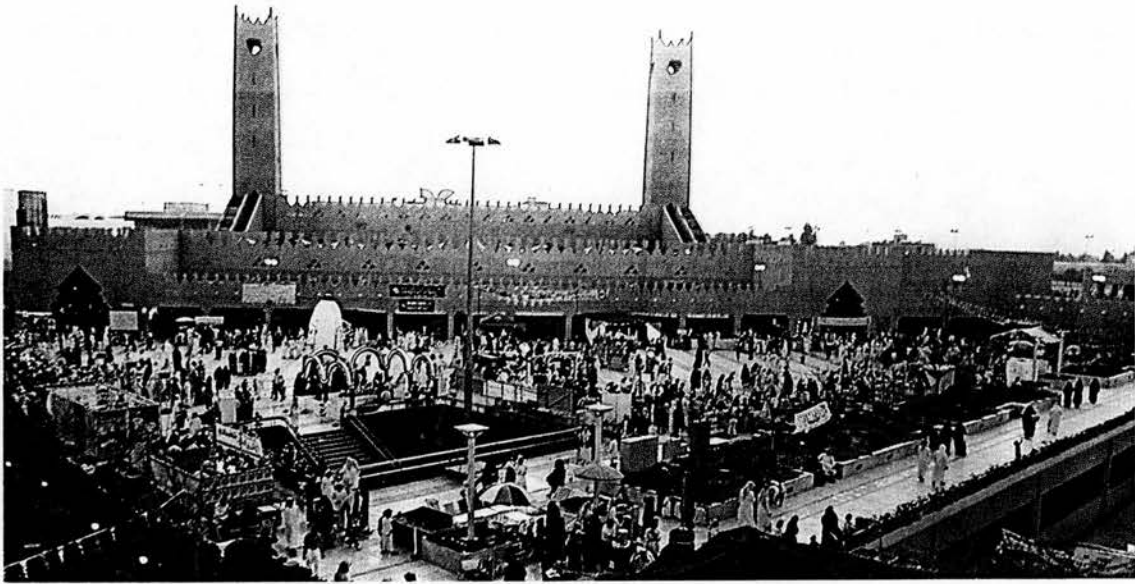


Figure 4.39: View of Sahat Alkindi and the main mosque in the background.
(Source: *ibid.*, p. 34)

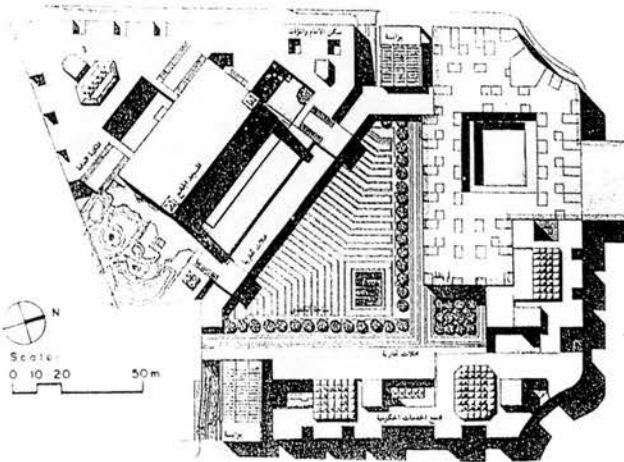
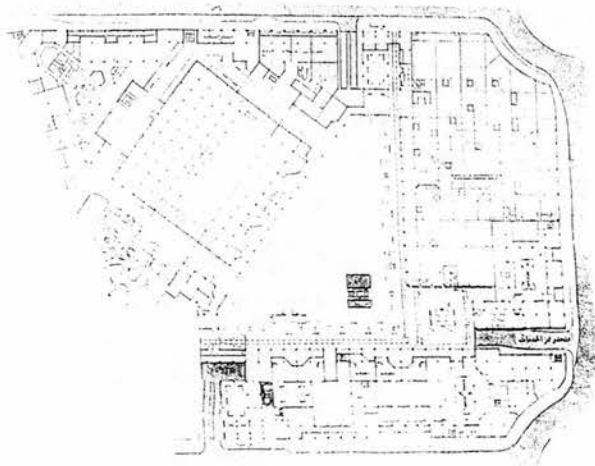


Figure 4.40: The site plan and the ground floor plan of the central area-centre.
(Source: *ibid.*, p. 33)

The location of the plaza as a main gathering place for people, surrounded by a covered arcade to protect shoppers from the climate as well the partially covered corridors that link up the different parts of the project. The location of the mosque identifies and assures the importance of this element in the urban context. It was shown through the integration of the plaza with the rest of the urban elements, making the longest angle of the triangular plaza as the mosque wall accentuated by the mosque entrance. Moreover, on the other two sides of the triangle there are the 4-storey office buildings which mark the urban space of the plaza as well as helping to cast some shade to protect people from the sun.



Figure 4.41: View of the pedestrian walking spaces along the Souq.
(Source: *ibid.*, p. 29)

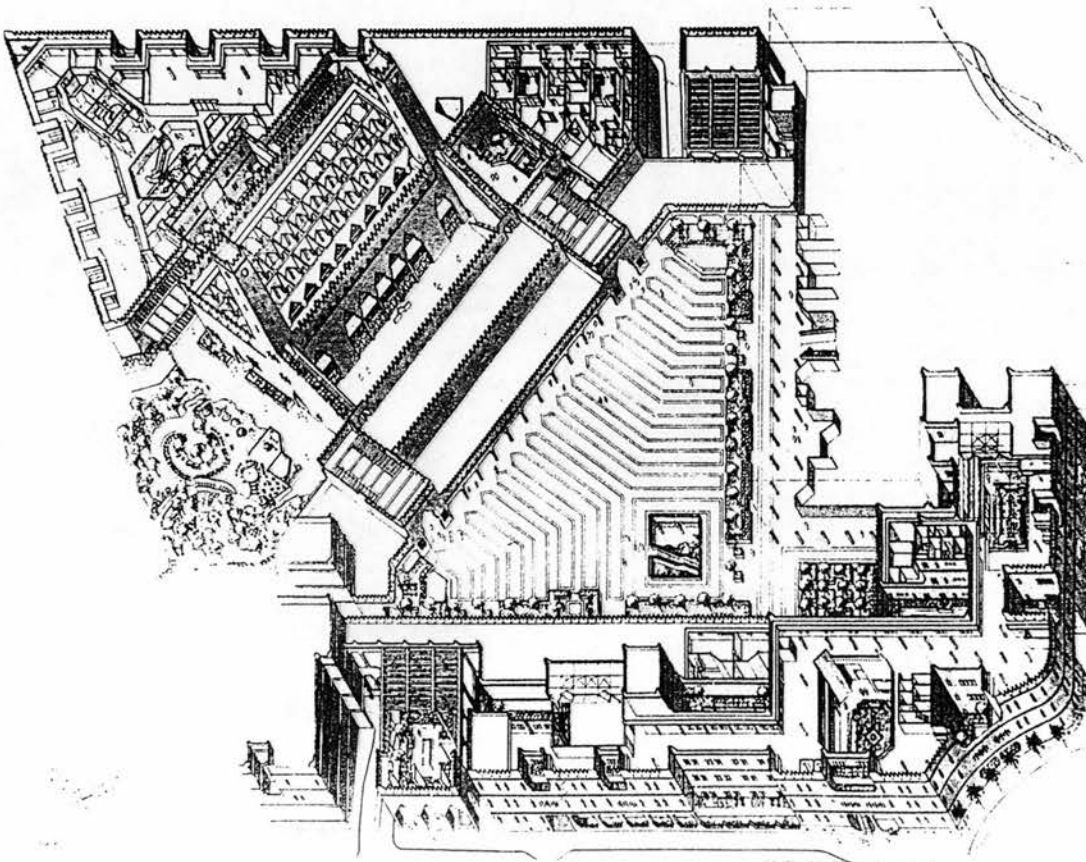


Figure 4.42: Axonometry of the central area commercial centre.
(Source: *ibid.*, p. 35)

The theme of the traditional Souq was seen in the design of the new *Souq*, which has an unobstructed central pedestrian spine. Here the pedestrians have the option on walking under the arcade or through the partially covered open spaces (figure 4.41) with shops on both sides interrupted by building entrances.

The designers aimed at creating a micro climate to minimise climatic effects and to cut down on running costs. Their comment was: “*The buildings are generally designed with oasis like central atriums and a number of open courts and recessed terraces. The buildings were enclosed with insulated walls that had small openings to the outside and large openings to the open courts and terraces. These create a micro climate that is cooler in summer and warmer in winter in the same time maintains a pleasant variety of visual environments for the occupants.*”²¹² (figure 4.43)

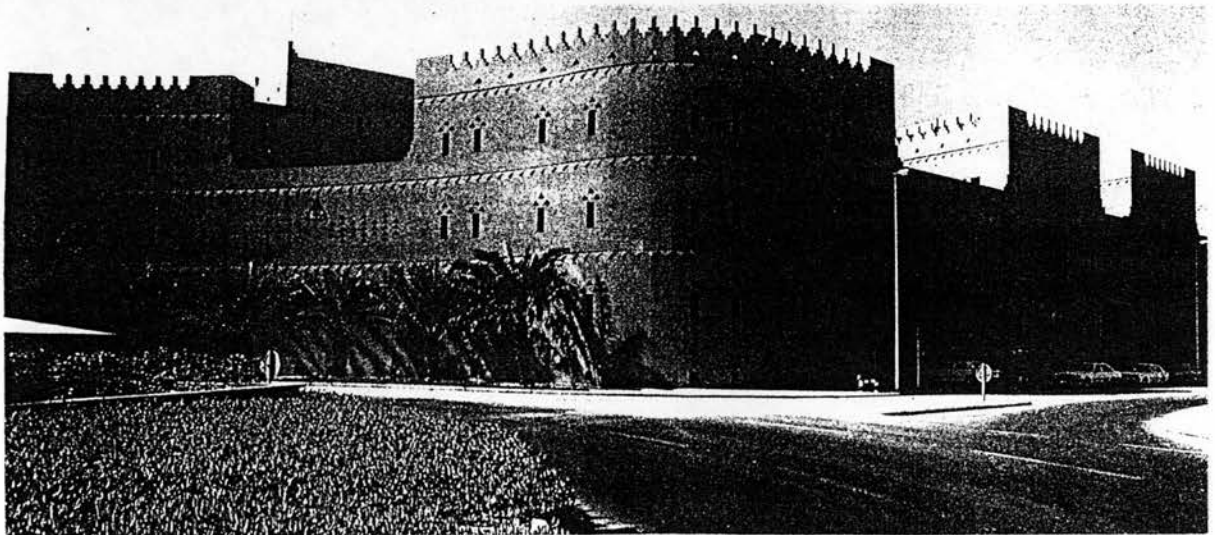
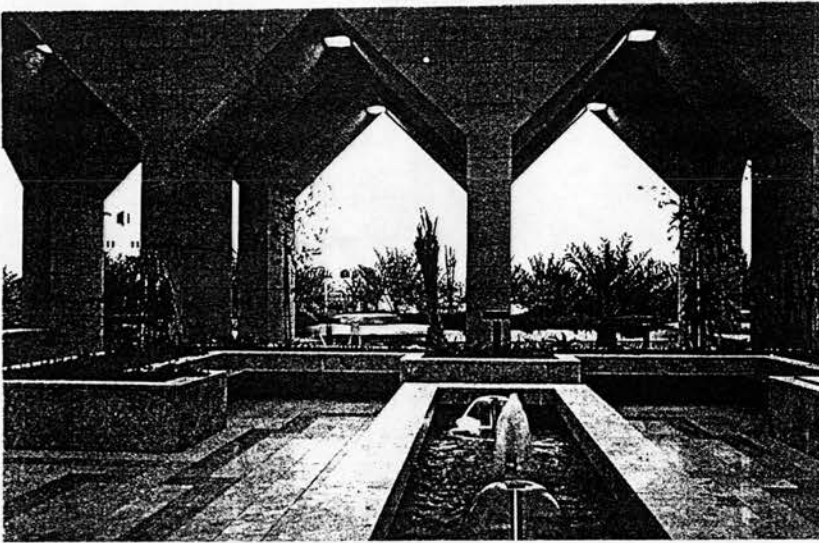


Figure 4.43: Two figures showing: (top) the ADA buildings from the main boulevard & One of the main gates (bottom).
(Source: *ibid.*, p. 36)

²¹² Beeah, “Beeah- Architectural Experiment”, Al-Wafa Printing Press, Dammam, 1989, p. 36.

The uninterrupted design of the Souq's paths and arcades allow people to enjoy the pleasure of mingling within different parts of the project without being in direct contact with vehicles or being forced to use pedestrian crossings. The designer located all parking spaces and services at lower-ground level. The designer also tried to develop a system of architectural signs and details to link the project visually to the region. His attempt was apparent in the detailing of walls, pavements, doors decorations, and in the use of colour (figure 4.44).

The project is an excellent step towards identifying our built environment, and linking it with the regional quality of Najd. The project has won two important prizes; the first was an Aga Khan Award for Architecture in 1989; and the second was in the year 1990 when it won the Arab Town Organisations -Architectural Project Award. The Jury's citation was:

The project generally, in its aspects and internal components, represents a super quality architectural model which has acquired the aspects of architectural heritage of the Najd region as well as the outcome of modern technology.

The design is based on the use of traditional elements of an Arabic Islamic city according to its logical sequence. The use of local architectural patterns and vocational arts to determine the principles of the plan and its details is the aspect which ensures the identity of the place.

The buildings of this project form an integrated, synchronised block. There are yards and open areas, in addition to a large, central square surrounded by pergolas. Beside the two main gates, which form a distinguished access, the project has a mosque which has two minarets indicating the direction to Makkah.²¹³

The departure of this project lay in its urban configuration, and the architectural pattern and details of the individual buildings, although the blind copying of some architectural details i.e. the triangular openings and the decorative triangular bands from traditional Najdi architecture, was not in itself necessarily the best way to link the project with the region. However, the project was a start in showing local architects that there are ways of building new projects that would definitely provide the sense of belonging to the Najd.

²¹³ *Albenaa* no. 52, February-March 1990, p. 6.

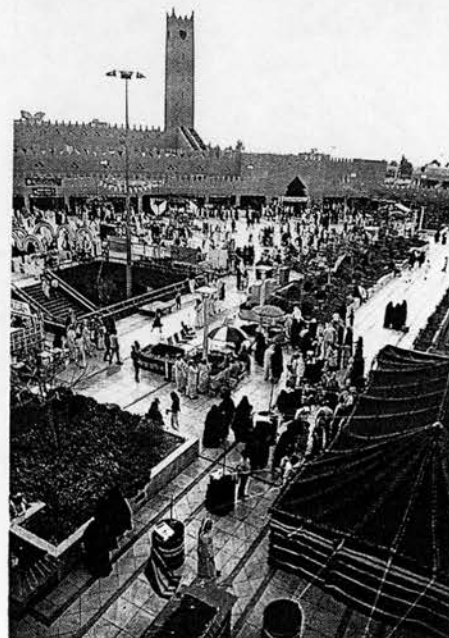
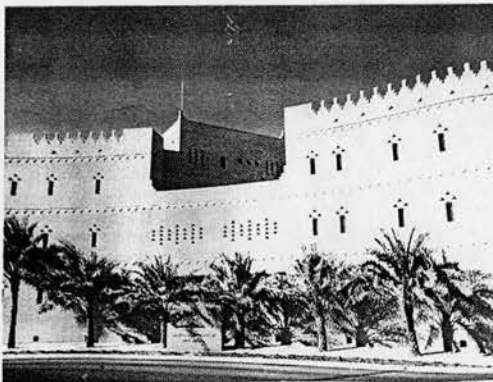
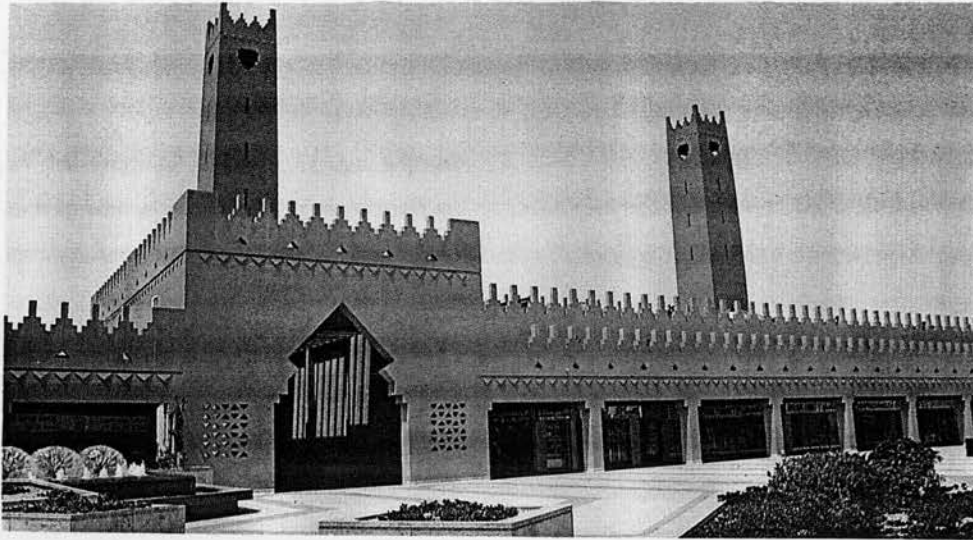


Figure 4.44: Different views of the DQ development.
(Source: *ibid.*, pp. 40-42)

*The Principles for Producing
an Appropriate Architecture:*



Chapters Three and Four demonstrate the coherence and distinctiveness of the built environment of the city of Arriyadh at the beginning of this Century. Then with the increase in national wealth, external cultural influences, the limitation of local experts, and with the accessibility of modern building materials in the town the architecture of the city started to lose its architectural identity.

In order to have an up to date identifiable built environment, the city of Arriyadh has to adopt new planning and design guidelines. These guidelines should be extracted from natural principles within the built environment, the urban form, the architectural form, and the architectural details of the buildings. All principles should be integrated and linked together creating a distinct built environment that respects the surrounding natural environment, the social norms and ethics, the economic status, and the climate. A number of writers support these arguments. Their ideas and theories have a particular relevance to my question: *How do we produce an appropriate architecture for the city?* These writers are Christian Norberg-Schulz, Pierre von Meiss, and Kenneth Frampton.

The next chapter will be devoted to extracting from these writings a set of criteria that may be used as guidelines to judge existing architecture, and hopefully as guidelines for future architectural development.

However, the principles for creating a coherent and identifiable built environment should also cover different architectural aspects such as: the whole and the parts (repetition and similarity); the architectural coherence of the city; the issue of privacy, the architectural character; the hierarchy of built environment; integrated masses and volumes; colour; texture; building materials, texture, technology; and the quality of openings (solid and void).

It is important to mention that the author of this thesis has no intention of making these principles and criteria universal, though clearly some of these criteria are universal.

In order to address the essence of this study we shall start by defining its central term: *What is the purpose of architecture?* Its basic components must then be comprehensively examined, and finally, the characteristics of appropriate architecture, in order to produce an authentic built environment.

5.1. The Purpose of Architecture

In his first book *Intentions in Architecture*²¹⁴ Norberg-Schulz interpreted the purposes of architecture as being both practical (or instrumental) and artistic in nature. Architecture makes a system of varied polarities which comprise our cultural objects or values. But the process is also artistic because it manifests *new* objects which act as intermediaries between the maker and society. Architecture, therefore, is the realisation of practical efforts and needs a system of symbols. This fusion of practical means with an artistic end shows that the purpose of architecture includes cognitive and evaluative features.²¹⁵

Norberg-Schulz expands on the idea of architecture as a form of activity. It is synthetic and adaptive to the form of life as a whole. The adaptivity of its nature does not require every work to relate to the entire output, but rather to play its part in the wholesale concretisation²¹⁶ which is our architectural system. Such original concretisation does not imitate the past work, or break radically from its tradition. Rather, the old and the new are related through dependence upon the underlying, ever -developing symbol-systems.²¹⁷ Norberg-Schulz also stresses that architecture is a form of production, the making of places, the creation of space, and the embodiment of character. These created places house human institutions and thus form part of a typology. A type presents in other words the spatial nature of a basic life-situation- therefore, it is an abstraction which becomes 'concretised' as a particular room or single building. When such concretisation develops into a complete system, that is a city, or the place of 'assembled institutions' as Kahn puts it.²¹⁸

5.2. The Basic Architectural Components

In a paper entitled *Kahn, Heidegger and the Language of Architecture*²¹⁹, Norberg-Schulz attempts to clarify the basic architectural structural components, 'topology', 'morphology', and 'typology'. His analysis aims at understanding the different architectural components.

²¹⁴ Norberg-Schulz, C. "Intentions in Architecture", Oslo: Universitetsforlaget, 1966.

²¹⁵ *ibid.*, pp. 187-188.

²¹⁶ For a definition of 'concretised' see this chapter, part: 5.3.8.2. and for more details on the concept of 'concretization' see Norberg-Schulz, C., "Intention in Architecture", 1963, pp. 61ff.

²¹⁷ *ibid.*, p. 188.

²¹⁸ Norberg-Schulz, C., "Towards an Authentic Architecture", "The presence of the Past. First International Exhibition of Architecture: Venice Biennale", London: Academy Editions, 1980, p. 26.

²¹⁹ Norberg-Schulz, C., "Kahn, Heidegger and the language of architecture", Oppositions 18, Cambridge: MIT Press, 1979.

Topology is the quality of spatial order, and is concretised within the single work as 'spatial organisation'. The basic elements of its structure are identified as 'centre' and 'path': "*The center represents to man what is known in contrast to the unknown and somewhat frightening world around him. It is the point where he acquires position as a being in space, the point where he 'lingers' and 'lives' in space.*"²²⁰ The path is the extension of what is known into what is practised: "*From the center paths lead into the environment. The horizontal directions represent man's concrete world of action. Structurally all horizontal directions are equal and form a plane of infinite extension. The vertical, however, has always been considered the sacred dimension of space. It represents a 'path' towards a reality which may be 'higher' or 'lower' than daily life, a reality which conquers gravity, that is, earthly existence, or succumbs to it.*"²²¹ The visionary structure is clear: "*the simplest model of man's existential space is, therefore, a horizontal plane pierced by a vertical axis.*"²²² With utmost clarity the quotation relates the topological structure to man's orientation, but we understand that this is not an 'empty' relationship, rather a qualitative concept.²²³

Morphology is the means of achieving form within architecture, and in the single work of architecture this is concretised as 'formal articulation'. The embodiment of a spatial organisation may be achieved in an infinite number of ways; thus, the various possibilities of organisation, with their limits, effect various changes in the character.²²⁴ In this context what we mean by concrete forms are the familiar building 'elements' of floor, wall, and roof, which combine to form the spatial boundaries. Heidegger notes that "*a boundary is not that at which something stops but, as the Greeks recognised, the boundary is that from which something begins its presencing.*"²²⁵ Morphology considers the question, how do buildings stand, rise, and open? Man's relationship to the earth is conveyed in the word 'stand', his relationship to the sky in the word 'rise', and his spatial interaction with the environment in the word 'open', his relationship between outside and inside. The interpretative creation of base and wall conveys this sense of standing, where a massive, concave base roots the building in the ground, while a contrary emphasis on the vertical lift tends to create a quality of freedom.²²⁶

²²⁰ *ibid.*, p. 42. (Originally published in Norberg-Schulz, C., "Existence, Space & Architecture", London: Studio Vista, 1971, p. 19.)

²²¹ *ibid.*, p. 42.

²²² *ibid.*

²²³ *ibid.*

²²⁴ *ibid.*

²²⁵ *ibid.*, pp. 42-43 (originally taken from: Heidegger, M., "The Origin of the Work of Art", p. 154.)

²²⁶ *ibid.*, p. 43.

Typology is involved with structuring the experience of Being, or in other words, the encounter between human beings, and in the single work this is concretised as a particular type of room or building intended to communicate a strong *image*. Kahn's concept of 'institution', elucidates this process through its definition of an institution. This is never an exclusive phenomenon, but always embodies a social convergence, a participation, a sharing. This institution is translated in terms of architecture into types of space, as Kahn suggests, "*when you create the realm of spaces you make the institution alive.*" He proceeds to list as examples the settlement, the street, the village green, the house, and the school - all of these, he asserts, 'want to be' a certain type of space. Similarly the city aims to be the place of 'assembled institution'. Through this sort of analysis of comprehensive, spatial totalities, typology stands apart from topology and morphology.²²⁷

Norberg-Schulz believes that in order to achieve a coherent *language of architecture*, we should combine the three structural components. Topology, morphology, and typology are interrelated and form a unified whole. For instance, the typology of spaces is focused on the order of centre and path, and any space, whether typical or particular, possesses a character. It is enlightening to consider these aspects individually for the purposes of analysis. Their distinction also enables the development of a theory of architecture on existential grounds. This is because the language of architecture possesses the capacity to translate the essence-lived reality - into existence built form.²²⁸

5.3. The Principles of an Appropriate Architecture

It is the degree of articulation of these different architectural components, as much as their sheer application, that lends quality to the architectural built environment. A complete phenomenon, consisting of several levels, with distinct yet inter-dependent dimensions, fully developed and co-ordinated, has a greater value than one which combines levels in an inarticulate and inharmonious way. What, therefore, are the characteristics of an appropriate architecture, and the manner of their affinity?

5.3.1. Cultural and Social Aspects

Social behaviour plays an important role in determining the traditional built form in the Najd. The structure of society is manifested through the implementation of the rules of religion. Certain social norms and principles have defined the form and the

²²⁷ *ibid.*, pp. 43-44.

²²⁸ *ibid.*, p. 44.

function of some of the architectural elements. That is clearly shown in the issue of privacy; it is the centre of the traditional built form, a part of being a suitable response to climate. The traditional courtyard house is carefully enclosed to maximise family privacy. Social practices in Saudi Arabia are different from any other people whether Arab, European, African, ... etc.²²⁹ So the implication of this main issue could be seen in Architecture. In the traditional city of Arriyadh, the built environment had a strong and identifiable architectural identity. Many foreign travellers in earlier times wrote about the uniqueness of Arriyadh architecture and urban form (see Chapter 3), whereas, in modern times, no single writer mentioned anything about the uniqueness of the built environment. The reason can be seen in the modern planned development which pays no respect to the long-lasting historical, social, and architectural form in the Najd.

There is a hierarchy in factors that create architecture. At the top of the list come social and cultural aspects, climate, topography, nature, economy and politics. Because of the social differences from the rest of the world, architecture in Saudi Arabia should be different. Also, within Saudi Arabia itself, there are five regions, each having its own criteria (climate, topography, nature, social norms). Because these are major differences they incite changes in architecture just as they do in the traditional built environment.

5.3.1.1. The Issue of Privacy

Privacy is one of the most important issues in the Islamic world. It springs from Islamic law and *sharièh* because of respect for people's private lives. Therefore, the traditional built environment was centred around satisfying this issue. This is clearly shown in the design of the main unit of the city -the family house- which takes on a clearly defined form in hot arid areas, such as Najd region, the courtyard house with sharp division between family and guest quarters; and in hot humid areas, for instance the Jeddah area, stone tower units with large windows covered with wooden lattice grid (*Mashrabiah*) to provide privacy. In contrast, the issue of privacy in a modern Western built environment is less important than in Islamic countries. Hence we find the mass production of newly built neighbourhoods in the West with semi-detached and detached houses, or medium & high rise building, where neighbours can invade the privacy of others. The detached house was recently copied and brought first to the Arab world then to Saudi Arabia, the only modifications being the introduction of a concrete fence wall. So there arose a new extroverted form with large windows and its front-and back-yards

²²⁹ Women in Saudi Arabia have to cover their faces with a veil. They should not be seen by any person other than their family, which is an Islamic rule. This issue is less important in other parts of the Arab world (Egypt, Syria, Lebanon, Morocco, Tunisia... etc.). It follows that entry to the women's part of the house by foreigners is forbidden.

easily viewed from neighbouring windows. In order to have an architecture that responds to the needs of society, we should investigate the current building form and suggest a future built form centred around the issue of privacy. The best examples are to be found in the traditional built environment where carefully controlled courtyard houses maintain family privacy to the full.

5.3.2. Order

In his book “Elements of Architecture: from form to place”²³⁰ von Meiss discusses many issues in architecture, one of which is *order*. In order to build we make use of fairly simple geometry. It is fundamental, first to design, and second to build. Given the scale of this geometrical preparation - to design and lay out roads and houses, prepare sites, cut stone, press bricks and concrete, and finally fit together these elements of structural frame - we naturally seek an economy of effort through repetition of assemblable components. Recurrence is essential to construction and design. von Meiss citing the German architect Tessenow²³¹ comments on order saying: *“Order is always more or less miserable... but you have to take the world as it is, and for that a certain inelegance is required. The construction of our streets, bridges, houses and furniture is always somewhat make-shift and it is for that reason that we particularly need order.”*²³² I agree with von Meiss when he stresses the idea that the order which is imposed on our modern cities and their edifices comes from the repetition, alignment and juxtaposition of identical elements and regular methods of construction.²³³ This is the order of modern Saudi cities. Order in our modern cities is more or less geometric. (figure 5.1)

Everything has to be at a sharp angle in contrast with order in the traditional built environment where everything is organised according to the human hierarchy with its respect for: social order, nature, topography, climate, and materials.

Order is dictated by structure or technical necessity. The repetitive order inherent in construction ultimately educates the viewer and alters his aesthetic sense. Once established, this appetite for the regular has an effect and a function beyond mere

²³⁰ von Meiss, P., “Elements of Architecture: from form to place”, London: E&FN SPON, 1986.

²³⁰ *ibid.*, p. 38.

²³¹ Born in 7 April 1876, Rostock, Germany. Tessenow, with his strongly puritanical 'reductive-classicism', does not fit easily into any 20th century movements. Although his work is unequivocally associated with the time span of New Building, Tessenow was much more interested in the human and social aspects of a new building than in the creation of a new style. (Source: Naylor, C. and Morgan, A. (eds.) “Contemporary Architects”, Chicago: St. James Press, 2nd. edition, 1987)

²³² von Meiss, “Elements of ...”, p. 31. (originally published in German by Henrich Tessenow, “Hausbau und dergleichen”, Waldemar Klein: Baden-Baden, 1955, p. 20.)

²³³ *ibid.*, p. 31.

constructional constraints; it influences architectural design so that order acquires a singular power. Man in the built environment seeks order not just to understand how that environment is made or what its purpose is, or its representational function. His senses seek out the intrinsic, geometric logic of those objects which surround him.²³⁴

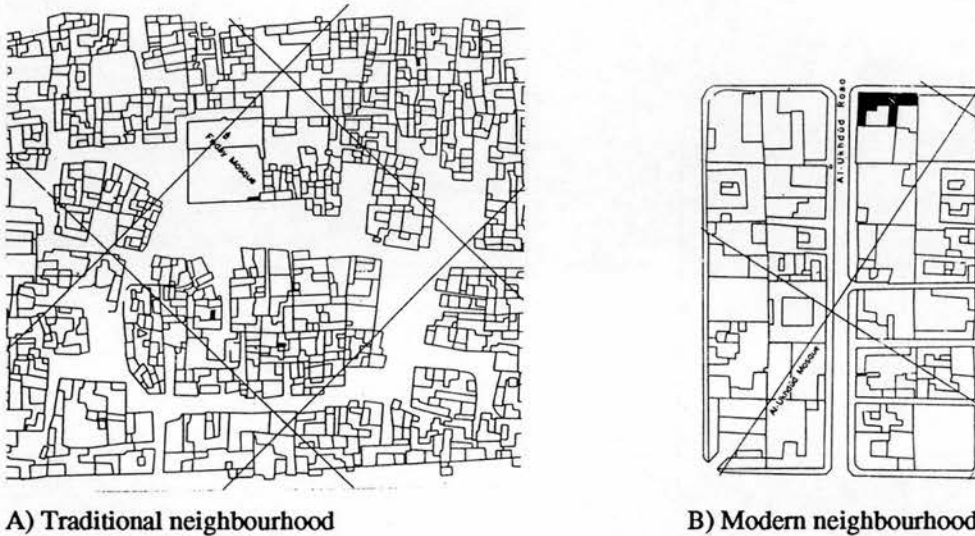


Figure 5.1: Two examples of traditional and modern neighbourhoods, showing the contrast in the natural and mechanical planning.

(Source: Albini, M., "Traditional Architecture in Saudi Arabia: the central region", Riyadh: The Department of Antiques and Museums, 1990, Chapter 4 appendix.)

5.3.2.1. From Order to Chaos

In the view of von Meiss the organisation of our built environment comes from the purposeful interplay of repetition, similarity, proximity, enclosure and orientation. Our choices determine the ultimate groupings which are intelligible at a glance, or, conversely challenge the eye to investigate and understand its complexities. There is a whole range of organisational levels possible between elements and, most important is the relationship between those elements. They range from the use of a uniform texture, through hierarchy and complexity to a chaotic confrontation of elements without perceptible relationships.²³⁵

It is clear that the present situation in the city of Arriyadh is chaotic. This chaos resulted from copying planning and building codes from other societies, and imposing them on a society where the social differences are noticeable. This copying resulted in creating a built environment that has almost no relationship whatsoever between

²³⁴ *ibid.*, p. 31.

²³⁵ *ibid.*, p. 38.

buildings in the same street or in the neighbourhood (figures: 4.23 & 5.2). Therefore, the time has come to review the planning and building codes of the city in order to create a built environment that has a strong link to society and regional characteristics.

5.3.3. The Whole

The relationship between the whole and the parts is crucial for creating a coherent built environment. Robert Venturi in *Complexity and Contradiction in Architecture*²³⁶ argues that the whole is dependent on its parts: position, number, and essential characteristics. He relates the issue to Herbert A. Simon who defines the whole as a complex system which includes “a large number of parts that interact in a non-simple way.”²³⁷ Furthermore, the positioning of the parts in architecture would generate complex and contrapuntal rhythms over simple, single ones. Variety of direction is also an aspect of the 'difficult whole'. As for those 'wholes' most easily read, the two extremes, those with either a single part or a multiplicity of parts are most easily comprehended. The origin of Venturi's idea derives from Gestalt psychology. He says:

Gestalt psychology also shows that the nature of the parts, as well as their number and position, influences a perceptual whole and it also has made a further distinction: the degree of wholeness can vary. Parts can be more or less whole in themselves, or, to put it in another way, in greater or lesser degree they can be fragments of a greater whole. Properties of the part can be more or less articulated; properties of the whole can be more or less accented. In the complex compositions, a special obligation toward the whole encourages the fragmentary part.²³⁸

When it comes to investigating the importance of the whole and the parts in the city of Arriyadh, the major problem in the city is, that there is no link or relationship between the different buildings in the same street.²³⁹ As individual buildings they appear aesthetically appealing, but they do not communicate or connect with other buildings in the same street, so the outcome is a 'forest' of architectural styles that does not have any relation whatsoever to: peoples, climate, or topography (figures: 4.23 & 5.2). This problem is the main theme of this thesis.

²³⁶ Venturi, R., “Complexity and Contradiction in Architecture”, London: The Architectural Press Ltd., 1977.

²³⁷ *ibid.*, p. 88.(originally published by Herbert A. Simon: in Proceedings of the American Philosophical Society, vol. 106, no. 6. December 12, 1962; p. 468.)

²³⁸ *ibid.*, p. 88.

²³⁹ This non-coherent relationship resulted from the contrast in building height, building material, building colour, building masses and volume, building openings, and last but not least, building style.

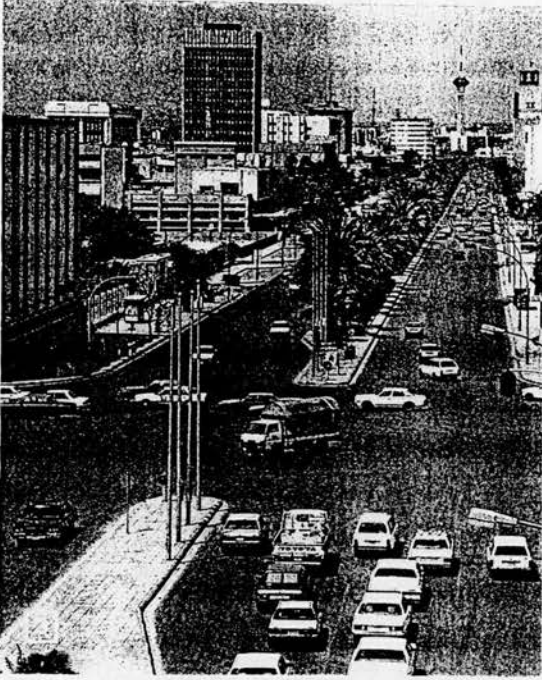


Figure 5.2: Aljameà streets in the city of Arriyadh showing the contrasts in style, height, volume, colour and texture.
(Source: “Riyadh the City of the Future”, p. 107)

5.3.3.1. Repetition and Similarity

According to von Meiss “*Repetition in the form of rhythm, as much in music as in architecture, is an extremely simple principle of composition which tends to give a sense of coherence.*”²⁴⁰ Repetition is strongly linked to the whole, by repetition of the parts we tend to have a whole, if the repetition of the parts are in order, consistent, and organised, we would have a coherent whole.

Pierre von Meiss explains the relationship between the whole and the parts; Within any system, repetitions result from either addition to or division of the whole. They may merely exist as a series without a clearly identifiable comprehensive structure. In the realm of architecture and urban design, the concept of the limit is vital: the absence of a clear beginning or an end disrupts human comprehension. Coherence of detail is pointless 'without aim', or without the coherent sense of the whole. There are many individual buildings in the city of Arriyadh that look appealing, but they do not integrate with surrounding buildings and therefore, do not create a coherent built environment for the city (figures: 4.23 & 5.2).

²⁴⁰ von Meiss, *ibid.*, p. 32.

The visual coherence of our built environment in the Najd may be linked by the use of identified elements which exist only in that region. The repetition of these elements in the city would visually link its various parts. Certain features exist only in Najd. However we face the problem that no buildings elements exist in the modern built environment which denote the Najd. The only apparent way is to borrow elements from the traditional city of Arriyadh (tri-angular bands, small window openings, or even colour). A number of projects have used these materials in the past, one of which is *Sahat Alkindi* in the Diplomatic Quarter, where the designer used these traditional items in the design of the mosque, office buildings, and the Souq. He succeeded in showing that these buildings do not exist anywhere else in the Kingdom or in the rest of the world.

5.3.3.2. The Scale

The sensitivity of the scale issue is very important in our built environment. In order to have a balanced built community, we must respect scale. von Meiss said: *“common scale, indeed even the comparative size of elements, is an effective factor in grouping by similarity. It must be emphasised that this would not be sufficient if it were the only common characteristic. When the objects differ in other ways, such as materials, texture, openings or roofs, the unity is destroyed in spite of the similarity of scale.”*²⁴¹ Despite the importance of scale, the built environment can not be conceived as coherent without the integration of other aspects, i.e. proportion, colour, texture, opening, ... etc.

5.3.4. Coherence

Coherence is always evident through the integration of parts. The more this integration is balanced in a hierarchical order, the more coherent it is. von Meiss emphasised that:

A figure, even if it is abstract, has other characteristics than its edges. We can compose it from parts which, together, give the effect of grouping. This principle of grouping is reinforced by repetition, similarity, proximity, common enclosure, symmetry and orientation of the parts. ... Part of the pleasures and difficulties we experience with the built environment can be explained by our ease or difficulty in mentally grouping different elements from the visual field into synoptic units. When one studies integration in an existing grouping, these phenomena require the closest attention. Architecture is an art which acts on the dependence between elements to establish coherence.²⁴²

²⁴¹ *ibid.*, p. 34.

²⁴² *ibid.*, p. 32.

Coherence has to work side by side with other issues of the built environment in order to have an identifiable city character.

5.3.5. Hierarchy

von Meiss, in his book "Elements of Architecture..." shed light on the importance of hierarchy: "*Hierarchy is a more complex order because of the combination of elements in relation to a scale of importance. There is not necessarily an affinity between the elements. To create a hierarchy we can resort not only to the means of variation of relative size, but also to that of disposition and singularity of form in relation to a context (for example: centrality, axially, orientation, geometric opposition, etc.)*"²⁴³

Pierre von Meiss' emphasis upon primary and secondary components in hierarchy requires that they all have a dependent relationship, where one or several command the others. Furthermore, the same pattern may be found within these elements. A primary focus arises with a single element, and thereafter secondary elements become apparent. Hierarchy is one powerful method of unifying diverse elements, enabling combinations to form larger, simpler and more articulate objects. In the case of Arriyadh, the fragmentation of the city is a consequence of broad highways and neighbourhoods designed for vehicles, not for people. Streets take up a large percentage of the city's total open spaces. Black asphalt²⁴⁴ adds to the heat problem of the environment; buildings on the same street have no relation between themselves in term of height, colour, texture, and above all architectural style. All the previous problems found in the city of Arriyadh were due to the lack of a hierarchical order to balance the different elements in the built environment. So, in order to have a coherent well-identified built environment, hierarchy has to be integrated with other principles.

Pierre von Meiss adds, on considering hierarchy in the built environment, that the terms 'axis', 'symmetry', 'centrality', have an immediate relevance, and are among the various means which can encourage the dominance-by-context of an element. Not even symmetry but the simple deliberate orientation of a building in relation to others will suffice, through exception, to create a pronounced hierarchy.²⁴⁵

²⁴³ *ibid.*, p. 43.

²⁴⁴ Black asphalt as a material absorbs and reflects the direct heat of the sun during the day and so it increases the ambient temperature of the city; on the other hand by storing heat during the day it is released during the night, which increases night temperature.

²⁴⁵ von Meiss, *ibid.*, p. 43.

Therefore hierarchy expresses the dominance of spaces and objects, and in so doing, draws on an everyday method of thought organisation. Thinking in hierarchies is essential to orientate our bodies within a complex space. Should too many hierarchies of equal value occur, this system of clarification breaks down.²⁴⁶

5.3.6. Space

Space is one of the most important issues in the quality of our built environment. The way we feel space is the way we appreciate and comprehend everything within a visual boundary. Many scholars and writers have tried to define space; an attempt by Norberg-Schulz in his book *Genius Loci* brings various definitions to the concept of space in material and qualitative terms. Giedion²⁴⁷, takes the distinction between 'outside' and 'inside' as ground for a grand vision of architectural history. Kevin Lynch²⁴⁸ explores more profoundly the structure of concrete space, pioneering the theory of 'node', 'path', 'edge', and 'district', to indicate those components fundamental to men's orientation in space. Paolo Portoghesi²⁴⁹ establishes space as a 'system of places': although the concept of space may be mathematically described, he asserts that it is rooted in concrete experiences and situations. This view pertains to Heidegger's statement that the 'being' of spaces derives from their location and not from sheer 'space'.²⁵⁰

The issue of space was at the centre of modern architectural ideology. Architects were concerned with the quality of the space, its function and technological production. Thus Norberg-Schulz in his Introduction to a book about the work of the Swiss architect Mario Botta says:

During the last decade several books have been published where place is proposed as a key to architectural theory and practice. During the history of the modern movement, on the contrary, the term was hardly used. Interest was rather concentrated on the problem of 'space', in connection with functional fit and technological production. Space was intended as a

²⁴⁶ *ibid.*, p. 43.

²⁴⁷ Giedion, S., "The Eternal Present: The beginnings of Architecture: a contribution on constancy and change". (The A.W. Mellon lectures in the fine arts, 1957, no.6, 2 vol., 2 Parts.). London 1964.

²⁴⁸ Lynch, K., "The Image of the City", Cambridge: MIT Press, 1960.

²⁴⁹ Italian. Born in Rome, 2 November 1931. Portoghesi has rediscovered the Gestalt qualities of oriental architecture and Gothic, Baroque and Art Nouveau buildings. His concern with tradition is not limited to literal adaptation, but is an active transformation according to his own vision. He fuses tradition in a new and creative way by absorbing the values of the past into forms of contemporary architecture. He is also concerned with the environmental qualities of the site; he works to create harmony between a building and its users. (Source: Naylor, C & Morgan, A. (eds.), "Contemporary Architects", Chicago: St. James Press, 2nd. Edition, 1987)

²⁵⁰ Norberg-Schulz, C., "Genius Loci: Towards a Phenomenology of Architecture". Rizzoli: New York, 1980, pp. 11-12.

measurable continuum, abstracted from the concrete phenomena of daily life. As a result, environmental qualities tended to disappear, and a general 'loss of place' came about. The reaction against this 'development' has taken many forms, but what they have in common is the wish for *meaningful* architecture.²⁵¹

In his attempt to clarify the system of spaces Norberg-Schulz interpreted the relationship between man and space saying:

Man's interest in space has existential roots. It stems from a need to grasp vital relations in his environment, to bring meaning and order into a world of events and actions. Basically, man orients to 'objects', that is, he adapts physiologically and technologically to physical things, he interacts with other people, and he grasps the abstract realities, or 'meanings', which are transmitted through the various languages created for the purpose of communication. His orientation to the different objects may be cognitive as well as affective, but in either case it aims at the establishment of a dynamic equilibrium between him and his environment.... Most of man's actions comprise a *spatial* aspect, in the sense that the objects of orientation are distributed according to such relations as inside and outside; far away and close by; separate and united; and continuous and discontinuous. Space, therefore, is not a particular category of orientation, but an aspect of any orientation. It should, however, be stressed that it is only *one* aspect of the total orientation. To be able to carry out his intentions, man has to 'understand' spatial relations and unify them in a 'space concept'.²⁵²

A primary characteristic of material space is the inside-outside relationship. This suggests there are varying degrees of extension and enclosure within space. Landscapes may form distinct areas, basically continuous with all their variations, thus demonstrating the figure-ground relationship between landscape and settlement. As a rule any enclosed space becomes an evident 'figure' when applied to the extended ground of the land. A settlement loses its identity when extended into a more comprehensive unity. In a broader situation, any enclosure forms a centre, which then works as a 'focus' for the encompassing environment. Space extends away from the focus in a varying rhythm or

²⁵¹ Norberg-Schulz, C. "Introduction", *GA Architect 3: Mario Botta*, 1984, pp. 8-9.

²⁵² *ibid.*, p. 9.

continuity and in different directions. Apparently its main vectors are horizontal and vertical, directions of the earth and sky. Finally, the natural elements such as hills and settlements may organise or cluster at varied distances.²⁵³

In another contribution towards defining the architecture space, Pierre von Meiss in his book *Elements of Architecture* says: “*Architectural space is born from the relationship between objects or boundaries and from planes which do not themselves have the character of object, but which define limits.*”²⁵⁴ Pierre von Meiss also explained the other meaning of a defined architectural space; a colonnade determines the space boundary, although the amount of void is greater than that of the solid.²⁵⁵ In his view “... *architect uses methods of juxtaposition and interpenetration to regulate interior-exterior relationships and to articulate transitions as inside-outside, man-nature, private-public, element-context... He establishes intermediary zones of transition which belong to both.*”²⁵⁶

Norberg-Schulz explores the preoccupation man has with space, which is rooted in existential concerns, arising from a compulsion to understand essential relations in his environment - to draw out significance and systems from the world of events and actions. Essentially man orients himself in relation to 'objects'. Physical things around him dominate his physiological and technological changes. Such interaction, say with other people, helps him to grasp abstract essences or 'meanings', which he then communicates through the tools of language. The method he uses to orientate himself in relation to different objects may be cognitive. Drawing from other sources, man attempts to set up dynamic equilibrium with his own environment.²⁵⁷

In his attempt to classify different notions of space Norberg-Schulz categorises space in five different concepts.

The pragmatic space of physical action, the perceptual space of immediate orientation, the existential space which forms man's stable image of his environment, the cognitive space of the physical world and the abstract space of pure logical relations. Pragmatic space integrates man with his natural, 'organic' environment, perceptual space is essential

²⁵³ Norberg-Schulz, “*Genius Loci...*”, pp. 11ff.

²⁵⁴ von Meiss, “*Elements of...*”, p. 101.

²⁵⁵ *ibid.*, p. 102.

²⁵⁶ *ibid.*, p. 109.

²⁵⁷ Norberg-Schulz, “*Existence, Space...*”, 1971, p. 9.

to his identity as a person, existential space makes him belong to a social and cultural totality,²⁵⁸ cognitive space means that he is able to think about space, and finally logical space offers the tools to describe the others. The series shows a growing abstraction from pragmatic space at the top, that is a growing content of 'information'.²⁵⁹

From this argument a question arises: is it content of information which distinguishes architectural space from other components of this system? Architectural space undoubtedly must adapt itself to the requirements of organic action, while concurrently allowing orientation through perception. It also possibly 'illustrates' some cognitive theories of space, for example when building a Cartesian co-ordinate system with concrete materials. But primarily it is involved with the space schemata²⁶⁰ of the individual and public world of human beings. Clearly man's schemata arise via interaction with extant architectural space. When these fail to satisfy him, that is, when the image they generate within becomes de-stabilising or disorientating, he then needs to alter his architectural space. Through this process, we see clearly the way in which architectural space becomes defined as the material expression of man's existential space.

5.3.7. Place

Norberg-Schulz devoted the main part of his book *Genius Loci*²⁶¹ to the issue of *Place*, where he defines it as the specific term for any environment. Actions and events are said to 'take place', events are meaningless without reference to a locality, both of which illustrate an essential dimension of existence. But the word 'place' signifies more than an abstract location; rather a definition composed of concrete phenomena, material substance, texture, shape, and hue. The combination of these elements determines the 'environmental character' which forms the essence of place. Generally a character or 'atmosphere' is attributed to a place, which is thus a qualitative, 'total' phenomenon. We

²⁵⁸ The social basis of schemata is discussed by Piaget in "The Psychology of Intelligence" (1950, pp. 156ff.), where he stresses that the social environment in part determines the interactions from which the schemata stem. He says: "Without interchange of thought and co-operation with others the individual would never come to group his operations into a coherent whole: in this sense, therefore, operational grouping presupposes social life" (p. 163), and further: "The grouping consists essentially in a freeing of the individual's perceptions and spontaneous intuitions from the egocentric viewpoint..."(p. 164)

²⁵⁹ Norberg-Schulz, "Existence, Space ...", *ibid.*, p. 11.

²⁶⁰ Norberg-Schulz define 'schemata' as a typical (stereotyped) reaction to a situation. The origin of the definition is by the Swiss child-psychologist Jean Piaget, "The Child's Construction of Space", London, 1956. Also for more details on the concept of Schemata, see Norberg-Schulz, "Intentions in Architecture", Universitetsforlaget: Oslo, 1963, pp. 41ff.)

²⁶¹ Norberg-Schulz, C., "Genius Loci: Towards a Phenomenology of Architecture", Rizzoli: New York, 1980.

cannot analytically reduce this to say, spatial relationships, without losing the complete sense of its concrete essence.²⁶²

5.3.7.1. Hierarchy of Places

Norberg-Schulz elaborated on the issue of space, dividing it into different hierarchical order:

Countries, regions, landscapes, settlements, buildings (and their sub-places) form a series with a gradually diminishing scale. The steps in this series may be called 'environmental levels'. At the 'top' of the series we find the more comprehensive natural places which 'contain' the man-made places on the 'lower' levels. The latter have the 'gathering' and 'focusing' function mentioned above. In other words, man 'receives' the environment and makes it focus in buildings and things. The things thereby 'explain' the environment and make its character manifest. Thereby the things themselves become meaningful. That is the basic function of *detail* in our surroundings.²⁶³

These different levels in space do not have the same structure, so the more we understand their hierarchical order, the more we create a coherent and identifiable built environment that respects the higher natural order.

According to Norberg-Schulz the different inside-outside relationships are generally made concrete through the use of openings: 'holes' in a massive wall emphasise the large scale sense of enclosure and interiority. Using large scale glass surfaces to fill in a skeletal wall serves to 'de-materialise' the building, inciting a dynamic relationship between exterior and interior.²⁶⁴ Since apertures also serve to accept and express light, they are the main creators of architectural character. Particular types of windows and doors used to characterise large-scale edifices thus work as motifs to frame the local character and extract its essence. Finally, material and colour can function decisively to build characterisation, providing the different 'presences' of stone, brick and wood, and to re-create the way buildings 'are' on earth.²⁶⁵

²⁶² Norberg-Schulz, *ibid.*, pp. 6ff.

²⁶³ *ibid.*, p. 16.

²⁶⁴ In the case of Arriyadh for instance, the hot climate determines the use of minimal outside openings and the use of thermal insulation to reduce heat impact on the internal spaces. That helps in two ways: the first, saving the internal environment from the effects of air-conditioning; the second, by cutting down the initial cost and the running cost of the number of air-condition units used in the building.

²⁶⁵ *ibid.*, p. 67.

Viewed in terms of structure, the processes of orientation and identification express the experience of man-made place within man-made place. Inside this system, various 'insides' are 'known' or apprehended as determined by the structural properties they exhibit. The man-made *genius loci* is determined by the way these places relate according to space and character, or more specifically, in terms of organisation and articulation.²⁶⁶

5.3.7.2. Enclosure

Norberg Schulz refers to 'man-made place' as a series of environmental stages from towns right down to the interiors of homes. What we term the 'presence' or being, of such places commences at their boundaries. The enclosure provides man-made places with a distinctive quality, and the nature of the enclosure determines the character and spatial properties. Thus enclosure may be more complete or less comprehensive, with the siting of openings and implied directions, and a corresponding differentiation of capacity and place. Enclosure pre-eminently means an area distinguished from its environment through use of a built boundary. Less strictly one could call a dense cluster of elements, with an inferred continuous boundary, an enclosure. In an extreme case, one can consider 'enclosure' as being created by a simple change in the ground texture.²⁶⁷

5.3.7.2.1. Common Enclosure and Common Ground

According to Pierre von Meiss "*An enclosure, a ground, even a carpet, defines a field. What is included within the field is distinguished from what is outside it, even if the elements within are heterogeneous*"²⁶⁸(figure 5.3). The physical setting defines a clear enclosure, argues von Meiss ..., "*This is a very effective method of unification which we frequently use. Moreover, the elements which define the enclosure form a separate subgroup*"²⁶⁹ (figure 5.4). Therefore, the natural setting of a region has to be respected to define our sense of enclosure, and link the built environment with the natural one.

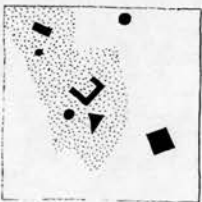
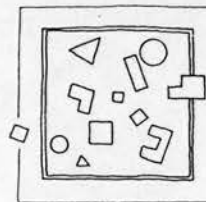


Figure 5.3: a) Group of figures on a 'carpet';
(Source: von Meiss, P., "Elements of Architecture...", p. 36)



b) Group of figures enclosed & un-enclosed.

²⁶⁶ *ibid.*, p. 69.

²⁶⁷ *ibid.*, p. 58.

²⁶⁸ von Meiss, "Elements of...", p. 36.

²⁶⁹ *ibid.*, p. 36.

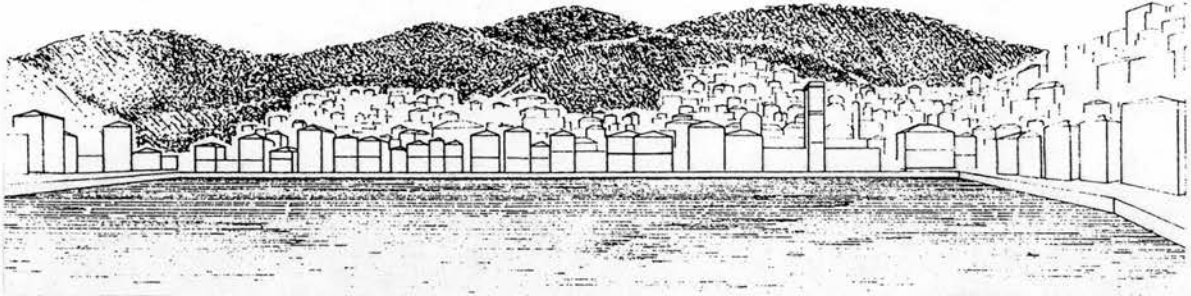


Figure 5.4: Homogeneity of the whole town in front of mountain backdrop. The houses on the waterfront constitute the sub-group of the enclosure.
(Source: von Meiss, *ibid.*, p. 36)

5.3.7.3. Hierarchy of Environmental Levels

Frampton elaborated on the hierarchy of environmental levels stressing that they are generally established by man-built settlements which, as a whole, relate externally to the natural or cultural landscape which contains them. The internal structure of a settlement possesses sub-places, e.g. a square, streets, districts, which themselves possess and are defined by buildings serving different functions. Further, within the buildings exist interior spaces and the interior contains artefacts which express the goal of this innermost space. Thus the 'form of life' is given shape, in an individual as well as social dimension, by using the expressive structural properties of the levels with formal interrelations.²⁷⁰

5.3.7.4. The Spirit of Place (*Genius Loci*)²⁷¹

According to Norberg Schulz, 'Dwelling' as a word conveys the total relationship of man to place. The man who dwells, is at once placed firmly in space and exposed to an active environmental character. 'Orientation' and 'identification' are the two psychological functions involved and identified.²⁷² Man must orientate himself to secure his grasp on the world; he must know where he is. However he must also secure his identity within the environment, must know that he is in a certain place.²⁷³

²⁷⁰ Norberg-Schulz, "*Genius Loci...*", p. 69.

²⁷¹ It is a Roman concept: according to ancient Roman belief, every identifiable place has its genius (guardian spirit), which gives life to people and places and determines its character.

²⁷² For more information about the concepts 'cognitive orientation' and 'cathectic orientation' see Christian Norberg-Schulz, "*Intentions in Architecture*", Universitetsforlaget: Oslo, 1966.

²⁷³ Norberg-Schulz, "*Genius Loci...*", p. 19.

Norberg-Schulz emphasises the importance of Kevin Lynch's ideas of 'node', 'path' and 'district', and has articulated the basic spatial structures, the object of man's orientation. These elements with their perceived interrelationship construct an 'environmental image'. He states: "*A good environmental image gives its possessor an important sense of emotional security.*"²⁷⁴ Thus all cultures will develop a 'system of orientation', that is, "*spatial structures which facilitate the development of a good environmental image. The world may be organised around a set of focal points, or be broken into named regions, or be linked by remembered routes.*"²⁷⁵ Frequently it is on an established natural structure that these systems of orientation base themselves. If the orientation system in place is not strong, man finds the process of the image-making almost impossible, and feels 'lost'. "*The terror of being lost comes from the necessity that a mobile organism be oriented in its surroundings.*"²⁷⁶ To feel undefined is clearly the opposite of the feeling of security which arises from the positive act of dwelling. That environmental character which defends man's sense of orientation Lynch calls 'image ability', indicating "*that shape, colour or arrangement which facilitates the making of vividly identified, powerfully structured, highly useful mental images of the environment.*"²⁷⁷

While orientation and identification may simply exist as aspects of a comprehensive relationship, they also function independently within the whole. Dwelling as a 'first principle' postulates identification with the environment. Clearly, one may orientate oneself without feeling 'at home'. Further, one may feel at home without being closely familiar with a spatial structure; simply by experiencing its pleasing general character. The true sense of belonging presumes the complete development of both psychological functions. While the significance of even the tiniest environmental details is recognised in primitive societies and comprises a complex spatial structure, modern society, by contrast, concentrates its attention almost exclusively on orientation as a 'practical' function, and leaves identification to chance. Consequently alienation has replaced true 'dwelling', in its psychological sense. We need, therefore, to reach a fuller comprehension of 'identification' and 'character'.²⁷⁸

²⁷⁴ Norberg-Schulz, *ibid.*, p. 19 (originally published by, Kevin Lynch, "The Image of the City", MIT Press: Cambridge, Massachusetts, 1960, p. 4)

²⁷⁵ *ibid.*, p. 19.

²⁷⁶ *ibid.*, pp. 19-20.

²⁷⁷ *ibid.*, p. 20.

²⁷⁸ *ibid.*, pp. 20-21.

Norberg-Schulz illustrates the word identification. Therefore, in our modern situation, 'identification' means to integrate with a given environment. The Arab must thus be a friend of the infinitely extended, arid desert and the powerful sun, although this understanding does not preclude taking protection from the natural extremes. In essence, the first goal of any desert settlement is the exclusion of extremes, and thus the settlement is in a process of combative harmony with the natural situation. Its complementary nature, however, suggests that the environment is indeed experienced as meaningful.²⁷⁹ By contrast, the integration of modern urban man and the natural environment have become reduced and fragmentary. Man identifies with the artefacts surrounding him, streets and houses. Norberg Schulz tells an illustrative story about the German-born American architect Gerhard Kallmann. Visiting his native Berlin at the end of the Second World War he wanted to see his childhood home. It had disappeared (destroyed during the War), and Mr. Kallmann felt vaguely lost. Then he suddenly identified the typical paving of the sidewalk, the floor on which he had played as a child and he felt a strong sense of homecoming.²⁸⁰

Thus it is clear that objects of identification form concrete environmental properties, with which man establishes relationships early in life: he grows up in green, or brown spaces; walks or plays on sand, earth, stone, beneath cloudy or calm skies. By grasping things, hard and soft, experiencing heat, cold and noises such as wind within his particular environment, he learns his environment, evolves perceptual schemata with which he tests all future experiences. Such schemata form structures that are universal, inter-human, but which are also locally crafted and forged, and culturally conditioned. Clearly, each human requires schemata of orientation as well identification.

5.3.7.5. A Place for Identity

Pierre von Meiss in his book "Elements of Architecture..."²⁸¹ discusses the importance of having an identity for a place. To exist in harmony with the universe, society and people require the ability to 'place' themselves through an affirmation of their identity: identity as part of the human race, distinct from the physical, mineral, vegetable and animal world; identity as part of a group - family, political party, association - of articulated, shared values; identity as a distinct being who guards his measure of liberty and individual responsibility, separate from the group and wholly unique.²⁸²

²⁷⁹ *ibid.*, p. 21.

²⁸⁰ *ibid.*

²⁸¹ von Meiss, Pierre. "Elements of Architecture: from form to place", London: E & FN SPON, 1986.

²⁸² *ibid.*, p. 161.

The built environment is only one among many influences on our sense of identity: manners and rites, apparel and belongings, food, individual use of language and many more factors. Nonetheless, architecture has a key function in affirming or destroying our sense of identity. In Saudi Arabia during the past forty years, architecture has undergone a major transformation from traditional coherent built environment into modern non-coherent built environment.

Pierre von Meiss supports Rapoport's²⁸³ argument when he distinguishes two possible forms of identity. First, private identity, "*the affirmation of identity to oneself and to one's intimate group*"²⁸⁴: The indications of this can be relatively 'private' or subtle. Second, public identity. The individual affirms his identity to the group by enforcing a distinction between 'them' and 'us': the signs of this must be outward and expressive: a large striking building for instance, by which a colonial power imposes its architecture on a colonised enclave or town. This has the effect of unambiguous reminder in the building of monuments which often demonstrates the same aim, recalling an event or a personality for those who may have no knowledge or memory of them.²⁸⁵

Pierre von Meiss underlines the importance of reminding the architect who is asked to build a family home to express the identity of a group of initiatives. He is advised to select one of three strategies. The first of these is interpretative; It presumes close observation and understanding of the group, its values and behaviour, not to mention those places and architectural elements from which their identity springs. If he institutes a strict personal rule that he must be an observer of adequate modesty, then his diagnosis and subsequent scheme no longer require him to participate in the observed group. Le Corbusier, for instance, while sustaining his Catholic beliefs, clearly had an essential grasp of the sacred Catholic space which enabled him to build Rondchamp and La Tourette. The Danish architect Henning Larsen, when he won the competition for designing the Ministry of Foreign Affairs building in Arriyadh, centred his scheme around the study of many issues, the use of geometry, small outside openings, interior courtyards, the use of colour corresponding to nature, and incorporating water into the design which helps balance the ambient temperature of the interior spaces. It is important to emphasise that, regardless of nationality, race or colour of the architect, the most

²⁸³ Rapoport, A., "Identity and Environment: a cross-cultural perspective", in Duncan, J.S., "Housing and Identity: Cross-cultural Perspective", London: Croom-Helm, 1981.

²⁸⁴ von Meiss, *ibid.*, p. 161.

²⁸⁵ *ibid.*, pp. 161-162.

important thing is his ability and determination to study and investigate local requirements, which help to link architecture to the quality of the region (people, climate, topography, nature, ... etc.), and so contribute in identifying the built environment.²⁸⁶

The second strategy open to the architect lies in his involvement of the future users in his design of place. There are positive possibilities in allowing those involved to affirm their identity through the design of their residence. However, it is clearly true that an architect who simply serves as a technical facilitator for the user will produce buildings which are essentially a non-critical consensus of personal tastes and which erode the collective interest, and diminish the lasting quality of the work. This further asks whether a place created in this way can continue to affirm identity after the original inhabitants depart?²⁸⁷ So we have to bear in mind the flexibility of the interior spaces.²⁸⁸

The third possible strategy requires the search for an architecture which works well with the places and symbols of identity which the inhabitants themselves will create after the architect has erected a strong ordering structure. The Dutch architect Herman Hertzberger²⁸⁹ discusses such 'architecture of hospitality' and has pursued this new scheme to regenerate a sense of individual identity within the framework of mass production.²⁹⁰

Furthermore, von Meiss argues that there is a different creative solution to projects which aim to create a place displaying a common public identity -a gateway, for example, to a private garden- in which case we will rely on symbols that everyone understands. The reason why such signs of place and underlying identity work effectively is that they are unique and known to all (Eiffel Tower) or else, like doorways, fountains or staircases, because they conform to a typology rather than any conventional code, fundamental to the collective memory we participate in. There is a unique name and a history of memorable events within the form of a door or an individual building. Histories are repeated and retold from our childhood. An edifice or an object like any other, gradually accretes a collective value perpetuating itself through time. This history is transmitted and modified from consciousness to consciousness, as a deep root to

²⁸⁶ *ibid.*, p. 162.

²⁸⁷ The best solution is to design the main structure as a rigid and solid one, then to leave the interior spaces to be designed flexibly by the different users.

²⁸⁸ von Meiss, *ibid.*, p. 162.

²⁸⁹ Born in Amsterdam, Netherlands, 6 July 1932, Hertzberger is part of a strong tradition in 20th-century Dutch architecture. His buildings are supported by written agendas of great clarity, which are a development of Team 10 ideas. The centre of the team thinking is the 'sense of place'.

²⁹⁰ von Meiss, *ibid.*, p. 162.

connect us in time and place with the past. Any architect planning to use this memory as a source must pay tribute to certain conventional layouts; this enables the building to play an effective role in supplementing public identity. It is a question of judgement as to how far an architect can depart from convention to experiment within our culture; however, it is culturally necessary to try. On the other hand, the socially conscious architect must remember that a belfry will never be a water-tower.²⁹¹

5.3.8. Character

Norberg-Schulz in his book *Genius Loci* compared character to the concept of space leading to his analysis that *character* is simultaneously more general and more concrete than a space. While it suggests a general comprehensive atmosphere, it also indicates the material form of space-defining elements. Any presence is closely linked with character. A phenomenology of character must make a complete study of manifest characters as well as their concrete determinants. Different activity requires places of different character. A dwelling offers shelter, an office practical assistance, a mosque reverence. Foreign cities usually impress us with their singular character, which forms a fundamental part of our experience. Landscapes we can also characterise as 'barren' and 'fertile', 'smiling' and 'threatening'. It is a first principle of the discipline that "*all places have character.*"²⁹² Character is the fundamental form in which the world is 'given'. This character of a place may to some extent be time-dependent, altering with season, time of day and weather, factors primarily important because they change conditions of light.²⁹³

Norberg-Schulz adds, it is the material and formal structure of the place which determines character and requires us to ask: "*how is the ground on which we walk, how is the sky above our heads, or in general; how are the boundaries which define the place.*"²⁹⁴ This last depends upon its formal articulation, once more determined by the way it is 'built'. Contemplating a building from this vantage, we must determine how it stands in or on the ground and how it ascends to the sky.²⁹⁵

Norberg-Schulz agreed with Robert Venturi when he formally acknowledged the fact that a specific attention must be paid to lateral boundaries, or walls which are also decisive in creating the urban environmental character following a long period when it

²⁹¹ *ibid.*, p. 162.

²⁹² Norberg-Schulz, "*Genius Loci...*", p. 14.

²⁹³ *ibid.*, pp. 13-14.

²⁹⁴ *ibid.*, p. 14.

²⁹⁵ *ibid.*

was thought 'immoral' to discuss 'facades'.²⁹⁶ Generally when a group of buildings form a place, its character is 'condensed' in motifs such as distinct types of windows, doors and roofs. These 'conventional elements' shift and alter the character from place to place. At the perimeter, therefore, character and space meet, and it is appropriate that Venturi defines architecture as "*the wall between the inside and the outside.*"²⁹⁷

Save for these observations of Venturi, character is one issue that has hardly been addressed in current architectural theory. Consequently existing theory has largely lost touch with the real life, singularly so with technology, currently regarded as a simple means to overcome practical pressures. But the creation of Character relies heavily upon "*how things are made*"²⁹⁸, and is thus defined by the technical realisation (building). Therefore, the construction of a phenomenology of place must incorporate and stress the basic modes of construction as they relate to formal articulation. Only by this means will architectural theory attain a real basis.²⁹⁹

5.3.8.1. The Character of Man-made Place

According to Norberg Schulz man-made places take the nature of their character from their degree of 'openness'. Density or the insubstantiality of boundaries may give the space a sense of isolation and social communion. However, a man-made place, incorporates more than a space of varied openness. It is a building. Thus the way it stands on the ground, and ascends towards the sky is very important. To a great degree, the nature of place is determined by the manner in which this standing and rising is made concrete. The principle remains true for entire towns or cities. If the distinct character of a town appeals to us, it is usually because most of its buildings relate to earth and sky in the same fashion; seeming to convey a harmonious means of living on the earth. As such, their *genius loci* is evident and encourages our human identification.³⁰⁰

5.3.8.2. Architecture Concretisation & The Character of Architectural Work

The meaning of architectural concretisation is to set a place into work, in the sense of concrete building. The character of the architectural work is also suggested, primarily, by the nature of its construction; whether massive and enclosed, or skeletal, open and transparent. Secondly, we perceive character in the actual making: binding,

²⁹⁶ *ibid.*, pp. 14-15 (originally taken from Venturi, R., "Complexity and Contradiction in Architecture", 1967, p. 88.)

²⁹⁷ *ibid.*, p. 15, quoting: Robert Venturi, "Complexity and Contradiction in Architecture", New York, 1967, p. 89.

²⁹⁸ *ibid.*

²⁹⁹ *ibid.*

³⁰⁰ *ibid.*, p. 63.

joining, erection and so on. These constructive stages demonstrate the process of the work becoming an expressive and material 'thing'. As Mies van der Rohe commented: "Architecture starts when you put two bricks carefully upon each other."³⁰¹

5.3.9. Boundary

As Norberg-Schulz points out a boundary is what defines any enclosure. He cites Heidegger: "A boundary is not that at which something stops but, as the Greeks recognised, the boundary is that, from which something begins its presencing".³⁰² Floor, wall and ceiling comprise the boundaries of a built space, with their corresponding boundaries of ground, horizon, and sky within a landscape. Such essential structural correspondence is of intrinsic importance for the interaction between the man-made place and the natural one. Commonly the boundary, and significantly the wall, gives continuity or discontinuity, direction and rhythm to the extended spatial structure.³⁰³

Frampton also cites Heidegger when he emphasises the importance of boundary in his 1954 essay 'Building, Dwelling, Thinking,' mentioning that it "provides us with a critical vantage point from which to behold this phenomenon of universal placelessness. Against the Latin or, rather the antique abstract concept of space as a more or less endless continuum of evenly subdivided spatial components or integers... the phenomenological essence of such a space/place depends upon the concrete, clearly defined nature of its boundary."³⁰⁴

5.3.10. Discourse

In the view of Frampton, a region can be identified in terms of locality and climate, topography, culture, ...etc. There are two important factors to be consider when institutionalising the region, the first subsumed under the notion of discourse³⁰⁵; the second addresses itself to the cultivation of the client in a profound sense.³⁰⁶

In a different way Norberg-Schulz points out in his paper *Kahn, Heidegger and the Language of Architecture*, that 'Discourse' (*Rede*) is one of the primal existential structures, articulated by Heidegger in *Being and Time*.³⁰⁷ "The intelligibility of Being-in-

301 *ibid.*, p. 66.

302 *ibid.*, p. 13.

303 *ibid.*

304 Frampton, K., "Towards a Critical Regionalism: Six Points for an Architecture of Resistance", From Foster, Hal (ed.), *Anti-Aesthetic*. Bay Press, Port Townsend, USA, 1983, p. 24.

305 The term discourse used to emphasise the 'school' of local culture.

306 By a client, I intend to say; a culturally significant work can hardly be achieved without a committed client.

307 Heidegger, M., "*Being and Time*", SCM Press London (1962), pp. 203ff.

the-world expresses itself as discourse,” he commented. In addition he emphasises its elementary fused nature: *“discourse is existentially equiprimordial with state-of-mind and understanding”* and that *“in discourse being-with becomes explicitly shared.”* The extent to which we exist together in the work is wholly reliant on our possession of a common discourse, and *“the way in which discourse gets expressed is language.”* The primary function, thus, of language in the broad sense is not to serve communication, but to uncover the elemental existential structures. It is language that *speaks*, while *“man only speaks as he responds to language.”*³⁰⁸

In the framework of architecture as a stimulating system of interplay between human and environment, 'discourse' is of fundamental interest. Works of architecture form part of human 'discourse', uncovering the spatial essence of the life-world, a 'revelation' possessing two characteristics. First, the assertion that something takes place presupposes the existence and availability of a space for it to happen in. The second concerns, therefore, the construction of the boundary. The boundary materially displays the character which is pertinent to the occurrence since the boundary is composed of concrete 'things'. Thus the twofold establishment of the discourse is clear: this mutual provision of space and embodiment of character construct a place. Places participate essentially in all life-situations, and evidently the more important places offer a form of togetherness.³⁰⁹

5.3.11. The Respect for Natural Forces

Nature is a global force. It exists outside, before and beyond humanity. Any new development has to be placed in a natural setting with its own characteristics - sand, mud, rocks, vegetation, forest, rivers, seas, mountains. Therefore, in order to live in harmony with the natural environment we need to incorporate our newly designed built environment with the natural one.

5.3.11.1. The Respect for Topography

Frampton established that modern architecture with its high technology and financial apprehension ignored the importance and the respect for topography. He also suggest Critical Regionalism as the solution for the 'placeness' problem:

³⁰⁸ Norberg-Schulz, N., “Kahn, Heidegger and the Language of Architecture”, *Oppositions* 18, MIT, 1979, p. 37. (originally by, Martin Heidegger, “*Poetry, Language, Thought*”, New York: Harper Colophon Book, 1971, pp. 225ff.)

³⁰⁹ Norberg-Schulz, C., “Towards an Authentic Architecture”, “*The Presence of The Past. First International Exhibition of Architecture: Venice Biennale*”, London: Academy Editions, 1980, p. 26.

Critical Regionalism necessarily involves a more directly dialectical relation with nature than the more abstract, formal traditions of modern avant-garde architecture allow. It is self-evident that the *tabula rasa* tendency of modernization favours the optimum use of earth-moving equipment in as much as a totally flat datum is regarded as the most economic matrix upon which to predicate the rationalization of construction. Here again, one touches in concrete terms this fundamental opposition between universal civilization and autochthonous culture. The bulldozing of an irregular topography into a flat site is clearly a technocratic gesture which aspires to a condition of absolute *placelessness*, whereas the terracing of the same site to receive the stepped form of a building is an engagement in the act of 'cultivating' the site.

Clearly such a mode of beholding and acting brings one close once again to Heidegger's etymology; at the same time, it evokes the method alluded to by the Swiss architect Mario Botta as 'building the site'..., has many levels of significance, for it has a capacity to embody, in built form, the prehistory of the place, its archaeological past and its subsequent cultivation and transformation across time. Through this layering into the site the idiosyncrasies of place find their expression without falling into sentimentality.³¹⁰

In Chapter 4 we alluded to the way in which the designer of the Diplomatic Quarter respected the topography of the site, on the east bank of the Wadi Hanifah, which inspired him to facilitate this important and significant issue in the design of the project. The result was a planned form that was regarded by most professionals as the best designed neighbourhood in the city of Arriyadh. Although other factors also contributed towards the quality of this project.

5.3.11.2. The Respect for Local Urban Fabric, Climate, and Light

In his continuing contribution towards identifying the aspect that would distinguish our built environment, Frampton extended his argument to cover the urban fabric, climate, and local light:

What is evident in the case of topography applies to a similar degree in the case of an existing urban fabric, and the same can be claimed for the

³¹⁰ *ibid.*

contingencies of climate and the temporally inflected qualities of local light. Once again, the sensitive modulation and incorporation of such factors must almost by definition be fundamentally opposed to the optimum use of universal technique. This is perhaps more clear in the case of light and climate control. The generic window is obviously the most delicate point at which these two natural forces impinge upon the outer membrane of the building, fenestration having an innate capacity to inscribe architecture with the character of a region and hence to express the place in which the work is situated.³¹¹

Light is undoubtedly another important element to consider in architectural design. Waldron Faulkner in his book *Architecture and Color*³¹² stresses the idea that the perception and appearance of any object depends self-evidently on the light in which it is viewed. Natural light is a variable quality, altering with the time, the rosiness of dawn, the glare of noon, the sunset glow, and the pale rays of moonlight. Not only with the hour, but from day to day and with the time of the year, the appearance of a building changes, seen under natural light, looking quite different in colour on a sunny day and on a dull one. The aspect of a building will vary when seen against a blue or dark sky in winter. Not only are there changes in the apparent colour of a building, but also its apparent form due to those constantly changing shadows which define it.³¹³

Norberg-Schulz emphasises that the concept of light forces us to confront the issue of expression. The will to be suggests a will to express; in other word to give the institutions 'presence'. By means of expression man reveals the innate structure of the world (in which he himself participates), and by this means accomplishes his elemental goal.³¹⁴

According to Norberg-Schulz when a space is conscious of what it desires to be, it is transformed into a room, or a place exhibits singular character. The character of a room is, as demonstrated, initially defined by its relation of light to structure. "*To make a square room is to give it the light which reveals the square in its infinite moods.*"³¹⁵ Kahn comments. Every room thus requires some form of natural light. "*I can't define a space*

311 *ibid.*

312 Faulkner, W., "*Architecture and Color*", New York: Wiley-Inter science, 1972.

313 *ibid.*, pp. 7-8.

314 Norberg-Schulz, "Kahn, Heidegger ...", p. 31.

315 *ibid.*, p. 32.

really as a space unless I have natural light. And that because the moods which are created by the time of the day and the seasons of the year are constantly helping you in evoking that which a space can be.”³¹⁶ However, Structure also exhibits an intrinsic, independent order of its own where, as Kahn says, “*the beam of brick is an arch.*”³¹⁷

Norberg-Schulz adds, generally speaking, that a building must demonstrate “*the way it was made*” as a manifestation of its will to be. When this will is demonstrated, it may termed “*inspired technology*”. One must not falsely separate engineering and design, but recognise that they should be one and the same thing - therefore, the technological realisation of a building is positively an incarnation of the institution. As such the achievement is un-measurable, although it is strictly measurable as a building.³¹⁸

A different set of conditions prevails in situations of artificial light. This is generally a constant and sustained light source. Under artificial light, however the appearance of a building will rely considerably on the quality of the light, together with its distribution and direction. Not only will the colour of the light source affect the apparent colour of the building, but it will also be affected by spectral energy distribution. This is true of both exterior and interior space.

5.3.11.3. The Respect for Local Climatic Conditions

Frampton elaborated on the peculiarities of openings as a means of respecting local climatic conditions in a specific place:

The way in which such openings provide for appropriate ventilation also constitutes an unsentimental element reflecting the nature of local culture. Here, clearly, the main antagonist of rooted culture is the ubiquitous air-conditioner, applied in all times and in all places, irrespective of the local climatic conditions which have a capacity to express the specific place and the seasonal variations of its climate. Wherever they occur, the fixed window and the remote-controlled air-conditioning system are mutually indicative of domination by universal technique.³¹⁹

³¹⁶ *ibid.*

³¹⁷ *ibid.*

³¹⁸ von Meiss, “*Elements of...*”, p. 32.

³¹⁹ *ibid.*, p. 27.

Openings contribute to direct visual contact with the physical environment. This, in a way, allows people to enjoy the depth of the visual experience. However, the climatic conditions of each region, and the solution adopted by the people to overcome the harsh climate, helps to identify each region with its unique pattern of building, architectural form, and detailed architectural elements. For example the built environment in the Najd is characterised by its small, narrow winding streets which maximise the shaded areas, and eliminate direct winds. The architectural form was a courtyard building minimising the surfaces in direct contact with the sun. The courtyard provides a micro-climate for the inhabitants. In contrast, the urban form in the Hijaz region is characterised by wider, straighter street patterns and the architectural form of multi-storey buildings, which divide the different levels for different functions, while the windows of large openings are covered by latticed wooden structures (Mashrabiah) for privacy.

Recent architecture in Arriyadh contains many contradictions, one of which is the rejection of natural ventilation. Most of the newly developed projects in the city dispense with ventilation. It is claimed that it is hardly used and it permits dust to penetrate the interior spaces; there is a trend among architects to design fixed glass windows to make sure that the children never open them and to eliminate dust. But this is extremely misguided, as there are seasons where it is pleasant to open the windows and enjoy the fresh air. To deny citizens access to open windows is to move them away from contact with nature. Therefore, we must respect weather changes and allow the user to interact with nature.

5.3.12. Colour

Ed Taverne and Cor Wagenaar in their jointly edited book “The Colour of the City”, define colour as a feature essential to our living environment. Colour is a singularly expressive element in architecture and town planning. One important feature of any city is its colour, and while the effect of this phenomenon has been examined by architects and town planners over time, they have been slow to construct a systematic approach to it. In the past twenty years, however, more methodical and consistent research has been undertaken which combines findings from physics, psychology and sociology with the outcome of historical studies of colour as an important function of our surroundings.³²⁰

³²⁰ Taverne, Ed and Wagenaar, C., (eds.), “The Colour of the City”, Netherlands: V+K Publishing, 1992, p. 7.

Unified colour schemes will harmonise buildings, streets, neighbourhoods, and the whole city, especially, if the building's colour integrates with the surrounding natural environment. For example the surroundings of the city of Arriyadh are mainly desert, tempered by green oasis with palm trees; so, if we construct buildings with colour related to sand colour, our visual appreciation of the built environment will be enhanced. Also for practical reasons, it will withstand the effect of sand storms. This unification was successful in many projects, for example the Ministry of Foreign Affairs Staff Housing project and the Diplomatic Quarter project.

Waldron Faulkner in his book "Architecture and Color" supports the unifying colour scheme and elaborates on other aesthetic aspects which colour may achieve in the design of buildings: first, it may suggest either diversity or unity. Unified colour adds a sense of unity to the built environment; a varied colour scheme adds a sense of diversity. Second, colour also builds atmosphere, from the bright colour schemes which convey excitement and gaiety to quiet schemes which express dignity and repose. Third, it reinforces the character of materials, and clearly states the essential character of each material - red tile roof, grey stone walls, or brown wood trim. Were these the same colour, the building would seem like a clay model. Fourth, colour defines form, for instance, a line, a two - dimensional surface, or a three dimensional volume is defined by colour contrast with its surroundings. Fifth, it also affects proportions, where contrasting materials set in horizontal lines emphasise a sense of breadth, while vertically applied, they promote height, and finally, increase our sense of scale. Uniformly coloured elements in a building give it the appearance of a monolith whose scale at a distance is hard to judge while contrasting colours convey scale more truthfully.³²¹

5.3.12.1. Achieving Characterisation and Harmony Through Colour

The way colour contributes harmony and characterisation to the built environment was discussed by Konrad Gatz & Wilhelm Wallenfang. When a building typifies its local or regional tradition, incorporating some more recent features of good architecture, it demonstrates repeatedly that *"Colour, besides the refining power contained in it is specific value, also possesses the coarser power of articulation, which lies mainly in it is degree of brightness, and which can be utilised in a uniting or dividing manner."*³²² On first acquaintance this assertion may seem rather summary, but if we stop to consider it, the varied potential of colour to articulate, unify, or divide, becomes clear.

³²¹ Faulkner, *ibid.*, pp. 5-6.

³²² Gatz, K. & Wallenfang, W., "Color in Architecture", New York: Reinhold Publishing Co., 1961, p. 9.

There are different aspects to the contribution of colour: first, colour tones and colour articulations bring a distinct accent to architectural shape. Architectural modulations harmonise an edifice with the indigenous environment, or conversely distinguish a building or group and, singularly, focus our attention on proportions, transforming them optically. Second, even buildings constructed on the same principles of design may receive individual treatment using colour or alternating hues. Third, uniformity in function, structure and construction can be combated using a contrast in colour tones or variations in lightness. In accents varying from the dramatic to the subtle, the individuality of buildings can be heightened and contrasted with their background. Fourth, in addition, through colour shading, tone and colour proportions, buildings or building groups can be presented as pleasing or oppressive, elegant or distorted, stimulating or tedious, calm or chaotic; and finally, by selecting particular colours and varying their differentiation, a building can be accommodated to any particular climate or atmosphere of a place. Therefore each building caught under the light has its own particular attitude and reaction, which means that no response to the issue of colour can be blatantly transplanted to another place or climate. Such varied effects contribute to the way in which humans find their built environment much more pleasant when colours animate our experience.³²³ In addition, each building has its distinct surroundings; another factor among the effects and counter-effects for consideration. A time-honoured tradition in the use of colour may force a harmonious choice on the architect so that his work stands in complete accord with the general picture; such tradition is usually missing today. However, in an era preoccupied with public relations, frequently plans are required to incorporate the means of harmonising the building with its surroundings. Fundamental to such plans is the first principle that all colours act and react with one another.³²⁴

The Mayoralty of the city of Arriyadh, in a recent regulation, tried to apply unified light colours scheme on the city's newly built development (white, beige, sandy, or any other related colours). It was a good sign of the start of harmonisation of the built environment with the natural environment. The white colour is very good from the climatic point of view, but it does not match with the surrounding sandy nature of Arriyadh, and it needs considerable maintenance to keep it clean. A successful colour scheme is to be found in the Diplomatic Quarter, a completely developed neighbourhood. The planners tried to control the colour scheme to be a product of the sand (except minor buildings which have a white colour, and in which you can feel that the character and

³²³ *ibid.*, p. 9.

³²⁴ *ibid.*, p. 10.

harmony of the built environment has been broken). Other good examples are the housing of the Ministry of Foreign Affairs staff, Gulf Countries Council Building, Ministry of Foreign Affairs, King Saud University, and last but not least, the Justice Palace District. All these examples implement a sandy colour scheme for the whole project which characterises and integrates each scheme as one whole. In my view these projects show complete integration with the surrounding natural environment. Therefore, for future development, we have to investigate these examples. By learning from them and their results we may start regulating the development of the city to create a coherent harmony within the built environment that integrates and blends with the surrounding natural environment.

5.3.13. Material, Texture, & Technology

In his attempt to clarify the truthfulness of the material and construction technique, von Meiss points out in *Elements of Architecture*:

Truth must lie in the nature of materials. By adopting this position we would at least have reassuring directives for attaining 'an architecture of truth'. It is no longer necessarily an adequate theory for our culture, as we near the end of the twentieth century, because our sophisticated technology allows us, on one hand, to make a 'perfect' and cheap imitation of a technique by substituting it with another, and on the other hand more than ever opens the way to cladding because of the requirements of thermal insulation.³²⁵

von Meiss shed light on the character of the materials and the way they are prepared and put in to place shows the quality of the form:³²⁶

What then, together with the choice of material, are the variables manipulated by the architect, the craftsman and the labourer? The 'tactility' of a building always has a triple aesthetic aspect: *the form*, *'massiveness'* and *the texture/colour combination*, whether it is a question of an element of construction prepared before being put to use, such as brick, the panel of a facade, one step of a flight of steps, or whether it is an element of composite architecture such as a wall, facade or staircase.³²⁷

³²⁵ von Meiss, *ibid.*, p. 180.

³²⁶ *ibid.*, p. 180.

³²⁷ *ibid.*, p. 183.

This describes the importance of defining character by the quality of surface texture and colour of the materials.³²⁸ The definition of form is based on materials and their appropriate use in construction. Technique is sometimes glorified, becoming the exclusive source of form; sometimes it is simply used as an image, as at the Lloyds building.³²⁹ *“The form and space of architecture are qualified by the character of the materials and the way they are prepared and put in place. Light is a contributory factor.”*³³⁰

von Meiss alluded also to the significance of material. *“In the definition of place, forms play their role by means of the material. When we run our hands or our eyes over it, it shows itself to be fragile or resistant, soft or hard, cold or temperate. According to its surface treatment the same material will be smooth or rough, matt, satiny or shiny.”*³³¹

The traditional built environment of Najd used dried mud brick. This material proved to work as a thermal regulator by transmitting heat gradually from the outside surface (during the day) to reach the inside of the building at night. Vice versa, it allows the cool air to transmit during the night, keeping the inner spaces cool during the day time, in contrast to modern materials. In other words it has a high thermal inertia. Modern building materials are international and produced in certain standard sizes to give a clean finish to buildings. But they are not durable materials in a hot climate. The inside of a concrete block house becomes over-hot with the heat transmitted from outside. So people turn to a mechanical solution of air-conditioning. Making our modern buildings rely mainly on air-conditioners adds to the cost of purchase and running. Therefore, it is time to investigate the quality of our building materials. One of the options is to utilise the sandy soil which is plentiful in the Najd region by carrying out more research on quality and durability, and applying it to help blend the natural with the built environment.

5.3.14. Coherence of Colour and Texture

Other partial characteristics which affirm the sense of coherence among very individual buildings are the unity of materials and textures. Thus von Meiss stresses this idea saying: *“Unity of materials and texture is another example of partial characteristics which reinforce the tendency towards coherence in spite of the individuality of each building.”*³³² (figure 5.5)

³²⁸ *ibid.*, p. 190.

³²⁹ *ibid.*, p. 167.

³³⁰ *ibid.*,

³³¹ *ibid.*, p. 180.

³³² *ibid.*, p. 32.

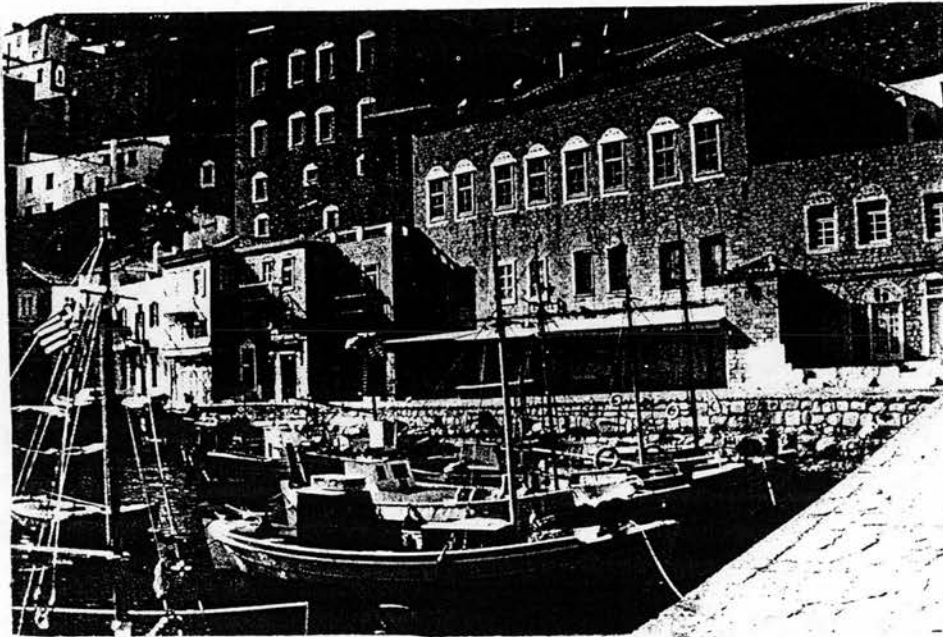


Figure 5.5: Waterfront of the town of Hydra, showing similarity of architectural details (windows pattern and style, building materials, and doors.)
(Source: von Meiss, P., "Elements of ...", p. 33.)

5.3.15. Architecture and the Senses:

(looking at, listening to, feeling, touching and moving through architecture)

In his analysis of the elements of architecture von Meiss tackled the importance of the sensitivity of the human being. An aesthetic experience of the environment occurs in the arena of all our senses. In some situations hearing, smell and touch even exceed vision in significance, being experienced with extraordinary intensity. These are among the five tactical images or effects that a designer must always remember, considering the echo in his spaces, the smells exuded by the materials or events which will occur there, with the tactile experience that they stimulate.³³³

Hearing, firstly, applies not only to areas of entertainment where its requirements are familiar; it also pertains to street paving, staircase materials, ceiling and floors for a work place, and so on. A guest is announced at a house by the gravel path he treads, whereas asphalt conveys nothing. This sound of a footstep reminds us that when the dominance of the visual realm is removed, auditory experience becomes a genuine pleasure.³³⁴

³³³ *ibid.*, p. 15.

³³⁴ *ibid.*

Smell, secondly, identifies places and moments for a lifetime, from the smell of perfumes, gardens, wood, or cooking. May be it is their singularity which retains them in our memory throughout an entire lifetime; a smell can be so deeply embedded in our memory that simply coming across it years later in an immensely different context delivers up amazingly precise images of the old past.³³⁵

Touch, thirdly, is especially significant in architecture for two reasons: first, gravity renders it an inevitable experience, and secondly our perception of objects, forms, and textures anticipates touch. Standing or walking, the human being retains a permanent tactile contact with the ground, rough or smooth, soft or hard, flat or sloping. The natural instinct encourages us to do more than look at a beautiful display: we want to touch its objects, test its weight and assess the texture of the surface and form. Smooth vertical elements, sculptures, tiles, columns, etc., present an opportunity to feel.³³⁶

Frampton also asserted the idea of using the touch sense to resist the domination of universal technology:

The tactile resilience of the place-form and the capacity of the body to read the environment in terms other than those of sight alone suggest a potential strategy for resisting the domination of universal technology. It is symptomatic of the priority given to sight that we find it necessary to remind ourselves that the tactile is an important dimension in the perception of built form. One has in mind a whole range of complementary sensory perceptions which are registered by the labile body: the intensity of light, darkness, heat and cold; the feeling of humidity; the aroma of material; the almost palpable presence of masonry as the body senses its own confinement; the momentum of an induced gait and the relative inertia of the body as it traverses the floor, the echoing resonance of our own footfall.³³⁷

An example of tactile sensitivity is seen in Alvar Aalto's Säynätasalo Town Hall of 1952 (figure 5.6). As Frampton describes it:

The main route leading to the second-floor council chamber is ultimately orchestrated in terms which are as much tactile as they are visual. Not

³³⁵ *ibid.*

³³⁶ *ibid.*

³³⁷ Frampton, "Towards a Critical ...", p. 28.

only is the principal access stair lined in raked brickwork, but the treads and risers are also finished in brick. The kinetic impetus of the body in climbing the stair is thus checked by the friction of the steps, which are 'read' soon after in contrast to the timber floor of the council chamber itself. This chamber asserts its honorific status through sound, smell and texture, not to mention the springy deflection of the floor underfoot.³³⁸

Furthermore, our posteriors are attracted to certain formal arrangements of benches and seats, steps, plinths, which we examine first visually and with our hands, assessing the sensual pleasure. To our skin, draughts make a decided impact, either cold, hot, unpleasant or refreshing. Even the stuffiness or freshness of the air presents a variety of concerns for architectural design.

Frampton stresses the importance of the tectonic in our daily life, where he classified it thus: "*the primary principle of architectural autonomy resides in the tectonic rather than the scenographic: that is to say, this autonomy is embodied in the revealed ligaments of the construction and in the way in which the syntactical form of the structure explicitly resists the action of gravity..., the tectonic is not to be confused with the purely technical, for it is more than the simple revelation of stereotomy or the expression of skeletal framework.*"³³⁹

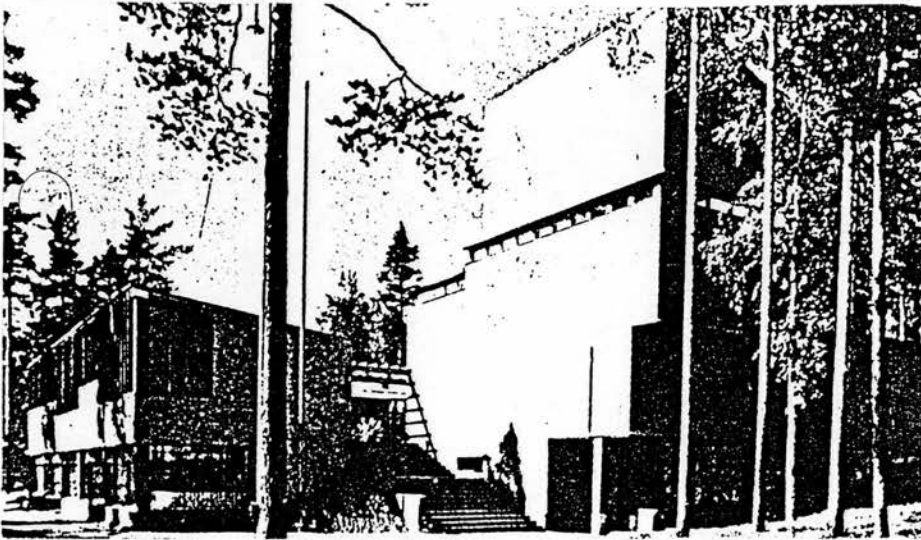


Figure 5.6: a) South-east facade of Alvar Aalto's Säynätasalo Town Hall, 1952.
(Source: Fleig, K., "Alvar Aalto", Barcelona, Spain: Imperner Juvenil, 1974, p. 139)

³³⁸ *ibid.*, p. 28.

³³⁹ *ibid.*, p. 27.

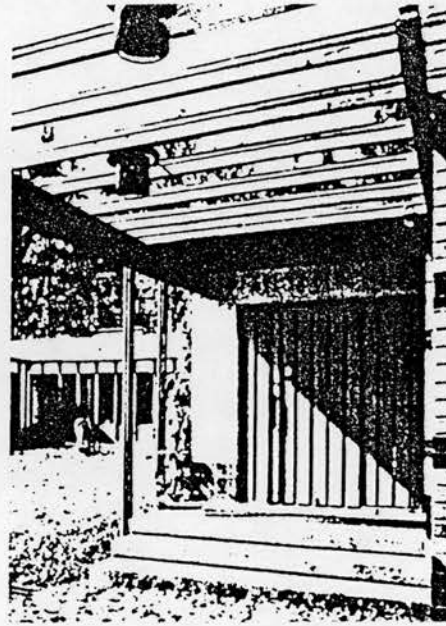


Figure 5.6: b) Interior corridor and offices

c) Main entrance

(Source: Fleig, K., "Alvar Aalto", Barcelona: Imperner Juvenil, 1974, (left, p. 143) & (right, p. 142))

The movement of the body, fourthly, while not actually one of our senses, offers us a means of measuring things and space. Gesturing, passing through, visiting, permit the evaluation of splendour and examination of what is concealed: many actions permit us to determine the sensual perceptions we desire, to see, hear, feel, smell and touch in a given environment; to move closer or away, go round, up or down, enter into or escape. Only on the draughtsman's board or in photographs is architecture a pure image. Once built, it immediately becomes the scene and the story of entrances and exits, gestures and even a parade of sensations.³⁴⁰

According to von Meiss, hearing, smell and our tactile sense are, like sight and the kinaesthetic sense, much more than simple physiological functions, they are also skills that may be acquired. Ear, nose and skin are no more 'innocent' than our eyes. We use them with the help of our intellectual faculties, combining them with our capacity to learn and memorise; thus transforming them into sensing mechanisms connected to our own experience, culture and era. The smell, noises and tunes of the previous century are not experienced in the same way as ours. Moreover, in our current built-environments the senses almost never act in isolation; aiding each other, mingling and sometimes belying each other.³⁴¹

³⁴⁰ von Meiss, *ibid.*, p. 15.

³⁴¹ *ibid.*, pp. 15ff.

5.3.16. Technology

Rifat Chadirji emphasises that Technology, in architectural terms comprises the array of methods utilised by a society to satisfy its building requirements. All social technology as an activity takes for its form the process of performance. Technology as such involves all of the elements relevant to performance, such as the ready availability of materials; physical and chemical functions and any comprehension of these properties; the capacity of economy and society to interact with them; and the array of controls which govern or affect them. After performance follows reciprocity, by which is defined the process of interaction between man and artefact for his good.³⁴²

According to Chadirji, these procedures of interaction more or less embody the case history of the development of architecture from its earliest developments to contemporary times.³⁴³ In the modern period, the revolution in social needs and social technology were caused by four factors. The first was the development of the machine as an agent of production within a series of production processes. As the initial and most dynamic of the new forces, the machine completely changed production relationships from a series of cybernetic co-operative actions to an array of separation actions during which it was frequently interrupted the cybernetic process. Second of the forces was the general prosperity arising out of the economic expansion which modern machine technology offered. Very rapidly it became possible to far exceed national and regional boundaries in the production and distribution of goods - with a capacity that threatened to submerge traditional judgement, creeds, religion and political values. Large volume and global distribution made possible a vast new variety of goods and objects for the performer or recipient to choose from. Third was the institution of new standardised building elements and building systems. Out of economic need, highly competitive labour and profitable markets, franchised production, and the universal spread of knowledge, structures and elements became increasingly homogeneous, active and unceasing, motivated mainly by the self-interest of the individual. This was largely to blame for such architectural losses as the loss of national and regional character; the breakdown of coherent regional character; and the demise of coherent style which had characterised architecture from its earliest history until the expansion of modern technology. The fourth factor had its effect through international media, which exerted a polarised influence on society. On one hand, it had begun to bring about the standardisation and

³⁴² Chadirji, R., *“Concepts and Influences: Towards a regionalized international architecture”*, New York: KPI, 1986, p. 11.

³⁴³ *ibid.*, p. 11.

internationalisation of science, art and academic training. On the other, there was a progressive increase in the heterogeneity of aesthetic values.³⁴⁴

To conclude this argument Chadirji says: *“The impact of these new factors threw the relationship between the two fundamental determinants of architecture. i.e. the needs and the technology of a society, into a state of confusion. This in turn introduced a fundamental ambiguity into the processes of production, academic training and architectural practice.”*³⁴⁵

5.3.17. Economy

Economy is the new main world problem; recession, inflation, redundancy, ... etc. - all are aspects of the national economy. A government comes to power because of its economic programme; another government falls by failing to implement its economic programme. One of the main ways of improving the national economy is by improving the quality of our built environment, maximising the interaction between built environment and nature, and most importantly minimising the initial and the running costs of buildings and urban structures.

If we investigate a method of research for improving the use of local sand, and incorporate it as a building material, and utilise it into mass production, eventually, the price of the unit will drop. The end result is local, cheap, durable building materials, which are easy to replace and maintain, and which, above all, respond to the natural environment, which will help to harmonise the built environment with the natural environment. An example utilising a local building material was demonstrated at The Royal Commission Exhibit Centre (RCEC) at the National Folk Festival in *Janadriyah* in 1988. *“The method recommended for the Janadriyah project involved a compacting technique to produce a brick with high compressive strength and durability that could be used immediately with minimum curing time.... However, more extensive tests at the site taken from samples 2 to 3 meters below ground level were found to have an optimum composition of gravel, sand, limestone and clay. Nearly 40,000 earth bricks would eventually be fabricated on hand presses at Janadriyah from the soil found on the site.”*³⁴⁶ (figure 5.8) The cost of this project was high, the International Center for the Research and Application of Earth Construction (CRA TERRE), associated with

³⁴⁴ *ibid.*, pp. 11-13.

³⁴⁵ *ibid.*, p. 15.

³⁴⁶ Royal Commission for Jubail and Yanbu, *“The Royal Commission Exhibit Centre at the National Folk Festival in Janadriyah”*, Yanbu: Royal Commission for Jubail and Yanbu Press, u.d.

University of Grenoble in France, was the consultant engineer for this project. Perhaps, if we utilise this technique and do more research, the construction cost of buildings in the Najd might be reduced, which will eventually save money for the nation.

At the moment the single family house is very expensive. (The cost of a house with a total built area of 400 sq.m. with water proofing and thermal insulation is an average of S.R. 2,000/sq.m. This gives a total of S.R. 800,000 + the price of the land + the landscaping, so the final figure could be in six digits). If we make use of a form and material that relates to the people and to the climate we would save a great deal of this money, and that in turn will improve the national economy.



Figure 5.7: a) The RCEC during construction



b) The finishing of the dome

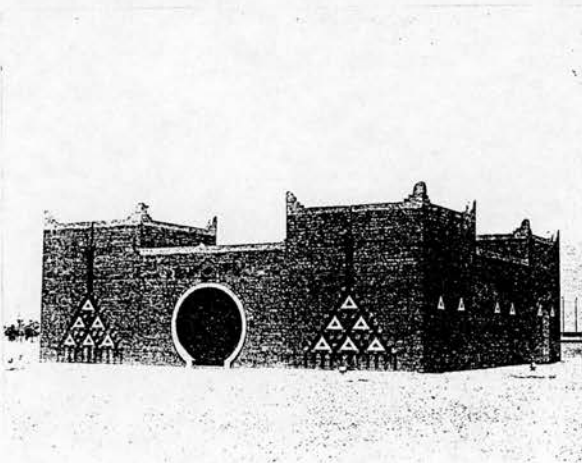


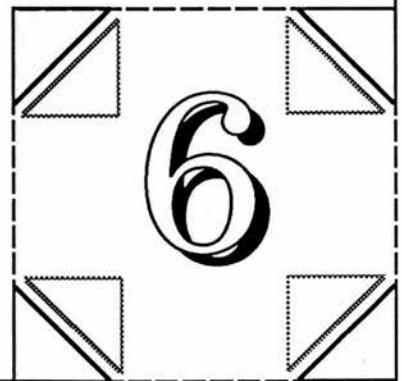
Figure 5.7: c) The RCEC final look

(Source: Royal Commission for Jubail and Yanbu, "The Royal Commission Exhibit Centre at the National Folk Festival in Janadriyah", Yanbu: Royal Commission for Jubail and Yanbu Press, n.d.)



d) The interior

*The Criteria for Producing
an Appropriate Architecture:*



The last chapter concentrated on listing principles that typify our built environment, and referred to a number of writers who contribute towards identifying architecture by principles of design appropriate to a region. Therefore, this chapter seeks to extract the ideas discussed and re-write them in a new format as precise criteria. These criteria are not comprehensive ones, but it gives a basic background for the method that any future research should take account of in order to produce a theoretical coherent coverage for the planning and building codes.

- 1 • Order is a prerequisite for designing a coherent built environment. Order has to respect the natural environment, has to comply with the physical setting, and has to conform to a social hierarchy.

We may establish a hierarchy to follow the rules that have been assigned and then integrate these rules to create a code for city planning, and building design. If these rules are in conflict, their hierarchical weighting is compared and the most important one chosen. So we define a list of rules that regulate our built environment and in turn integrate it with natural and mechanical forces.

In order of priorities, the family house tops the list, being the main unit in the city. Therefore we begin with the house, and proceed to the larger complex (streets, open spaces, principal buildings, neighbourhoods) creating the entire fabric of the city.

- 2 • The integration of the parts creates a coherent entity in which the family house is predominant. Within the family house there are many elements -solid and voids, colour, texture, volume, material, equipment, furnishing, ... etc. The intricate relationship between these parts makes the family house coherent. Elaboration of the relationship between these single units ultimately creates a coherent built environment.
- 3 • It is important to notice that semantic unity can reinforce and sometimes even replace formal coherence. Architecture relies on the relationship of elements to establish coherence. Coherence creates identity. The more we have coherence in the built environment the more we feel integrated with it and feel that it succeeds. Therefore, we should aim to establish a sense of coherence by adopting a unified colour scheme, integration of topography, respect for climate, light, and air in the city fabric, and respecting social and cultural values.

- 4 • Architecture is the mirror of society. Since people in Saudi Arabia are socially and culturally distinct, their architecture should reflect the lifestyle of the people. Saudi architecture should reflect the cultural and social richness of the Saudi people.
- 5 • In order to produce a built environment that respects physical needs and social requirements we need to investigate the different architectural forms that provide privacy in life, learning from traditions as a form produced by social and cultural needs.
- 6 • A coherent hierarchy can unify diverse elements, enabling combinations to form larger, simpler and more articulate objects. In the built environment the hierarchy of different elements can create an intricate and organised urban structure.
- 7 • Architectural space must cater for organic action as well as facilitate orientation through perception. A primary characteristic of space is the outside-inside relationship, implying that space possesses a varying degree of extension and enclosure, therefore settlement and landscape have a figure-ground relationship. Space extends away from the focus in a varying rhythm or continuity and in different directions.
- 8 • The term place describes a totality having shape, volume, colour, and texture. The character of a place determines its quality. Character or 'atmosphere' is attributed to a place. There is a hierarchy of places -countries, regions, landscapes, settlements, neighbourhoods, and buildings with their sub-places. They form a series of 'environmental levels'. At the top of this series we find the more comprehensive natural places, which contain the man-made places on the 'lower' levels.
- 9 • The quality of any place commences at its boundary. Enclosure provides man-made places with distinctive quality, and the nature of the enclosure determines the character and its spatial properties. Enclosure fundamentally means an area distinguished from its environment by a boundary. Therefore, we start from the main unit of the city-the family house- moving through to the physical boundary of the city.

- 10 • One of the factors is repetition of certain architectural elements around the city, causing people to perceive and link its different parts. There are some architectural elements which exist only in the traditional built environment of the Najd. If we incorporate and modify these elements to match modern technology, we may promote its own specific character. It is however important that such elements are incorporated with good reason and in a logical way.
- 11 • Identification & orientation exist as aspects of a comprehensive relationship, and function independently within the whole. Modern society concentrates its attention on orientation as a practical function, and leaves identification to chance. The once close relationship between man and the natural environment has become reduced and fragmentary. So, a dwelling, in its true psychological sense, must achieve a full understanding of identification and character.
- 12 • To exist in harmony with the universe, society must acquire the ability to place itself appropriately in world culture. Identity distinguishes the human being from the mineral, vegetable, and animal worlds. The built environment is only one among many influences on our sense of identity, others include: manners and rites, apparel and belongings, food, and use of language. Nonetheless, architecture has a key function in affirming or destroying our sense of identity. To create an identity for the built environment we have to relate architecture to people and their regional requirement. The relationship between these different factors determine the unique identity of the built environment.
- 13 • Character is more general than space. The character of a place may to some extent be time-dependent, altering with season, time of day and weather factors, primarily important because they change. While Character suggests a general comprehensive atmosphere, it also indicates the material form of space - defining elements. Therefore, built environment should impress us with its singular character, which forms a fundamental part of our experience. When a group of buildings form a place, its character condenses into elements or *motifs* - distinct types of windows, doors, roof shape and wall patterns. These 'conventional elements',- as they vary, alter character from place to place.
- 14 • Boundary is what defines any enclosure. The boundary gives continuity or discontinuity, direction and rhythm to the extended spatial structure. In order to have a clear image of a city, we have to acknowledge the physical setting that determines the growth of the city .

- 15 • In the framework of architecture a stimulating system of interplay between human and environmental, 'discourse' is of fundamental importance. Architecture forms part of human 'discourse', uncovering the spatial essence of the world.
- 16 • Colour is an essential feature to our living environment. It suggests either diversity or unity. A coherent unified colour scheme adds a sense of unity to the built environment.
- 17 • One of the factors that distinguishes our built environment is the nature of its physical setting. The interaction between the building and its site distinguishes each building, each neighbourhood, each city, and finally each region.
- 18 • The peculiarities of climate add a special element. As architects we should maximise the beneficial interaction between man and climate, giving him the chance to enjoy its seasonal variations.
- 19 • Natural light is a variable quality, altering with time -the rosiness of dawn, the noon glare, the sunset glow, and the pale rays of moon light. The appearance of a building changes seen under natural light, varying between a sunny day and a dull one. Natural light is essential to our physical response to natural changes, helping us to interact with nature. Artificial light, however, is a constant feature.
- 20 • One of the first things to attract our attention is material and texture. Therefore, in order to achieve distinctive qualities we must produce a building material with a texture which belongs to the region. One option is to research the quality of dried mud brick for use in our future development. This by itself would be distinctive.
- 21 • An aesthetic experience occurs in the arena of our senses. In some situations hearing, smell and touch even exceed vision in significance.
- 22 • Enclosure provides man-made places with their distinctive qualities, giving a sense of containment to the user.
- 23 • Technology is vital. Unavoidably, we employ technology (building materials, building techniques, solar systems, air-condition, ... etc.) to maximise comfort and to minimise expense;

- 24 • Economy is always important and may be improved by reducing construction and running costs. One avenue to be explored is the use local soils in building construction. We must also utilise building forms that respect nature and avoid waste of space.

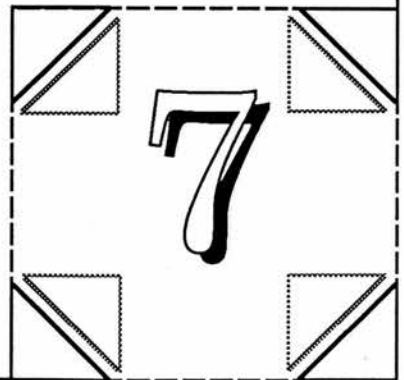
Note:

This study does not seek to duplicate the extensive research into the technologies of mud brick buildings and other forms of earth construction. However it does recognise a transition from the use of earth to architectural forms deriving from earth and mud as to colour and texture but exploiting other materials. It is clear that the visual characteristics of the earlier material have been transposed into the new architecture of the region without stylistic copying. What gives the process legitimacy is the sympathetic adaptation of aesthetics derived from mud buildings to the newer materials. The most important aspect of traditional architecture is the principle that shaped the traditional city of Arriyadh, and the fact that the people used local building materials and techniques because society could not afford to buy or to use imported ones. For more details on the use of building and construction materials see: Al-Jadeed, M., "Building with Earth: Traditional architecture and new technology with special reference to Saudi Arabia", Cardiff: PhD Thesis, 1994.

Summary

As all these criteria are interrelated, any future building code must take them into account to provide planning and design guidelines that will shape architectural identity appropriately. We must therefore respect the hierarchy of criteria and achieve the right order of precedence. Furthermore, still more research should apply to test such criteria and we then shall add or delete according to the needs.

*The Historical Development
of the Qasr Albokm Area:*



Chapter 4 demonstrated the coherence of the built environment up to 1940s. Thereafter, following the introduction of vehicles and foreign planning and construction technology, the city fabric started to fragment, plummeting to its low point in the 1970s when the government commissioned Doxiadis of Greece to make the first Master Plan. The Central Business District (CBD) or Qasr Alhokm Area headed every planning priority.

This Chapter will describe the historical development of the Qasr Alhokm Area till the 1970s when the government decided to re-develop the area. That redevelopment is fundamental to this thesis.

7.1. The Historical Development of the Qasr Alhokm Area

The Qasr Alhokm Area housed the seat of government from the time of the Second Saudi State. Arriyadh became the Saudi State in 1824 when Imam Turki bin Abdullah (- 1833) captured the city and used it as his base.

On the 5th of Shawal 1319 AH (15 February 1902 CE) Àbdulaziz (1875-1953) reached Arriyadh from Kuwait with 40 of his close friends and allies.³⁴⁷ He and 7 other men went into the city, hiding overnight in the house of Àjlan³⁴⁸ the Governor, which stood close to the Almasmak building (Governor's palace). There he was joined by the rest of his team. Àbdulaziz asked Àjlan's wife what time he was expected to return from Almasmak, to which she replied that he was expected back in the morning. Àjlan was late in leaving the palace. When he did emerge the custodian of Almasmak opened the main door³⁴⁹ and Àbdulaziz walked with his allies towards it. Àjlan had come out with 10 other men and was walking to his house, where Àbdulaziz had stayed that night. Àbdulaziz and his men ran towards Almasmak. Àjlan saw what Àbdulaziz was doing and tried to go back, upon which Àbdulaziz shot Àjlan but did not kill him. He ran back towards the main gate³⁵⁰, which was already shut, except for a small opening in the main fortress door called *Alkhokhah*³⁵¹ through which Àjlan squeezed to get inside, but Àbdulaziz grabbed his feet. However Àjlan managed to get inside. Àbdulaziz wanted to follow him through the small door, but Abdullah Bin Julawai was closer. He succeeded in entering Almasmak and killed Àjlan. 10 men followed Ibn

³⁴⁷ As told by King Àbdulaziz to Fouad Hamzah in a book entitled: "Albilad Alarabiah Alsaudiah", [Arabic], Um Alqurra Press, 1355 AH., pp12ff.

³⁴⁸ Àjlan was the Governor of the town appointed by Ibn Rasheed (The Ruler of Hail).

³⁴⁹ It is usually closed from sun down till sun-rise on the next day.

³⁵⁰ Almasmak main gate is 3.6 metres in height and 2.7 metres in width.

³⁵¹ A small opening in the main gate of the fortress, where people had to bend and squeeze themselves through in order to get inside. It served to help the guardian examine and control people seeking admission.

Julawai by opening the main gate, and the rest of the group followed. Àjlan's followers inside Almasmak numbered 80 men while Àbdulaziz allies were only 40. As the fight inside the palace intensified half of Àjlan's followers were killed and the rest surrendered. Then Àbdulaziz proclaimed himself as the new Amir (Governor) of the town, upon which he ordered the rebuilding of the town wall. This task was finished within five weeks.³⁵²

Almasmak was built by Mohammed bin Abdullah bin Rasheed in 1312 AH (1894 CE) on the ruins of Imam Abdullah bin Faisal's palace. Scholars have claimed that this palace was built by Imam Abdullah bin Faisal, but Fouad Hamzah in his book "Albilad Alarabiah Alsaudiah" notes that King Àbdulaziz said that Almasmak palace was built by Ibn Rasheed on the ruins of Imam Abdullah bin Faisal's palace. This reference is the closest source information available. Moreover, there are close similarities between the architectural style of Almasmak and the great fortress in the centre of Hail.³⁵³ (figures: 7.1 & 7.3).

7.1.1. The Palace³⁵⁴ and Its Meaning

The Qasr Alhokm building carries symbolic meanings of the highest order, being the place where the Governor sat to hear citizens' grievances and deliver justice in the case of disputes; it also served as the place where Eid and national celebrations took place. Here people came in direct contact with the Governor and other decision makers. The palace also functioned as the place where people come to give allegiance to the King. It was also significant as the place where HM King Àbdulaziz was born and thereafter his other sons: HM. King Khalid (1914-1982), HM. King Fahd (1921), and Crown Prince Abdullah (1923).

In 1936 King Àbdulaziz start building the Almurabaà palace complex. Meanwhile, the old palace at the city centre remained the centre of government until 1949. The King then used the Almurabaà palace as the centre of government. At the beginning of 1953, just before the death of King Àbdulaziz, Crown Prince Saud built the Alhamra palace.

³⁵² Altawbah, M., Alsubait, A., and Alfara, T., "Almasmak Ramz men Alturath" [Almasmak: A symbol of a Tradition], National Guard Press, Arriyadh, 1405 AH., pp.147-157.

³⁵³ Alrowaished, A., "Qasr Almasmak fi Arriyadh: Asalat Almadhi wa Rawat Alhadher" [Qasr Alhokm in Arriyadh: The historical heritage and the beauty of the present], Alshebel Printing Press, Arriyadh, 1992, pp. 219-223.

³⁵⁴ There is no clear record to show when the term Qasr Alhokm first came into use. During King Àbdulaziz time the palace was called the palace of the Imam retaining this title until the unification of the Kingdom. Thereafter people called it the King's palace. The name Qasr Alhokm may first have been used during King Saud's time when he demolished the old mud palace and replace it with the stone one. The first recorded planning use was in Albin's report as Doxiadis called the area the CBD.

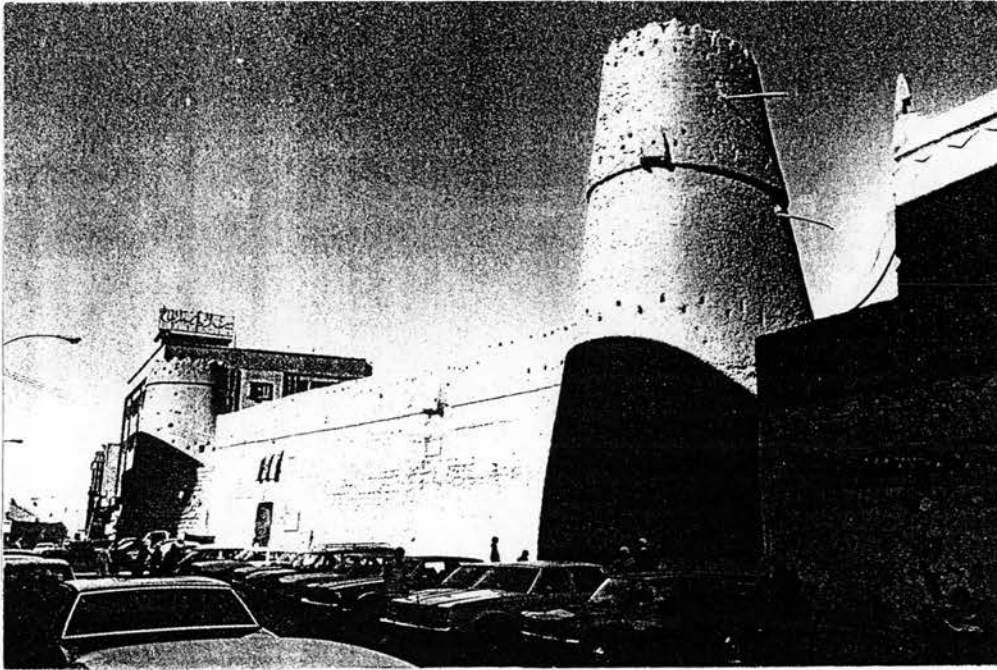


Figure 7.1: Almasmak palace in the 1970s.
(Source: Facey, W., "Riyadh the Old City", 1992, p. 178)



Figure 7.2: One of the palaces in Hail showing the similarity with Almasmak palace.
(Source: Facey, *ibid.*, p. 179)

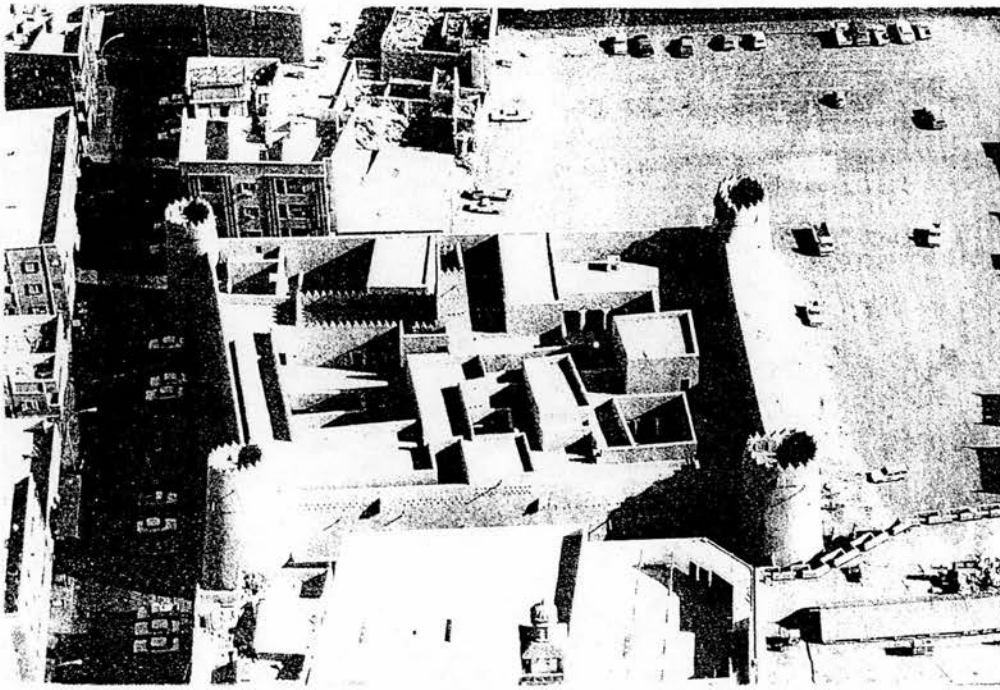


Figure 7.3: Almasmak palace after restoration in the early 1980s showing the buildings built adjacent to it. (Source: Facey, *ibid.*, p. 178)

In April 1953 King Saud ordered the demolition of the old town palace³⁵⁵ and adjacent buildings in the centre, to be replaced by the house of the Governorate of Riyadh; the law-courts (Qasr Alàdl)³⁵⁶, and a spacious audience hall where the King could receive visitors³⁵⁷ on ceremonial occasions (figure 7.4).³⁵⁸ The mosque thereafter was demolished to be replaced by a larger concrete mosque (figure 7.5), “*Its two tall minarets and graceful colonnades in striking contrast to its austere and simple predecessor.*”³⁵⁹ By March 1954 the new town palace (Qasr Alhokm)³⁶⁰ was completed and Philby visited King Saud there.³⁶¹ It is believed that King Saud used the Alhamra palace as an office as well as his residence during the time that Qasr Alhokm was rebuilt between 1953-1954. Thereafter, he used Qasr Alhokm as his office and the Alhamra palace as a residence until 1957 when he moved to *Alnaşeriah* palace (see Chapter Four).

³⁵⁵ It was originally built by Imam Turki Bin Abdullah around 1240 AH (1824 CE). In King Àbdulàziz time and through the development of the nation he enlarged the palace number of times. This was a natural result of the increase in the country's, wealth, responsibilities, administration, and the increase in his family's numbers. The most important point was that the architectural form of the palace did not change despite the changes in the palace size, spaces, furniture, and decorations.

³⁵⁶ There is a confusion between the English and the Arabic name for the area. In Arabic the area called *Manteqat Qasr Alhokm* meaning the Ruling Palace Area, whereas in English the area's is called Justice Palace District meaning *Manteqat Qasr Alàdl*. Therefore, in this thesis I shall call it Qasr Alhokm Area.

³⁵⁷ Facey, W., “*Riyadh the Old City*”, pp.318-319.

³⁵⁸ Abul-Ela, M. T., “Some Geographical Aspects of Al Riyadh: Saudi Arabia”, *Bulletin de la Société de Géographie D'Égypte* 38, Cairo, Egypt, 1965, p.48.

³⁵⁹ Facey, W., *ibid.*, p. 319.

³⁶⁰ This was the first incident to mention the new name Qasr Alhokm, thereafter this name was the official name for the building and the area been called after it.

³⁶¹ Facey, W., *ibid.*, p. 318.

When King Saud built *Alnaṣeriah* he ordered the construction of a dual carriageway with planting along the centre, to link the palace with the city centre, by-passing the Almurabaà palace. The street is still known as King Saud street, and a branch was established leading to the new airport and the railway station.³⁶²

During 1955 the King continued to demolish more buildings in the area to refine the vehicular approach to the palace from Thumairi street³⁶³. Abul-Ela reports: "*The houses bordering the crooked narrow streets and lanes were demolished to give place to new wide tarmac streets suitable for motor traffic. Modern shops lined the new streets radiating from the central enclave in every direction. So the residential belt in the kernel was invaded by the expanding commercial core and other central services.*"³⁶⁴ (figure 7.7)

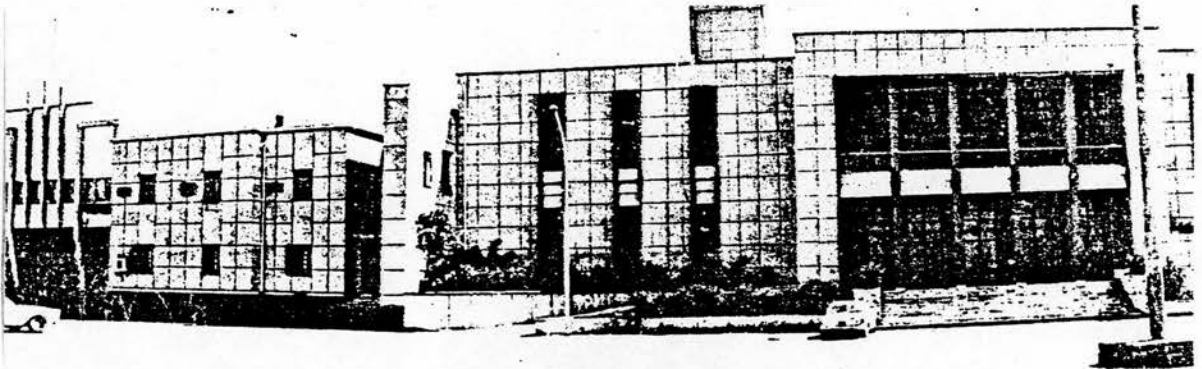


Figure 7.4: Qasr Aladl, the High Court, and the King's audience hall in Dira plaza. (Source: Doxiadis Associates-Consultants on Development and Ekistics, Riyadh: Existing condition, report prepared for the Ministry of Interior for Municipalities, July 1968, p. 330)

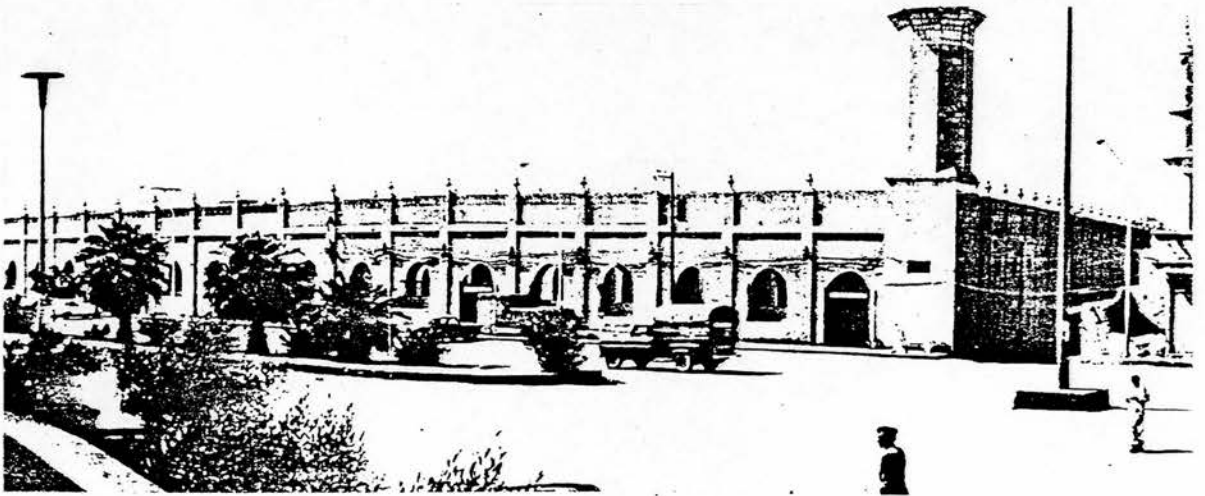


Figure 7.5: The Masjid Jamie from the south-east, the photo taken from Aladl plaza. (Source: Doxiadis Associates - Consultants on Development and Ekistics, "Riyadh: Existing Condition", report prepared for the Ministry of Interior for Municipalities, July 1968, p. 256)

³⁶² *ibid.*, p.321.

³⁶³ Mentioned by Prince Fahad Bin Faisal Bin Farhan (the Mayor at that time) and William Facey supports that in his book "Riyadh the Old City", p.318.

³⁶⁴ Abul-Ela, *ibid.*, p.49.

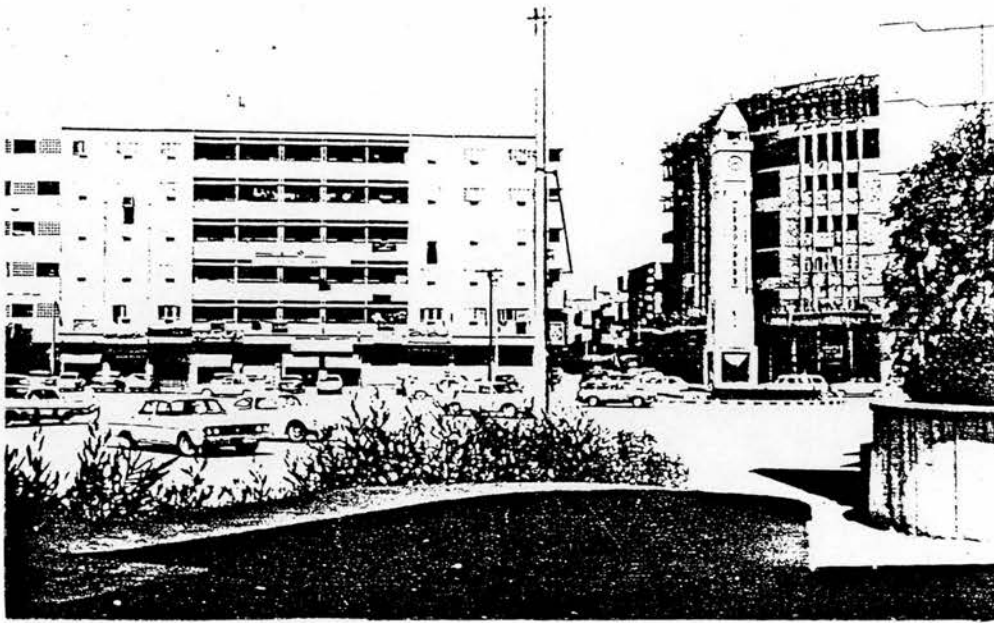


Figure 7.6: The clock tower located at Alādī plaza looking east towards Thumairi Street. (Source: *ibid.*, p. 256)

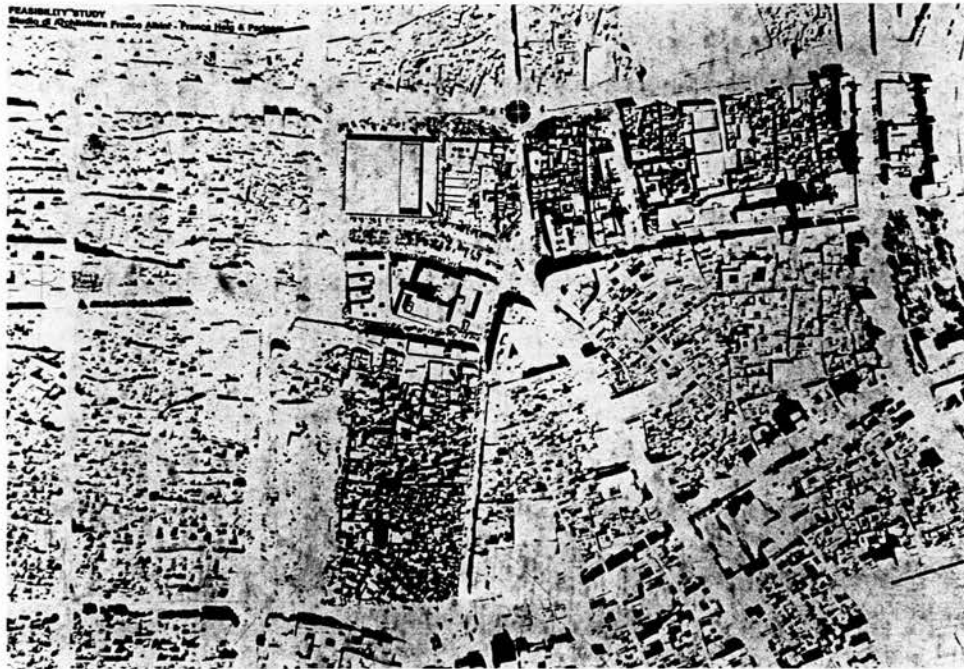


Figure 7.7: Aerial photo of the area at the beginning of the 1970s. (Source: “Kasr-El-Hokm Area redevelopment project: Riyadh-Saudi Arabia. Feasibility Study Report”. Studio di Architettura Franco Albini-Franca Helg & Partners, Milan, 1974, Front cover photo)

Engineers from Egypt came to design and supervise the new projects. According to Prince Fahad Bin Faisal Bin Farhan, the Mayor of the city at that time, who was in direct control of the projects, the reason for demolishing the old palace was the unimpressive nature of the main reception room with its many columns. This was a consequence of the traditional way of building a roof due to the limitations of the length of the tree trunks. The mosque followed in this demolition process, as did the Souq

located around *Dirah* Square, where the mayoralty ordered people owning shops to evacuate them within 3 days, upon which they built larger reinforced concrete shops divided into different sections. Despite these new buildings and development in the city centre, most of the neighbourhood remained unharmed, preserving its architectural character till the end of 1970s.

The wave of modernisation in the city started at that time. The city centre was the first with widening for vehicles. It is likely that the main reason for demolishing King *Àbdulaziz* palace, the mosque, and the surrounding shops was the feeling that these buildings were located at the heart of the town and had been built by traditional methods using sun-dried mud brick. Otherwise these buildings would not have been demolished at one time. We also may sense that King Saud was overwhelmed with enthusiasm for modern building and finishes, as seen in his *Alnaṣeriah* palace originally built in the 1940s, in new buildings for the Ministries along the Matar road, and in building the Airport itself.

The 1950s witnessed the inauguration of the Airport, the inauguration of the Railway station linking Arriyadh with the East coast; the transfer of governmental activities from Jeddah to Arriyadh and the need to build thousands of new buildings to accommodate government staff, and the influx of migrants and other experts who came to work in the city. This increased the pressure to demolish more houses and build new commercial and business buildings to satisfy the needs of the newcomers. New functions had been added i.e. hotels, restaurants, hospitals, clinics, schools, libraries, zoo, shopping centres, and other services.

According to a survey of the city centre made by Abu-Ela in 1964-65; the residential building in the area represent 74% of the total buildings. Of these, traditional mud-brick houses represented 86% of the total with narrow street patterns. The remaining 14% were modern buildings.

Modern facilities were beginning to be evident in the city centre residential areas, and the majority of residents started to appreciate the importance of modern facilities i.e. electricity and water supply. Only 210 houses out of 1228 had no electricity or mains water; 880 houses had both electricity and water; 87 houses had only electricity; and 51 houses had only water.³⁶⁵ From these figures we may presume that the traditional building character was the dominant feature of the city centre, and the

³⁶⁵ *ibid.*, pp. 54-55.

small narrow streets were the dominant feature of the neighbourhood structure. Most modern buildings were on the main streets.

7.1.2. Definition of the Qasr Alhokm Area

Doxiadis defined the Qasr Alhokm area as the area located at the city's centre of gravity, and it lies in the northern-central section of the old city of Arriyadh. Therefore, it can be easily accessed and linked with the governmental development located to the north of the city centre, the Ministries located along the Airport road, the Airport itself, and the new neighbourhood developments in Almalaz and Alwazarat. The Qasr Alhokm Area comprises: central commercial, business activities, governmental offices, and residential neighbourhoods although these are not predominant.³⁶⁶ The density of habitation and uses within the Central Business District are much higher than in the rest of the city's neighbourhoods although the residential density of the Qasr Alhokm area is low as a result of the displacement of residential uses by business functions.³⁶⁷

7.1.3. The Qasr Alhokm Area Boundaries

Qasr Alhokm Area is defined to the north by Al Imam Turki bin Abdullah street, to the south by Tareq bin Ziyad street, to the east by King Faisal street, and to the west by King Fahd Road. It has a total developed area of 54 hectares. Being the only main commercial centre and with the increase of city population, the development of commercial and governmental activities there caused serious pressure on the area. Traffic was the most intractable problem. Streets were too small to handle the number of vehicles coming to the city centre and there were insufficient parking spaces in the area to handle the increasing number of cars (figure 4.20).

A number of modern blocks 5 to 8 storeys in height were built along the main roads in the area (Thumairi road, King Faisal road (Alwazeer), and Batha road). Many of these buildings were used for commercial, business, and residential premises. Shops were located on the ground floor, and on the remaining floors were either offices (including professionals such as: physicians, dentists, lawyers, architects, and engineers)³⁶⁸ or residential flats.

³⁶⁶ Doxiadis Associates-consultants on development and Ekistics, "Riyadh: Existing conditions part 2. Final report", a report prepared for the Ministry of Interior for Municipalities, Riyadh, July 1968, revised in February 1970, pp.249-250.

³⁶⁷ *ibid.*, p.258.

³⁶⁸ There is no accurate information about the percentage of business and professional users occupying the area, but Doxiadis estimated that about 40% of the floor area of multi-storey buildings was occupied by business and professional uses. (Source: DOX-SAU-A2, p.266)

The architectural character of these new buildings was different in style and character to the surrounding local architecture. Doxiadis report dated July 1968 described the visual incoherence of the architecture in the area ...*“The architecture of the elevations is not always interesting, as most of the new buildings lack the grace, harmony and plasticity of the old traditional buildings. Nor has the proportion of facade openings to solid surfaces and the interchange of masses yet reached a new agreeable style.”*³⁶⁹ This reference demonstrates the imbalance in the new building style and character by comparison with the traditional one. His surprising comment ... *“yet reached a new agreeable style”* is a departure from previous statements which, encouragingly, is an early response to the problem which concerns this thesis (figure 7.8).



Figure 7.8: The area looking from the east to the west. Notice Almasmak palace towers and the masjid Jamie mosque's minaret in the background.

(Source: *“Qasr-El-Hokm Area redevelopment project: Riyadh -Saudi Arabia. Feasibility Study Report”*, Studio di Architettura Franco Albini-Franca Helg & Partners, Milan, 1974, p. 2/2)

The new and old markets were placed in the different parts of the area. The *Dira* market contained furniture, carpets, bronze and similar items; the west *Dira* market contained cotton, cereals, seeds, etc.; the south *Dira* market contained cloth and garments; the market at the Mammon Avenue sold meat and vegetables; and the Thumairi road retail shops offered all kinds of goods. All of these markets were located around the *Dira* square and the Masjid Jamie which reflected the strong relationship between the *Souq* and the mosque.

³⁶⁹ DOX-SAU-A2, p. 272.

The location of the Masjid Jamie in the city centre surrounded by the different markets and bazaars enriched the area with people walking around the different shops seeking bargains. When the *Mothen* called for prayer the men in the *Souq* went to the mosque. Most impressive was the sense of trust which allowed shop owners to leave their shops open or semi-open when they went to the mosque. This scenario has changed in our time as the result of social changes. In the past people in the city knew each other, but now society is multi-racial and the sense of trust has largely gone. This seems to be the social price paid for modern society.

The first approach to re-development of the area was presented by Doxiadis to the decision makers of the city on May 1970. It was purely an idea for re-organisation. From the reaction and the comments of the decision makers Doxiadis suggested a preliminary urban design for the area which was submitted in July 1971. The main idea of the development was to provide a city centre which gave an interaction of the historical buildings with the proposed future development creating a coherent entity. With this objective, Doxiadis suggested the linking up of the city centre with the rest of the city by a network of primary and secondary streets designed to satisfy the needs of the different users of the area.

Doxiadis's Master Plan suggested modernising the city centre. But such an action could not have been implemented without total rebuilding. According to HE Sheikh Àbdulaziz Althenayan³⁷⁰ -the Mayor of the city at that time- the people who lived in the city centre started to leave to build new homes outside. The increase of house prices in the city centre rose to an average value of SR. 15,000/sq.m.³⁷¹ (approximately £2,500/sq.m.). This was coupled with their wish to live in a modern residential neighbourhood, the need of more space for the family, and the fact that they were impressed with the design and modern services of the new villas. These factors led most Saudi families to sell their houses in the city centre and use the money to build large new villas on the outskirts, where the average price was SR. 200/sq.m (approximately £35) for land. Eventually the city centre started to deteriorate. The Mayoralty sought to deal with the problem.

³⁷⁰ This information comes from an interview with Sheikh Àbdulaziz Althonayan - Deputy Minister for Administration and Finance for Ministry of Foreign Affairs - on 5th of April 1993. He was the Mayor of the city from 1966 till the end of 1976. Sheikh Althonayan currently is the Saudi Ambassador in Spain.

³⁷¹ The annual rent for these houses was very low as a result of their poor quality and conditions. So, most Saudi families started to leave, which in turn caused the quality of the neighbourhood to deteriorate.

At the beginning of 1960, there were no Saudi consultants specialising in planning or architecture. The Saudi government requested help from the United Nations, which recommended a number of experts in physical planning, particularly for the development of the cities. Dr. Omar Azzam was among these experts who participated in the organisation for the development and planning, having the title of *The General Director of Regional Planning Offices in the Kingdom of Saudi Arabia*.

Dr. Azzam³⁷² reported that when they arrived in September 1960 there was no Saudi Planning Authority. There was only a small technical unit which mainly undertook a surveys of existing areas and the design of small projects for the Mayoralty, and at that time it was part of the Ministry of Interior.

According to Dr. Azzam the biggest problem they faced when they started work was the lack of background information such as statistics and maps. They started developing a planning authority and concentrated on five major cities (Arriyadh, Makkah, Jeddah, Madinah, and Taif). The quickest way of collecting information was to initiate aerial mapping surveys of all cities and towns in Saudi Arabia (approximately 45 cities and towns). They then made some sample studies to collect information about population and the density levels. This was successful and was an important step in starting the physical planning. They divided the Kingdom into five regions: Southern, Western, Eastern, Northern, and Central. They recruited a number of planners and launched a large programme to develop Regional Plans, a Master Plan, and a new process of involvement, described as Action Areas.

The idea of Action Areas was developed through experience in other countries. It involves an in-depth design co-ordination between architects and planners, in order to give the city its real character and start a new dialogue between the architect and the planners to achieve a level of urban design in certain key areas.

Qasr Alhokm area was one of these Action Areas. At that time Dr. Azzam was working on the development of the Master Plan and Action Areas in Kuwait. He held the post of "United Nations Regional Advisor for the Middle East". He was selected together with Sir Leslie Martin and Professor Franco Albini to sit on a committee headed by the Kuwaiti Prime Minister to develop a Master Plan for the city of Kuwait, which had taken them four and a half years.

³⁷² Born in 1930 in Cairo -Egypt-. Dr. Omar Azzam finished his first degree in architecture from Cairo University in 1953-54, and he finished his master and PhD degrees in urban planning from Zurich Polytechnic in Switzerland in the late 1950s. He then worked for united Nations and retired in 1980-1981. (The following information were taken through a personal communication on the 9th April 1996).

When the Action Area of Qasr Alḥokm was called for, Dr. Azzam recommended Franco Albini to HE. Àbdulaziz Althonayan, as a highly respected and sensitive architect³⁷³. A relationship was forged between the consultants (headed by Dr. Azzam) and the Mayor of Riyadh to visualise how the area of Qasr Alḥokm could develop and what influence it would have on the development of the surrounding urban areas. They saw Qasr Alḥokm as a pilot project. Meanwhile, the government started to send young Saudi students to study abroad in the fields of regional planning, urban planning, urban design, and architecture, so that they could take a major role in continuing the city development.

After initial data collection and aerial mapping they commissioned reputable companies and architects to carry on with the Master Plan of each region:

- Doxiadis for the Central Region;
- George Candilis for the Eastern Region;
- Robert Matthew for the Western and Northern Regions; and
- Kenzo Tange for the Southern Region.

Dr. Azzam and his team controlled and supervised the work of these consultants. In the case of Qasr Alḥokm, HE. Àbdulaziz Althonayan was a trained anthropologist, so dialogue was easy. However, when Àbdulaziz Althonayan left the post of the Mayor at the end of 1976, a new group had taken the responsibility for the planning of Arriyadh and they were very much influenced by civil engineers and others who were fascinated by modern high rise buildings of concrete, glass and steel. In their view this represented Modernism and Development.

Dr. Azzam however tried to convince the authorities of the merits of traditional architecture and planning. Nevertheless, the rapid growth and increasing need for new buildings, as well as speculation in land, became the main influence. Sensitivity to the traditional environment was seen as outdated and reactionary.

Albini made a site visit in June 1973 to make a visual survey and to study the character of Almasmak to enable him to make recommendations on the methods to be followed for the conservation and the restoration.

³⁷³ Francesco Tentori said, "*The architecture of Franco Albini (17, October 1905-1, November 1977) was always, throughout his long and busy career of nearly fifty years, based on a search for a coherent connection, a symbiosis almost, with his surroundings, together, of course, with a quest for harmony and functionality.*" (Source: Tentori, F., *Lotus International*, no. 18, 1978, p.104)

The urban fabric surrounding Almasmak was in poor condition, detracting from the building's significance. Professor Albini made it clear that the "*Conservation will concern not only the Masmak but also its siting and its character. Landscaping, street furniture and lighting are but a few of the items that have to be carefully considered.*"³⁷⁴ Albini after his visit to Almasmak summarised the existing condition of the palace saying: "*The fast development of the city of Riyadh in the recent past have surrounded the Masmak with new buildings which do not co-operate in giving the right importance and environment to such an historical building but on the contrary, they kill the right scale and views. The Masmak should have open spaces or piazzas and green areas around to allow the old fortress to emerge in relation with the surroundings.*"³⁷⁵ (figure 7.3) Albini acknowledged the importance of the building when he made it clear that they should demolish the area surrounding Almasmak and make a green zone in which the building could be appreciated by the public and could be easily distinguished in the urban context. To accomplish this goal he made the following recommendations:

- 1 • To free the area around Almasmak to allow the building to stand as an important element and to make a visual and pedestrian connection between Almasmak, and the Masjid Jamie and Qasr Alhokm.
- 2 • To build a piazza around Almasmak with fountain and seats so people can sit and enjoy looking at this important building. Furthermore the quality of the shops should be improved in order to give the area more life.
- 3 • To restore the two mud mosques near Almasmak, one to the east and the other to the south. The two mosques are of traditional construction and look attractive.
- 4 • To restore other houses in the area to be used as an extension of the exhibition area inside Almasmak.

While Albini was working on the re-development of Qasr Alhokm Area scheme, another consultant was appointed to revise Doxiadis Master Plan. In 1976 the SCET revision of the Master Plan "*Emphasises that the city centre will require consistent and co-ordinated government action to prevent its further deterioration, and to provide encouragement to the private sector to participate in redevelopment and improvement programme.*"³⁷⁶ Surprisingly, the new consultant's study did not mention Albini's work in re-developing the city centre.

³⁷⁴ Kasr-El-Hokm Area redevelopment project: Riyadh-Saudi Arabia, Feasibility Study Report, Studio di Architettura Franco Albini-Franca Helg & Partners, Milan, March 1974, p.2/4.

³⁷⁵ *ibid.*, p.2/4

³⁷⁶ Daghistani, p.175.

The objectives of the SCET re-development programme of the area were to:

- 1 • Redevelop the city centre to make it attractive for investment and as a place to live;
- 2 • Improve the accessibility of the city centre and provide proper parking facilities for private cars;
- 3 • Provide a comfortable public transport system;
- 4 • Implement a traffic management control system;
- 5 • Redevelop land along Makkah Road [King Fahad Road] for commercial and residential purposes;
- 6 • Create cultural and recreational facilities accessible to the resident population and the metropolitan area at large; and
- 7 • Enhance the environment of the city centre by creating pedestrian ways and having better designed shopping areas.³⁷⁷

From these policies SCET identified projects for implementation by the year 1990:

- Qasr Alhokm redevelopment project comprising Qasr Alhokm building, Masjid Jamie, Emirate offices, Mayoralty offices, Police headquarters building, commercial centres, parking garage, cultural centre, office buildings, and the restoration of Almasmak.

- Public transport loop to release the pressure on the most congested areas and giving access to the parking garages.

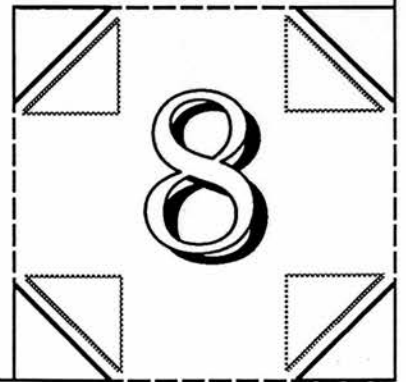
- The construction of ten parking garages within the city centre.³⁷⁸

Professor Albini progressed the idea and worked on the redevelopment scheme for the area surrounding Almasmak. He concluded by suggesting that the area could not be effective without re-planning. He presented a preliminary urban scheme for the area. HE. Àbdulaziz Althonayan and Dr. Azzam liked the idea of the redevelopment, which is the subject of the next Chapter.

³⁷⁷ *ibid.*, p.175.

³⁷⁸ *ibid.*, pp.175ff.

*The Development
of the Qasr Albokm Area:*



This chapter is divided according to the role of each governmental institution that undertook responsibilities in the development of the Qasr Alhokm Area project, in order to relate the decisions to the institution responsible.

8.1. The Mayoralty

This was the only governmental department responsible at that time for the physical development of the city. In Chapter 7 Franco Albini came into the picture as the first foreign architectural consultant to analyse on the Area.

8.1.1. Albini's Scheme

Professor Franco Albini valued the historical importance of the area and since the majority of its buildings and its neighbourhood are traditional, Albini's team conducted a thorough investigation of the traditional architecture of the region. This comprised a visual survey, photographing, and documenting the important buildings in the different cities with plans, sections and elevations; and an analysis of the different architectural elements in the traditional Najdi house. Their aim was to understand the principles of the local architecture to produce an urban and architectural scheme linking the development with the architecture of the region.³⁷⁹

When the mayoralty commissioned Albini to start developing the area at the beginning of 1973, he recommended a comprehensive re-planning. On March 1974 Albini submitted a complete report to the Mayoralty titled "Kasr-El-Hokm Area redevelopment project Riyadh-Saudi Arabia: feasibility study". This report was a summary of his ideas and suggestions for its future development, including:

- a study of traditional examples of city centres from the Islamic world and of different architectural elements -in particular: a study of the Arab palaces-, and a study of the architecture of Najd region;
- a site survey for the area;
- land use and space requirements for the different elements in the area;
- design alternatives for the redevelopment of the area;
- architectural design drawings for Qasr Alhokm and the office buildings (Emirate and Police headquarters);
- the construction phases for the redevelopment; and
- costs and budgets for the different construction phases.

³⁷⁹ According to Marco Albini the original idea was to restore the Almasmak palace and utilise it as a cultural centre. When Franco Albini started to make the preliminary analysis he concluded that it was impossible to proceed with this idea without damaging the original structure of the palace. Therefore, the Mayoralty decided to preserve Almasmak and use it as a museum, building another cultural centre adjacent to it.

Albini's scheme covers 640 by 600 metres along the two external lines and 170 by 130 metres along the two internal lines. It is bound to the North by Imam Turki Bin Abdullah street; to the South by Thumairi street; to the West by Alsuwailem street; and to the East by King Faisal street. (figure 8.1)

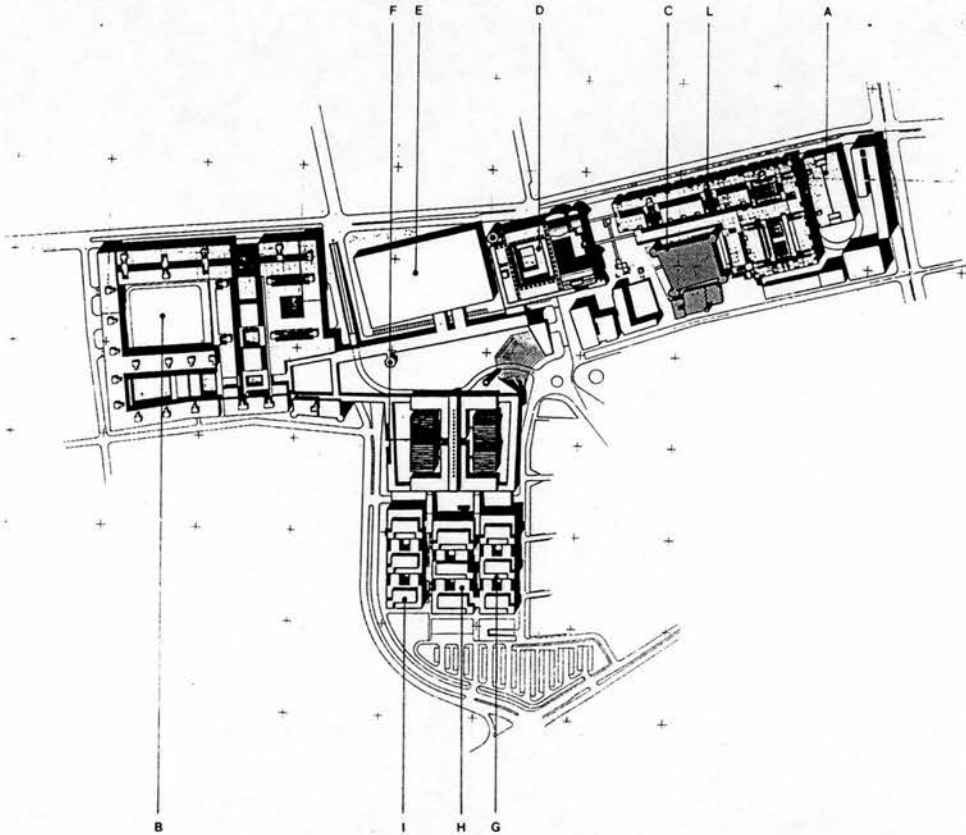


Figure 8.1: The site plan of Albini's scheme:
A) Parking; B) Commercial centre; C) Almasmak; D) Cultural Centre; E) Mosque;
F) Qasr Alhokm; G) Police; H) Governoate; I) Mayoralty; L) Commercial Centre.
(Source: "Marco Albini/Franca Helg/ Antonio Piva: Architettura e design 1970/1986", Arnoldo Mondadori Editore, S.p.A., Milano, 1986, p. 141)

The aim of Albini's study was to "propose a development plan of the area and to set the conditions for its implementation."³⁸⁰ Albini's study emphasises the following principles:³⁸¹

i) Link up with Arab tradition in all permanent features which are still valid in modern life:

The traditional Arab Architecture is rich of examples to learn from which give solutions both to the climatic conditions and to the social life of the populations.

³⁸⁰ "Kasr-El-Hokm Area redevelopment project: Riyadh-Saudi Arabia. Feasibility Study Report", Studio di Architettura Franco Albini-Franca Helg & Partners, Milan, 1974, p. 1.

³⁸¹ The following points are quoted from Albini's report titled: "Kasr-El-Hokm Area redevelopment project: Riyadh-Saudi Arabia, Feasibility Study Report", Studio di Architettura Franco Albini-Franca Helg & Partners, Milan, 1974, p.1.

The main purpose of the Arab constructions, the protection from the sun, developed some characteristics typologies and forms of buildings which represents the identification of the country: this types of buildings and forms have to be brought on and used also for the modern urban settlements in order to develop the country in the most natural and economic way without breaking the values of the tradition.

It is also clear that the traditional urban pattern fits the psychology and the mentality of the people much better than any other western modern architecture which has no possibility to survive in the hot countries.

ii) Use of architectural solutions connected with the climate:

- Use of patios*
- natural ventilation*
- orientation of the buildings*
- protection from the sun*
- shaded public areas*

iii) The architectural form and the use of the materials must come from the way of life of the people:

The old town of Riyadh has a very active social life where most activities happen in the open air, in the streets or in the souks.

Every kind of shaded space is turned spontaneously into a public space where people meet, walk or sit-down. All the activities in the traditional urban patterns are linked together forming a continuous pedestrian walkways.

This gives consequently a typical differentiation of spaces integrated together in a unity. The project is conceived as an integration of different public spaces forming the real Civic Centre of Riyadh.

iv) Horizontal development:

The city of Riyadh has developed in the past as a continuous built up with certain characteristics:

- a) a particular balance between empty and built-up spaces where the built-up predominates.*
- b) organic development which avoids right angles to reach better protections from the wind and the sun.*
- c) use of patios and enclosed spaces to keep cool inside together with particular positions and dimensions of openings to ventilate the house.*
- d) continuous pedestrian circulation.*
- e) limited number of storeys of the building: generally not more than three.*

The characteristic which fits better the above mentioned requirements is an horizontal development of the city.

Since we think that also the future development of Riyadh must remain horizontal, the buildings designed are all only few storeys high.

v) *Pedestrian circulation:*

The area is to be reserved mainly for pedestrian.

vi) *Vitality of the area:*

A city centre as the Kasr El Hokm area is, must guarantee vitality at every hour of the day, and also during the night of festivities.

For this purpose we propose to have some housing in the area added to the other functions: the presence of all the tertiary, commercial and residential activities will ensure the formation of an integrated population with its various categories and to guarantee vitality all the day long.

vii) *Unitarian development:*

The Kasr Al Hokm redevelopment area is at present fragmentary as for the types of existing buildings as for what regards the vehicular and pedestrian movements.

There is no space to walk at present; roads cross the area on both directions. Parking areas in the open are everywhere especially at Dira square which is now a parking lot: the Masmak area is completely divided from the rest of the area.

The basic aim of the project is to separate completely the pedestrian movements from the vehicular traffic by different levels in order to create an homogeneous arrangement unifying the area as a whole.

viii) *Traditional sites:*

The Mosque and the Kasr El Hokm building must have traditionally the same location as they have now.

For what regards the orientation of the Mosque, the calculation has fixed that the new direction must be ten degrees southern than the existing one.

The dimensions of the new Mosque in the project come from comparisons made among different famous Arab Great Mosques.

The Mosque must be a focal point for the community, emerging from the surrounding as a pivot.

The Kasr-El-Hokm will be the landmark of the skyline of Riyadh and will give identification to the site.

The pedestrian movements in the Arab and eastern cities is a very impressive experience for a western visitor.

The car and the modern ways of transportation have not touched the habit of using the city as a public space, giving enormous possibilities of social and human relationships.

It is very rare to find in western countries an example of liveable town such as any (Souk) or (bazaar) is.

The pedestrian movements are an important character of the eastern cities and are the base of the economic and commercial life.

The physical space follows very strongly the social behaviour.

In this sense the pedestrian movements have to be carefully considered and proposed in new projects because represent an important defence against the typical breakdown of social relationships which happens in the European cities.³⁸²

From this quotation we see that Albinì made a thorough recommendations for preserving and developing the architectural regional character. This is seen in his respect for the climatic conditions of the region by using patios, natural ventilation, appropriate orientation of buildings, protection from the sun, and the provision of shaded public areas. However, it is a hypothetical solution, because in real life people want to enjoy the comfort of modern technology i.e. air conditioning, which minimises exposure and provides a cooler rooms for comfort. It is desirable however to utilise solutions that can provide for both extremes-the enjoyment of natural ventilation and of air-conditioned spaces, which allows more flexibility bearing in mind the four seasonal weather differences. In retrospect it is possible to see a number of other doubtful features in this brief, viz:

- a) • His objective was the use of shaded areas as gathering places which can be developed and linked up to create the real Civic Centre of Arriyadh. This extreme proposal for the use of shaded spaces throughout the city centre could results in transforming the area into a covered mall or plaza, whereas the integration of open landscape and water within these covered areas would create an oasis of public spaces and pedestrian paths which is greatly appreciated by the city dweller.
- b) • The main reason that the height of traditional buildings was limited to three storeys was the nature of construction techniques. With the use of modern technique more floors can be built, especially in governmental buildings.
- c) • The proposal to separate pedestrian and vehicular movement by different levels is very expensive. From the theoretical point of view it is good to separate these movements, but the financial aspects must be considered.
- d) • The proposal to make Qasr Alḥokm a landmark on the skyline of the city is difficult to achieve, because, the roof height of the palace would not exceed 15 metres which is insufficient in relation to the size of the city. The use of the Minaret of the congregational mosque would be more justifiable, particularly as it has the function of guiding people to the mosque.
- e) • Albinì's scheme divided the execution of the development into five main phases: the first, the restoration of Almasmak fortress and the arrangement of the area to the north and to the east of Almasmak as public plazas with the building of the Masjid Jamiè (to be designed by another architect); the second, the construction of the Emirate and Police headquarters buildings, building the elevated plaza in front of

³⁸² *ibid.*

the mosque and the cultural centre to complete linking the mosque area with Almasmak area; the third, the construction of Qasr Alhokm building with the main elevated plaza in front of it and the parking space underneath it; the fourth, the construction of the Mayoralty building; and the fifth, the construction of the private developments to the north and east of Almasmak palace, including shops, flats, offices, a department store, and a multi-storey car park.³⁸³ The idea of phasing to develop the area part by part without damaging its viability. If the government had decided to develop the area all at once, it would have taken long time. Meanwhile, people would have transferred their interests to other centres.

The amount of data Albini gathered about the traditional architecture of the region was considerable. In 1979 Marco Albini presented most of the materials and the text to the Assistant Deputy Minister for Antiquities and Museum Affairs. The department printed and published a book in 1990 titled *“Traditional Architecture in Saudi Arabia: the central region”*, by Marco Albini, translated into Arabic by Dr. Osama Al-Jawharji.³⁸⁴

8.1.1.1. Urban Design Philosophy

Albini's scheme was based on the analysis of traditional cities and the relationship of their elements with the urban context. His major idea was the elevated plaza. He had made a study of Islamic cities, consequently he emphasised the need to elevate the main plaza to separate vehicles from pedestrian traffic. He gave as examples the cities of Mashad and Kashan which he described as... *“elevating the piazza in order to have an emerging platform in the skyline and to give more importance to the buildings on the piazzas”*³⁸⁵. In the case of Arriyadh this is Qasr Alhokm building and the Great mosque. Albini also instanced the Dome of the Rock and the Qasr Al Ashiq in Samarra which both used the elevated plaza solution, although, in the latter case, the situation is barely comparable. Qasr Al Ashiq is simply a fortress built upon a vaulted substructure.

The building character and the architectural style of the project was described by Francesco Tentori thus: *“... shows that, by means of markedly horizontal progress of all the volumes, the desire has been to underline a principle of figurative continuity in harmony with the traditional city, without in any way referring, conversely, to the verticalism and 'towerism' of the provincial 'international' style, which has not failed in*

³⁸³ *ibid.*, p. 6.

³⁸⁴ Marco Albini was unaware of the publication of this book before my contact with him.

³⁸⁵ *“Kasr-El-Hokm Area redevelopment project: Riyadh-Saudi Arabia, Feasibility Study Report”*, Studio di Architettura Franco Albini-Franca Helg & Partners, Milan, March 1974, Section no. 1.

recent times to leave substantial footprints in the Saudi capital as well. Out of these, extenuated horizontalities emerge with emphasis, as we have seen, the sail-shaped roofs of the king's rooms and the governor's rooms (that is to say, of Power) and the modern-designed rooftops of the cultural centre.”³⁸⁶ It is also possible that Albini made the roof structure of Qasr Alḥokm building like the tent shape which symbolise the traditional shelter for the Arab Bedouin. (figure 8.2)

The scheme was based on the separation between pedestrian and vehicular movement, to allow people to walk freely in the area. The natural topographical difference in the levels between the northern and southern part of the development caused Albini to transform this idea by gradually elevating the main pedestrian level that links Almasmak area with the cultural centre and the commercial shops; and thence to the main plaza (Saḥat Alādī) located between the mosque and the Qasr Alḥokm building. Here the Saḥat Alādī was surrounded by colonnades giving people shelter from the direct sun. From this elevated plaza access to the ground level was by stairs, ramps, and lift (figure 8.3). The ground level was devoted to vehicular movement and access to the parking garage; also, from the main plaza you can move to the southern parts (administrative complex) of the project by using pedestrian passages.

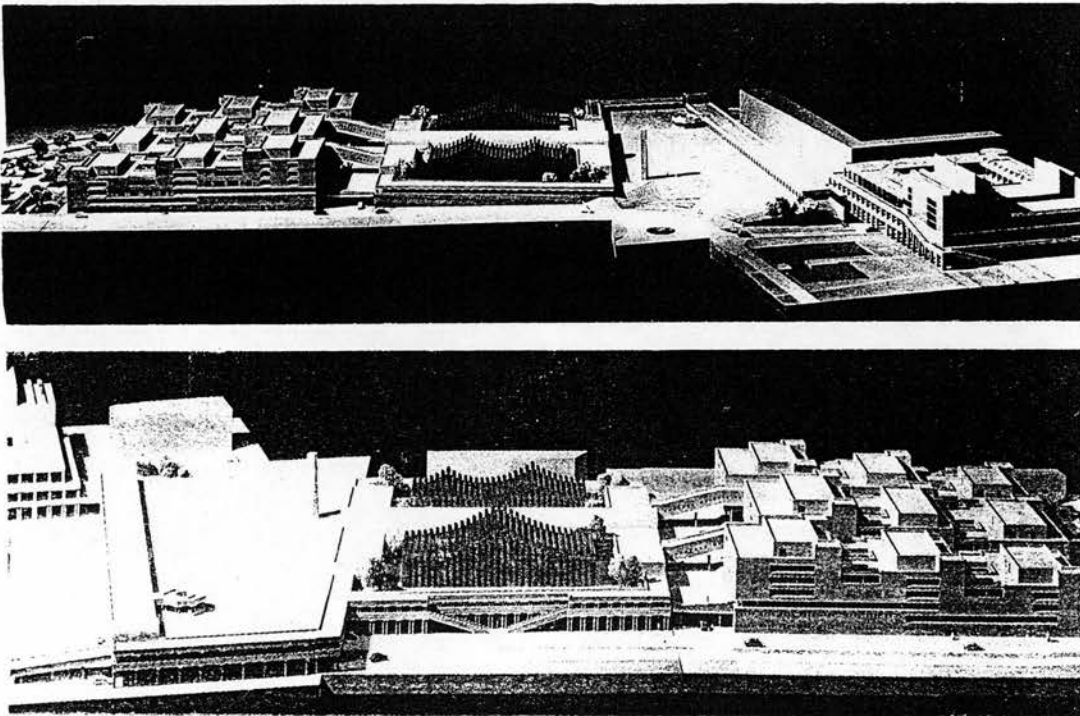


Figure 8.2: Model for the development.

(Source: “Marco Albini/Franca Helg/ Antonio Piva: *Architettura e design 1970/1986*”, Arnoldo Mondadori Editore, S.p.A., Milano, 1986, (top, p. 160) & (bottom, p. 151))

³⁸⁶ Tentori, F., “From architecture of petrodollars to architecture of new man: restructuring of Kasr-El-Hokm area”, *Lotus International*, no. 18, 1978, pp. 106-107.

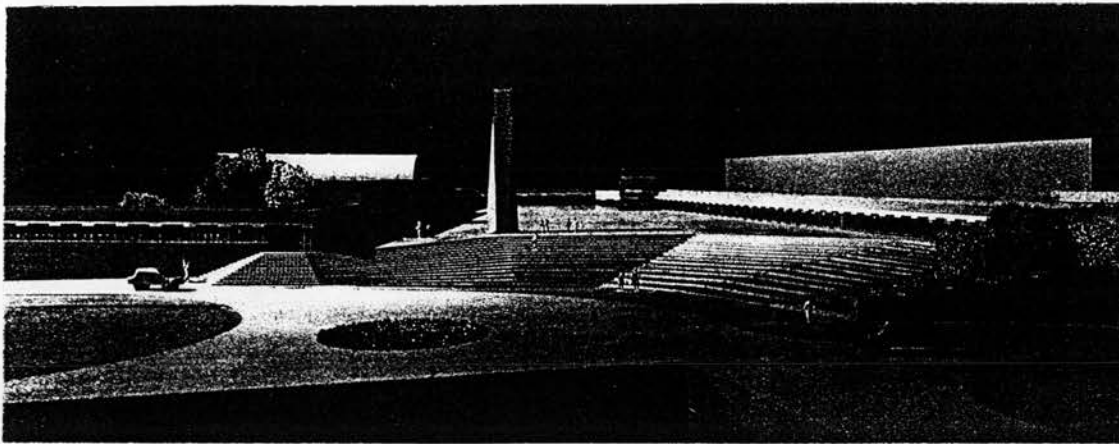


Figure 8.3: Showing the separation between pedestrian and vehicular movement. (Source: *ibid.*, p. 160)

The use of landscaped courtyard spaces with fountains to balance the climatic conditions, the use of mud-plaster colour throughout the scheme, which helps to link up the project visually with the surrounding natural environment; and the use of minimal number of windows on the elevation to limit the external exposure of the inner spaces, all contrive to give an atmosphere sympathetic to the Arabian scene.

Albini also used number of techniques to counteract the effect of climate: Inner courtyards or patios open to the sky provide light and fresh air; the northerly exposure; the introduction of vegetation; the use of ventilation shafts to generate a current of fresh air; ventilated open space beneath the flat roof; and the use of Mashrabiah on the windows facing south.³⁸⁷

The development was divided into different parts:

1) The Administrative complex, located at the southern part of the development with a direct vehicular access from Tareq bin Ziyad street, containing three governmental buildings (the Governor, the Mayoralty, and the Police headquarters) each measuring approximately 110 by 140 metres (figure 8.4);

2) The Qasr Alhokm building, located to the north of the administrative complex, which measures approximately 220 by 280 metres. It contains the King's reception room (22 by 55 metres), a dining room and a reception room for the Governor. This building was considered functionally and figuratively the hub of the project. The roof of this building was intended to be the prime land mark (figure 8.5);

³⁸⁷ "Kasr-El-Hokm Area redevelopment project: Riyadh-Saudi Arabia, Feasibility Study Report", Studio di Architettura Franco Albini-Franca Helg & Partners, Milan, March 1974, Section No. 1.

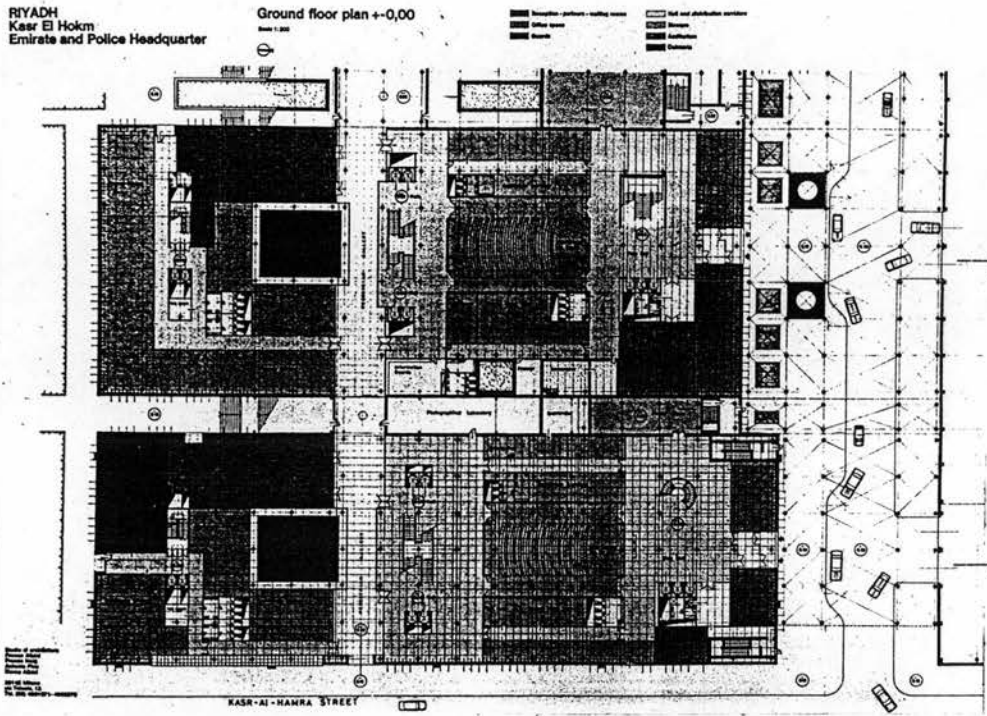


Figure 8.4: Ground floor plan for the Emirate and the Police Headquarters.
(Source: "Marco Albini/Franca Helg/ Antonio Piva: Architettura e design 1970/1986", Arnoldo Mondadori Editore, S.p.A., Milano, 1986, p. 162)

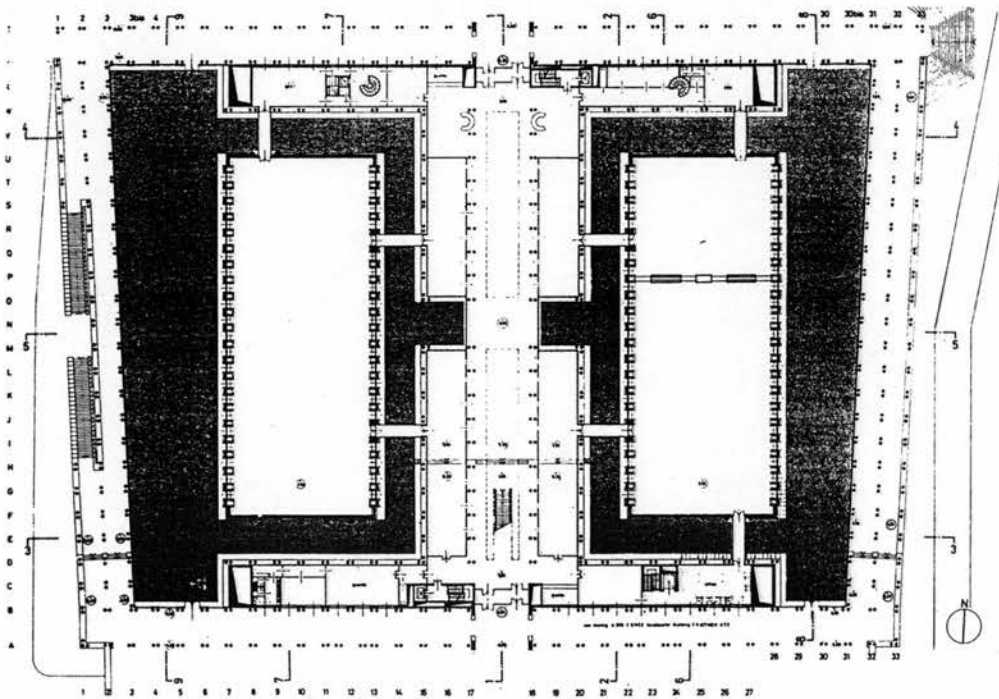


Figure 8.5: The ground floor plan for Qasr Alhokm building showing the courtyard surrounding the main rooms in the palace.
(Source: *ibid.*, p. 152)

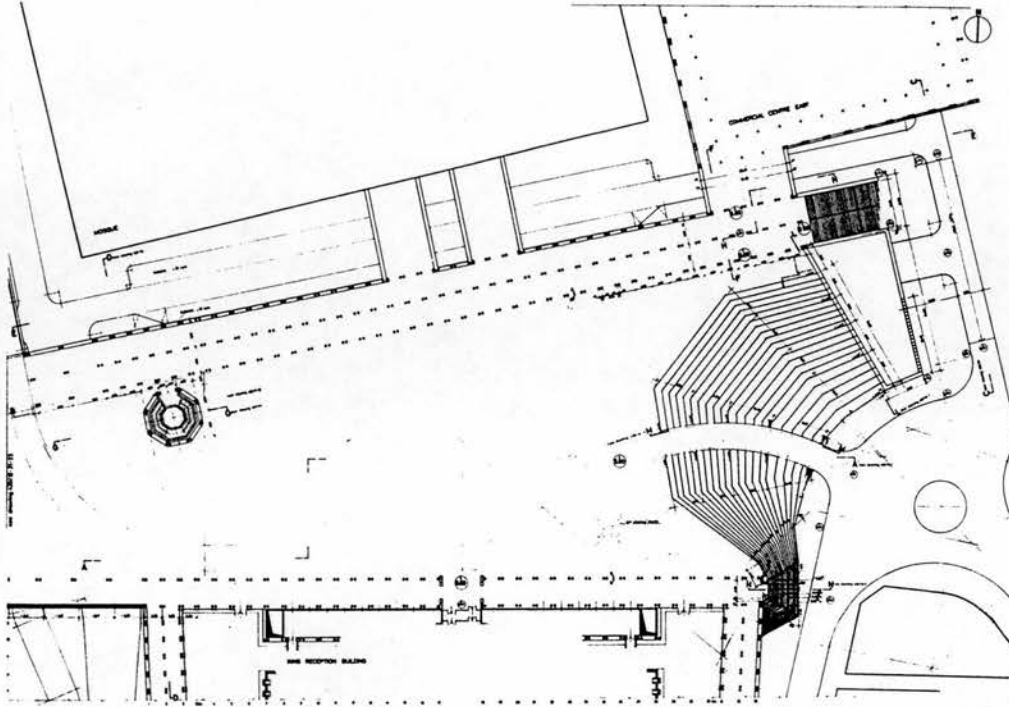


Figure 8.6: The plan of the main plaza.
(Source: *ibid.*, p. 159)

3) The main plaza located between Qasr Alhokm and the Great Mosque surrounded by pedestrian arcade and shops and connected with Thumairi street by a spacious and wide flight of steps functioning also as an emergency access to the area (figure 8.6).

4) The Great Mosque to the north of the main plaza, measuring 80 by 135 meters to be designed by another architect;

5) To the east of the mosque lay a large building divided into two parts. The shopping centre was developed as a classical type of bazaar on three levels with colonnades round a courtyard. The other smaller part was the cultural centre which included an exhibition hall, library, two auditoriums (one with a seating capacity of 380 people, and the other with a capacity of 110);

The Mayoralty approved Albini's feasibility study and commissioned him to make the detailed Master Plan and architectural drawings for the different architectural elements. It took him 24 months to finish these drawings.

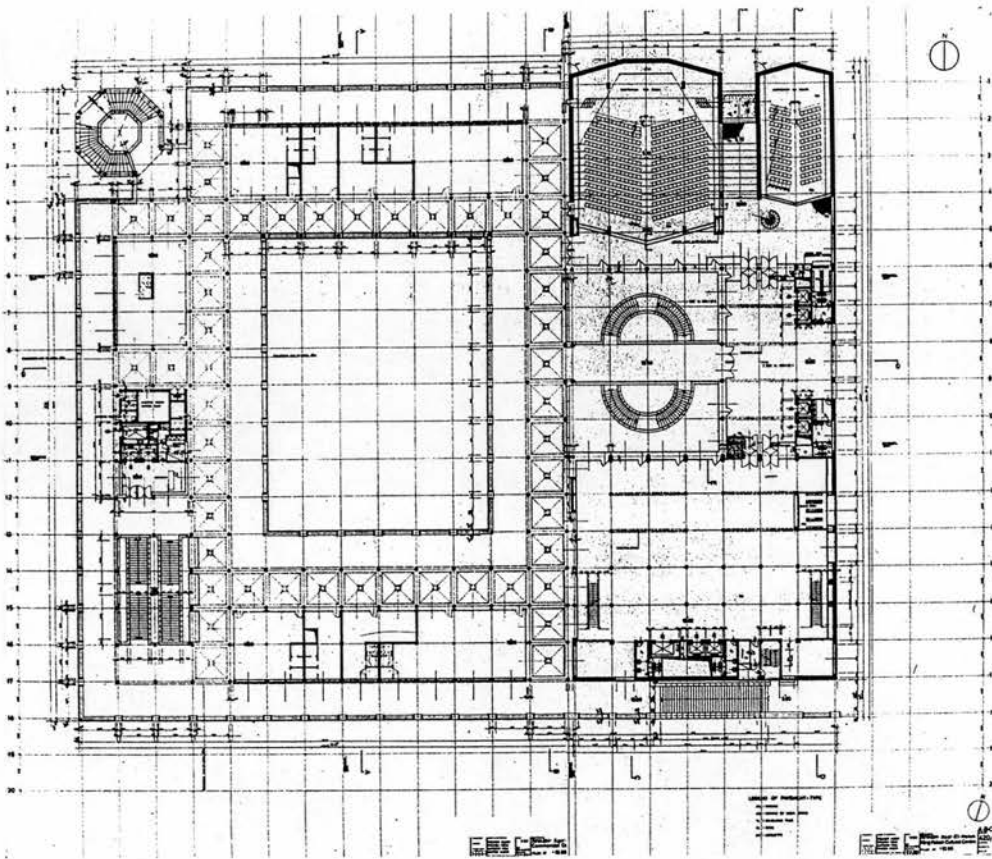


Figure 8.7: The plan of the cultural centre and the Souq.
(Source: *ibid.*, p. 144)

8.1.1.2. The Analysis Of the Different Elements:

A) The Qasr Alhokm Building

The architectural configuration comprises three main elements: the volume of the two reception rooms linked by a vault structure containing the main entrance (figure 8.2), the main circulation area, and waiting rooms; and two large reception rooms surrounded by garden on all sides and linked to the main circulation area with narrow passages³⁸⁸. The lighting of the reception rooms is by continuous linear roofs facing north which provide the interior with diffused light (figure 8.8). The use of blue ceramic cladding on the roof creates different effect in sunlight due to the effect of reflected light. At the level of the main plaza there are three important rooms: the king's reception room, the Governor's reception room, and the dining room (figure 8.5). On the upper level we find the administration department and meeting rooms. The main circulation area is covered with a vaulted structure with natural light coming from the sides. The upper corridor is visually linked with the lower circulation area. The building is connected with the three governmental buildings by two bridges (figure 8.2).³⁸⁹

³⁸⁸ According to Dr. Alabdulkareem, that the width of this passage was 2 metres which was very narrow.

³⁸⁹ Tentori, F., *ibid.*, p. 123.

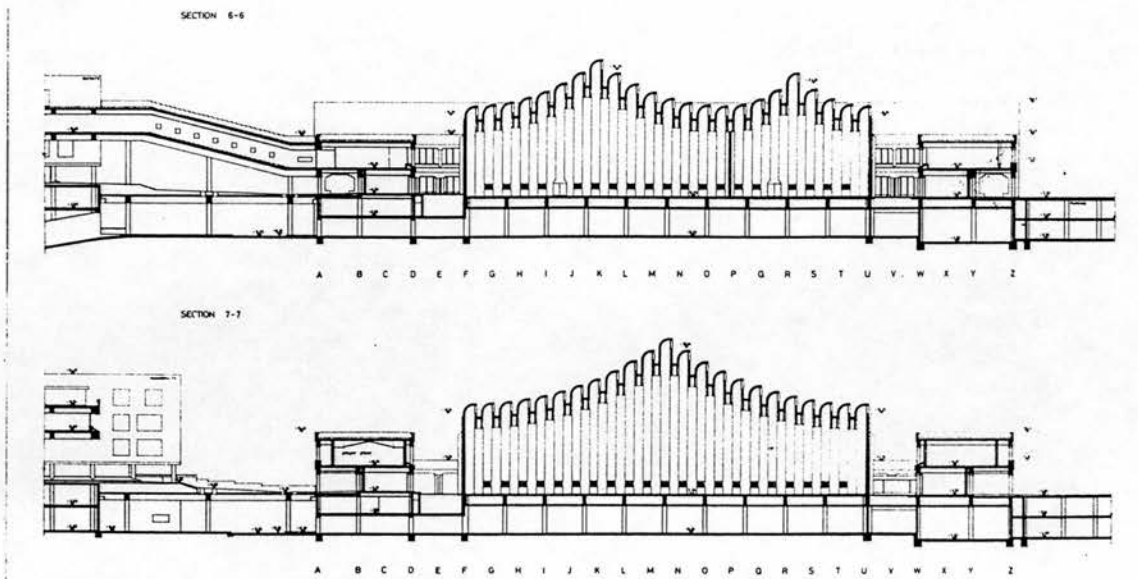


Figure 8.8: Sections in the Qasr Alhokm building.
(Source: *ibid.*, p. 154)

B) The Administrative Complex

The use of courtyards is the common feature of these three buildings, where they provide a natural light and ventilation to the different spaces within (figure 8.4). The step-down of the volumes to the south allowed the designer to balance these volumes with the surrounding environment (figure 8.9). A small covered street is made to provide a drop-off for the three buildings; the use of Mashrabiah to cover the windows controls the amount of natural light; and last but not least, the use of sand-coloured marble links the building visually with the local architecture.

C) The Cultural Centre

This element was fundamental to help the citizens to use the public library, and research and information centre. The dominant architectural feature is the sloping roof structure (from north to south), which rises above other surrounding buildings (figure 8.2). The sloping roof of the library allows natural diffused light for reading to be distributed vertically at different levels. The public spaces of the building overlook the central courtyard where a central double circular staircase connects the different levels of the centre. The cladding of the external elevations is of prefabricated concrete panels finished externally with a sand colour.

D) The Commercial Centre

Located at the eastern edge of the project, the shops and offices are conceived as a pedestrian fabric linking the parking building with the rest of the project. The shops are located to the sides of the pedestrian spine. A number of transverse passages allow the internal animation to be perceived from the street level.

E) Car Parking

The existing difference in level between Imam Turki bin Abdullah street and the southern part of the project made it easy for the designer to place a two-storey car park underneath the main plaza, with a capacity of 700 cars. The other car park building is located at the eastern edge of the area (figure 8.2).

F) Pedestrian Circulation

The pedestrian movement system has enhanced inter-connected spaces linking the different elements of the project (figure 8.9). A raised main plaza located between Qasr Alhokm and the mosque functions as a gathering place for the people of the city. This plaza was also enhanced by providing an arcade. The project is based on a system of internal pedestrian galleries according to the traditional Arab market-place typology.

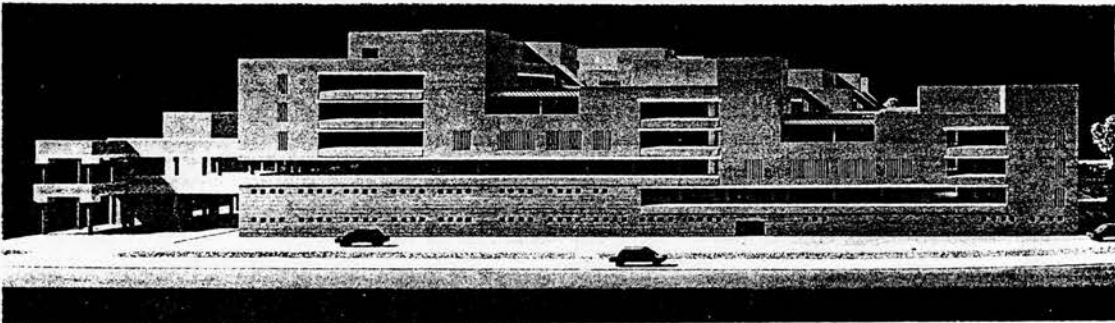


Figure 8.9: The west elevation of the Mayoralty building showing the limitation of window openings and the step-down in volume. (Source: *ibid.*, p. 167).

At the end of 1976, a complete set of drawings was submitted to the Mayoralty. At that time Abdulaziz Althonayan was appointed as the Deputy Minister of Foreign Affairs for Administration and Abdullah Alnoaiem was appointed Mayor. This delayed the tender process. According to Dr. Azzam and Marco Albini, this administrative change slowed down the development. The new Mayor took some time to familiarise himself with the project and thereafter, in their view, did not reflect the earlier enthusiasm, which delayed the approval of certain phases of the project. However, in 1977, the Mayoralty approved the restoration of Almasmak palace, but without developing the area around it, as there were difficulties with land expropriation. In 1978 a tender was accepted and in 1979 the restoration of Almasmak actually started. Marco Albini was the consultant.

8.2. The Establishment of the Qasr Alḥokm Area Development Office (QAADO)

With the difficulty the Mayoralty was facing with the land expropriation and with the sharp increase in its responsibilities, and last but not least, the importance of this project, the government decided to establish an independent design office solely to expedite the development of Qasr Alḥokm Area (figures: 8.10 - 8.12).

On the 19th of January 1979 the High Commission (HC) established the High Executive Committee for the Development of Qasr Alḥokm Area (HECDQAA) to undertake direct supervision of the development of Qasr Alḥokm Area. The (HECDQAA) then established the Qasr Alḥokm Area Development Office (QAADO). This office was in many ways similar to the Diplomatic Quarter Development Office (See Chapter 4).

8.2.1. The QAADO Evaluation of the Albini's Scheme

Albini's appreciation of the quality of local architecture made it clear that this development could be developed by linking it visually and functionally with the quality that was evident in the traditional architecture. Although the mayoralty did not proceed with Albini's scheme, his work was the basis of all schemes that were to follow in the area.

At this stage, the already planned and approved scheme began to collapse as a result of the changes in governmental responsibilities towards the development of the area, and with the delay of completing phase one of Albini's scheme. This phase was not fully implemented because of the problem of land expropriation the Mayoralty faced, due to the multiplicity of owners. Even sometimes part of a room was separately owned as a result of the inheritance system in Islam. The Mayoralty decided to restore Almasmak palace, leaving the rest of the proposed phase to be completed when they had solved the land acquisition problem.

The QAADO decided to merge phases two and four³⁹⁰ of Albini's scheme as it was easier to build them all in one stage as both phases share the same site. They were impelled by the need to finish the administrative complex in the shortest time possible.

³⁹⁰ Phase two was the Governorate and the Police headquarters buildings; and phase four was the Mayoralty building.

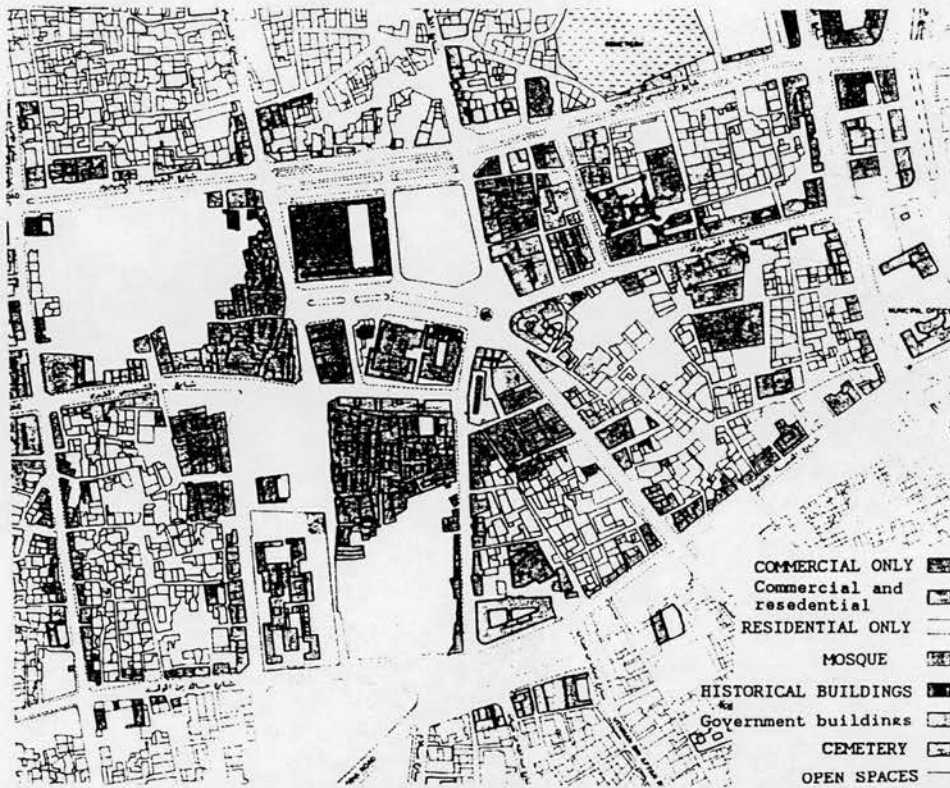


Figure 8.10: QAA existing condition in 1980.
(Source: Othman, Z., "Development of City Centres in Saudi Arabia: Development of the Justice Palace District, Arriyadh", Edinburgh: PhD. Thesis, University of Edinburgh, 1992, p. 210)

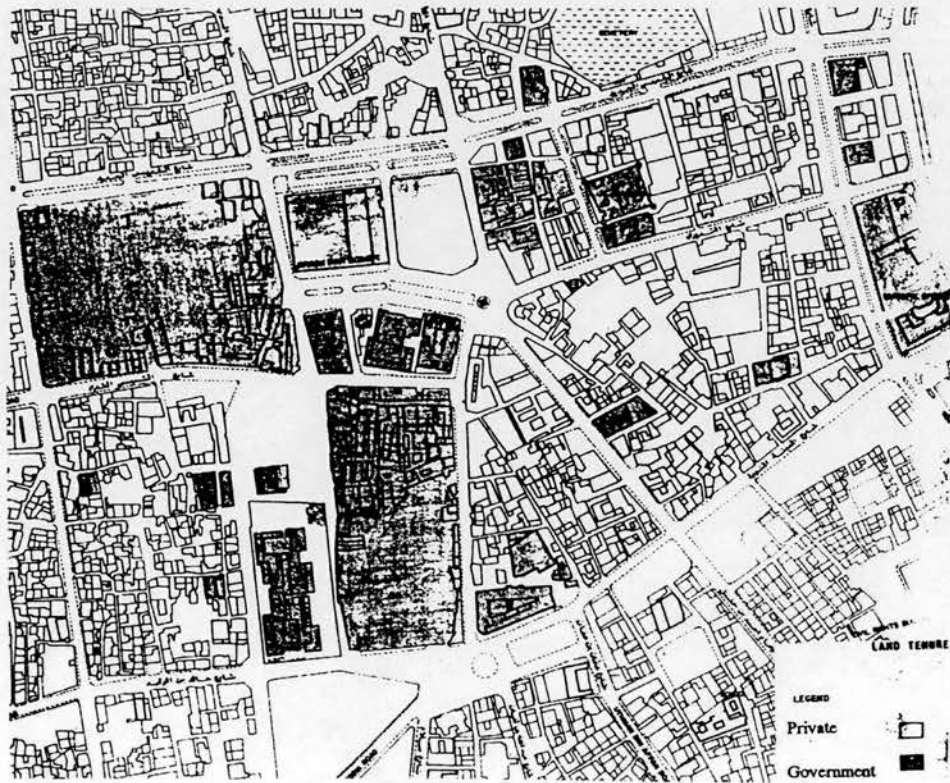


Figure 8.11: Land Ownership in the area: government and private.
(Source: *ibid.*, p. 216)

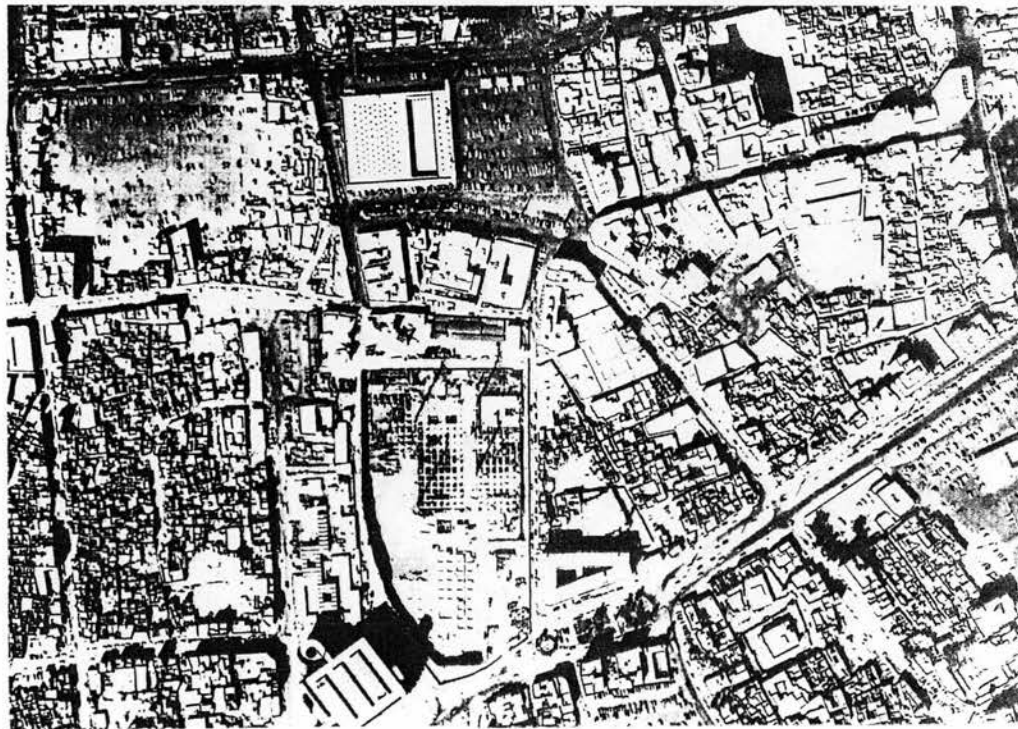
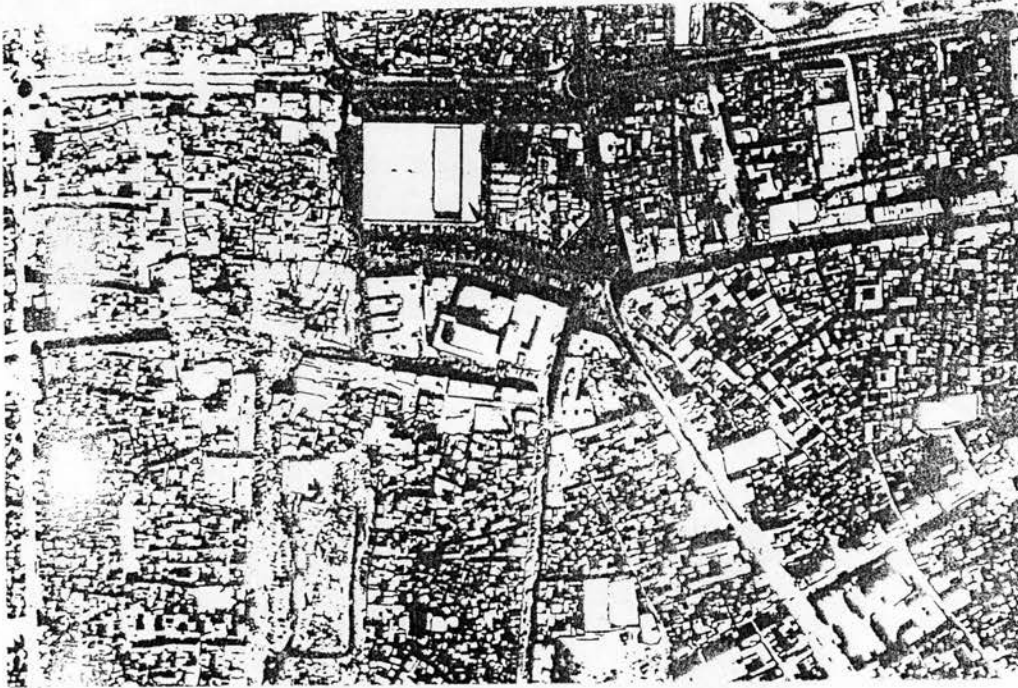


Figure 8.12: The deterioration of the area between 1968 (top) and 1983 (bottom) are shown in these two aerial photographs.
(Source: Othman, p. 204)

According to Dr. Omar Alabdulkareem the director of the QAADO, the first step the office made was to review Albini's Master Plan and all the architectural designs previously approved by the Mayoralty.³⁹¹ The QAADO also asked the different governmental departments who would move to the area to provide them with up-to-date requirements. With the six years gap, the governmental departments asked for more space and additional elements, and the QAADO architectural team found many features that needed to be re-designed.

The QAADO office proceeded with another tender for the required changes of the three governmental buildings, and Marco Albini's office was one of the offices to participate. A young Saudi office *Beeah Group Consultant* won the competition, after succeeding in the DQ Saḥat Alkindi project commissioned by the *Diplomatic Quarter Development Project Office* DQDPO (see chapter 4). With Beeah, the development of Qasr Alhokm Area project took on a new dimension.

According to Dr. Azzam, Franco Albini was following the project closely until 1974 when he started to suffer from a heart problem. Beyond this point he could not follow-up the project effectively and he could not travel to Arriyadh, where his son Marco was carrying on with the project. On 1st November 1977 Franco Albini died in Milan. Thereafter, according to Dr. Alabdulkareem and Dr. Azzam, Marco Albini did not show the same enthusiasm towards the development. In fact, Dr. Alabdulkareem adds that, during his time as the director of the QAADO, Marco Albini came only twice to the city to discuss the project. All other correspondence was managed through their agent in Saudi Arabia, and this agent was not fully qualified to carry on with such a project.

8.2.2. The Beeah Scheme

The QAADO assigned Beeah Group Consultants to evaluate Albini's architectural design of the three governmental buildings and to review the overall scheme. They suggested to re-design the whole area. The QAADO had to finalise the design scheme for the three governmental buildings as soon as possible. The QAADO approved the re-design of the whole area, stressing the need to make the required changes in the three governmental buildings as soon as possible and with a recommendations to alter the elevations. Beeah made the additional spaces required, but they refused to change the elevation because of "... *respect for the profession, they felt unable to change just the elevations. They wished either to re-design the whole scheme,*

³⁹¹ But no funds had been allocated for the execution of the project.

or leave Albini's elevations unaltered.”³⁹². The QAADO then commissioned their own team to change the elevations. A triangular decorations band (*Sharaf*) were added on the roof parapet. They also changed the pattern of the external openings in the elevations, together with the material, and the colour of the cladding. Marco Albini wrote many letters objecting to these changes, but there was no reply from the QAADO.³⁹³ (figures 8.9 & 8.13)

Beeah worked on the urban and the architectural design for the whole project. After evaluating the condition of the area, they suggested that in order to make a coherent urban design they need a larger area than the one worked on by Albini. In 1981 the High Commission approved the required extension of the developed area, hoping to help the consultant create a coherent scheme for the area.³⁹⁴

Beeah evaluated Doxiadis's urban design scheme for the area and they suggested major changes upon the following basis:

1) To limit vehicular traffic in the area which creates traffic congestion and shortens the life of the mud-buildings;

2) Difficulty in implementing the Master Plan regulations in the area, due to problems in restoring the old fabric;

3) The feeling that the city centre is not functioning properly due to lack of sense of a city centre in contrast with the traditional pattern;

4) A strong feeling that the area should be developed in a traditional way. This was hard to fulfil due to differing ideas of requirements;

5) The feeling that most traditional buildings do not have a historical importance or value to match their commercial value. However two clusters worth preserving were identified as the best examples of traditional architecture, although already destroyed.³⁹⁵

It is worth mentioning that Beeah referred to the Doxiadis proposals and did not refer to Albini's scheme, although Albini had made a thorough study on the area, and QAADO had already approved the construction of the Administrative complex.

³⁹² Interview with Ali Shuaibi, partner in Beeah Group Consultant on 4th of May 1993.

³⁹³ Personal communication with Marco Albini on 4th of March 1996.

³⁹⁴ Othman, *ibid.*, p. 209.

³⁹⁵ Shuaibi, A. and Alhathloul, S., "The Justice Palace District, Riyadh", "Design in Islamic Cultures 4, Continuity and Change", The Aga Khan program for Islamic Architecture, Cambridge, Massachusetts, 1984, p. 38.

Beeah refined their ideas with design criteria based on:

1) Development of the area with minimal public funds and with no intervention by government agencies;

2) High priority to be given to the transportation system;

3) Strong integration with the rest of the city;

4) Multiplicity of activities including residential to ensure liveliness;

5) Shopping being the key issue in the development by comparison with other uses i.e. offices and residential. The development was to be viable from the investment point of view. Albeeah analysed the maximum shopping permissible, working out income in comparison with the land prices and construction cost. The capacity of the commercial area in the development was calculated on the total number of shops in the area to be demolished adding 5%, to define the maximum growth;

6) The completion of the project within 10 years, based on a 5% annual rate growth for the city;

7) They calculated that 8,000 car parking spaces should be provided for shoppers together with 700 residential units, and *“to deal with traffic circulation it was important to limit accessibility.”* Therefore, they *“proposed a network that would limit traffic to people who wanted to come to the area itself, and re-routed city traffic to take care of cross-circulation from east to west and from south to north”*.³⁹⁶

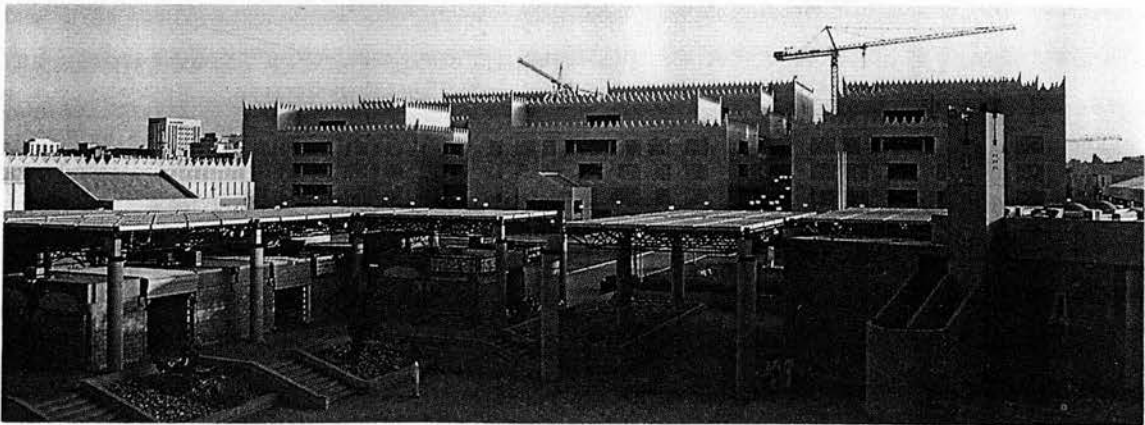


Figure 8.13: The modified elevations of the governmental buildings.
(Source: *“Beeah-Architectural Experiment”*, 1989, p. 64)

8.2.2.1. The Design Concept

The radial configuration scheme was chosen, making the Great Mosque, the Qasr Alhokm, and the administrative complex buildings the focal point, with radial pedestrian streets linking the different parts of the project with the centre (figures 8.14

³⁹⁶ *ibid.*, pp. 38-41.

& 8.16). The idea of making these elements the centre corresponded to their importance as the religious and the administrative focus of the whole city. The Beeah scheme uses the minarets as foci to help pedestrians locate themselves in the urban context (figure 8.15). The function of radial pedestrian streets was enhanced by locating commercial shops on both sides of the walkways. There are two main plazas in the project namely Saḥat Alādī located between the Great Mosque and the Qasr Alḥokm, and Saḥat Al Jamiè located between the mosque and the cultural centre. Both plazas were designed to serve cultural and social activities.³⁹⁷

In order to provide comfort for shoppers it was decided to build parking spaces beneath the project, so that people could park as close as possible. The physical need for providing 8,000 car space was calculated on the basis that two levels of car parking would be adequate, *“when we calculated the amount of excavation required for two levels of parking we found that it would take about one hundred trucks shuttling in and out of the area for an entire year to remove the earth.”*³⁹⁸ But this is an overstatement as their initial suggestion was to divide the construction process into different phases, so reducing the amount of earth in the initial phase.

Utilising the difference in level between the northern and southern part of the project, Beeah decided to elevate the whole project with a 6-metres high pedestrian podium, forming the parking spaces and the service access in the two lower levels. This sharp separation between pedestrian and parking level would have discouraged people from coming to the area, as people tend to locate themselves by visualising the place they are going to. In order to link the pedestrian level with the surrounding areas, pedestrian ramps and escalators were provided. This solution made it clear that the historic parts and traditional buildings in the area would be accessed from the parking level.³⁹⁹ Albeeah suggested that these parts could be re-constructed at the pedestrian level ... *“We then studied the possibility of what to do with the two clusters of old buildings we had proposed to preserve. Elevating the main pedestrian level to about six meters above the ground level had left the historic buildings at parking level. We suggested that they be surveyed and reconstructed at the pedestrian levels and be given uses that would generate income but would also be appropriate to their importance.”*⁴⁰⁰ This was in contradiction of their initial policy of maintaining the two traditional

³⁹⁷ *“Beeah- Architectural Experiment”*, Dammam, 1989, Al-wafa Printing Press, p.11; Also in the Final Urban Design: Technical Report, Arabic, u.d., pp. 20-22.

³⁹⁸ Shuaibi, A. and Alhathloul, S., *“The Justice Palace District, Riyadh”*, *“Design in Islamic Cultures 4. Continuity and Change”*, The Aga Khan program for Islamic Architecture, Cambridge, Massachusetts, 1984, p. 41.

³⁹⁹ *ibid.*, p. 42. Also mentioned in: Othman, Z., *“Development of City Centres in Saudi Arabia: Development of the Justice Palace District, Arriyadh”*, Ph.D. Thesis, University of Edinburgh, p. 211.

⁴⁰⁰ Othman, Z., p. 271. (originally published in: Alhathloul, S., Shuaibi, A., *ibid.*, p. 37)

clusters. The reconstruction requires total re-building which makes the cost very high and that in itself contradicts the construction budget, in addition to the ethical point of retention of the genuine original fabric.

Albeeah wrongly assumed that the government would own most of the development area. When the ADA calculated the total cost it proved very expensive. The expropriation would have cost SR. 2,500 Million, the construction cost of public and private developments SR. 3,300 Million, building the services and the infrastructure SR. 700 Million, and finally the cost of the rehabilitation program SR. 460 Million. The total investment would have been SR. 6,960 Million excluding the cost of the temporary shops and parking spaces for the demolished shops.⁴⁰¹

8.2.2.2. The Urban Characteristics

The Najdi urban and architectural style was adopted to ensure that Qasr Alḥokm Area would have a distinct architectural character (figures: 8.15 & 8.16). The design scheme comprised attached buildings to minimise exposure to the direct sun. The gradual stepping up of building heights from the centre to the periphery was implemented to ensure lighting and natural ventilation for the area and to ensure that the mosque's minaret would remain as the landmark.⁴⁰² The segregation between pedestrian and vehicular movement was the other key point of this scheme.

8.2.2.3. Urban Design Scheme Level Divisions

The sub-division was: Levels 1 and 2 parking spaces with shops facing the main streets, storage, and linear shops to enliven the parking areas; levels 3 and 4 for shops, offices, and administration; levels 5, 6, and 7 for offices, residential units, and community facilities.⁴⁰³ Ali Shuaibi chronicled the evolution of Beeah's involvement in the Area: *"The QAADO gave them the same area as Albini, and Albeeah started to re-design the 'T' shape area⁴⁰⁴, the only buildings the scheme kept were the Almasmak and Albini's three governmental buildings, even though, the required changes in the interior spaces were not finalised. Albeeah proposed to the ADA proceeding with the design process: To determine the development process, they suggested establishing a real estate development company to help owners sell their properties to the company and to take a percentage of the shares. The Council of Ministers did not approve this proposition;*

⁴⁰¹ Beeah Group Consultant, Urban Design-technical report no.3: Urban design implementations, a report submitted for the Redevelopment Project of JPD, p. 45. (Othman, Z, p. 272.)

⁴⁰² "Beeah Architectural Experiment", Dammam, 1989, Al-wafa Printing Press, pp. 11-13.

⁴⁰³ Othman, *ibid.*, p. 212.

⁴⁰⁴ The 'T' area means the T shape that Albini adopted in his scheme. All the land in this area was later on have been owned by the government.

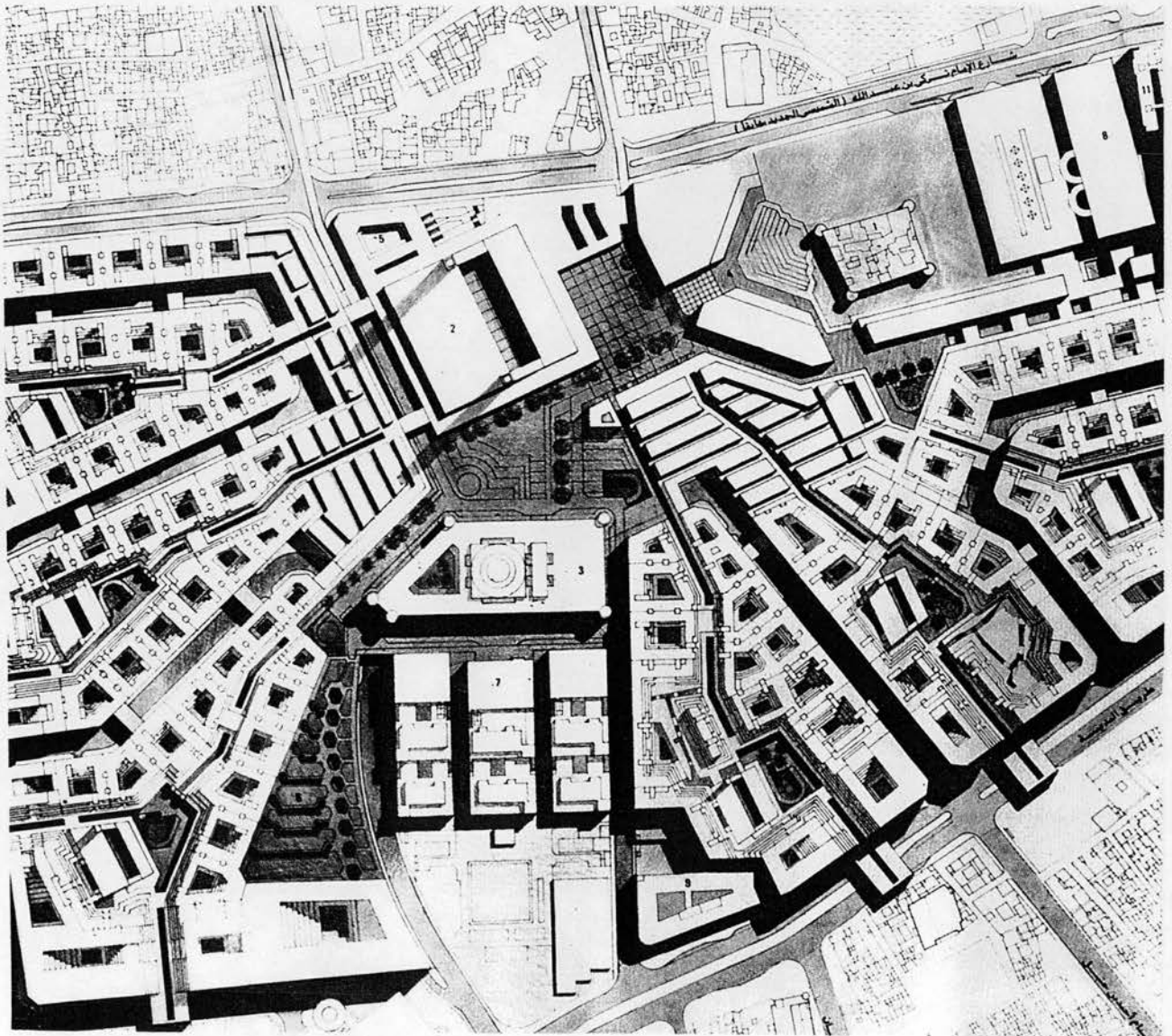
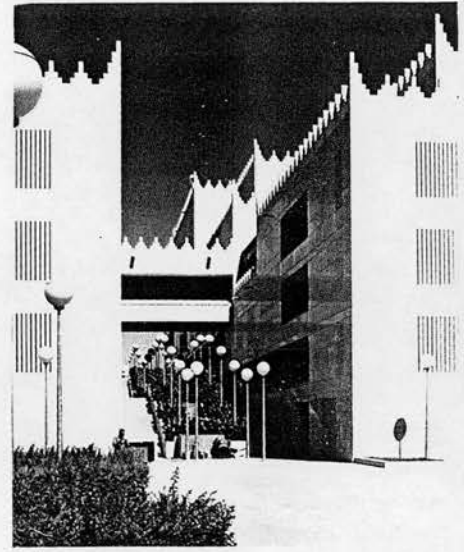
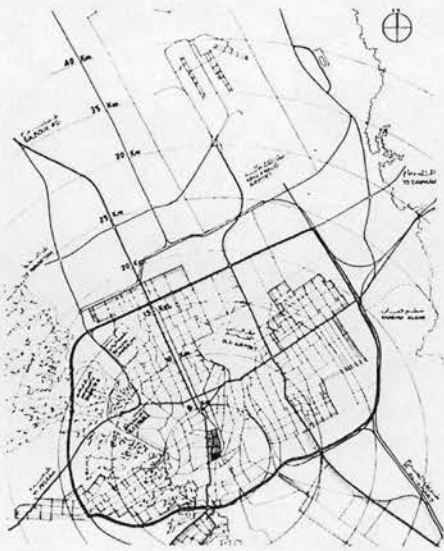


Figure 8.14: (Top) The location of the QAA within the city; (Bottom) The mass plan.
(Source: "Beeah-Architectural Experiment", 1989, top left and bottom, pp. 11-12 & top right, p. 64)

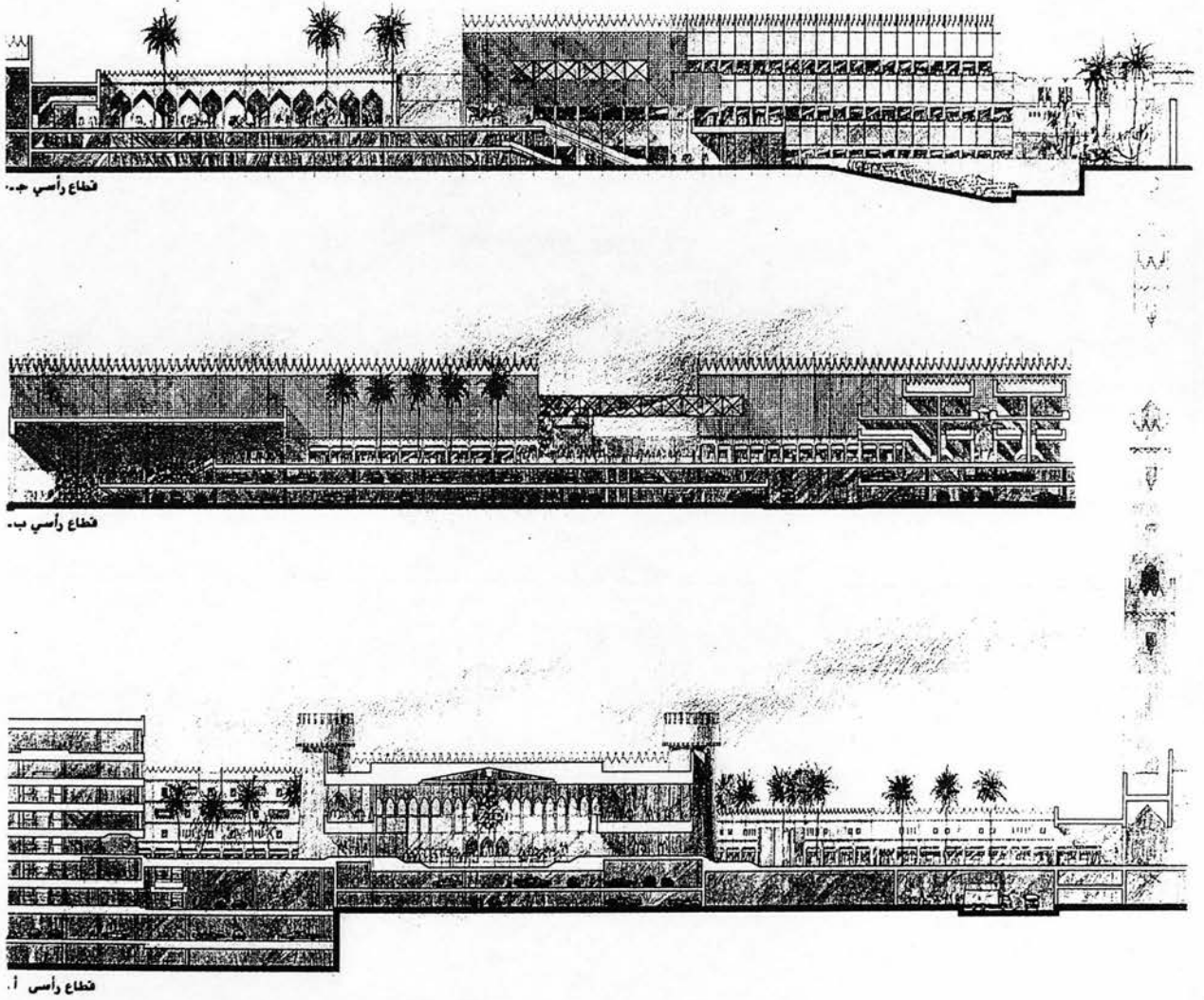


Figure 8.15: Central area sections and elevations
(Source: Beeah-International-Architectural Experiment, 1989, p.14)

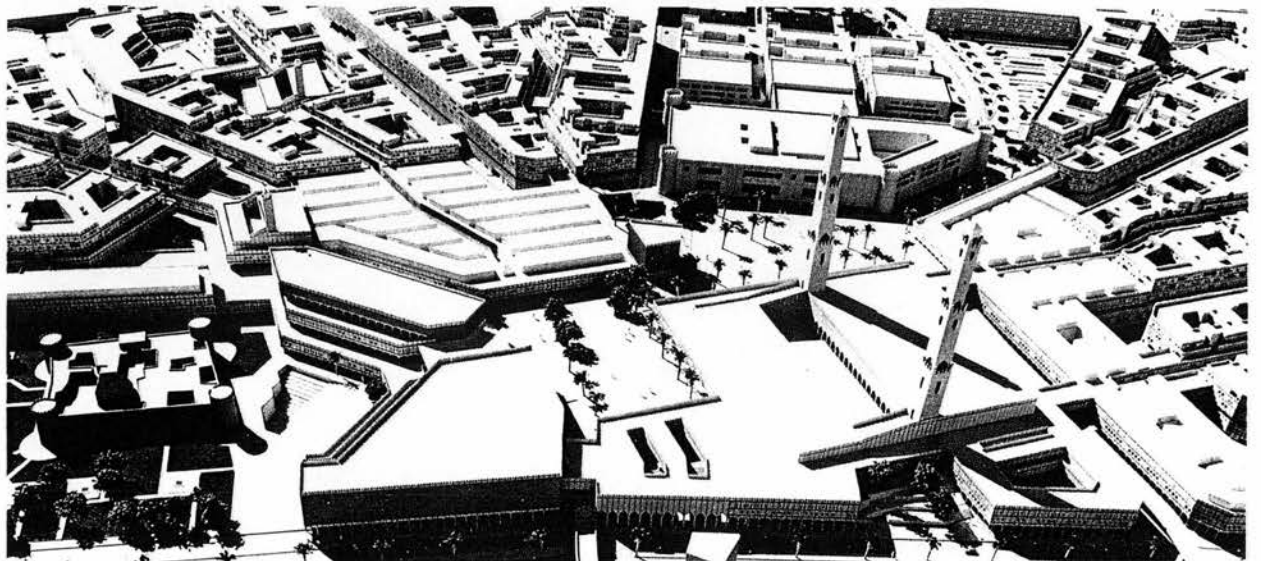


Figure 8.16: View of the model.
(Source: Beeah-International-Architectural Experiment, 1989, p. 16)

Thereafter, Beeah prepared the regulations book for: Qasr Alhokm (QA), Masjid Jamiè, the Cultural Centre, and the public places. When they finished they contacted businessmen through the ADA. The businessmen were anxious. They believed that the government had delayed the project and would not bring it back to life; Furthermore, when Beeah made the topographical survey they found the northern part of the project was higher than the southern part by an average of four metres. The area needed many car parking spaces so Beeah used the topographical difference to make the pedestrian entrance to the pedestrian podium from the north (Imam Turki bin Abdullah street) and to use the space underneath it as parking garages. This solution would help the construction process to avoid earth moving; Meanwhile, the King ordered that no planning should be made on any land that is not owned by the government, confirming that private owners in the area do have the right to develop their properties as they may choose." This decision by the King froze the development.

8.3. Arriyadh Development Authority (ADA)

The development of the area had by now, been delayed for over 10 years, and people were losing hope and interest (figure 8.12). The delay was mainly the responsibility of the QAADO and Beeah. Neither party had achieved a practical solution. Zaher Othman made it clear that the delay in the project was not only the consultants' fault: the QAADO and the High Commission also shared a great deal of this responsibility, as both parties "... did not make effective use of the flexibility they had. The bureaucracy of the office and its technical capabilities allowed the design of the area to lag for a long time. The office involved the HECJPD [HECQA] and the HC in all details of the design, and these might be blamed for approving some major assumptions for the development of the JPD [QAA] that were not practical. For instance, they approved the complete negligence of private ownership on the assumption that all lands would be acquired by the government. Based on this decision, the Beeah Group Consultant assumed redevelopment without constraints. The High Commission and HECJPD were also involved in determining the locations of the Justice Palace [QA] and the Jamiè Mosque."⁴⁰⁵ Therefore, in 1983, the Council of Ministers issued an order establishing the Arriyadh Development Authority (see Chapter 4, section 4.13).

8.3.1. The ADA Review of the Beeah Scheme

Ali Shuaibi, interviewed on 4th May 1993, described the continued involvement of their firm: "During that time, the ADA undertook responsibilities for the management

⁴⁰⁵ Othman, Z, p. 240.

of the QAA, and the new Director contacted met to say that the ADA cannot proceed with their scheme, but that they will try to keep the essence of it.

In summary, Beeah's scheme failed for the following reasons:

- 1) Land prices were very high, producing a lengthy dispute over land expropriation as most properties had more than one owner;
- 2) The assumption that the government owned or would buy the whole area;
- 3) The total cost for the redevelopment was very high and the economic situation had weakened in comparison with the 1970's; and
- 4) The difficulty of executing the project in phases, as their scheme centred on elevating the whole project on a podium, requiring almost ten years to achieve completion.

8.3.2. The ADA Urban Design Scheme

The ADA revised the objectives for developing the area, stressing on four interrelated objectives, listed by Dr. Zahir Othman:

- *To physically re-establish a new urban core responding to today's changed needs and conditions.*
- *To generate a new sense of identity by expressing and enhancing the historic significance of the site.*
- *To enhance the interaction between religious, civic, cultural and commercial activities.*
- *To provide a pleasant and enjoyable landscaped environment within the framework of the new urban core.*⁴⁰⁶

The second objective stated clearly that the identity should also be extended to the rest of the town, making it a recognisable modern capital with its own distinctive architectural character. The ADA developed a notion of understanding the importance of adopting an architectural solution related visually to the historical importance of the area and the importance of the development as the centre of the nation's capital. The ADA acted quickly in setting-up the design for the second phase. At that time, the Government owned only the 'T' area, so, they needed various different consultants to think about an immediate design for the different architectural elements in the development (figures: 8.17 & 8.18). Ali Shuaibi continued ... *"The ADA with the help of Saud Consult* ⁴⁰⁷*made their own urban design scheme (figure 8.17) and they set-up a design competition*⁴⁰⁸ *for the different architectural elements in the area: Rasem*

⁴⁰⁶ *ibid.*, p. 225.

⁴⁰⁷ Saud Consult is a Saudi architectural consulting office owned by Dr. Tareq Alshawaf.

⁴⁰⁸ There is no clear information about this design competition. The ADA library and the archives centre where all drawings and documentation is kept could give no solid information about the competition.

*Badran*⁴⁰⁹ to design *Almasjid Al Jamiè*; *Albeeah* for *QA* and to re-build part of the city wall, *Dira* tower, and two gates (*Althumairi* and *Dokhnah*); *Alshathri*⁴¹⁰ for the cultural centre; and *Saud Consult* for the urban design, the engineering, and the landscape.” In a latter stage, the ADA hired a British consultant -*Buro Happold*-⁴¹¹ to work as the engineering co-ordinator for the consultants. He continues ... “*Albeeah* started working on *QA* scheme. After spending sometime in the preliminary design, they realised the design brief did not give -space wise- sufficient prestige to *HRH* the Governor. The ADA agreed with their suggestions that more spaces should be added. The ADA wanted to accelerate the approval of the design of *QA* as the project was becoming delayed. So, they asked *Rasem Badran*⁴¹² to work on *QA* scheme hoping that two consultants working separately would help the ADA to act quickly by choosing the appropriate scheme. At this stage, *Beeah* did not know anything about the involvement of *Rasem Badran*. *Albeeah* did not like the new urban design scheme proposed by the ADA and *Saud Consult*, in which they decided to take part of *Saḥat Al Imam Mohammed bin Saud* and use it to accommodate the required additional spaces. *Rasem Badran* however made use of the courtyard space located between *QA* and the Administrative complex [figure 8.17 & 8.18]. When the two consultants submitted their preliminary design proposals for *QA* building, the ADA found *Rasem Badran* did use the space that was part of the complex, unlike *Beeah* whose scheme had taken part of the plaza. The ADA needed *Saud Consults* approval for the changes in the Urban Design scheme. The other reason that caused the ADA to proceed with *Rasem Badran's* scheme was that his fees were less than those of *Albeeah*.” *Ali Shuaibi* adds, “Their office had been exhausted by this project and when they submitted their preliminary design scheme to the ADA they made it on a sketch basis so their presentation was normal; whereas, *Rasem Badran's* presented his scheme with full functional analysis, drawings, sketches, and perspectives.⁴¹³ At this stage the ADA approved *Badran's* scheme and commissioned him to make the final architectural drawings for *QA*.”⁴¹⁴

⁴⁰⁹ *Rasem Badran* is a Jordanian architect who studied in Germany. His early response and awareness of the need to design buildings that respect the regional quality has been evident in his projects. His main breakthrough was the winning of the design competition for the *Masjid Jamiè* in the city of *Arriyadh*, which led to a number of international prizes.

⁴¹⁰ *Alshathri Consulting Office* is a Saudi office owned by *Eng. Abdulrahman Alshathri*.

⁴¹¹ *Buro Happold* is an English consultant firm based in the city of *Bath*. Participated extensively in the *Diplomatic Quarter* project, then they were appointed by ADA as the main consultant to carry out the engineering of the *Qasr Alḥokm* project and to co-ordinate between the different architectural firms participated in the design.

⁴¹² The reason for choosing *Rasem Badran* was that he had succeeded in transferring the traditional architectural principles into the modern times and his preliminary scheme for the *Masjid Jamie* was good evidence of his skills.

⁴¹³ According to *Abdulrahman Alsery* (The manager of the design department at the ADA), *Albeeah* was not fully committed when they had the *Qasr Alḥokm* design. At that time it was very important to finalise the preliminary design scheme which cause a great pressure on the ADA decision makers and the consultants to act as quickly as possible.

⁴¹⁴ This information was taken in an interview with *Ali Shuaibi* on the 4th of May 1993.

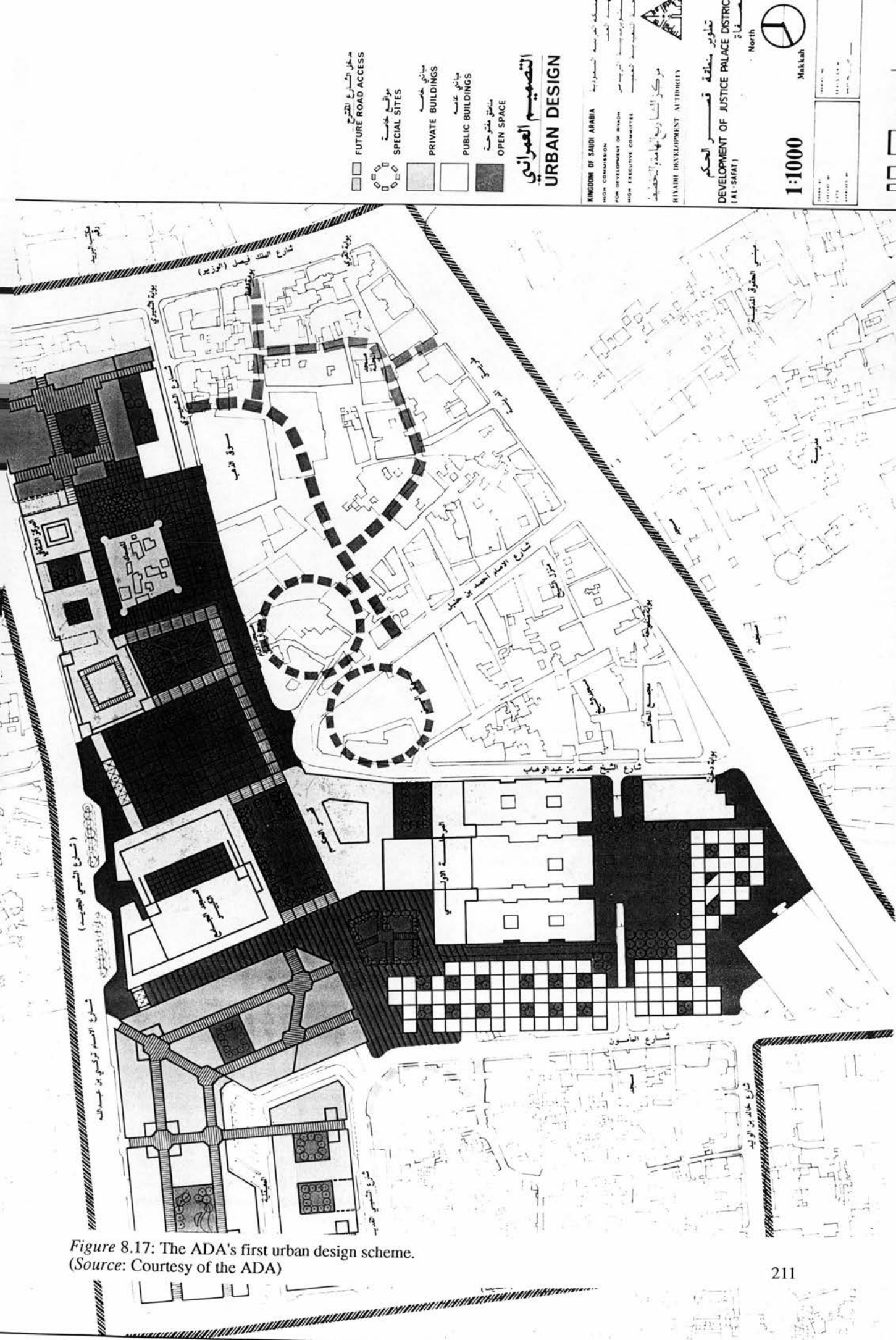
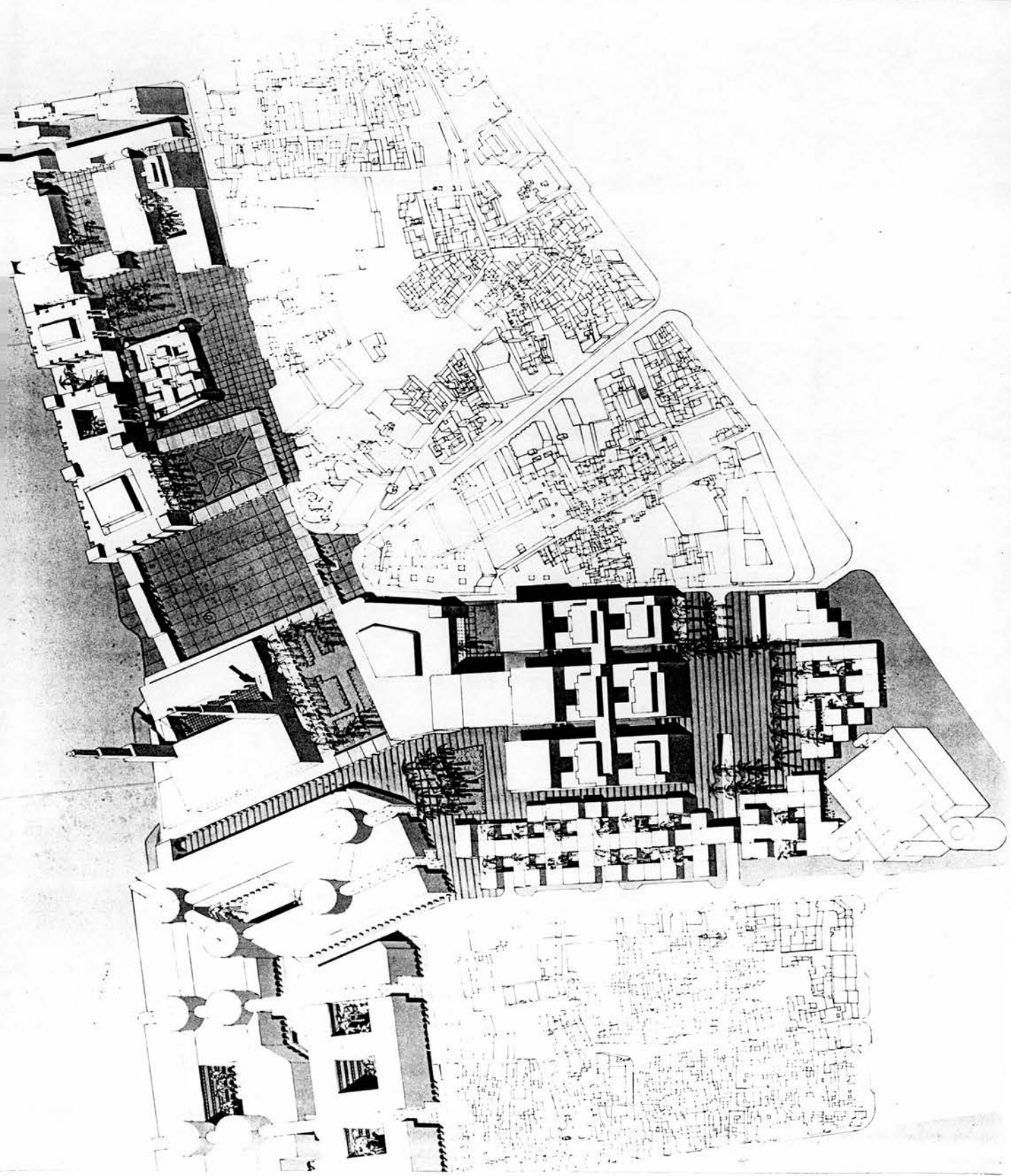


Figure 8.17: The ADA's first urban design scheme. (Source: Courtesy of the ADA)



KINGDOM OF SAUDI ARABIA
 HIGH COMMISSION
 HIGH DEVELOPMENT OF REGION
 HIGH EXECUTIVE COMMITTEE
 مركز المبادرات
 REGIONAL DEVELOPMENT AUTHORITY
 تطوير منطقة قسطنطين
 DEVELOPMENT OF JUSTICE PALACE DISTRICT
 (AL-SHAAT)
 North
 Makkah
 1:1000

Figure 8.18: Axonometry of the ADA's first urban design scheme.
 (Source: Courtesy of the ADA)

At this stage the ADA team was familiar with the development and they thought of utilising their own resources. The ADA questioned giving credit for the development to any consultant where they could hire individual expertise to work with their own team to implement the required policies. They commissioned their own team to make changes in the urban design scheme reaching a solution based on development of all governmental buildings, open spaces, and the infra-structure by the government itself. The ADA urban design scheme was similar to that of Albin, except for the main plazas which were not elevated. The 'T' shape development covered governmental and other related public buildings. The ADA circulation scheme was based on making the central area free from vehicular traffic - except emergency and VIP vehicles, and also transforming Althumairi streets into pedestrian streets.⁴¹⁵ (figure 8.19)

According to Dr. Othman the ADA planning concept was based on:⁴¹⁶

1) The creation of a functional public centre: the importance of developing the area with respect to its centrality as a governmental core;

2) Establishing a central business and commercial centre to ensure its vitality: The area needed to be active with commercial and business activities by supporting individuals to develop according to a clear development policy in order to achieve its potential target as an active centre for the whole city;

3) Encouraging private re-development: Government should continue their support of the public services to allow private development to be completed. This support could come in the form of all infra-structure and roads, and parking spaces. The government could also take some action towards stabilising land prices;

4) The improvement of accessibility and circulation: these are the main problems affecting the city centre, requiring therefore a careful study of the circulation and car parking;

5) Integration with the rest of the city: the neighbourhoods surrounding the QAA are of poor urban quality, requiring close monitoring to avoid reverse impact on the development.⁴¹⁷

The development of the private areas was intended to be implemented by private developers with minimum governmental intervention. One of ADA policies was to reinforce the incentive of the investor. The ADA scheme was an urban renewal rather than a re-building of the whole area.

⁴¹⁵ Othman, *ibid.*, p. 221.

⁴¹⁶ *ibid.*, pp. 221-222.

⁴¹⁷ These policies were a continuation of the previous implemented policies by the Mayoralty.

The construction process for the first phase⁴¹⁸ was started in 1983 and completed in 1985 at a total cost of SR. 469,350,565;⁴¹⁹ The construction of phase two started in 1988 and finished in 1992 at a total cost of around SR. 1 Billion (part of it private investment).⁴²⁰ The second phase included the execution of: the Great Mosque, Qasr Alhokm, Saḥat Alādī, Saḥat Alsafat, Saḥat Al Imam Mohammed Bin Saud, Saḥat Almasmak, Meḡliah centre; Aswaq Aldira, Souq Alawqaf Alkhairiah, and the rebuilding of the Thumairi and Dokhnah gates, Dira tower, parts of the old city wall, and finally the road network and the infrastructure. With the completion of phase two the 'T' shape of the development was completed creating a strong uninterrupted pedestrian flow from the east to the west side of the project. (figures: 8.19 & 8.20)

8.3.2.1. Analysis of the Urban Design Scheme

The majority of visitors to the area would come from King Fahd Freeway which runs north-south through the whole city. The freeway leads to either Tareq Bin Ziyad street or Imam Turki Bin Abdullah street. The QAA emphasised the concept of 'sense of arrival' by making the northern entrance of the project indistinct by forming an external edge of buildings along Imam Turki Bin Abdullah street, as people drive along they will see a sharp edge of buildings with colonnades of shops, and the 50 metre-high minarets which form a distinguishing landmark for the area and gives a sense of direction (figure 8.21). The sharp edge leads to a wide opening between buildings which is considered to be the northern gateway to the project (figures: 8.19 & 8.20).

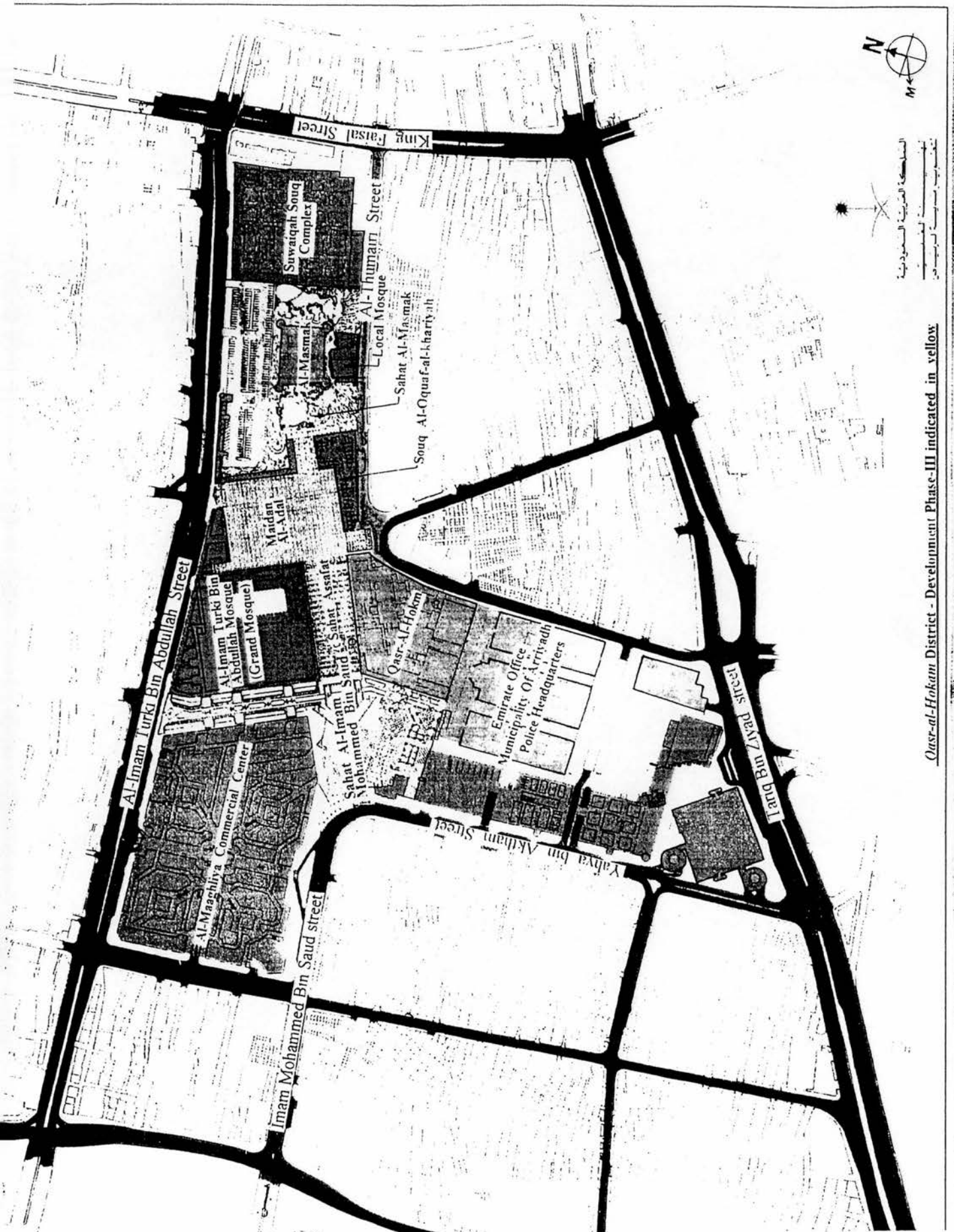
Once you enter, you see a large plaza -Saḥat Alādī- with a total area of 14,000 sq.m., furnished with water fountains and palm trees positioned to create natural shaded paths (figure 8.22). The plaza is surrounded by a colonnades of shops and is connected visually and functionally with the other plazas: Saḥat Almasmak and Saḥat Alsafat. Through the western colonnades of Saḥat Alādī are entrances to the Masjid Jamiè integrated with the colonnades of shops and the same architectural configuration which existed in the old mosque. At the southern edge of Saḥat Alādī is Aswaq Alawqaf Alkhairiah and the clock tower, another element retained from the old scheme (figure 8.23).⁴²¹

418 This should not be confused with Albini's phase one (the restoration of Almasmak) as the ADA defined phase one as the three governmental buildings and phase two are the rest of the 'T' shape development.

419 Othman, *ibid.*, p. 227.

420 *ibid.*, p. 219, and p. 227.

421 The Clock Tower was built in the 1960s. The ADA were debating whether to demolish it or to keep it, where they decided to keep it as an element that has establish recognition in the area which will help people to make a reference.



Qasr-al-Hokm District - Development Phase-III indicated in yellow

Figure 8.19: ADA's final urban design scheme and the phases of the developments.
 (Source: Holdsworth, J., "Qasr Alhokm District Development Strategy: Review April 1995", report prepared for the ADA, 1995, p. 6)

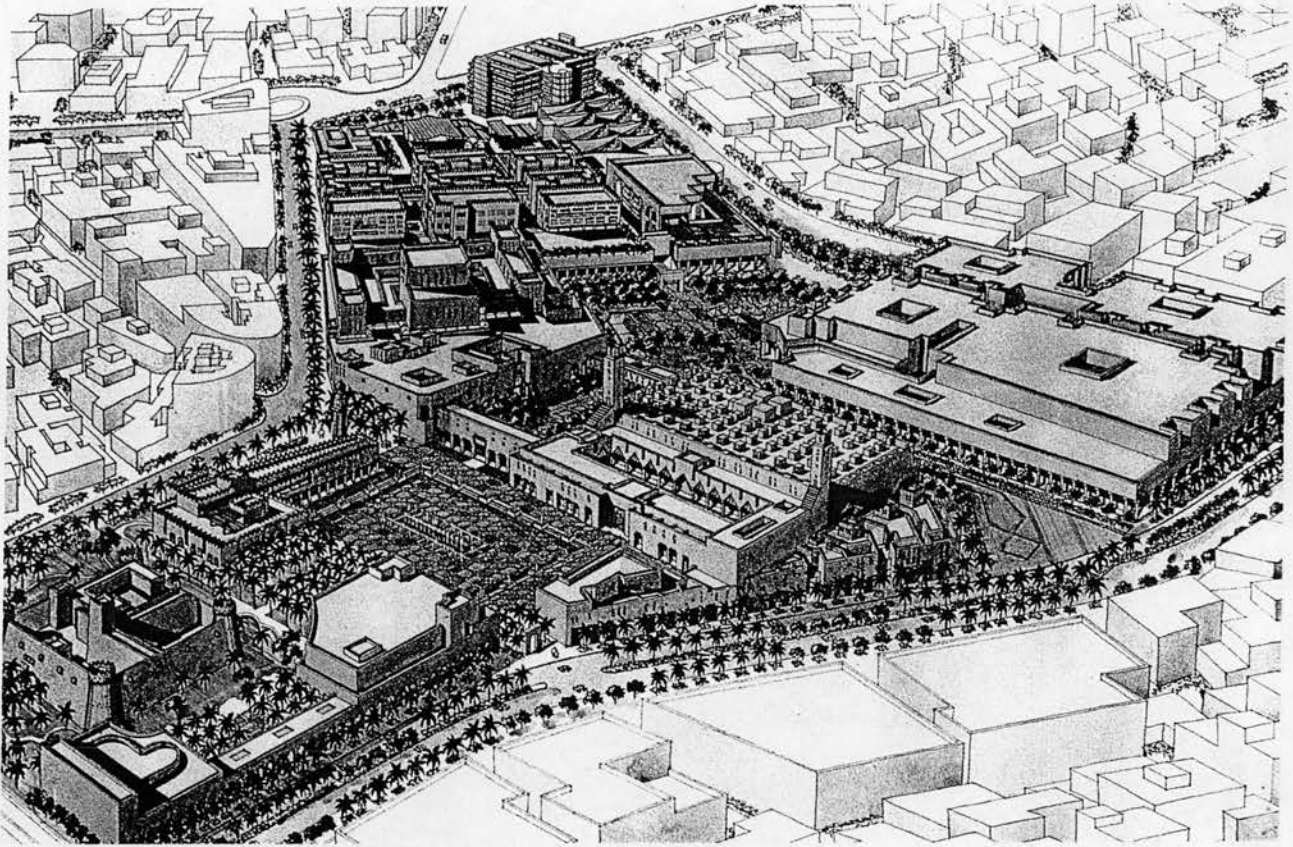


Figure 8.20: Perspective of Qasr Alhokm Area.
(Source: ADA, "Qasr Alhokm District Development Program: Phase two", Saudi Media Systems, Riyadh, 1992, p.11)



Figure 8.21: Imam Turki Bin Abdullah Street showing the sharp edge of buildings. Almasmak palace is on the left hand side of the photo. Notice the change of pavement denoting the location of the old city wall.
(Source: *ibid.*, p. 34)



Figure 8.22: View of Saḥat Alādī showing the entrance from Imam Turki Bin Abdullah Street and the colonnades of shops on both sides.
(Source: Author)

The plazas are the most important element in the urban design. They connect the different elements of the project, and are used for other functional activities i.e. celebration festivals, praying area, and entertainment. There are four plazas in the project, namely: Saḥat Alsafat; Saḥat Alādī -the main plaza in the city-; Saḥat Al Imam Mohammed Bin Saud; and Saḥat Almasmak. During the Eid festivals and national day celebrations the plazas are one of the main attractions in the city. They host national folk dancing, games, the sale of goods, foods, and clothing, which makes the area very lively during the festivities (figure 8.24).

The urban design centred on a major pedestrian spine linking Saḥat Al Imam Mohammed Bin Saud from the west with Qasr Almasmak in the east (figure 8.25) and Aswaq Suwaiqah behind it, passing through Saḥat Alsafat and Saḥat Alādī. The essence of this spine is to enable people to see Almasmak palace while they are walking from Saḥat Al Imam Mohammed Bin Saud towards the east. This spine will be strengthened after the completion of phase three of the QAA development to the west of Yahya Bin Aktham street (west of Imam Mohammed Bin Saud Plaza). The east-west spine was also enhanced by planting palm trees along the main pedestrian routes leading people from Saḥat Al Imam Mohammed Bin Saud to Qasr Almasmak and to the shops behind it. Other minor spines link the northern part of the area with the rest of the

development. One is the entrance that passes through Saḥat Alàdl leading to Aswaq Alawqaf Alkhairiah and Althumairi street; the other spine located between Masjid Jamiè and Meàgliah commercial centre connects Imam Turki Bin Abdullah street with Saḥat Al Imam Mohammed Bin Saud and is furnished with natural shrubs planted on the both sides of the road (figure 8.27).

Saḥat Alàdl is connected on its eastern side by a wide space with Saḥat Almasmak. This emphasises the importance of the Almasmak building, were people can see it from as far as the end of the western edge of Saḥat Al Imam Mohammed Bin Saud (figure 8.26). Saḥat Almasmak is the smallest in terms of size with a total area of 4,500 sq.m. The purpose of this Saḥa, as emphasised by Albini, was to make the Almasmak building appreciated within the urban context. Also, to make Almasmak to be seen from Imam Turki Bin Abdullah street.

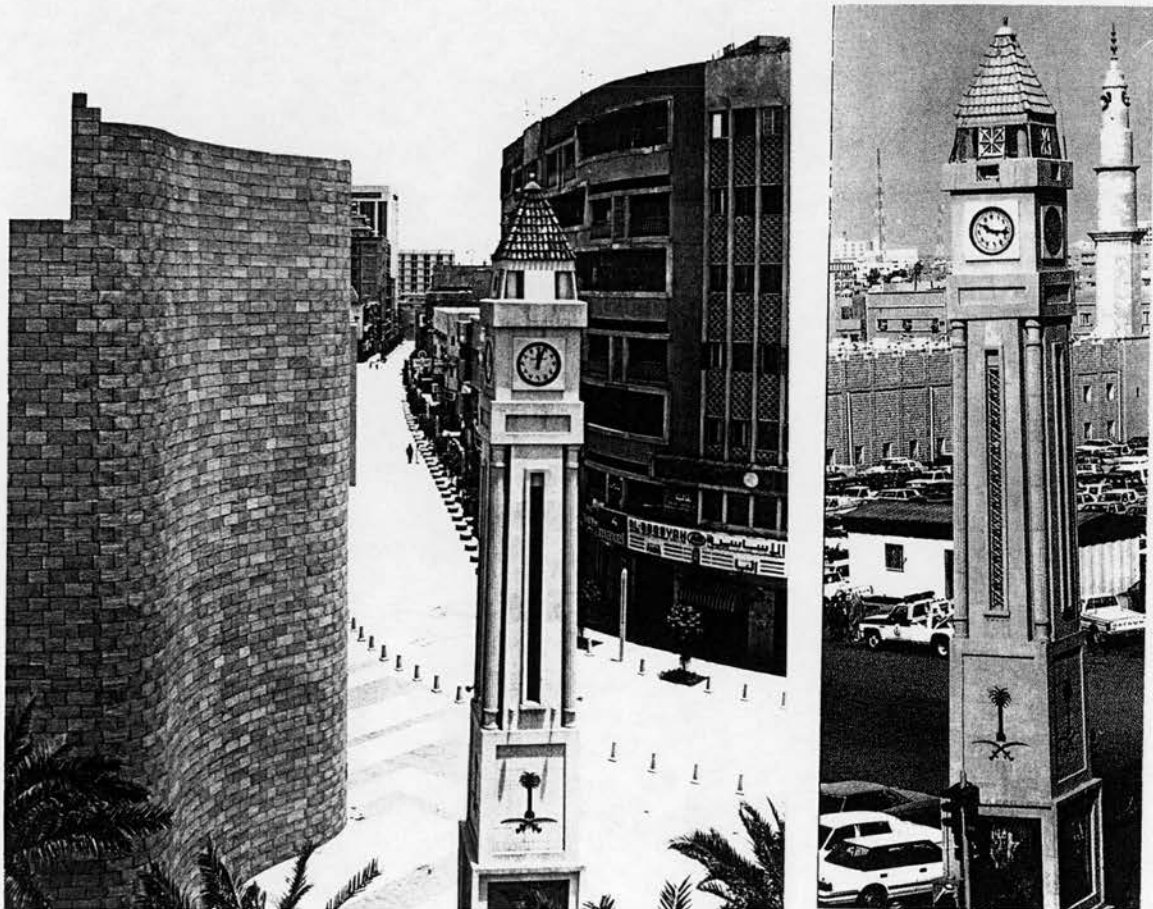


Figure 8.23: (Left) View from the south showing the clock tower and the Aswaq which creates the southern edge of Alàdl plaza. (Right) The clock tower in the 1960s. (Source: (Left) Author & (Right) Tatweer, Fifth edition, ADA, 1992, p. 3)



*Figure 8.24: Saḥat Al Imam Mohammed Bin Saud during the festivity period.
(Source: Courtesy of the ADA)*

From Saḥat Alādī you can walk west towards Qasr Alḥokm and the southern edge of the Masjid Jamiè, into the space between the mosque and the palace called Saḥat Alsafat (5,000 sq.m). Palm trees were also planted in this plaza (figure 8.28). Two overpasses linking Qasr Alḥokm with the Masjid, define the entrances to this special plaza, which contains the Royal entrance to Qasr Alḥokm. This treatment also existed in the old palace and mosque. Beyond the second bridge heading west you will see another large plaza, Saḥat Al Imam Mohammed Bin Saud (with a total area of 14,000 sq.m.) (figure 8.29). This plaza is surrounded by Qasr Alḥokm to the east, the Meàgliah centre to the north, the Mayoralty building and Souq Aldira to the south, and to the west by the third phase of commercial development which is due to be finished in 1999. The plaza is furnished with palm trees and water fountains. In addition there are tent structures to break the solidity of the space and to give shade.



*Figure 8.25: View from Saḥat Al Imam Mohammed Bin Saud looking east.
(Source: Author)*



*Figure 8.26: View from Saḥat Almasmak looking west.
(Source: Author)*



Figure 8.27: View of the pedestrian and VIP car entrance to the area.
(Source: Author)



Figure 8.28: View of Saḥat Alsafat showing the bridge that links the Qasr with the Masjid.
(Source: Author)



Figure 8.29: View of Saḥat Al Imam Mohammed Bin Saud. The picture is taken from the palace and looking west.
(Source: Author)

The landscape of palm trees and fountains provides a natural path from Saḥat Al Imam Mohammed Bin Saud to Saḥat Almasmak. The fountains and the trees also provide a cooler micro-climate and help to break the rigidity of the open space.

Street furniture is another element that defines and identifies the area. The sidewalks of Imam Turki Bin Abdullah street, part of Tareq Bin Ziyad street, and Yahya Bin Aktum street have been reconstructed and provided with special pavements, trees, and street lighting and furniture. These elements should be enhanced to cover all other streets and public places in the area to make them distinctive. The use of granite for the pavement of the open places has been a problem as the material stores and radiates heat (figure 8.29).

The ADA implemented the idea of building parts of the old city wall and gates in their original locations to help people to know the limit and size of the old city. Part of the old city wall passed through main roads. The ADA showed this by changing the pattern of the pavement to emphasise the location. (figure 8.21) The ADA also rebuilt parts of the old city wall and two gates: Althumairi and Doknah, and the Dira tower wall using the original building materials and size and shape (figures: 8.30 & 8.31). This idea of rebuilding some of the old city gates links the area visually and functionally with the recent past and enables younger citizens to envisage the character at the beginning of this century.

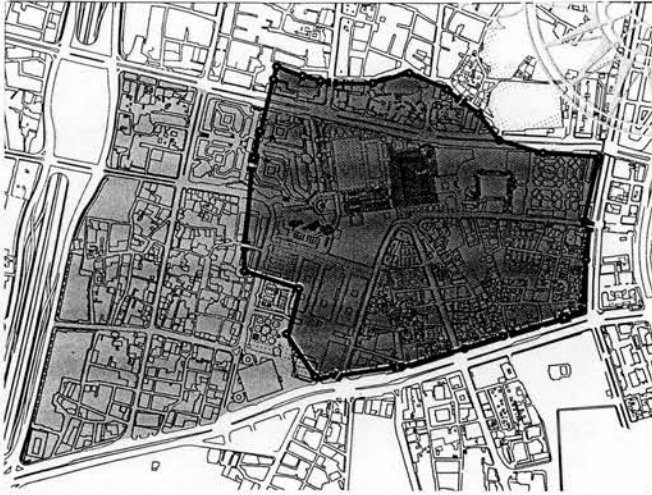


Figure 8.30: The site plan of the area showing the boundary of the old city.
(Source: ADA, "Qasr Alhokm District Development Program: Phase two", Saudi Media systems, Riyadh, 1992, p. 34)

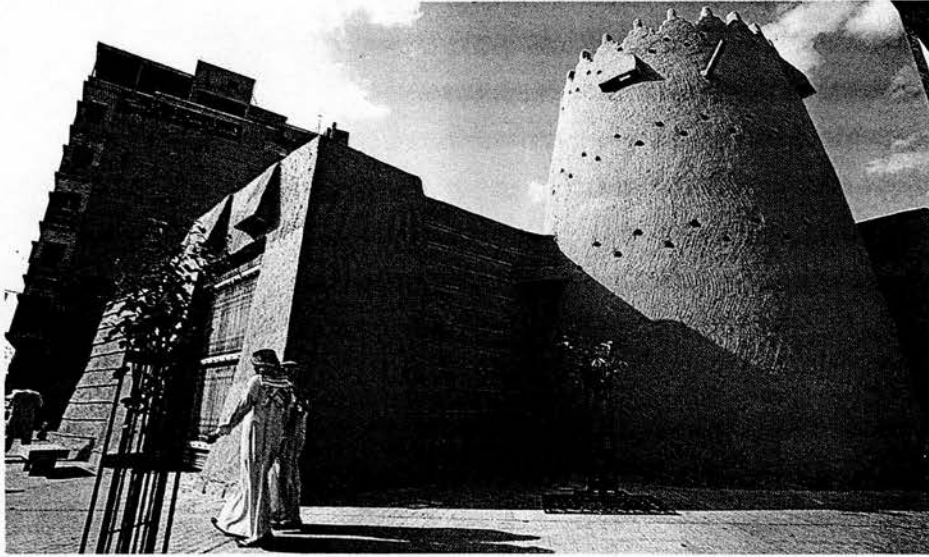


Figure 8.31: View of one of the old gates built in its original location and by using the same building materials and size.
(Source: *ibid.*, p. 35)

8.3.2.2. The Architectural Analysis:

The importance of phase two relates to its role as the host of the most important buildings in the development: Qasr Alhokm and Imam Turki Bin Abdullah Mosque. In the following analysis we discuss the architectural characteristics in detail to show how the architect translated the principles of traditional architecture into these two modern examples.

8.3.2.2.1. The Qasr Alhokm

The overall design of the palace and its detailing originated in traditional building. The palace as seen from outside is a fortified large building with minimal external openings (figure 8.32). It occupies a total area of 11,500 sq.m. and has a total building area of 35,000 sq.m. It contains the King's reception room, dining room, and the King's Office. The King's rest quarters include a bedroom, bathroom, a meeting room, and offices. HRH the Governor of Arriyadh's section includes: office, reception room, administration department, resting chamber, meeting room, and a private reception room. A section for HRH the Deputy Governor of Arriyadh includes an office, meeting room, and rest quarters. The palace also includes offices, meeting rooms, and other supportive elements (figure 8.34).

The simplicity of its external appearance is one of the main features of the buildings of the old city. Rasem Badran comments: *"The architectural features of the Najd region with its simplicity, clear expression of the environment and rich heritage were the core of our analytical study to reach a clear understanding of these features."*⁴²² The external volume of the palace was divided into two parts. The southern part rises to six storeys and has five distinguishing towers - four at the corners and the fifth on the middle - whose function was to bring light and ventilation to the spaces and courtyards underneath it (figures: 8.32 & 8.33). The northern part has a lesser volume and height, rising to five storeys. The external difference between the northern and southern part of the palace distinguishes the location of the different spaces underneath it.

The southern part is more solid and evolves from a castle-shaped structure which symbolises force and power. The spaces underneath it are the King's reception room, dining room, and the public entrance. The northern part is simpler and accommodates the Royal entrance, the Royal office and private quarter.

The Qasr Alhokm and the Great Mosque are linked by two bridges as they were in the old city (figures: 8.32, 8.36 & 8.37). There are two balconies overlooking the two plazas (Aladl and Alsafat) (figure 8.38). Aladl plaza is used by the King to address the people on important occasions.

The external character of the palace conveys solidity by the use of small openings in contrast with the overall volume. The only large external opening was the

⁴²² SBA-Buro Happold, *"Justice Palace: schematic design architectural report"*, u.d., p. 8.

entrance: the main Royal entrance located on Saḥat Alsafat opposite the mosque emphasises the spiritual and physical connection between the mosque and the Qasr (figures: 8.36 & 8.37). The use of projecting cubes on top of the entrance (*Turma*) was widely used in the traditional architecture in Najd region, but in this case the designer has used this space to project lighting on the entrance and to house security cameras, utilising the traditional shape structure to advantage for modern use. The public entrance is located on the western side of the palace which is close to the Emirate and Mayoralty buildings as their functions complement each other (figure 8.40). It has the same treatment for the *Turma*. The Royal and public entrances meet inside the palace through a ceremonial axis in a ceremonial hall (figure 8.41). The palace is also connected on the second floor with the Emirate building as the function of the two elements are integrated. This link shows the contrast between the first and the second phase of the development which is seen in the use of colour, texture, and in the solid and void pattern (figure 8.42).

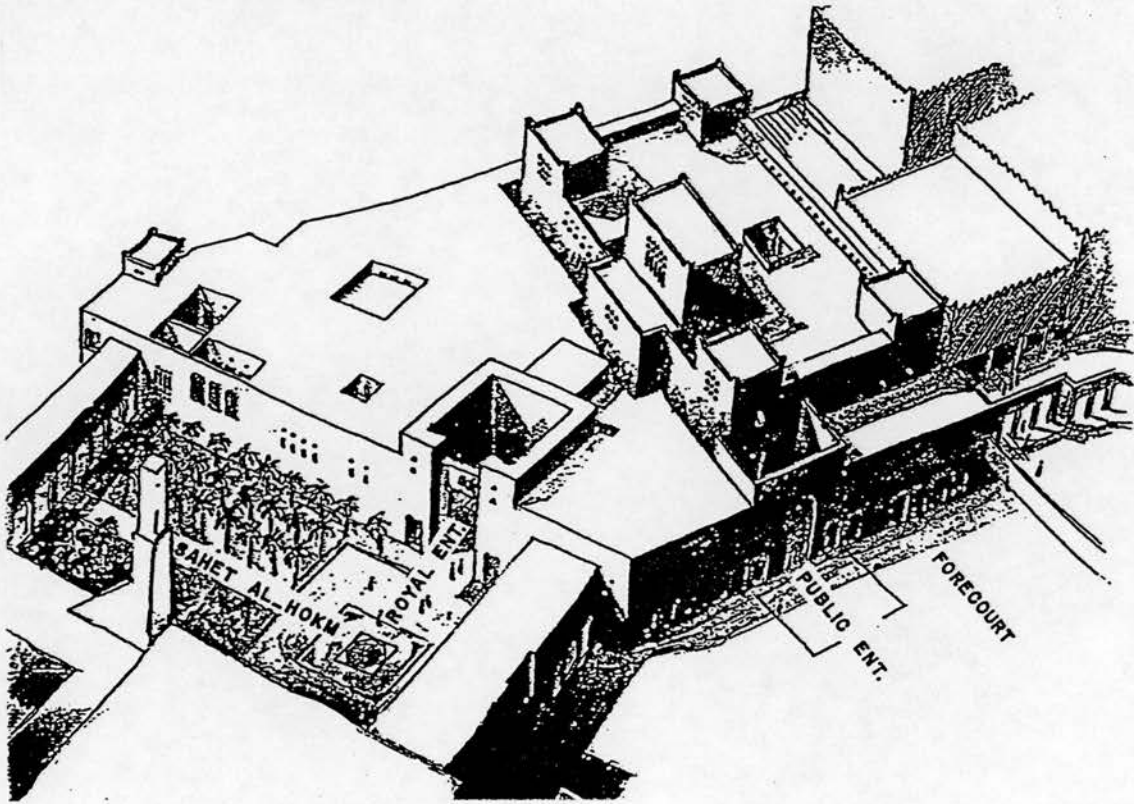


Figure 8.32: Sketch of the palace overall volume.
(Source: SBA-Buro Happold, "Justice Palace: schematic design architectural report", u.d., p. 12)

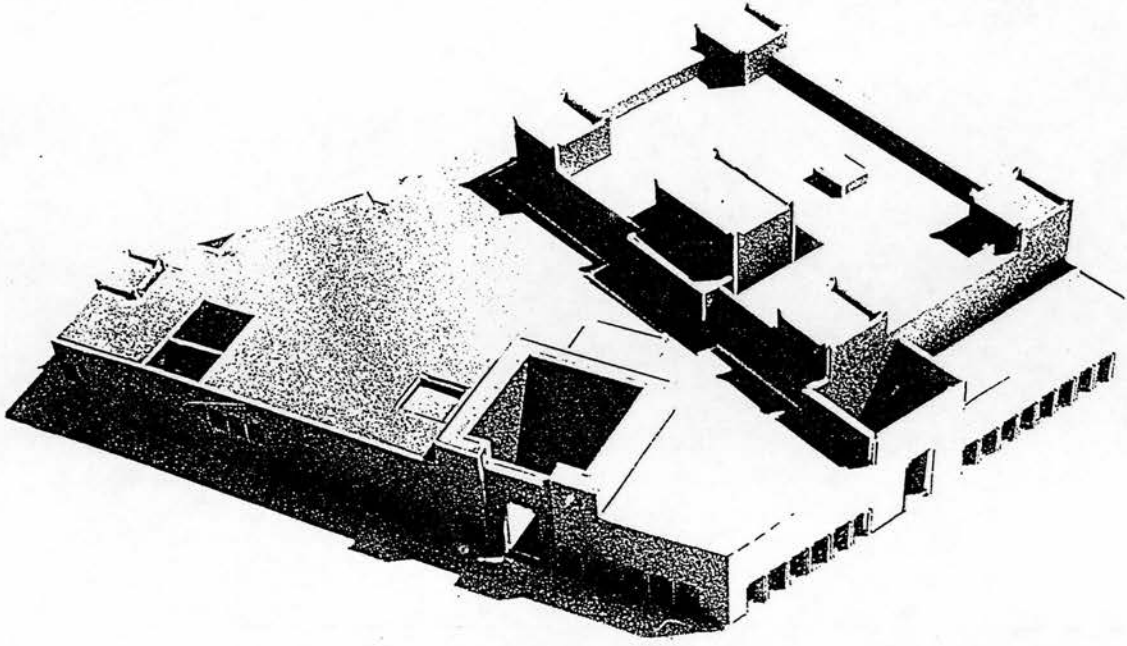


Figure 8.33: Mass model for the Qasr looking from the north-west direction. (Source: *ibid.*, p.32.)

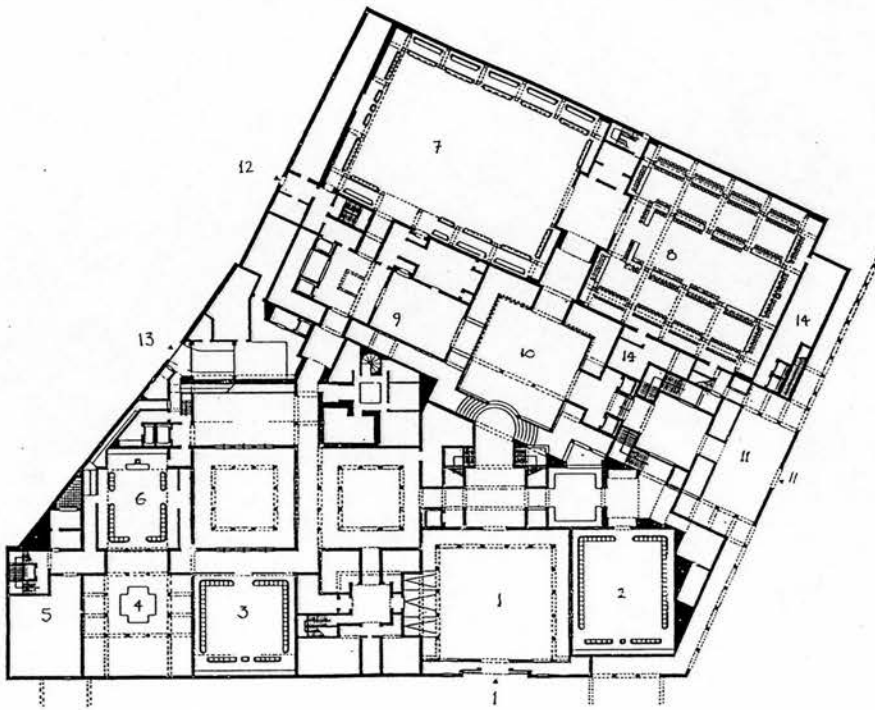


Figure 8.34: Ground floor plan. (1- The Royal entrance; 2- Main reception; 3- Private reception; 4- Courtyard; 5- The Royal quarter; 6- The Royal office; 7- The main Royal reception room; 8- The Royal dining room; 9- Private dining room; 10- The main foyer; 11- Public entrance; 12- Employee entrance; 13- Services entrance; 14- Service; 15- Mechanical room.)

(Source: SBA-Buro Happold, "Justice Palace: schematic design architectural report", n.d., p. 35)

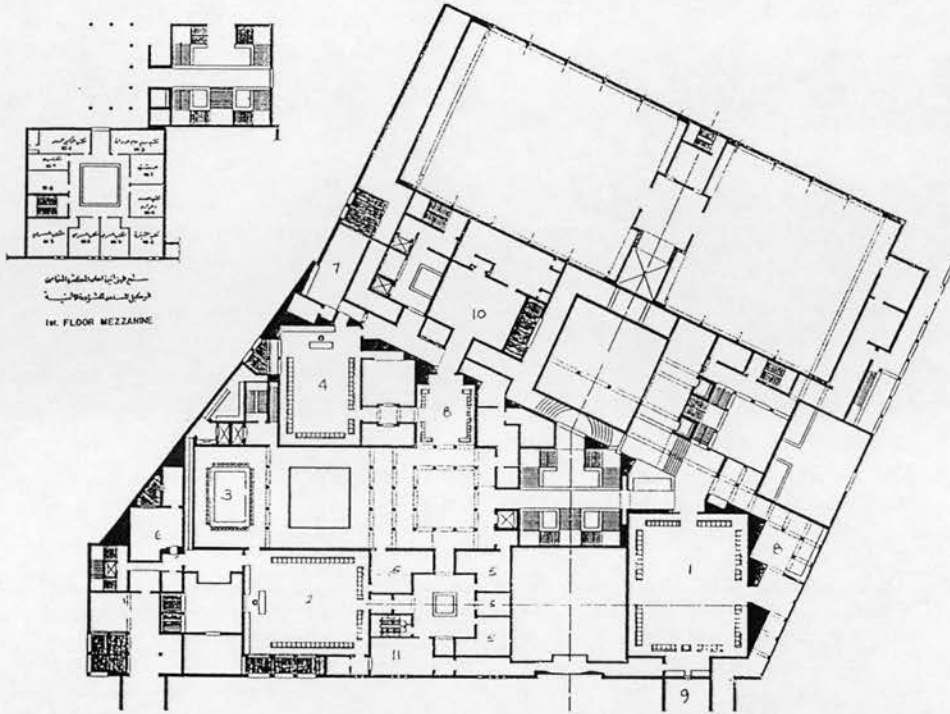


Figure 8.35: First floor plan: 1- HRH the Governor reception room; 2- HRH the Governor office; 3- Meeting room; 4- HRH the Deputy Governor's office; 5- Administration office; 6- HRH the Governor's rest room; 7- HRH the Deputy Governor's rest room; 8- Waiting room; 9- Prayer area; 10- Private dining room; 11- Private reception room. (Source: *ibid.*, p. 35)



Figure 8.36: View of the Royal entrance and the bridge that connects the palace with the mosque. The photo is taken from Saḥat Alsafat looking west. (Source: Author)

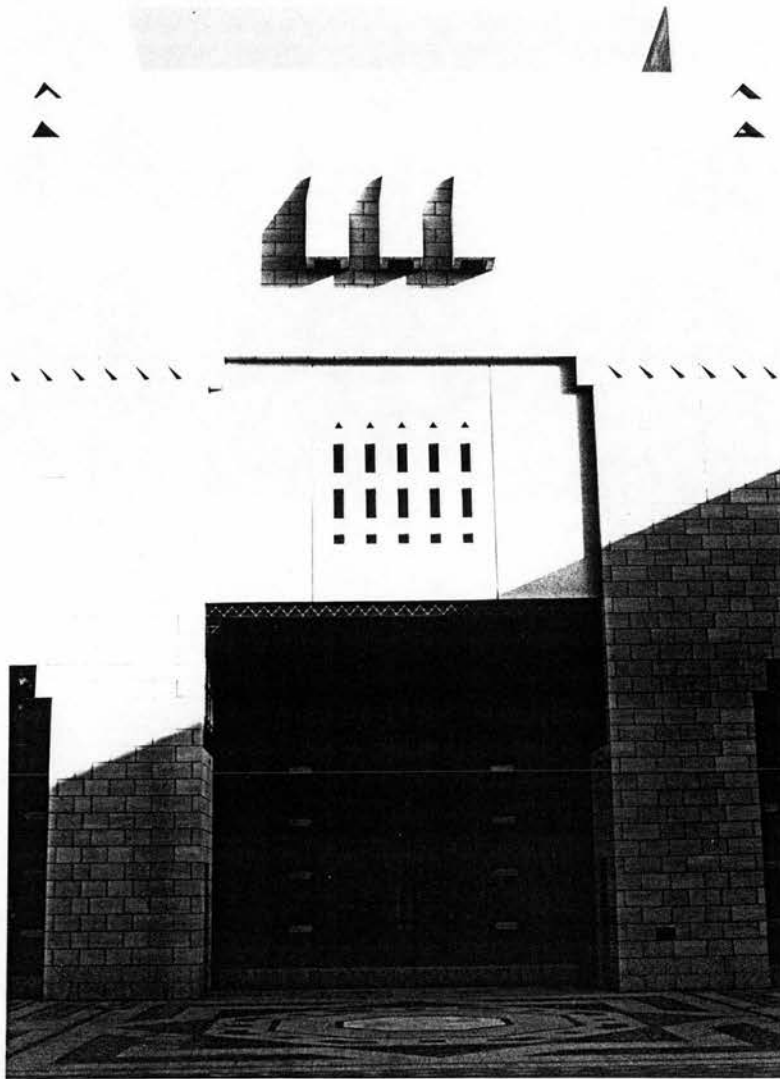


Figure 8.37: Details of the Royal entrance. Notice the decoration in the pavement.
(Source: Author)

The use of a decorative band of small triangles around the palace breaks the solidity of the overall mass and carries a symbolic meaning for the people, as this treatment existed in traditional architecture (figures: 8.39 & 8.44). The use of the courtyard is seen in this project, which provides natural light and ventilation to the inner spaces (figure 8.43). The use of the wind catcher⁴²³ and water element at ground level provides a cooler micro-climate. Water to Arabs is the source of life, the use of water fountains running in the ground floor function to humidify the air that comes from the wind catcher and also work as a pleasant element to see and walk around. This natural feeling is enhanced by the use of sky-light in the corridors and public places (figure 8.45).

⁴²³ The wind catcher is a physical structure designed to allow fresh air to be channelled from the top of the building through a vertical shaft to the bottom which creates a stream of fresh air to ventilate the house. The structure is widely used in the Eastern region of Saudi Arabia and throughout the Gulf cities, Iran, and Pakistan. The incorporation of this climatical structure in this scheme is another illustration of the incorporation of new ideas as long as they serve a justified function.

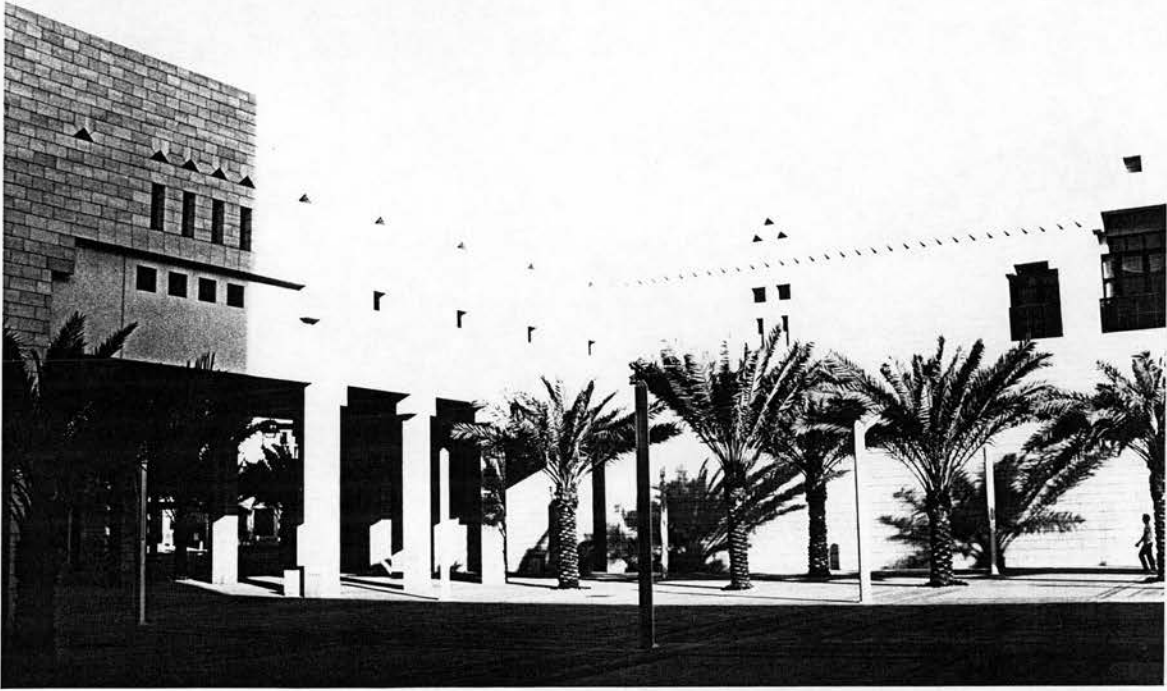


Figure 8.38: View of the palace and the bridge that connects it with the mosque.
(Source: Author)



Figure 8.39: The balcony overlooking Alsafat plaza showing the details of the facade.
(Source: Author)



Figure 8.40: View of the palace from Saḥat Al Imam Mohammed Bin Saud showing the public entrance and the overall volume and character of the palace.
(Source: Author)

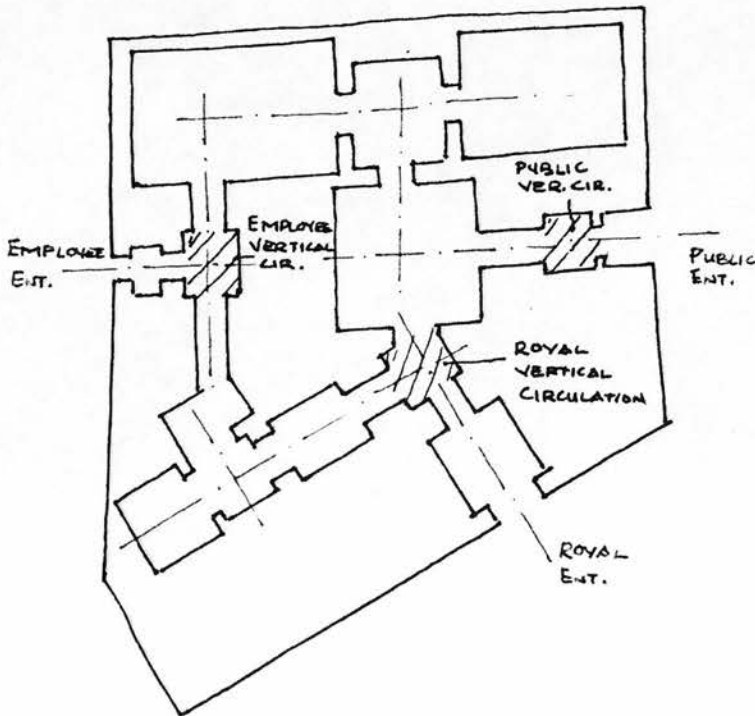


Figure 8.41: Sketch of the palace showing the entrances, axis, and the vertical circulations.
(Source: Author)



Figure 8.42: Two photos showing the link between the Qasr and the Emirate building.
(Source: Author)

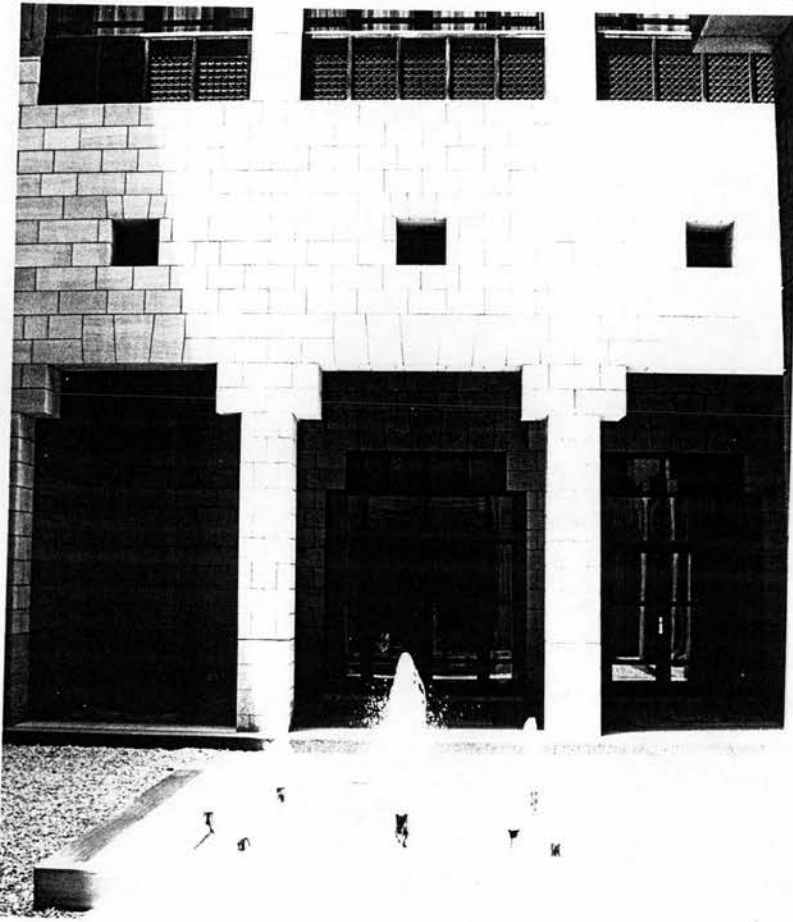


Figure 8.43: The inner courtyards with water fountain which helps to provide natural light and ventilation to the inner rooms.
(Source: Author)

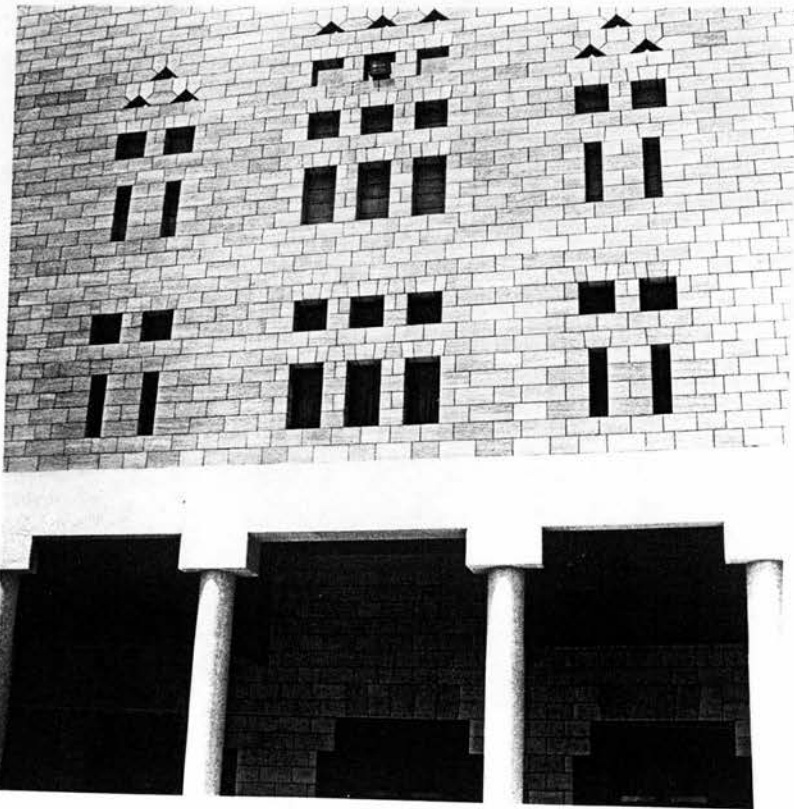


Figure 8.44: Details of the external wall of the Royal entrance courtyard.
(Source: Author)

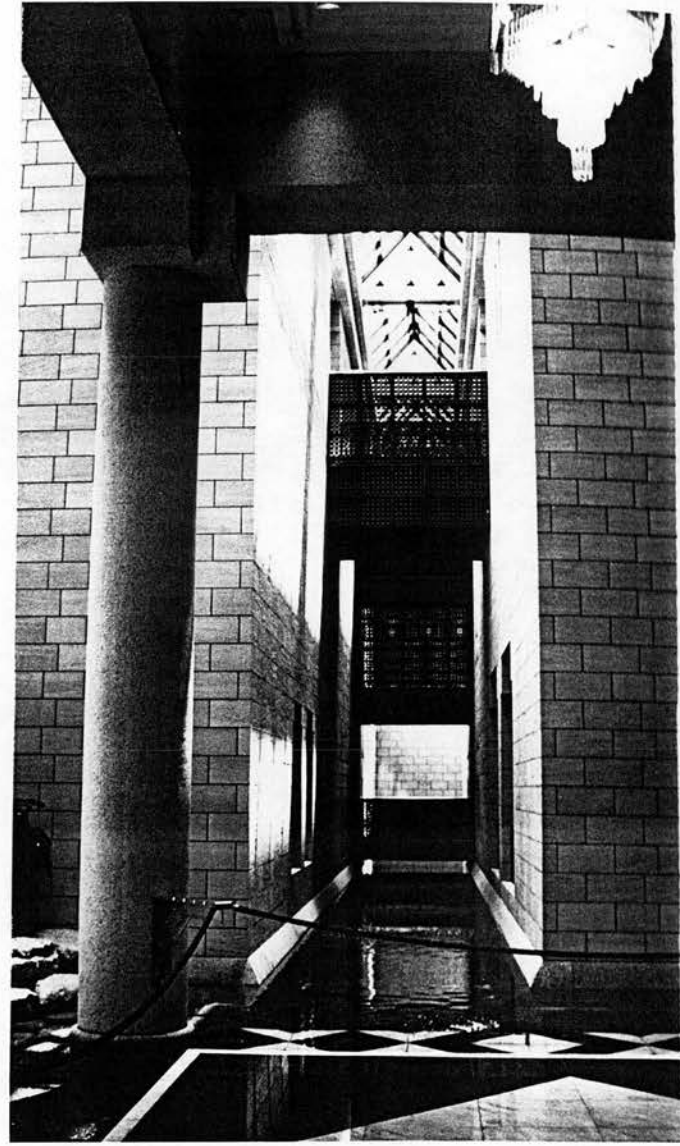
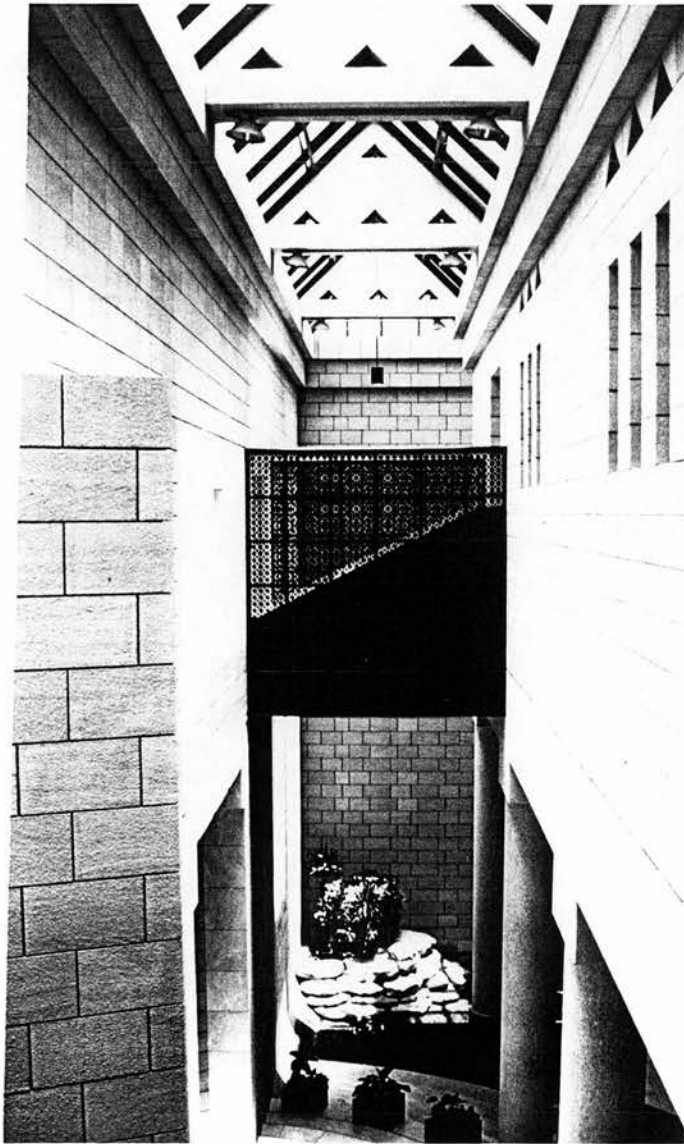


Figure 8.45: Two photos showing the treatment of the public places where water and natural light is incorporated.
(Source: Author)



Figure 8.46: Waiting area on the first floor showing the intimacy of the space with its subtle furniture, floor and wall finishing, and natural light.
(Source: Author)



Figure 8.47: The foyer where the public and Royal entrances meet.
(Source: Courtesy of Meshari Alnaim)

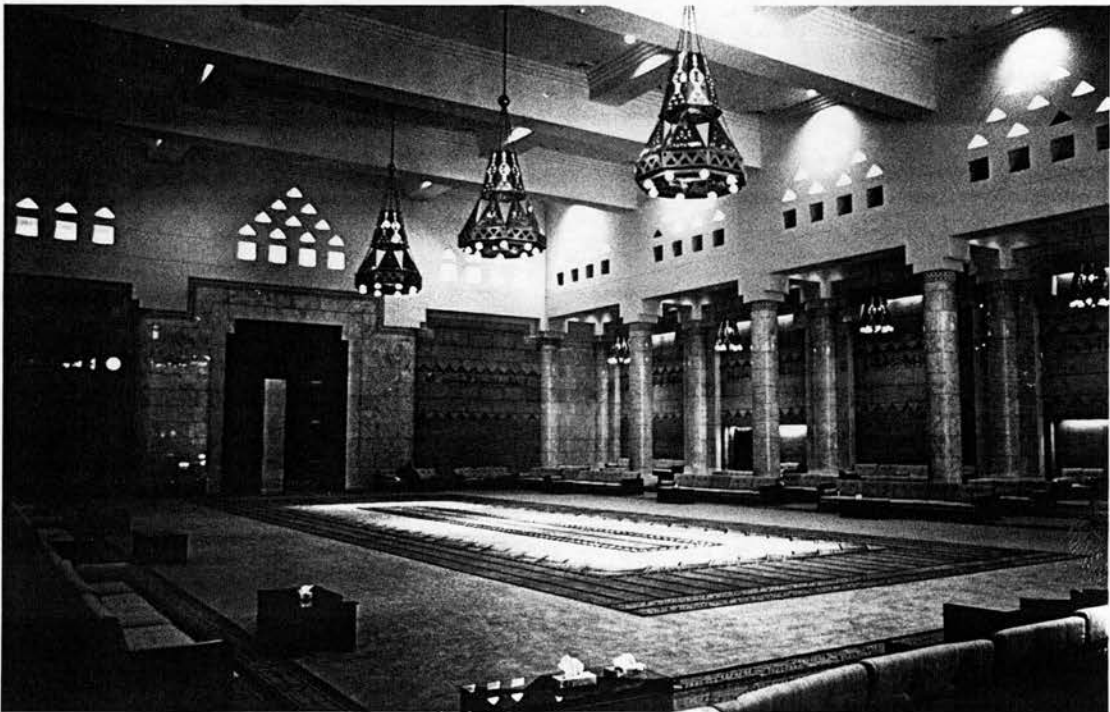
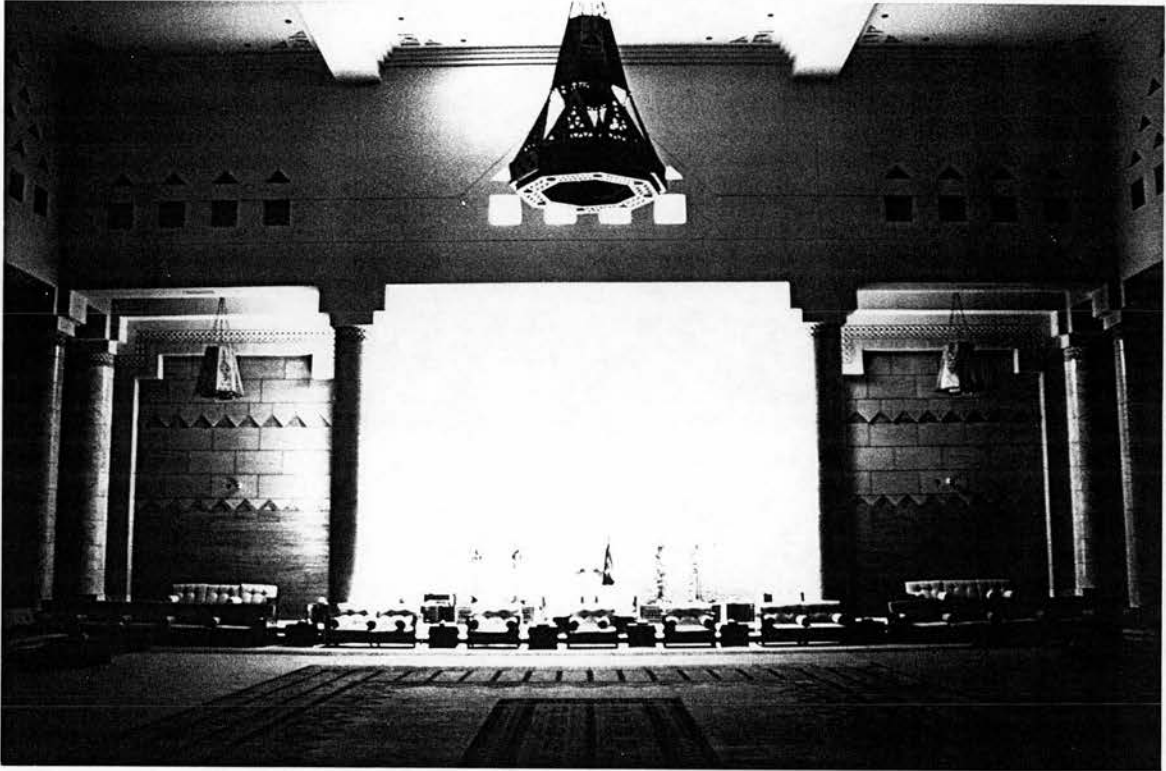


Figure 8.48: The King's reception room showing the intricate balance of volume, furniture, and decorations.
(Source: (Top) Author & (Bottom) Courtesy of Meshari Alnaim)



*Figure 8.49: The space behind the King's seat in the reception room.
(Source: Courtesy of Meshari Alnaim)*

In contrast with the monumentality of the exterior appearance of the palace the interior spaces are strongly linked with the human scale. The use of lighting, decoration, and furniture are supportive elements that make people feel comfortable when walking around the different rooms (figure 8.46). The main room is the King's reception room⁴²⁴ with a total area of 1280 sq.m. (figure 8.48). It has two rectangular spaces, one within the other. The larger is formed by the walls of the reception room and the smaller is an inner rectangle emphasised by a row of columns running in all directions (figure 8.34). The wall of the inner rectangle has been pierced by square and triangular openings to break the solidity of the mass. A background light was arranged which gives the effect of natural light (figure 8.48). The internal walls are finished with natural stone and waved with a triangular band on all directions. The side opposite the

⁴²⁴ I shall describe only the King's reception room as it is the most important space within the palace, which will give an example of the internal treatment.

entrance, where the king sits is enhanced by natural light coming from the roof which symbolise the importance of this area (figures: 8.48 & 8.50). On the other three sides is Arabic calligraphy of Quranic verse which was not intrinsic to the Najdi style (figure 8.48)⁴²⁵. The columns are round and finished with a capital similar to the traditional columns, a simple and subtle decorative band on top of the column which makes a visual transition to the capital (figures: 8.48 & 8.50).

The feeling of locality is found throughout the palace different spaces, as each room and open space has a localised treatment. The internal design and decoration is translated from traditional finishes, as is shown in the use of internal colours for the walls and ceilings, the triangular decoration of the walls and ceilings, the pattern of the carpets, the shape of the columns, and the use of wooden structure in the ceiling (figures: 8.48- 8.54 & 8.57).

Lighting is another important element. The architect tried to achieve natural lighting in the corridors, and in the king's reception and dining rooms. The use of bronze lamp covers on the ceiling of the King's reception and dining room is another distinctive feature, being decorated with small triangular openings which match the theme of triangular openings and decoration in the palace (figures: 8.48 & 8.50).

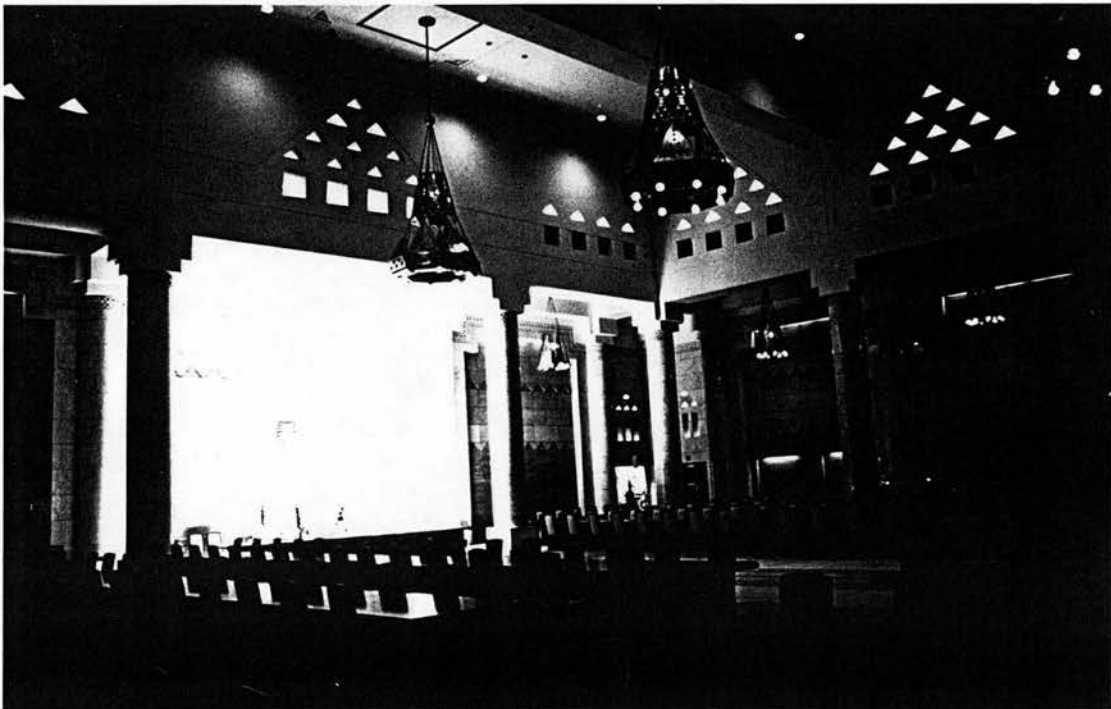


Figure 8.50: The Royal dining room.
(Source: Courtesy of Meshari Alnaim)

⁴²⁵ The use of calligraphy as a decoration element was recently applied in Najd, as pictures and portrait drawings are not used in Najd region.

The furniture is traditional in character. A brown wooden frame is the common theme for the furniture i.e. chairs, sofas, tables, doors, Mashrabiah, office tables, coffee tables, plant boxes, ... etc., and the sides of these elements are finished with bronze triangular decorations to match the rest of the triangular decorations on the walls, floors and ceilings (figures: 8.48-8.50).

The floor of the interior corridors is of coloured marble. The use of a green, brown and beige colour scheme for the floor makes a strong contrast with the rest of the decoration. A stronger link with the geometry is also seen in the floor pattern. The interior rooms are carpeted and here there is a powerful interpretation of triangular and other traditional patterns (figures: 8.46- 8.54).

All the external walls and public areas of the interior are finished with Arriyadh stone -unique to the area -, which gives a unique colour and texture. Some of the internal windows and balconies have been finished with a band of gypsum decoration which also exists in traditional building (figure 8.55). The contrast between the sandy and the white colours gives a special character, used in almost every internal space. The dark brown wooden colour is used in the doors, the hand-rail, furniture, and the Mashrabiah (figures: 8.48-8.57).



Figure 8.51: The King's office.
(Source: Author)

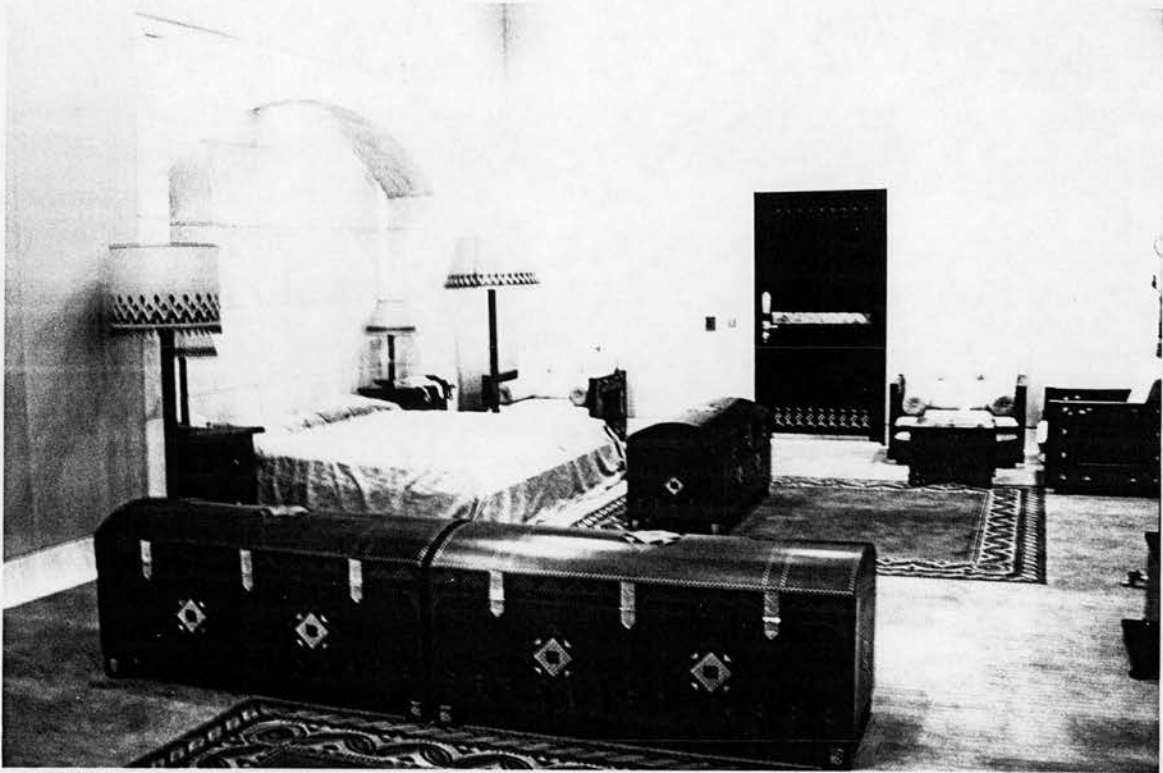


Figure 8.52: The Royal suite showing the simplicity of the design and the use of the traditional pattern in the decoration.
(Source: Author)



Figure 8.53: HRH the Governor's reception room.
(Source: Author)

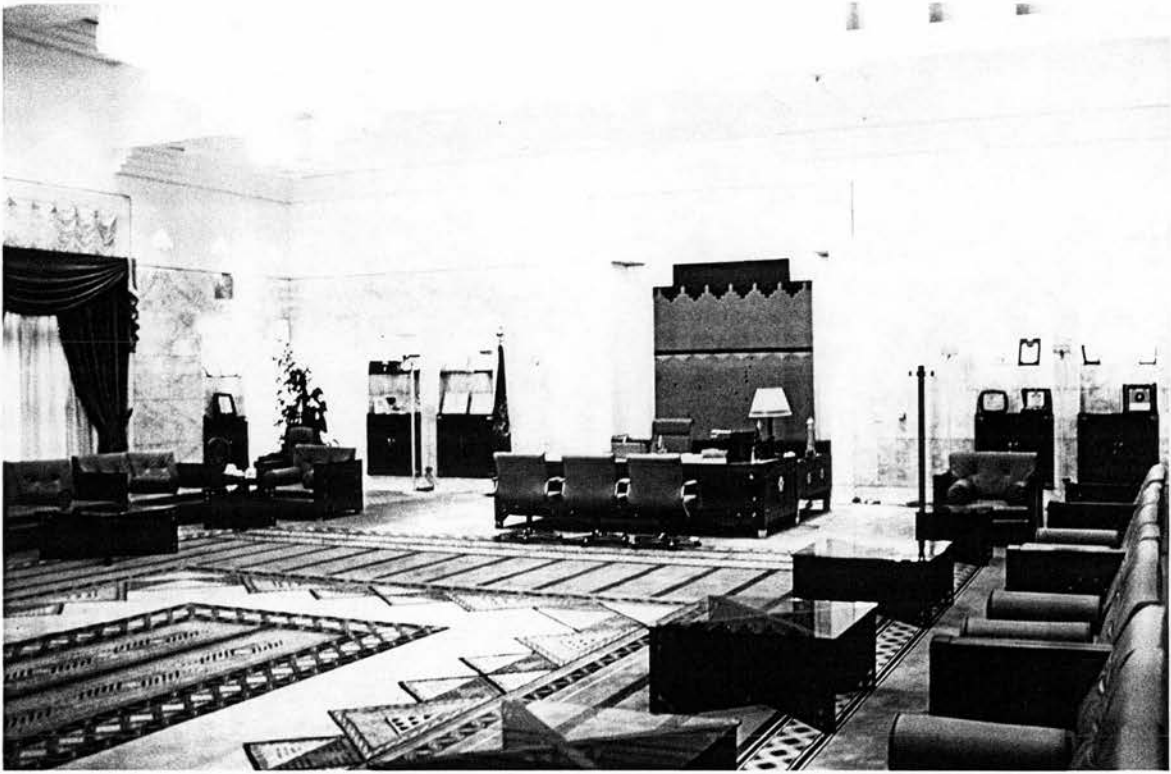


Figure 8.54: HRH the Governor's office.
(Source: Author)

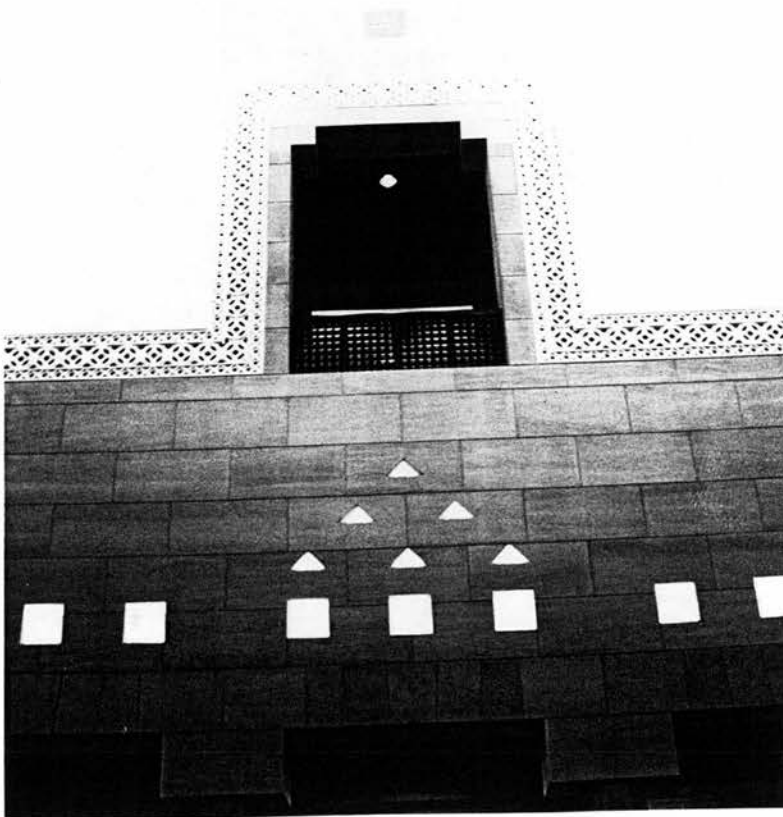


Figure 8.55: Details of the interior showing the intricate details of the finishing and decorations.
(Source: Author)

Air-conditioning shafts were incorporated within the decorative openings of the walls and ceilings providing a feeling of comfort without sight of mechanical ducts (figure 8.57).

The use of triangular shaped openings and decoration scheme throughout the exterior and the interior of the palace link the different parts of the project in a harmonious way. Triangular decoration was also extended to be seen in the walls, columns, ceiling, and minaret of the mosque.

Generally speaking, the interior design is highly finished. Every room and every corner has been carefully treated. You feel that you are walking through a special place that is certainly distinguished from any other project in the whole of Arabia and the rest of the world.

Rasem Badran said in conclusion ... *“Qasr Al-Hokm district of Riyadh will be seen as a contemporary and intellectual architecture for Muslim communities. It is a master plan for a way of life, rather than just a visual exercise or a personal expression of man's desires and cultural background. Architecture has to be an embodiment of human and moral concepts, and not just for Muslims. We should seek those special characteristics within the social environment that can offer the society an identity.”*⁴²⁶

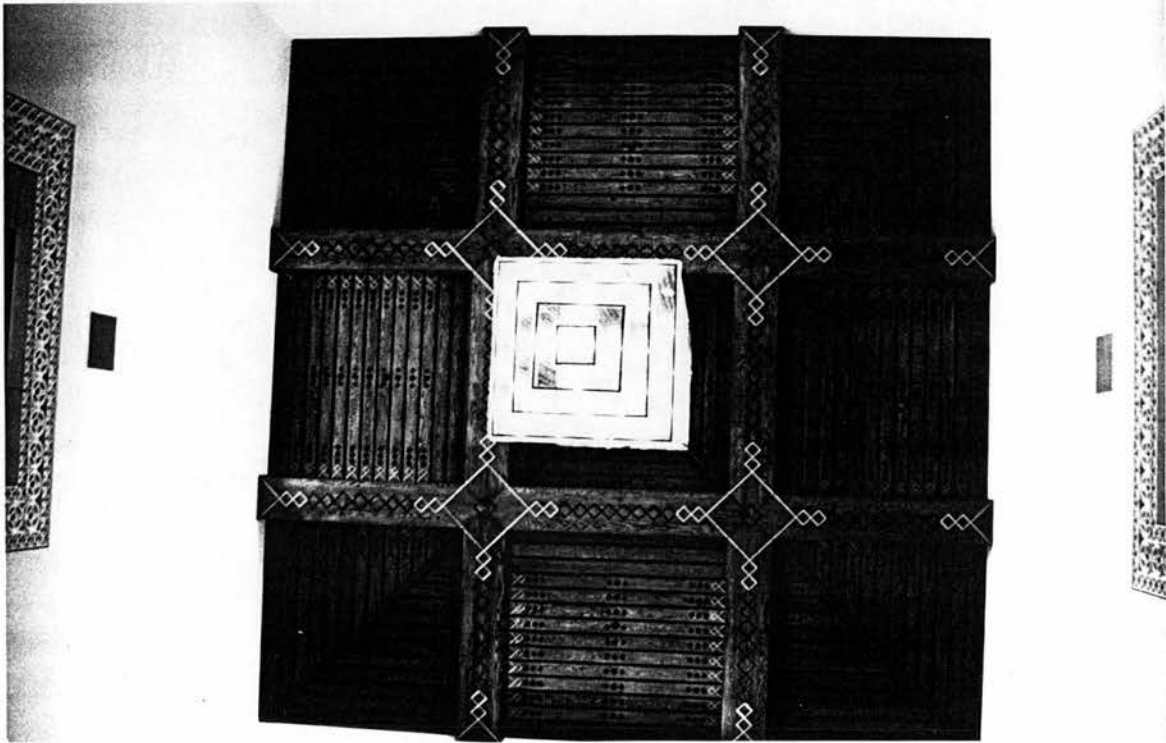


Figure 8.56: The roof structure of one of the covered atriums.
(Source: Author)

⁴²⁶ Mimar 25, September 1987, Interview with Rasem Badran by Akram Abu Hamdan, pp. 67-69.

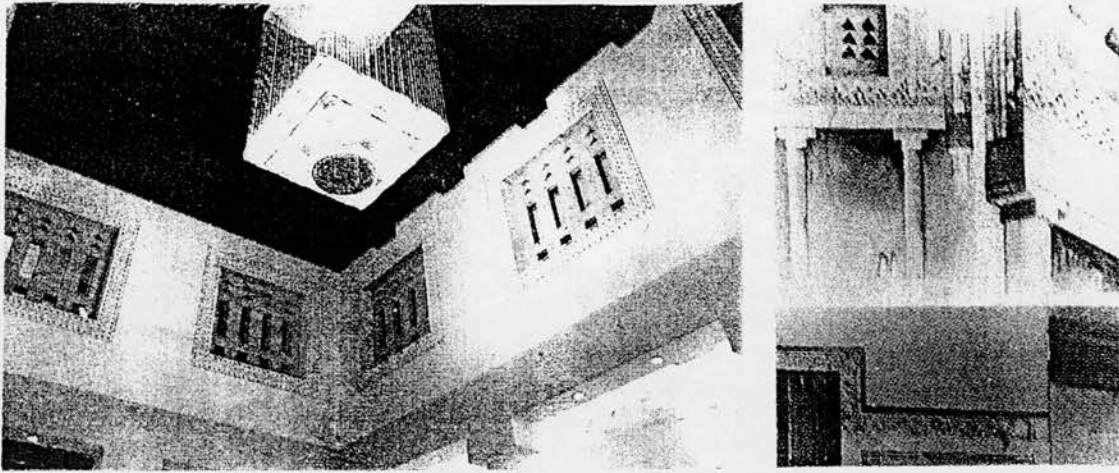


Figure 8.57: The air-conditioning shafts are incorporated within the decorative patterns of the palace. (Source: *Albenaa* no. 63, vol.11, January 1992, p. 56)

8.3.2.2.2. Imam Turki Bin Abdullah Mosque (The Masjid Jamiè)

The architectural configuration of the mosque is like the mosques of the Najd. The open part - the *Saḥan* - is usually used for prayer when the climate is moderate and it is also used as an extension to the main hall for prayer on Fridays or at Eid prayer when the mosque is full (figures: 8.58 & 8.59). The covered part has within it two sections: the smaller is for women and is located in the mezzanine level accessed from private stairs (figure 8.60), the men's praying area occupying the ground floor (figure 8.61). The Masjid occupies a total area of 16,800 sq.m. It is divided into three main parts: the men's hall 6,322 sq.m.; the women's praying area 1,875 sq.m; and the *Saḥan* 4,794 sq.m. The capacity of the covered part is 10,500 persons and the *Saḥan* 6,000, making a total of 16,500 worshippers. The residence of the Imam and Mothen, the library, and the offices of "Al Amer Be Almarouf Wa Alnahi An Almonker"⁴²⁷ are located on the first floor adjacent to the mosque on the north. The ground floor is used by shops (figure 8.62).

The courtyard is a common element in most mosques in the Arab world. In this region, all mosques have courtyards. In the past the courtyard was use during moderate weather. Here the architect has used the same pattern as in the old mosques with slight modification in the treatment of architectural details and decoration (figure 8.59). The mosque is surrounded by an arcade of shops on two sides (north and east) which also keeps the area busy with activities, especially after Friday's prayer. The old mosque was surrounded by shops on four sides. This configuration change was driven by security considerations. The integration of commercial and administrative activities within the body of the mosque strengthens its role as 'the centre' for the city (figure 8.62).

⁴²⁷ A benevolent religious department.



Figure 8.58: (Left & Right top) The courtyard during Friday's prayers, used as overflow for worshippers from the main hall (Right bottom).
(Source: Davidson, C. & Serageldin, I. (eds.), "Architecture Beyond Architecture", The Aga Khan Award for Architecture, Academy editions, 1995, p. 88 & p. 92)



Figure 8.59: The courtyard showing the simplicity of the architectural details.
(Source: Author)



Figure 8.60: For privacy the women's prayer hall located on the mezzanine level and accessed via private stairs.
(Source: Author)

All the external walls of the mosque, the buildings adjacent to the mosque on the north, and the minarets are built of reinforced concrete. The external walls, internal walls of the covered part of the mosque, and the walls of the *Saḥan* are faced with Arriyadh Stone which matches the Qasr (figures: 8.63-8.65). The character of this material itself identifies the buildings with its special appearance.

The minaret of the mosque is a landmark for the project as it rises to 50 metres, and therefore it helps people locate the mosque in the urban context (figure 8.21). The minaret is square in plan with a flat roof (figure 8.65). The triangular openings and the decoration bands are another feature repeated in the minarets. The style of the minarets was subject to debate. It was claimed that they were not in the style of Arriyadh although they exist in Ōnayzah in the Najd. Nevertheless, the overall balance and proportion is successful, It is important that the designer should not simply copy elements from the traditional architecture and then change the material, but should be creative in developing the architectural character in order to reach the appropriate style.

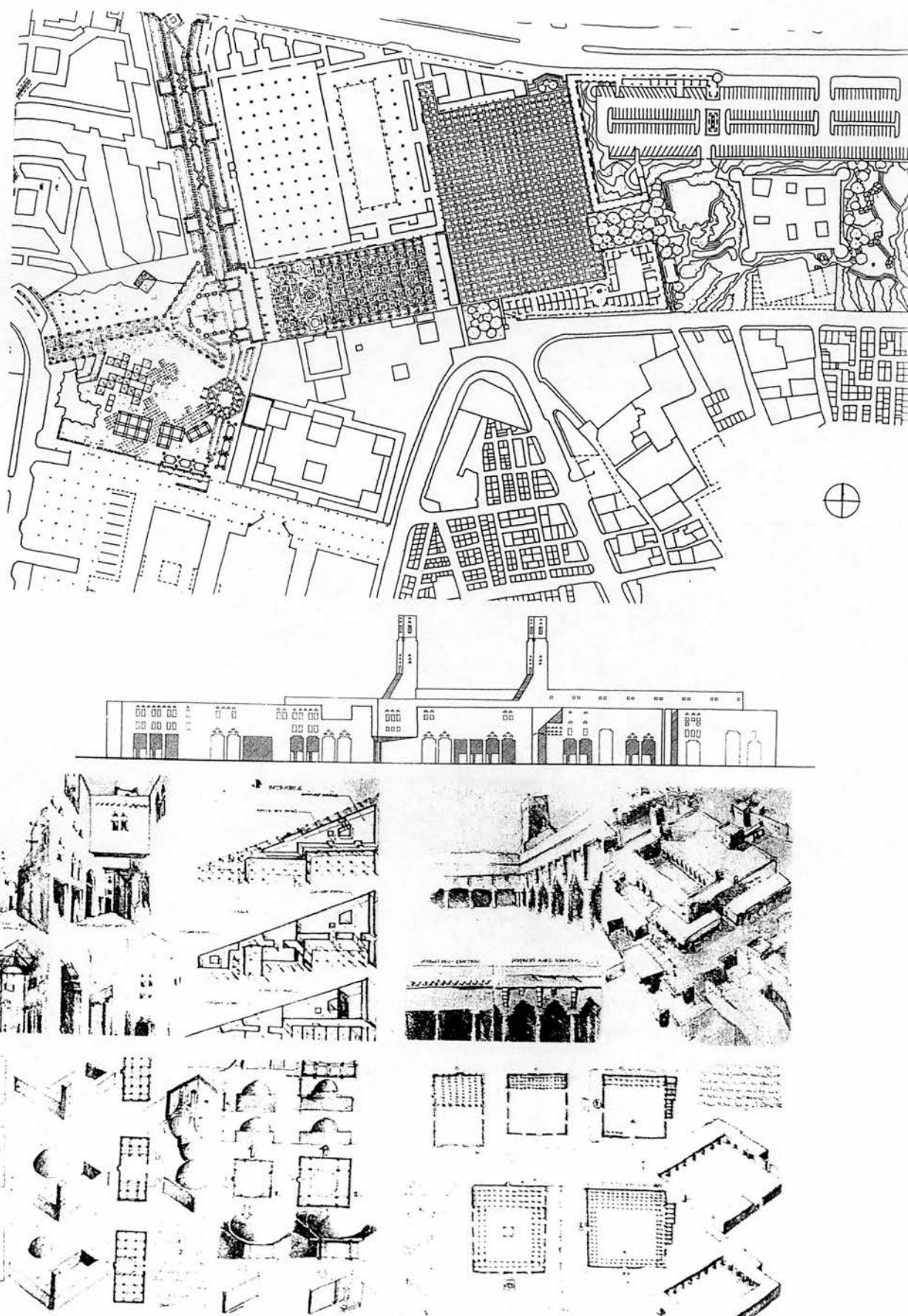


Figure 8.61: (Top) The site plan of the mosque showing the relationship with the rest of the development; (Middle) The north elevation & (Bottom) The architect analysis of the configuration of the mosque. (Source: *ibid.*, p. 93 & (Bottom) *Albenaa* no. 63, p. 55)

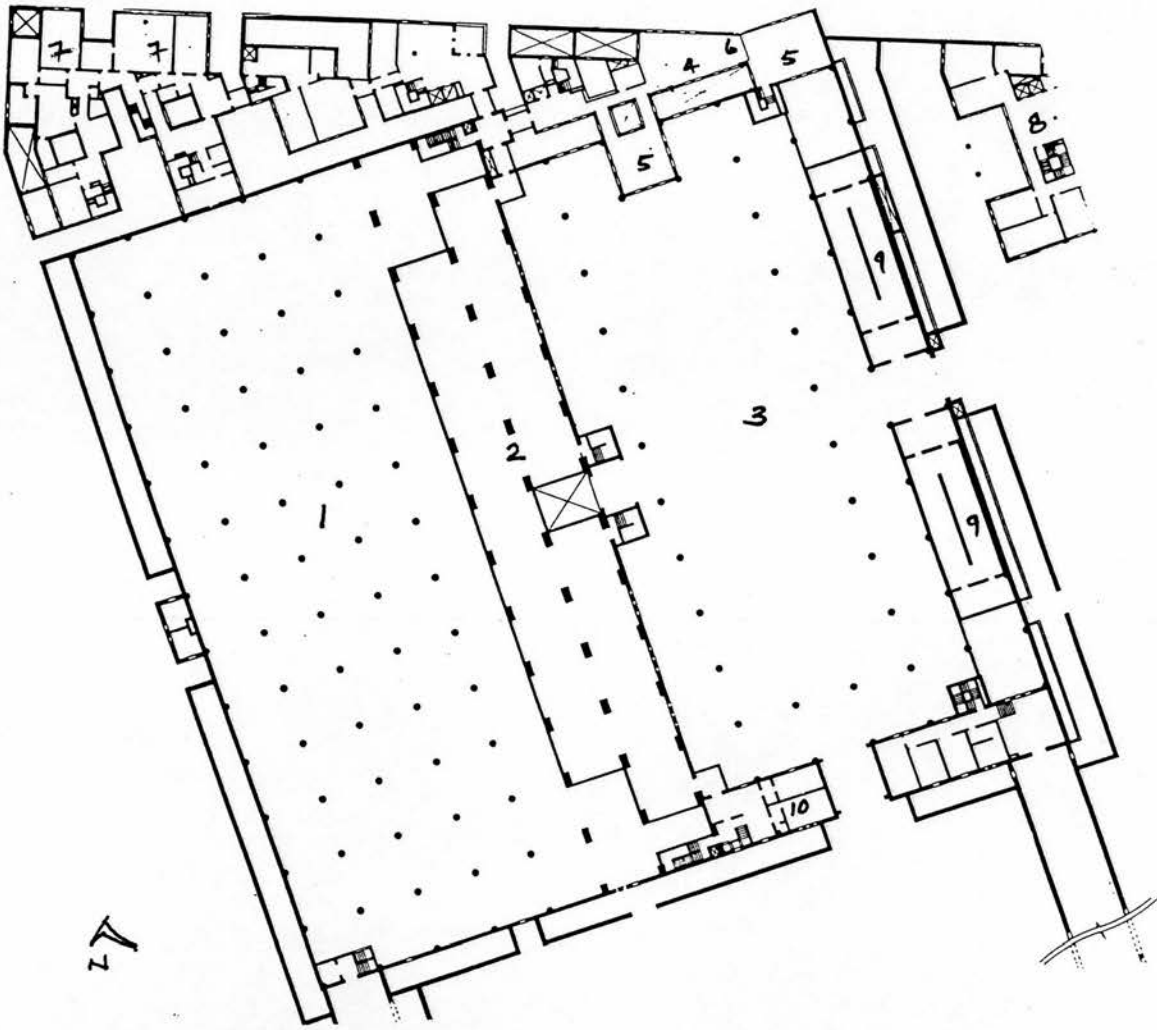


Figure 8.62: Floor plan showing: 1- Men's main praying hall; 2- Women's praying area; 3- Courtyard; 4- Women's library; 5- Reading area; 6- Storage; 7- Imam and Mothen residence; 8- Administration 9- Men's washing room; 10- Women's washing room. (Source: *Albanaa* no.63, vol. 11, Jan. 1992, p. 43)

There are many entrances to the mosque from the south, east, and north. The main entrances are from Alādī and Alsafat plazas. Both lead to a covered arcade which leads to the open courtyard (Saḥan) (figures: 8.59 & 8.65). The main prayer hall has a range of wooden doors out to the courtyards. The main door is opposite the main entrance from Alādī plaza. The doors are of plain brown mahogany furnished with bronze triangular decoration at the bottom (figure 8.66).

The men's washing area is located at the eastern part of the courtyard and is accessed from the eastern and southern entrances (figure 8.67). A separate women's washing area is located next to southern entrance, where there is also a private stair to the women's prayer space.



*Figure 8.63: View of the mosque from Alâdl plaza showing the arcade of shops attached to the mosque.
(Source: Author)*



*Figure 8.64: View of the mosque from Alsafat plaza showing the entrances from the south and the pedestrian arcade.
(Source: Author)*

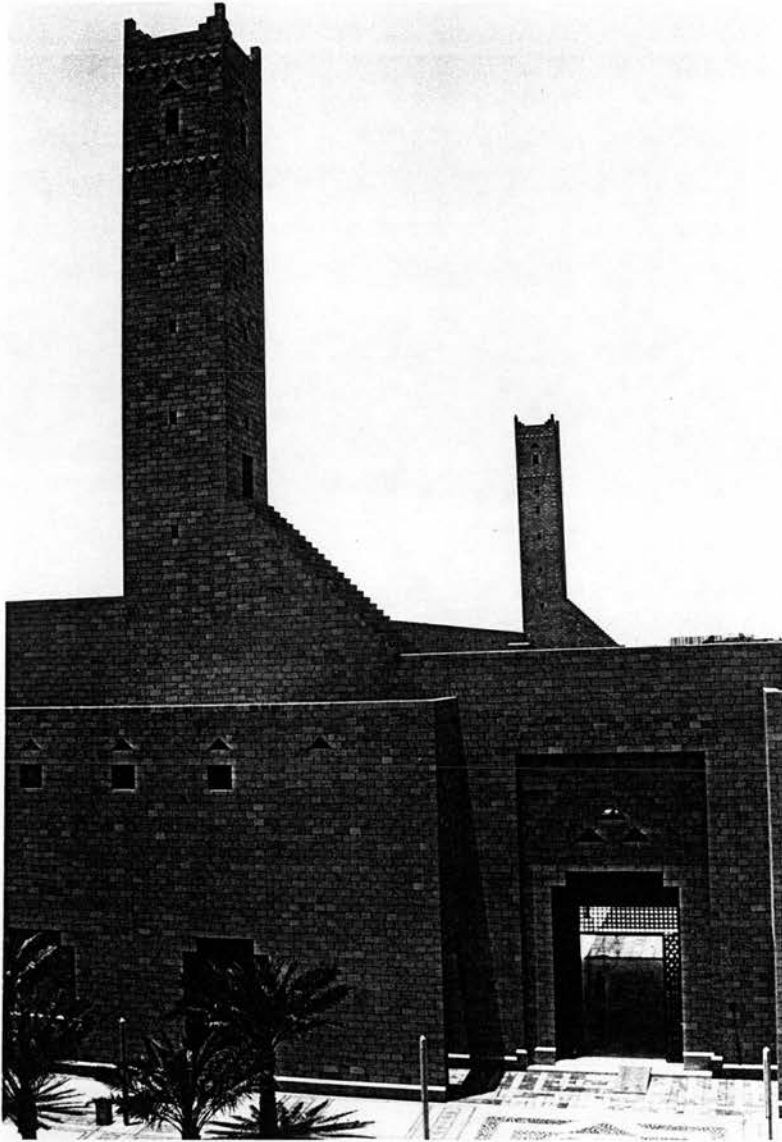


Figure 8.65: View of the mosque from the Qasr showing the southern entrance which leads to the open courtyard.
(Source: Author)



Figure 8.66: (Left) The shops after prayer, with shoppers. (Right) Aerial view of the mosque and the surrounding development.
(Source: Davidson, C. & Serageldin, I. (eds.), *ibid.*, p. 90 & p. 92)

The use of a 9.6 by 9.6 metre column grid pattern for the main prayer hall was chosen after study of most advantageous grid to accommodate so many worshippers (figure 8.68). The columns support a flat roof and the design of the three parts of the column (base, shaft, and capital) which was found in the old mosque. The essential difference was in the building materials.

The important modification of the column is seen in the use of the capital for location of the air-conditioning shafts (figure 8.71). The air-conditioning shafts are concealed to avoid detracting from the spirituality, and the simplicity of the decoration minimises distraction.

The architect used traditional characteristics as the base for his design and he sought to conceal modern technology within this design, by placing the electrical and mechanical services in the structure. For example the pre-cast columns with a pre-cast capital carry a double layer of walls and the walls carry double beams. The use of double walls helped in concealing the electrical and mechanical ducts. Each of these units is controlled individually to reduce air-conditioning when the mosque is not full, so reducing operating costs (figure 8.70). The traditional pattern of columns, walls, arches, and beams is similar to the treatment used in traditional mosques.

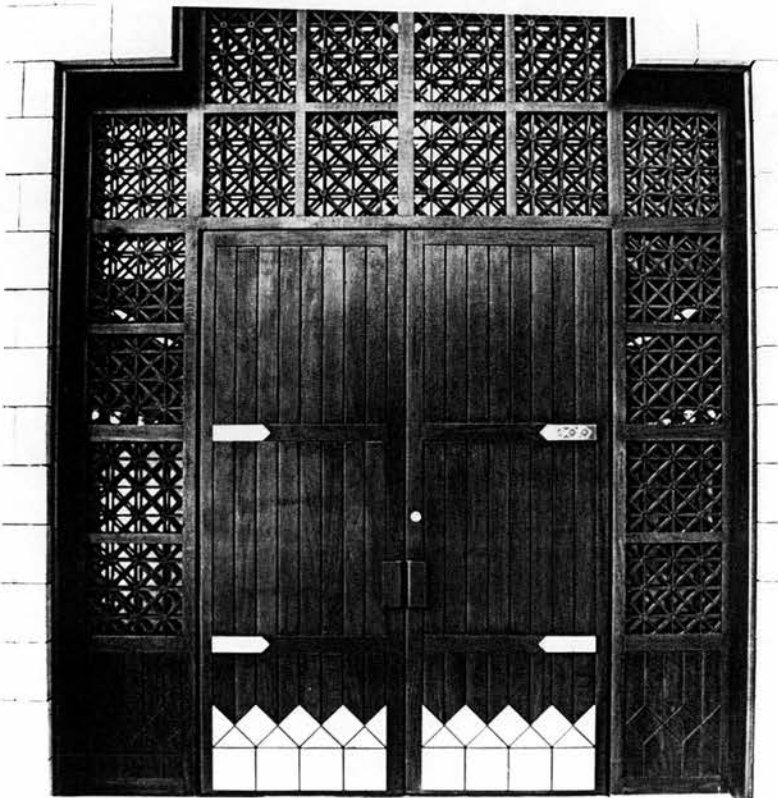


Figure 8.67: One of the doors that opens into the main prayer hall.
(Source: Author)



Figure 8.68: Men's washing area. Notice the details of the space and the finishing, which have the same spirit as the rest of the scheme.
(Source: Author)

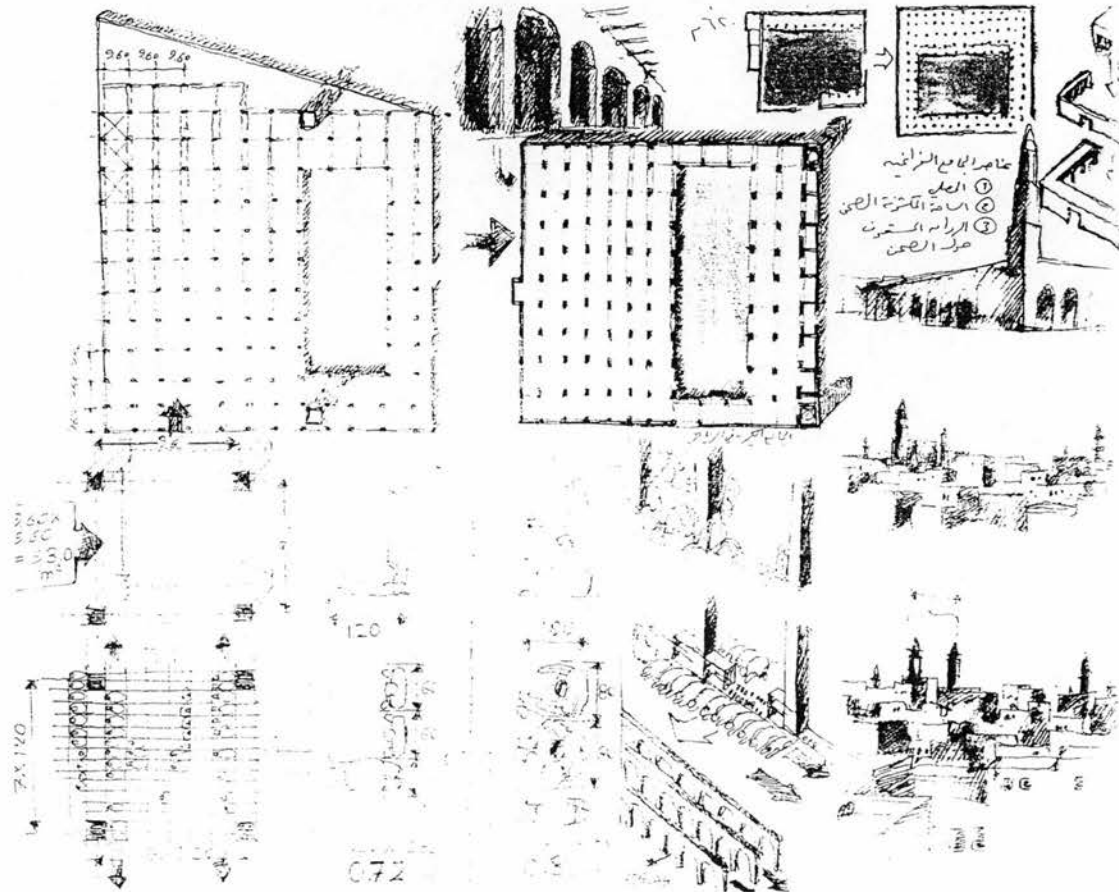


Figure 8.69: The architect's analysis for choosing the dimension of the grid pattern.
(Source: Davidson, C., *ibid.*, p. 89)

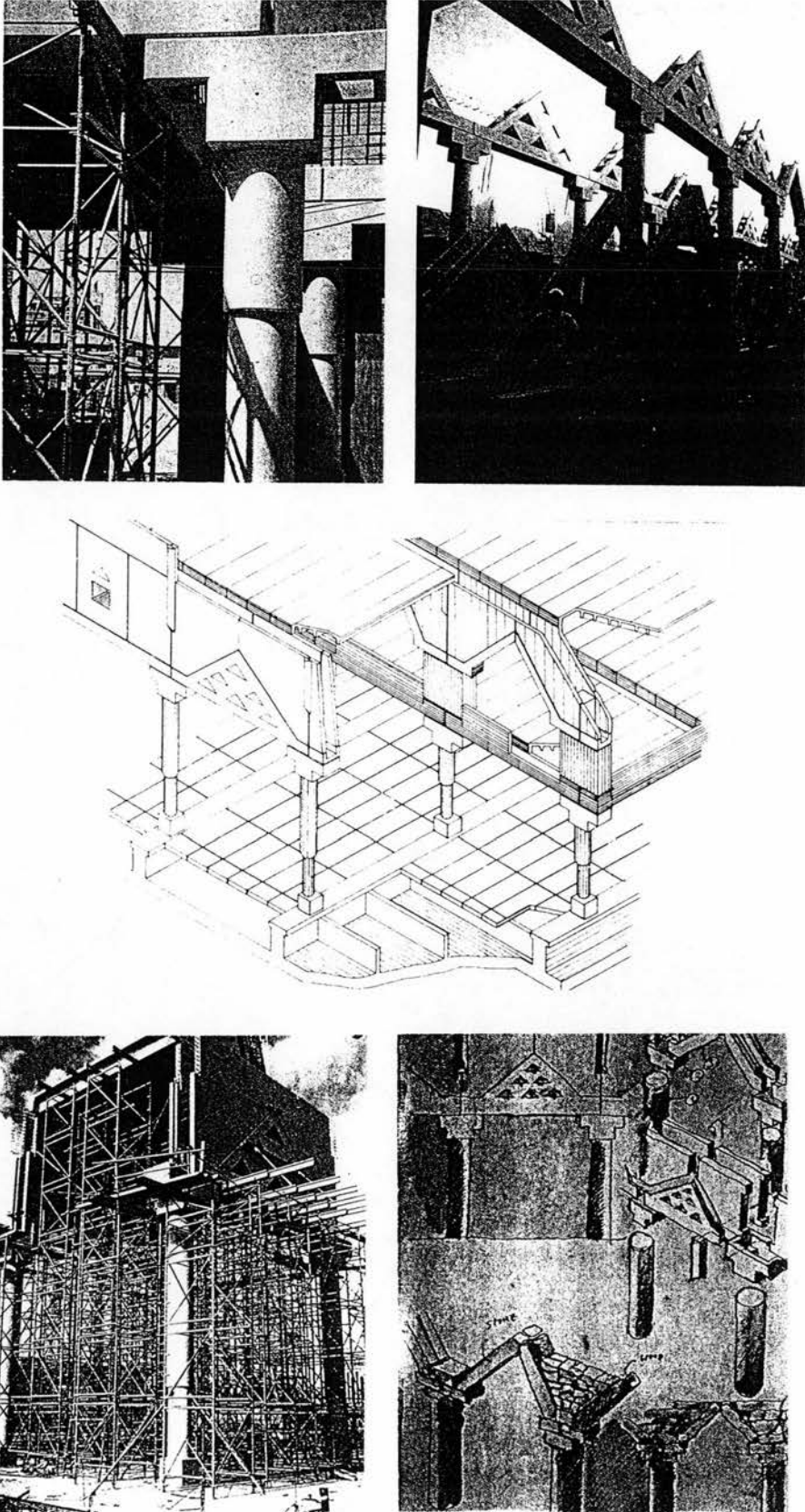


Figure 8.70: Different sketches and diagrams for the column and the double wall treatment. (Source: *Albenaa*, 63, vol. 11, Jan. 1992, pp. 62-63)

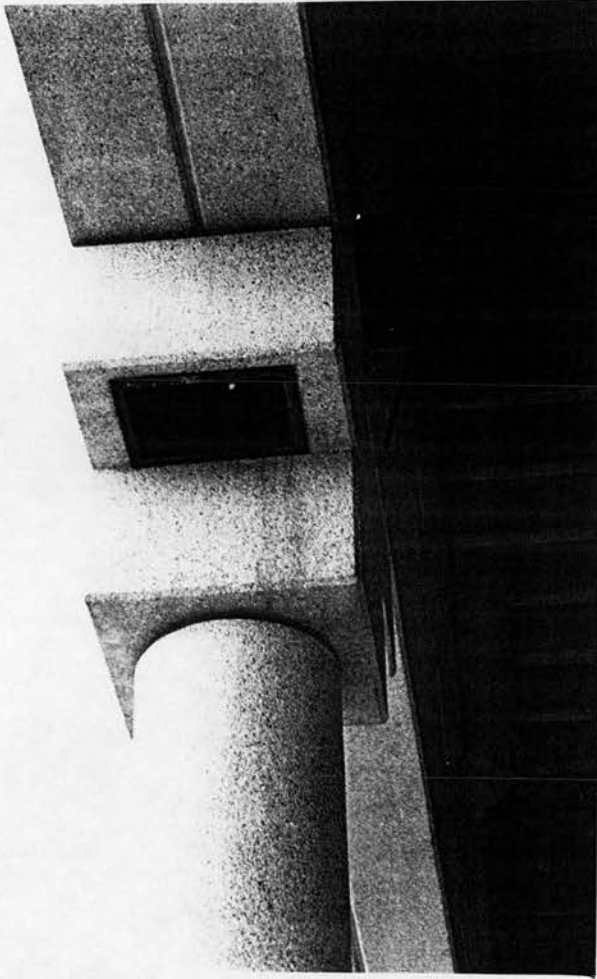


Figure 8.71: Detail of a typical capital.
(Source: Author)



Figure 8.72: The north-west corner of the courtyard.
(Source: Author)

Lighting is an important element in the design; the architect tried to incorporate natural light into the inner spaces by making a skylight. Despite this praiseworthy intention all electric lights were in use, on an afternoon inspection, as the natural light was insufficient (figure 8.60). The architect might have intended to provide lighting level equivalent to the old mosque, but this clearly is not adequate in our modern time, as the unnecessary use of electricity contributes towards waste of money and pollution. Lamp covers of decorated bronze were used in the design of the mosque. Triangular decorations and openings were also executed in bronze (figure 8.73).

The architect also used traditional patterns in the purpose-made carpet and incorporated the traditional colours of red, white, and blue in the design (figure 8.73).⁴²⁸

Although the report of the Aga Khan was relatively brief, the views of the authors very neatly summarised some of the qualities outlined here:

The architect has met the complex demands of a new programme on an old site with a solution that responds to the local lifestyle, climate and physical surroundings. The spatial character and iconography of the project provide a sense of continuity with the historical context, and the reinterpretation of the language of traditional Najdi architecture demonstrates a mastery of building techniques and a deep understanding of the culture of the area.

The use of modern materials and technology, such as air conditioning, is unobtrusive and does not detract from the quiet sense of spirituality inside the mosque.

The sequence of open courtyards is skilful and sensitive. The architect's success in creating a modern urban complex while still retaining the essence of its traditional frame is a remarkable achievement.⁴²⁹

⁴²⁸ Arch. Hassan Al Sheikh from the ADA designed the carpet for the mosque made in Arriyadh.

⁴²⁹ Davidson, C. & Serageldin, I. (eds.), "Architecture Beyond Architecture", The Aga Khan Award for Architecture, Academy editions, 1995, p. 85.



Figure 8.73: The interior of the mosque.
(Source: Author)

8.3.3. The Establishment of Arriyadh Development Company (ADC)

After the ADA took responsibility for supervising the design and the execution of the project, they had to deal with the privately-owned property in the area (Figure 8.74). The government decided not to impose a particular policy on the people in respect of their properties. However, the living quality of these areas was not satisfactory. Therefore, the government decided to establish a private commercial company where owners and investors would create the capital. The property owners sold out to the company and in return they acquired a percentage of the shares.

The ADC worked under the planning regulations and administration of the ADA, but the ADC provided the finance. The ADA updated its policies and monitored the progress of the ADC to ensure that the development would be co-ordinated with the

overall objective and policy for the development of the QAA. The ADC therefore was established to give investors and owners an opportunity to participate in the development of the city centre with the main objective of profits for the shareholders. A Royal decree No. M/2 dated 9/2/1414 A.H. established the ADC as a Saudi joint-stock company with a capital of 1 billion Saudi Riyal divided into 10 million shares each with a nominal value of 100 Saudi Riyal.⁴³⁰

8.3.3.1. The ADC Commercial Development

The ADC commercial development is the third phase for the development of the QAA (figure 8.74), and it is designed by a consortium of architectural firms: Dar Almemar (Rasem Badran, Abdulhaleem Ibrahim, and Maher Estino), Arrow Street Inc., and SITE International. It is important to examine this work to investigate the difference in the architectural language that been adopted by the architect.

The total developed area is 88,000 sq.m. lying between King Fahad freeway to the west, Yahya Bin Aktum street to the east, Prince Mohammed Bin Àbulaziz street to the north, and Sebalah street to the south. The project has several types of accommodation: commercial shops, offices, residential, and supportive elements such as: car parking, plaza, and local streets and corridors. There are around 1,700 car parking spaces in the project. These parking spaces were designed to minimise the travel distance between the parking space and the designated zone.

According to Arch. Hamzah Al Àttas⁴³¹ the ADC worked hard to persuade businessmen to participate in financing the project, but most of them were reluctant to do so as they preferred to invest in other parts of the city where they would own the whole project and there would be no problems with decision making. The other important point was that businessmen did not want traditional facades for the commercial development, preferring a high-tech architecture. The ADC and the architect took up their suggestions and blended advanced technology with traditional principles in their designs.

The failure of Almeàgiah centre⁴³² to attract businesses led the ADC to seek the full involvement of businessmen and shop owners in the design. The main difficulty found was a conflict of individual tastes and interests.

⁴³⁰ The ADA commercial procure, u.d., p.7.

⁴³¹ Hamzah Alattas worked for the ADA architectural team, and when the ADC was established he was appointed as the manager for the design department. This interview was made in the ADC building-Arriyadh on the 5th of May 1996.

⁴³² Commercial centre privately developed between the Mayoralty and Almeàgiah Co., built in 1992 as part of the second phase development. Almeàgiah centre is located to the west of the Grand Mosque.

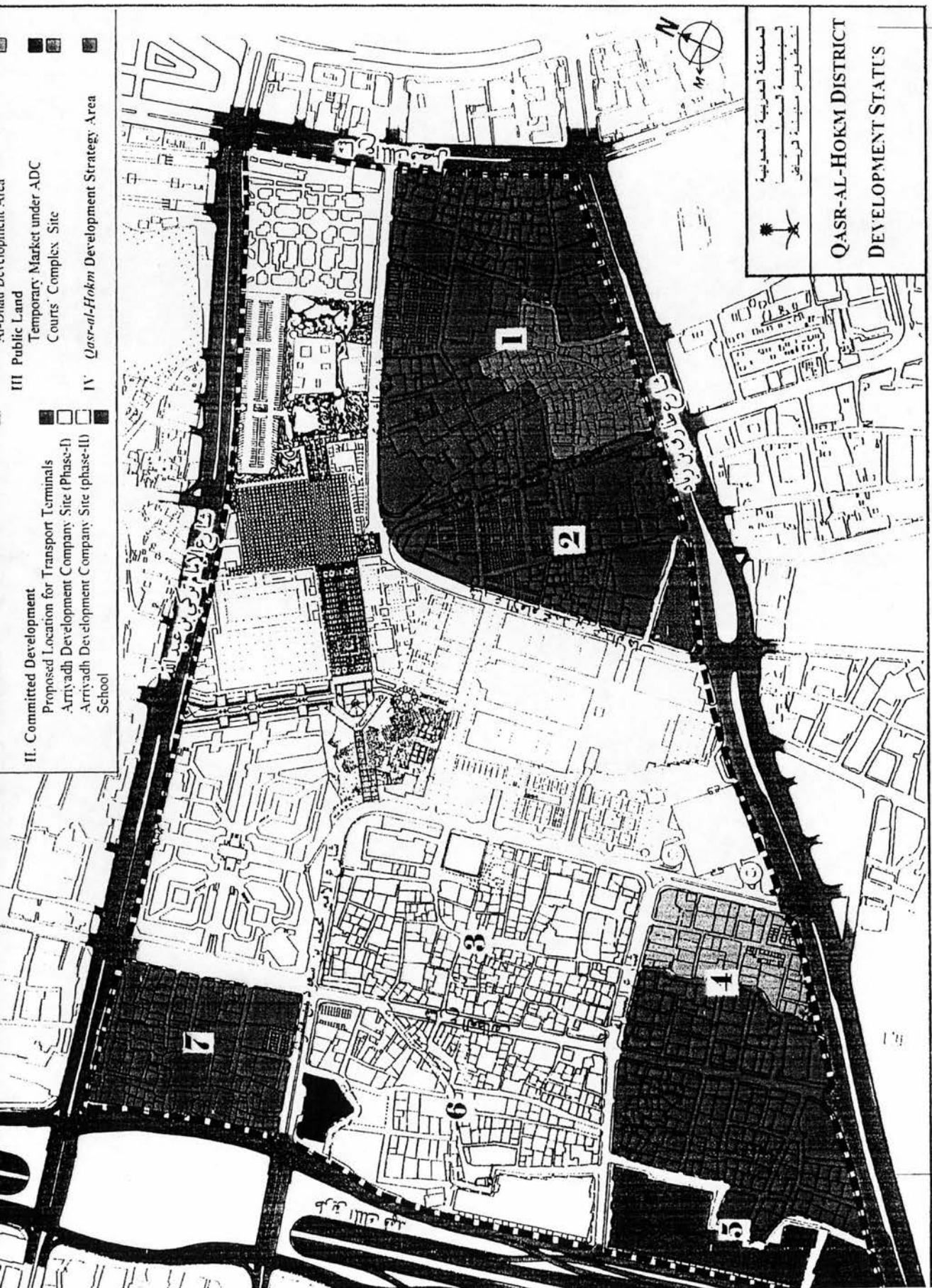


Figure 8.74: The QAA site plan showing the zones of the private development. Zone number 3& 6 are the site for the third phase development. (Source: Holdsworth, J., "Qasr Alhokm District Development Strategy: Review April 1995", report prepared for the ADA, 1995, p. 22)

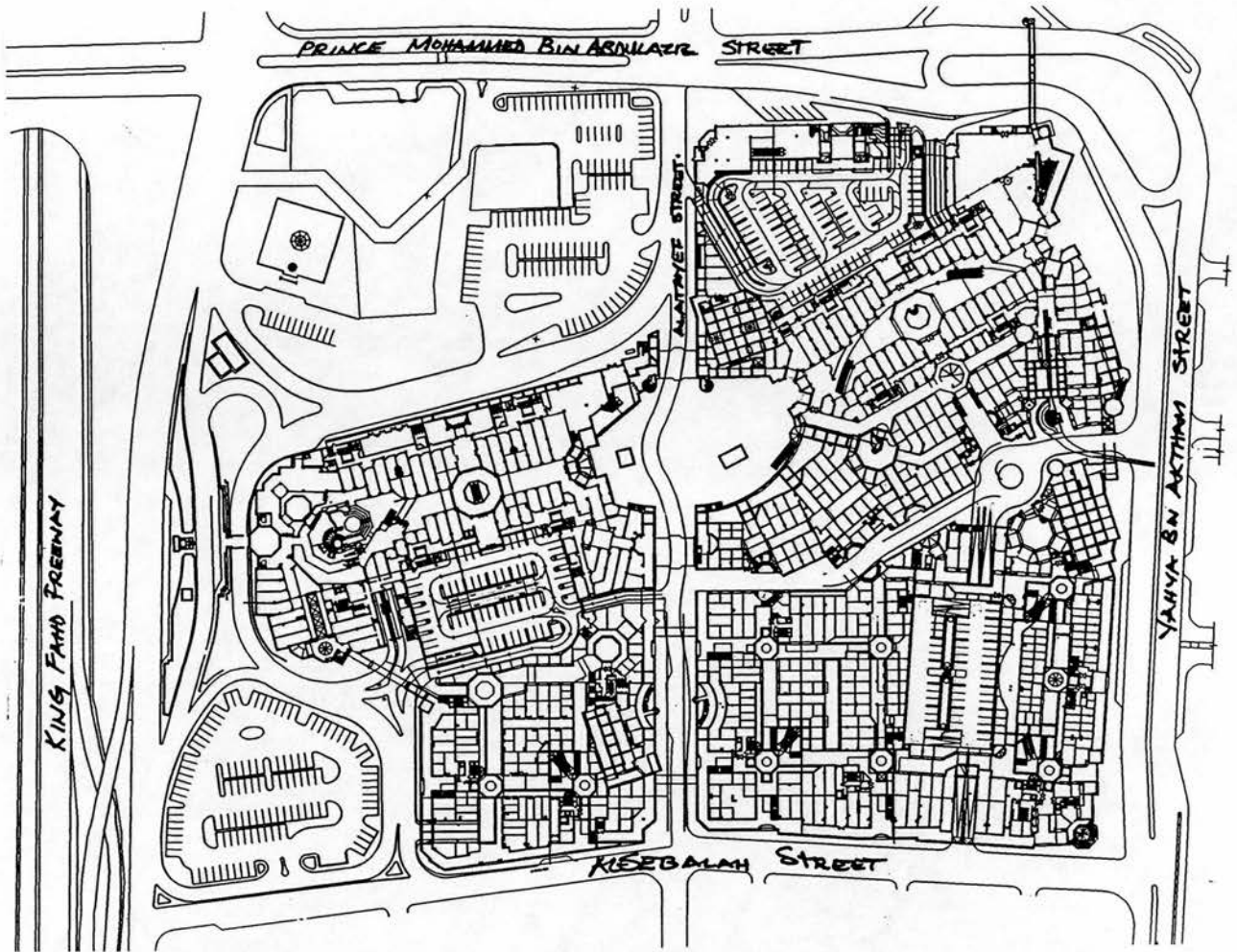


Figure 8.75: The ground floor plan.
(Source: Courtesy of the ADC)

The provision of 'Anchor Stores' (i.e. strategically placed shops providing essential goods) in different parts of the project was aimed at encouraging other small retailers to participate (figure 8.75). The ADC also met private shop owners to discover their views of the scheme and took their valid points into consideration. The first and second floors of a commercial development are always sensitive as people tend not to go to the upper floors without good reason, so the ADC provided car parking on the different levels with direct access to each floor (figure 8.76).

The main entrance to the commercial complex is from King Fahd freeway. There the architect made two drop-off points; one at ground level; and the other on the first floor, to give shoppers a choice between the two main levels (figure 8.75).

The architectural character of the project was handled in the same way as in the mosque and the Qasr Alhokm. The architect used a compact mass of buildings with courtyard opening, and the facade was treated with triangular openings and Arriyadh

stone which harmonised with the rest of the development. The architect also used a space frame and glass to lift the architectural language and ensure that the facades look commercially appealing. This high-tech treatment was requested by investors, being vital from their point of view. The blend of high-tech architecture with the local form and material has produced a new aesthetic that can be seen as developing a new dimension in the architecture (figures: 8.76 & 8.77).

The development has many elements and serves the following functions:

The Festival Souq:

The objective in this Souq is to give a sense of festivity which will cause shoppers to spend more time in the Souq. The main pedestrian corridor is covered and air-conditioned rising through four storeys connecting the shops in the ground and first floor with the upper levels of offices. There are 248 commercial establishments including five main ones working as an Anchor stores, typically of 1,000-1,500 sq.m. in area. In the centre is the Gold market of 102 shops, overlooking Alatayef street which bisects the development and is equipped with traffic-calming surfaces (figure 8.78). The Gold market links this Souq with the central and the traditional markets.

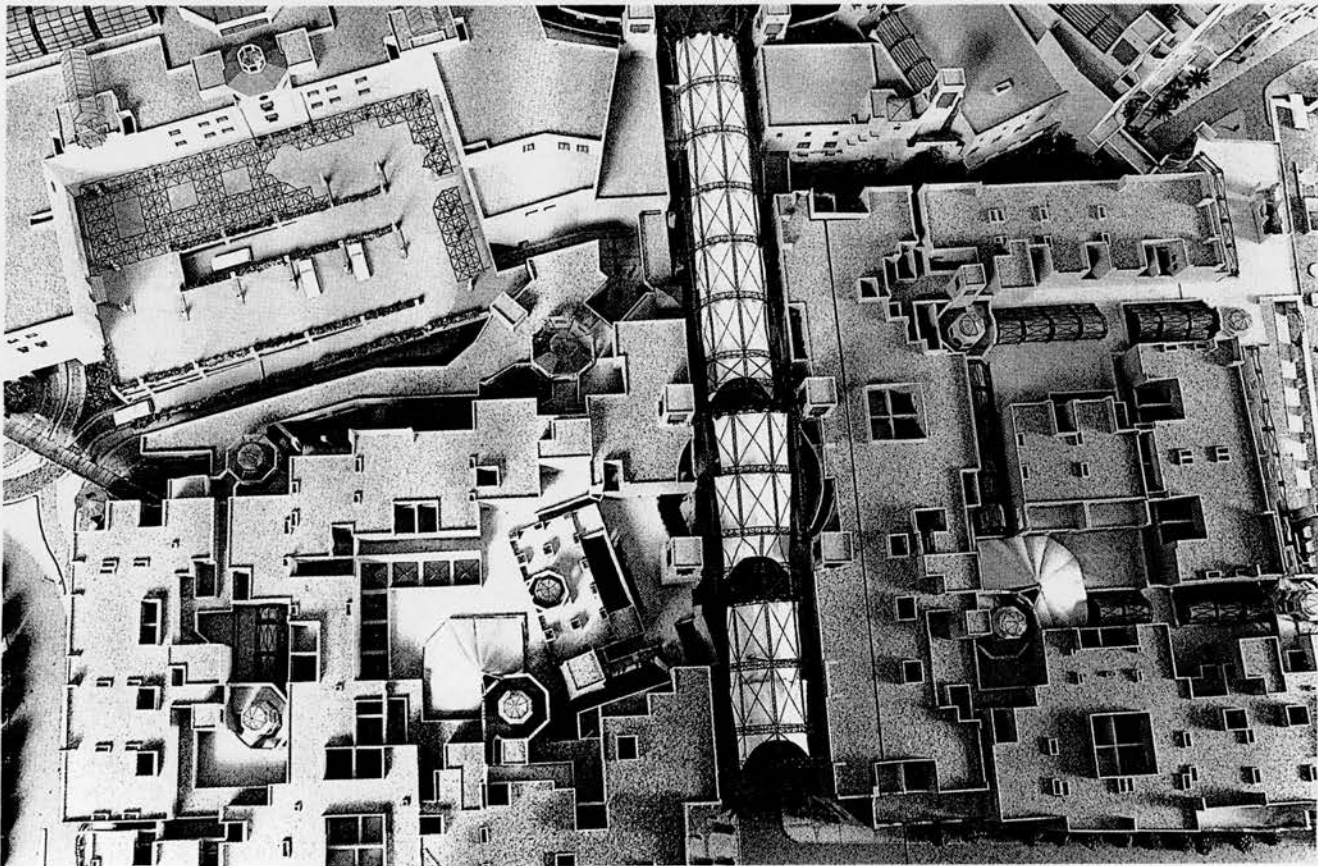


Figure 8.76: Model showing part 1 of the ADC commercial development.
(Source: ADC, "Markaz Altameer Alawal (Altameer Centre no.1)", Riyadh, 1996, p. 7)

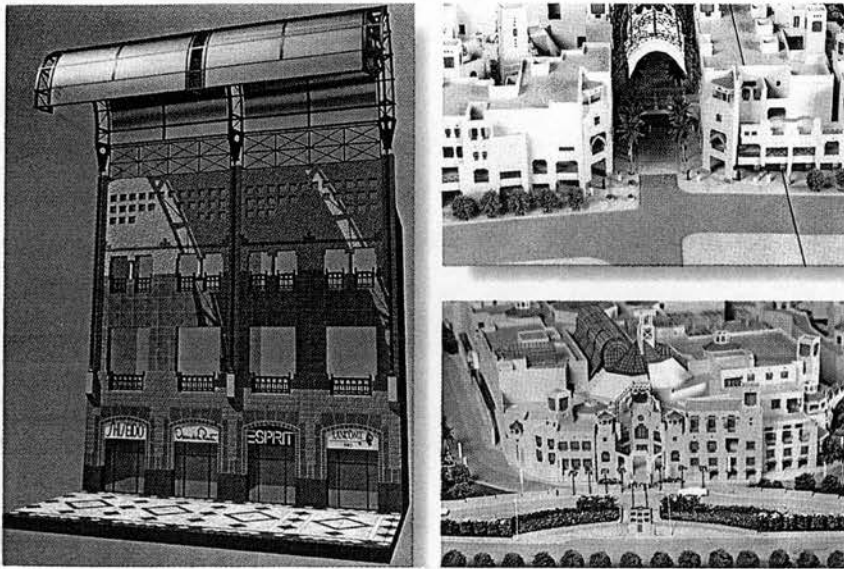


Figure 8.77: Different views of the development showing the overall volume, the courtyards, and the use of space frame structure to cover the public areas.
(Source: *ibid.*, (left) p. 9 & (right) p. 13)

The Central Souq:

This Souq has a total of 515 shops ranging in area between 30 and 50 sq.m. and with three shops of 200 sq.m. The noticeable feature is the use of wind catchers for ventilation. The wind catcher brings fresh air across water to cool the in-coming air. The corridors are 9 metres in width giving access to lower and upper levels (figure 8.79).

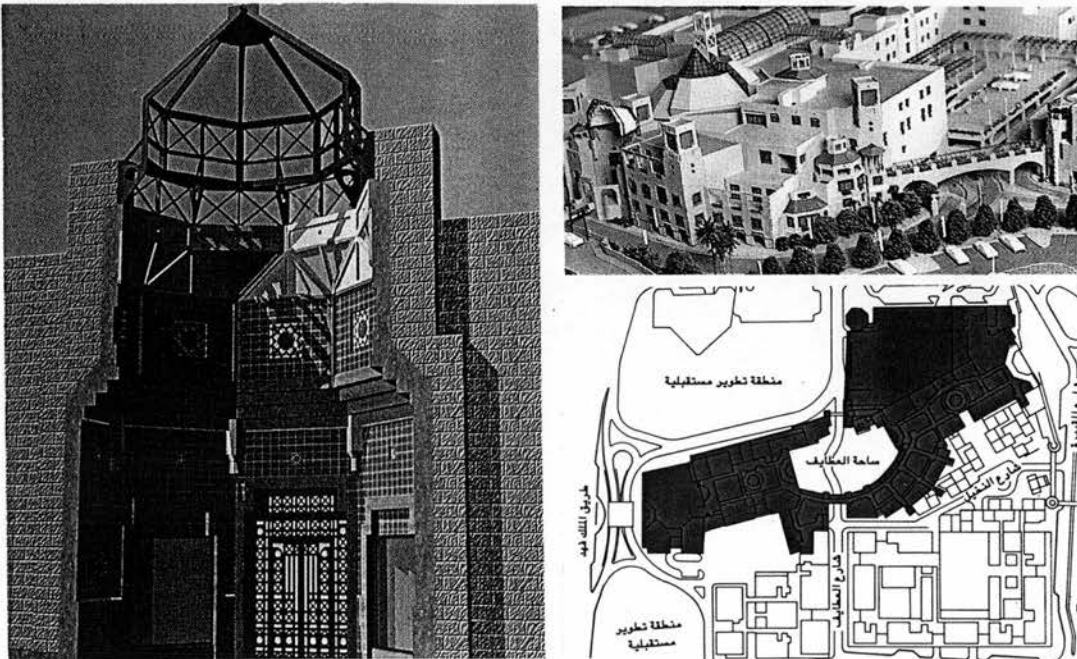


Figure 8.78: (Bottom right) The shaded area showing the festival market; (Top right) close-up for the model showing the details of the built form; (Left) Section through one of the covered courtyards showing the interior details and the finishing.
(Source: *ibid.*, pp. 10-11)

The Traditional Souq:

This Souq is designed solely to accommodate all the traditional shops that previously existed in the area (i.e. carpets, sandals, perfume, clothing accessories). The positioning of a large open plaza within the Souq functions as an auction market, in the spirit of the old market. The designer also used palm trees in the landscape to give a stronger link with the traditional atmosphere (figure 8.79). The ADC have moved the shops from the old traditional market and have added 15% for future demand, making a total of sixty shops.

The Offices:

The use of open plan in all offices allows people to divide the space according to their needs. The average area is 200-400 sq.m. and all offices have access from the street or parking level without interruption.

Residential Flats:

Flats are located on the second and third floors of the central and traditional Souq (figure 8.80), and the most important consideration is complete isolation between these units and the commercial activities within the area. The designer has provided private parking and access to the different units. The design of these units centred on a courtyard providing privacy, natural light, and ventilation.

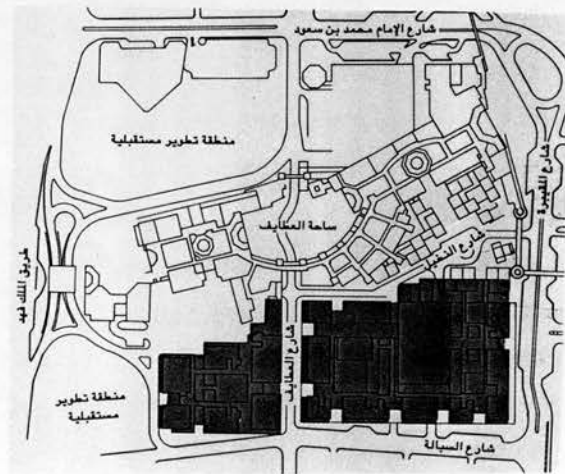
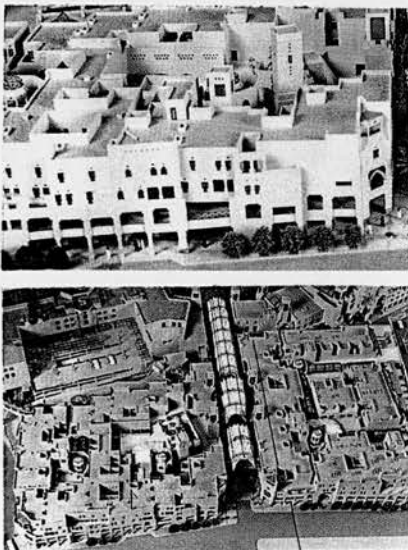


Figure 8.79: (Right) the orange colour shows the central Souq and the yellow the traditional Souq; (Left) The Souq as seen from outside. (Source: ibid., pp. 12-13)

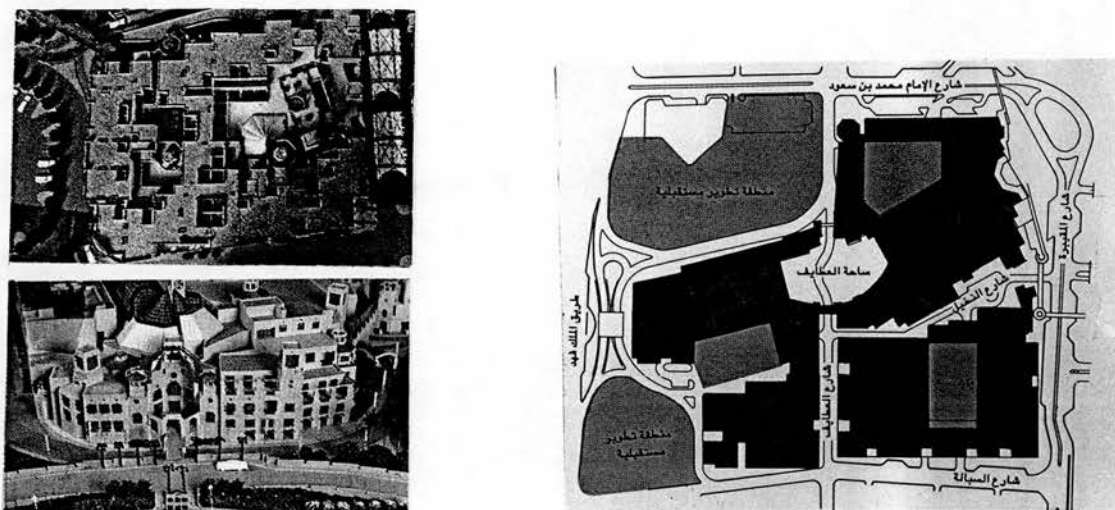


Figure 8.80: (Right) the orange colour shows offices, the green the residential units, and the grey the car park; (Left) details of the architectural character. (Source: *ibid.*, pp. 14-15)

In summary the ADC project, which differs in its function and nature from the mosque and the palace, proves to the people that modern Najdi architecture could be developed to satisfy modern functions i.e. office buildings, governmental buildings, air-ports, hospitals, ... etc. The blend of modern technology with characteristics of traditional architecture carries this project into a wider perspective which is again proof of Saudi ability to develop the built environment with an architectural pattern and style that is strongly related to the quality of the people and the region.

8.4. Critical Comments on the Qasr Alhokm Area Development Scheme

i) Linkage:

There is no strong link between the western and eastern commercial activities. Travel between the eastern and western part of the project is not exciting. It takes a considerable time and there are no commercial or other activities to divert the pedestrian, whereas, if the designer had tried to integrate the mosque area (*Sahat Al'adl and Sahat Alsafat*) with shops and markets he would have made the area vital and active, giving the real heart to the project. This decision could have another justification; security is an important issue in the place where the top decision makers meet (Qasr Alhokm). Therefore, as a priority for security in the area, the ADA thought of locating the markets and Souq at some distance from the Qasr Alhokm building. One of the main reasons that the ADA did not approve Albini's scheme and other similar schemes, was that they placed parking underneath the Qasr Alhokm building.

ii) The clock tower as a symbol:

The ADA decided to leave the clock tower -Alsafat plaza- to enable people to retain an established reference with its location. It was the only element left when the

whole area was demolished (figures: 7.6 & 8.23). In theory it does make sense, but the clock tower has a different architectural style from the new development, and it does contradict the objective of the ADA *“To generate a new sense of identity by expressing and enhancing the historic significance of the site.”* It is doubtful whether this clock tower could be considered as having a historical significance. The ADA should have demolished it and built another one in the same location with a style related to the whole development.

iii) Pedestrian segregation:

The suggestion of separating pedestrian and vehicle movement on different levels is very expensive in execution. From the theoretical point of view it is a desirable to separate the two movements, but the cost must be considered. The ADA scheme did minimise the construction cost, however, providing a good solution for the separation of vehicular and pedestrian movements.

iv) Other professional comments:

The following comments have been brought to my attention by a number of scholars and professional architects. It is to be hoped that they will help towards developing the area, in terms of its original goal as a vibrant political, administrative, business, and commercial centre for the city and the metropolitan area.

a) Ali Shuaibi:

- 1) The architectural language of the arcades in the project is not consistent;
- 2) The plazas are deserted. They should have been planned to accommodate stalls for local hand-crafted items, foods, games, playground, story-tellers, acrobats, ...etc. These activities would make the plaza very active and alive all day long, 365 days a year, which in turn would encourage private investors and developers to invest in the area;
- 3) The architectural details of Rasem Badran are different from the language that he himself would have chosen. Rasem has tended to make the columns over-decorated. The use of triangular decorations everywhere became repetitive. (However, Ali Shuaibi made a remarkable complement about Rasem's work, that his criticism of Rasem's work is less than he would have made of his own);
- 4) The re-use of some items from traditional architecture, drew the comment that it is a long established historical phenomenon that people tend to copy from other civilisations as long as the function and the material exists. He also remarked that King Àbdulaziz has developed the architectural detail of his palace with the help of craftsmen from Kuwait, Qassem region, and Hijaz region, i.e. window size and character from Kuwait, triangular band (Sharaf) from Ònaiza in Qaseem region. So the use of some of these elements in the modern context would be agreeable as long as it had a function. In

this view sometimes a symbolic message is conveyed by items that provides links with recent traditional architecture.

b) Basem Alshuhabi:

1) It is one of the most successful projects in the city and in the Arab world and in time the project will receive international recognition. The project was very honest in pursuit of architectural identity with the help of modern building technology, utilising architectural principles that identified with the recent past;

2) Although, the project has some weakness in the volume and the facade treatments, it is an excellent start to identifying our built environment with an architecture that reflects the quality of the region.

c) Mohammed Alsabeq:

1) Qasr Alhokm project did not respect the climatical conditions of the region: the public plazas are huge with no shading. These plazas are out of scale, and they do not respect the climate. In the past the public plazas were very small due to the heat;

2) The use of Granite as a building material for the floors of the public open areas does not provide comfort, as it act as a heat store.

8.4.1. Informed Public Comments:

The view of the general informed public has been very favourable towards this project, as Saleh Alhathloul's comments on the project show: "*A distinctive architectural character is being developed for Kasr El-Hokm area. This architectural style is an out growth and a development of the traditional style of the Najd area. This style provides a homogeneous character in external features, in texture and in colour. However, it also provides for variety in form, arrangements, types, and shapes of buildings as well as in small elements within buildings.*"⁴³³

8.4.2. The User:

From personal observation and sampling by talking to people were visiting or working in the area I noticed and recorded number of comments:

a) The shops to the north and north-east of the mosque did not have sufficient shoppers because there were no parking facilities near by and many shops in the area selling the same products do have parking spaces -such as those in Almeàgliah and Aswaq Aldira. The only time these shops in the northern sector are busy is after prayers;

⁴³³ Alhathloul, Saleh, "Islamic Architecture: The effect of Sharieah and tradition on the work of some contemporary Saudi architects", 1986, u.p., p. 20.

b) The distance between the eastern and western part of the development is long and dull as there were no business or other entertaining activities to make this spine active. However, the majority of the people who work and come to the area feel a sense of belonging as the different elements of the project demonstrate and reflect a warm feeling towards the relationship between this development and the historic qualities of the area. This was demonstrated through the balance between mass and open space, the balance of the architectural volume of the buildings, the architectural details, the landscape, and the overall harmony and integration of the architectural elements.

8.5. International Recognition

The development is definitely an excellent step towards achieving harmony and identity in the city and it will achieve international recognition as a unique urban and architectural development. One of the earliest responses was through the Aga Khan Award for Architecture; the Masjid Jamiè was given the winning prize in 'a critical architecture and urbanistic discourse'. The following quotation shows how the Masjid Jamiè got its international recognition:

Jordanian architect Rasem Badran, who designed the mosque, Justice Palace and the open area and enclosures that form the Maidan al-Safah, analysed the environmental, climatic and cultural factors, as well as local traditions and social patterns of behaviour, in order to re-create the spatial character of the Najdi architecture idiom without copying it. The mosque, set within public areas, recreates the traditional place of worship as part of the urban fabric. Traditional components, such as courtyards, arcades and the prayer hall, are emphasised, and two square minarets indicate the quibla direction on the skyline.

There are no domes over the prayer hall; columns on a nine-by-nine-metre grid evoke earlier palm trunk constructions and support a flat roof. Openings for natural light and ventilation are provided above each column head, and columnar structures and beams contain the ventilation ducts of the air-conditioning units on the roof. Each unit can be controlled individually to adjust cooling needs according to the occupancy of the mosque, resulting in reduced operating costs.

The exterior walls of the mosque are clad in local limestone, and the restrained use of small triangular openings organised in patterns both resembles traditional building practices and helps to diminish the harsh glare of the sun in the interior spaces.

Courtyards and open squares are aligned towards the quibla so that they can be used as additional prayer areas during feast days and

Fridays, when the size of the congregation exceeds the capacity of the main prayer hall and courtyard. Granite seats and benches, as well as drinking-water fountains, have been provided for the general public, and the area is landscaped with palm trees to provide shade. It is a popular place for families and children.

The massing of the buildings and the articulation of spaces and courtyards evoke a traditional character, even though the construction materials and the design of the buildings are completely modern. The project has elicited interest from the intellectual and academic communities, and its underlying methodology is likely to impress professionals.⁴³⁴

This international recognition considered as the first reward for such quality laid within the built environment of Qasr Alḥokm Area development project. In order to have a coherent and identifiable built environment for the city as a whole, number of actions and decisions should be implemented in the city's planning and building codes. The next Chapter is devoted towards suggesting number of actions that could improve the quality of the city.

⁴³⁴ Davidson, C. & Serageldin, I. (eds.), "Architecture Beyond Architecture", The Aga Khan Award for Architecture, Academy editions, 1995, pp. 88-92.

*Conclusion and
Recommendations:*



9.1. Historical Summary

The traditional architecture of the city of Arriyadh was coherent and it had a strong visual identity. This coherence and identity resulted from a number of factors: the inherited *Shariéh* laws which unified building practice; the simplicity of society in which diminished architectural differences; the hot climate which caused society to plan the city and design houses to minimise the climatic impact; and last but not least, financial limitations which restricted the cost of building and maintenance by using local building materials. This resulted in a strong link between the natural and the built environment.

The city of Arriyadh maintained its tradition and coherence for hundreds of years. When King Àbdulaziz decided to make Arriyadh the base for the Kingdom, the size and the responsibilities of the city started to change; meanwhile the physical characteristics remained within the same framework and context. That was mainly as a result of the limitation of external cultural influence, limited wealth, and difficulty in the transmission of building technology and transport of materials. All these factors made the physical development of the city slow and consistent.

The city during the last 60 years has witnessed a number of actions which have contributed to the loss of its urban and architectural identity. The first was the introduction of vehicles which led to the widening of major streets. Secondly, in 1938 King Àbdulaziz decided to built his new palace (*Almurabaà* palace) outside the city wall. Although the palace preserved the general characteristics of the Najdi architecture, which could be seen in the courtyard pattern, in the continuity of its solid masses, in its cover and narrow streets, and in the repetition of the rectangular theme in its general layout, this action affected the city by showing residents, that the city wall was no longer a physical barrier to expansion. I have to stress again that the *Almurabaà* palace was an excellent example of the ability of Najdi craftsmen to develop a monumental building. The interior of the palace contained modern European furniture which served the spaces within, but the other characteristics were in harmony with the surrounding built and natural environment. So the building of *Almurabaà* encouraged other people to start building their houses outside the city wall. The other consequence was a road linking the palace with the city, which necessitated workmen being brought from Egypt, which shows the beginning of their cultural influence.

These actions did not damage the city's physical structure, because the number of cars, and of streets opened up, was limited. Not until 1953, in King Saud's time, was the city exposed to rapid development, through the influence of growing wealth, the easy access of building materials and technology through the railway line and with the inauguration of the Airport. It changed particularly under the cultural influence of people immigrating from other parts of the Arab world. The city spread in all directions without adequate planning control, and people built their individual houses using building forms different to the original Najdi tradition, breaking practical and social codes.

The first large scale modern building to be built in Arriyadh was King Saud's residence -*Alnaṣeriah* -. The new palace disregarded traditional ways of building and decoration, using the most up to date construction technology and facilities. The palace followed the form of modern palaces in Europe.

The other action which affected the city's architectural development was the transfer of Government departments from the Western province to the capital in 1955. By 1957 all government employees had been transferred and new Ministry buildings were constructed along the Airport road. Most of the buildings were designed by an Egyptian architect. His design scheme was totally modern and bore no relation whatsoever with the architecture of the region. So the gap between the traditional way of building and the new style widened, especially as the Government ordered the building of a new residential project to accommodate Government employees transferred from the Western province. This *Almalaz* project was a totally modern planning scheme with a grid-iron street pattern, and extrovert modern villas with outside (set back) gardens visible from neighbouring buildings. This project inspired the populace to imitate and copy the new residential prototype (the villa) for several reasons: firstly, the project was sponsored by the Government, so it was an authorised scheme by the decision makers showing how modern Arriyadh should be; secondly, it was the first residential public project to be executed in the capital with modern facilities and landscaped boulevards in contrast with the dusty and unhygienic traditional residential quarters, therefore, to the society it became the dream living environment. The modern villa has replaced the traditional courtyard hose because the latter is not equipped with modern services, and for social reasons.

A network of roads linked these new projects with the old city, and other minor streets linked these projects with each other. People started to build their houses along these roads and closer to these developments, which in time filled the

gap. Thereafter, haphazard architectural and planning development continued in the city. Up to 1968 the Government felt the need to organise the scattered city by holding an international competition for the Master Plan. Doxiadis Associates of Greece won the competition, and produced their proposals for the Master Plan in 1971. They implemented the 'setback' regulation, where the land owner has to leave a space between his own property and that of his neighbours. This space was fundamentally different from the enclosed courtyard house. The former is visually accessible to neighbours, and the latter is a completely secure private space. In 1973 the Ministry Council approved Doxiadis's Master Plan.

In 1974 oil prices quadrupled. The capital was alive with development. People migrated from every city in the Kingdom, and workers from all over the world flooded in. As a result there was a shortage of houses. A Real Estate Development Fund (REDF) was established in 1974 to give citizens a free interest loan for their projects (private houses, apartment buildings and commercial buildings). Housing schemes were required and the 'setback' regulation was implemented, so the gap between the traditional and modern styles widened even further.

The city centre during the 1950s and 1960s witnessed rapid construction development to meet the demand for more shops and offices. At this stage the city centre was overcrowded with the large influx of cars, the lack of parking spaces, and the uncontrolled building codes and patterns. Traditional buildings were demolished and replaced with modern concrete buildings, with wide streets and parking spaces, which caused a complete separation of the fabric and damaged the historical and traditional part of the city.

With the increased pressure on the city centre and no clear guidelines to control the new development. Doxiadis' in their Master Plan for the area suggested an immediate conservation of the historic building (Almasmak), and modernising the city centre with respect for the historical value, and respect for the area's symbolic importance as the centre of the nation. In 1973 the Mayoralty with its consultants commissioned a study on the area by Franco Albini. He made a thorough investigation of the architectural and urban quality of the region and used it as the theme of his proposals; he recommended that the whole city centre needed reconstruction in order to create a city centre that responded to the importance of the area and the city as a whole.

The Qasr Alḥokm Project covers most of the old city of Arriyadh. The government required that the development should maintain the heritage of the area by rebuilding the original city gates and by the restoration of Almasmak Palace, and that Qasr Alḥokm and Almasjid Al Jamie buildings should be rebuilt in their original locations to justify their historical role and importance.

Albini's scheme had two essential characteristics. Firstly, this urban design focused on separating vehicular from pedestrian movement and providing an urban environment where people could walk freely around the shops and the bazaars without any conflict with traffic. The aim of this was to provide a central area which revived the activities of the old city centre and responded to its historical and administrative importance;

Secondly, the architectural treatment of the design focused on linking the design of the buildings with the architectural quality of the region, harmonising the development with a single colour scheme that responded to the natural sandy surroundings, and having compact volumes with minimal openings in response to climatic and social needs.

Unfortunately Albini's scheme was not fully implemented because of his untimely death in 1977, the land acquisition problem, and the change in governmental administration, with the appointment of a new Mayor.

Meanwhile, the development of the city was progressing and there was a lack of co-ordination between the different governmental institutions regarding the execution of the infra-structure and other major projects. This led the government in 1974 to establish the High Commission for the Development of Arriyadh (HC).

The Doxiadis Master Plan failed to accommodate the booming development. Consequently in 1976 the Government appointed SCET International to revise the Doxiadis Master Plan. A revised Master Plan was approved in 1982 under the name 'Arriyadh Action Master Plan', with short-range planning policies. The 'Action Plan' also implemented the 'setback' regulation, and from the planning point of view tried to give coherence to the shattered and fragmented city.

The Qasr Alḥokm Area project had been delayed and to accelerate its execution the government decided in 1979 to establish the Qasr Alḥokm Area Development Office (QAADO), designed solely to supervise the design and the

construction process. QAADO's first review of Albini's urban and architectural schemes led them to conclude that they could not proceed, as Albini had wrongly assumed that the government would buy the whole of the designated 'T' area. With the land acquisition problem the QAADO set aside Albini's scheme.

The QAADO decided upon the request of the governmental administrative agency that who had buildings in the area to add more spaces and further elements in the design. Therefore, QAADO offered an architectural tender for the required changes and Albini's office (led by Albini's son Marco) participated. However Beeah won this competition, changing the direction of development.

QAADO also commissioned Beeah to review Albini's scheme. They proposed to cover a wider area, on the basis that the surrounding areas were of poor architectural and urban quality. The Council of Ministers (COM) approved the addition of the development area hoping this action would help the development to meet the objective of being the centre of the nation.

Beeah re-designed the whole area. The only existing buildings that they took into consideration were the Almasmak and the three governmental buildings designed by Albini. Their scheme centred on separating vehicular from pedestrian movement by elevating the whole project on a pedestrian podium 6 metres above the ground, making the lower two levels into parking spaces for the whole project. A radial configuration scheme was selected, making the Masjid the centre from which a radial pattern of streets connected to the peripheral areas.

By this time the development had been delayed for almost ten years, and with the success of the Diplomatic Quarter Development Office (DQDO), the government decided in 1983 to merge the two offices: QAADO and DQDO into the Arriyadh Development Authority (ADA).

The ADA's first action was to undertake a full review of the Beeah scheme. They concluded that it was not feasible to implement it for the following reasons:

- 1) Cost and land availability;
- 2) The problem of land acquisition;
- 3) The assumption that the government owned the whole area; and
- 4) The difficulty of execution in phases.

By this time the government had purchased the whole of the 'T' area and with the help of Saud Consult, the ADA set up their urban design scheme. The scheme was similar to Albini's scheme with one essential difference - the main plaza was not elevated. The ADA urban design scheme centred on separating vehicular from pedestrian traffic with plazas connecting the different elements of the project. The ADA invited various consultants to participate in the design of the different buildings in the area: Rasem Badran was chosen for Almasjid Al Jamie; Beeah for Qasr Alḥokm and to re-build part of the city wall, Dira tower, and two gates (Althumairi and Dokhnah); Alshathri for the cultural centre; Saud Consult for the urban design, engineering, and landscape, and Buro Happold as the engineering co-ordinator between the different consultant.

After analysing the Qasr Alḥokm design program, Beeah suggested adding more space to the palace. However, the ADA felt that Beeah were not fully committed and asked Rasem Badran to work separately on the design of Qasr Alḥokm. Beeah did not know anything about Badran's involvement. This decision was made on the basis that two consultants working separately would help the ADA to make a quick decision on the final design. When the two schemes were finished the ADA chose Badran's scheme.

In summary, every governmental agency and several consultants had contributed towards this development:

- The Mayoralty took the credit for initiating the commission of Albini;
- Albini set up the main base for the development to reflect the regional urban and architectural quality;
- QAADO solved the problems of land acquisition and of compensating owners, negotiated with businessmen with investment in the area; and managed the temporary relocation of some business activities;
- Beeah insisted on developing the whole area and trying to link it strongly with the rest of the city;
- The ADA committed themselves towards setting-up the urban design and the design of each building;
- Rasem Badran studied the local regional architectural quality and transformed it into a masterpiece of architectural quality;
- The Arriyadh Development Company (ADC) involved the businessmen and shop owners in the design process in the third stage of the commercial development.

The architectural style of the Qasr Alhokm Area was a development of the Najdi style. This style was seen in the treatment of the exterior facades and the interior design and decoration of the mosque, the palace, the offices, and the commercial development.

This project demonstrates more than twenty years of continuous thought and development. The reason for this long time-span was the lack of clear guidelines; each governmental agency with responsibility for the area would take its time in familiarising themselves with the project and would then make their own design criteria. The difference in the architectural character between the first and the second stage demonstrated the evolution of the architectural character of our built environment. The third phase of the development - the ADC commercial project - supported the use of modern technology blended with regional character. A new stage has been reached, in proving that we can develop our own architectural style and character, to identify our built environment with regional qualities, which only exist in Najd. The QAA project was a departure point where the authorities of the Mayoralty and ADA worked hand in hand to change the building regulations and the planning codes for the city, as the first essential step, towards giving the future city development the same spirit of place as the Qasr Alhokm Area.

This evolution has demonstrated that regional character blended with modern technology can create a distinctive style appropriate to our era.

9.2. Recommendations

From this evolution come a number of suggestions to raise the quality of all architectural and environmental aspects, leading to a comprehensive image for the city. In particular we should set down common guiding principles at:

- Residential scale;
- Neighbourhood scale; and
- City scale.

On the residential scale:

- 1 • Houses should respect the most important cultural issue - privacy. This respect can be implemented by a building form which ensures that inner spaces of the house are not visually accessed by neighbours;
- 2 • Privacy in the house should be implemented by separating the guest area from the family sections;
- 3 • Selection of a colour scheme which harmonises with the surrounding;

- 4 • The use of water in enclosed spaces to reduce ambient temperature;
- 5 • The house volume should balance the width of the street and the adjacent houses;
- 6 • The use of building materials that minimise heat transmission;
- 7 • The use of building materials which harmonise the built environment with its surroundings, reduce the building cost, and can be recycled;
- 8 • The use of party walls to reduce exposure to the direct sun, reduce building costs, and increase efficient use of land;
- 9 • Minimising external openings and use of screens, and solar glass to reduce heat ingress;
- 10 • The use of elevational treatments that relate to the regional pattern;
- 11 • The use of decorative motifs internally to link the inner spaces and rooms with the exterior;
- 12 • The use of palm trees and other desert plants in the landscape to identify with the locality and create a cooler micro-climate;
- 13 • Provision of courtyard coverings to control the micro climate.

On the neighbourhood scale:

- 1 • Using a cul-de-sac planning pattern to reduce the number of intersections, reduces the number of accidents and provide security;
- 2 • Creating a hierarchy of the street width according to use;
- 3 • Minimal street widths to reduce radiation from the street paving, and to reduce the initial building cost and subsequent maintenance;
- 4 • Changing the paving pattern and colour in the pedestrian intersections for safety;
- 5 • Changing street paving material to reduce the effect of reflected and stored heat;
- 6 • Using a unified building colour scheme externally to create a visual balance and harmonise the whole of the neighbourhood;
- 7 • Unifying building heights;
- 8 • Providing adequate contrast of solid and voids in the buildings;
- 9 • Extending the use of palm trees and other vegetation and water elements in the street scape;
- 10 • Providing grouped facilities for the neighbourhood with mosque, clinic, school, nursery, shopping centre, library, and ...etc.;
- 11 • Planning to provide segregated pedestrian and vehicular routes;
- 12 • Making the mosque the centre of the neighbourhood with minarets as the landmark;
- 13 • Using extensive coverage of the landscape greenery and water elements in the central area;
- 14 • Linking residential quarters with the neighbourhood centre through shaded pedestrian walkways;

- 15 • Providing special roads that can be used by emergency and service vehicles to reach the neighbourhood centre. This road can be shared with pedestrians by changing the pavement pattern and design;
- 16 • Designing street furniture to implement local patterns and regional elements;

On the city scale:

- 1 • Providing a city boundary which is clear and respects topographical and natural features;
- 2 • Strictly controlling the grant of planning permission for any residential development outside the city boundary;
- 3 • Providing an appropriate hierarchy in street width and design to reflect the function and importance of each street;
- 4 • The provision of one major city centre with sub-centres located in the other parts of the city;
- 5 • The provision in the main city centre of major elements (governmental, commercial, business, and residential) to attract citizens;
- 6 • Maintaining a full harmony in street frontages by height, colour, balance of mass, and openings;
- 7 • Ensuring compatibility between the neighbourhood buildings and private space of other buildings in the same street or neighbourhood;
- 8 • Integrating street design to serve pedestrians and all forms of transport;
- 9 • Recognising the priority of pedestrians over vehicles;
- 10 • Providing pedestrian crossing areas in the main streets;

9.2.1. Advantages Offered by these Policies:

- 1 • Use of the courtyard as a form for building will maintain the following ideas:
 - Secure privacy;
 - Party walls reduce the number of external walls and minimise exposure to direct sun;
 - Party walls reduces construction costs.
- 2 • There are many possible variations on the courtyard form. Design can be evolved; there is the possibility of having three or four courtyard spaces within the design enclosure. Courtyards also have a special function, for the servants, animals, kitchen, majlis, vegetable garden, etc. Sometimes an upper courtyard might be provided, giving the whole series of private and semi-private spaces.
- 3 • Reducing the street length and width saves money by cutting the initial cost of setting up the infra structure and subsequently reducing the maintenance costs;
- 4 • Using compatible colour harmonises the built environment with the surrounding natural environment.

- 5 • The use of local construction techniques and local building materials promotes:
 - Harmony with the natural environment;
 - Cheaper construction costs;
 - Cheaper maintenance and repair.
- 6 • Using construction materials and techniques responsive to or derived from local resources allow integration between natural resources and their usage. There is no break in the ecological system; most of the materials used in the built environment can be recycled.

9.2.1. Some Supportive Recommendations

- 1 • White Land (i.e. unused land area): There are large vacant serviced lands and deteriorating urban areas within the developed part of the city that contribute to the image of an incomplete fragmented city, while other new large areas are being subdivided for future residential use for which the government has yet to provide all the services. A number of actions could be helpful:
 - A) The Real Estate Development Fund could be restrained from giving loans for developing un-serviced areas;
 - B) Taxation could be applied to vacant serviced land to bring it into use.
- 2 • Land prices should be restrained to prevent land escalation;
- 3 • The government should take the lead in developing new neighbourhoods designed to meet the family needs, and to respect regional differences;
- 4 • The present system of mass production of modern building materials should be reconsidered in several aspects:
 - a) Construction Materials: The mass use of cement block materials has been proven to be inappropriate and not durable. Construction companies have tried to find alternative building materials that can provide better thermal specifications and durabilities. These new building materials have proved very expensive, because they were developed recently by relatively few manufacturers. Consequently, so the prices have been very high causing extensive use of cement blocks. Therefore, research into, and production of better materials should be encouraged.
 - b) Building fixtures: Many building fixtures are not compatible with daily use. For example the design of bathroom fixtures is not appropriate to daily use. Muslims pray five times a day before which they wash the hands, mouth, nose, head, arms, and feet. Fixtures more suitable than standard wash basins are required. Saudi architects and engineers should design fixtures better related to daily use.

- c) House spaces: There are many wasted spaces in houses. In particular the unnecessary duplication of reception rooms (for men and women). Improvements and greater flexibility in design could overcome problems of this sort.
 - d) Similarly, a formal dining room is unnecessary in most Saudi households;
- 5 • The aesthetic appearance of the city is the most important issue, therefore the authorities should abandon the installation of satellite dishes on the top of buildings as it causes a visual disturbance for citizens. Other issues might be considered, such as the control of commercial sign boards, street furniture, pedestrian crossing bridges, etc.
 - 6 • Suspended wire for electrical and telephone services should be avoided.

From these studies I conclude that architecture is currently producing buildings which in many respects are ill-suited to our society, and is in need of vital change. There is a fundamental need to consider traditional values when designing contemporary projects. Only by re-evaluating our architecture shall we have a coherent physical environment, reflecting the real underlying aspirations of Saudi society.

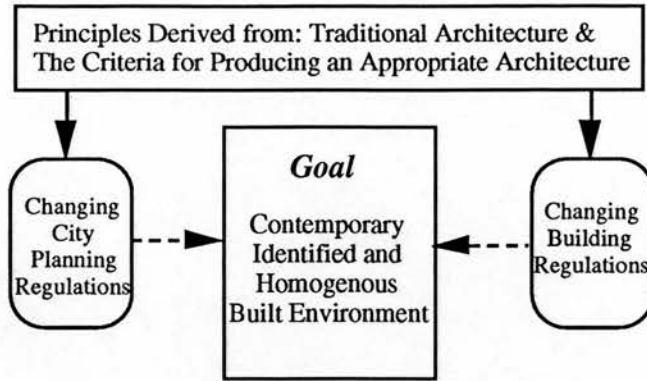
9.3. Evaluation

From the principles derived from traditional architecture (Chapter 3) and the criteria for producing an appropriate architecture (Chapter 6), it is possible to extract the basic guidelines and regulations from which we start developing the future built environment, achieving the goal of having identified and coherent city. It has not been the intention of this study to produce detailed guidelines and regulations⁴³⁵, but rather to define the underlying considerations.

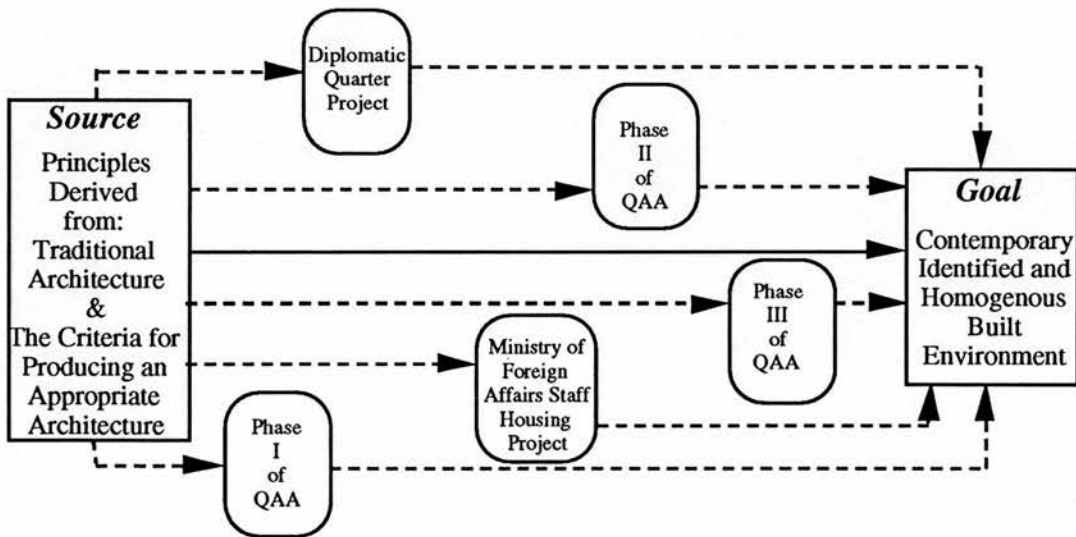
To produce a coherent urban and architectural pattern in the built environment we have to start from both directions, changing the structure of the city from one end, and changing the building codes from the other.⁴³⁶

⁴³⁵ Such detailed guidelines and regulations should look into intensifying the research into different aspects, such as: social, psychological, economical, urban, geographical, environmental, and ... etc.

⁴³⁶ Saleh Al-Hathloul, Ali Shuaibi, and Zaher Othman support my argument; by pointing out that one can not change the physical environment by changing the design of the single unit in the city which is the house, or the commercial part, or the governmental buildings. To enhance the physical environment, one has also to change the planning of the city as a whole, the street pattern, and the size of the street in the neighbourhoods. There argument based on now a days cities are not for human being but it is a city for cars. Where Abdulrahman Alhussaini adds, that you can not change the physical structure of the city without changing the planning codes of the city and consequently the neighbourhoods, he adds, that our neighbourhood is not designed for people it designed mainly for cars.

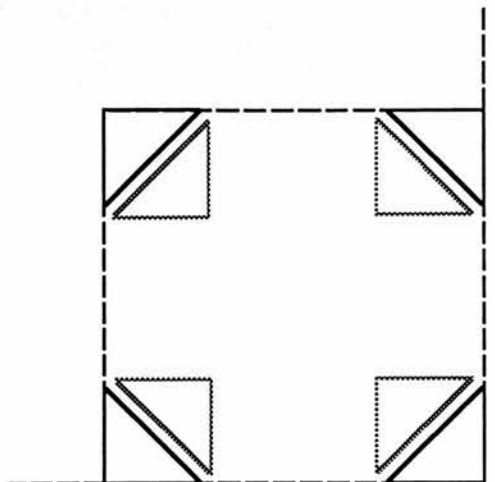


It is not possible to be precise about the future because design in architecture is a social matter created by many people. This thesis has drawn together the visible trends in a rapidly developing area with strong traditions and a distinct social structure. The sources that we are relying on are the principles derived from traditional architecture and the criteria for producing an appropriate architecture, and by learning from examples already discussed (QAA project, Ministry of Foreign Affairs staff housing project, and the Diplomatic Quarter) we are able to modify and change our planning and building regulations to create an identifiable regional urban form. This process can be summarised in a diagram:



The careful application of the principles derived from these studies and the consistent use of resources coupled with skilled design will lead to a new regional architecture appropriate to life in the capital of the Kingdom of Saudi Arabia in the Twenty first century.

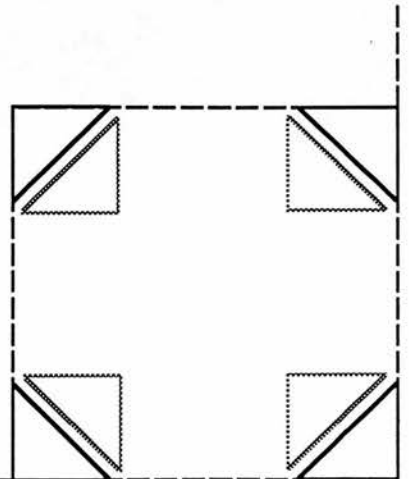
Appendix:
The City of Arriyadh Evolution Chart



The Evolution of the City of Arriyadh: (1900 - The Present Time)

Until 1930	1930s	1940s	1950s	1960s	1970s	1980s	1990s
<p>1902:</p> <ul style="list-style-type: none"> King Abdulaziz conquer the city of Arriyadh. The first physical action was to re-build the city wall. Rebuilt the town palace to be used as a Royal residence. Population 8,000. <p>1918:</p> <ul style="list-style-type: none"> Population: 19,000. <p>1919:</p> <ul style="list-style-type: none"> The first car to be seen in the city were dragged by camels from the desert. <p>1923:</p> <ul style="list-style-type: none"> The first discovery of Oil. City Area: less than One sq.km. <p>1910s and 1920s:</p> <ul style="list-style-type: none"> The architectural development were very slow as a result of many reasons: The King's was very busy to unify the country, and The limitations of the financial resources. 	<p>1930:</p> <ul style="list-style-type: none"> The first palace to be built outside the city wall was the King's brother Muhammad in Ataiqah garden. <p>1932:</p> <ul style="list-style-type: none"> The unification of the Kingdom. The establishment of the Ministry of Finance. <p>1935:</p> <ul style="list-style-type: none"> Population 40,000 <p>1936:</p> <ul style="list-style-type: none"> No. of telephones 50 <p>1937:</p> <ul style="list-style-type: none"> The establishment of the core of what later became the Municipality. <p>1938:</p> <ul style="list-style-type: none"> The discovery of Oil in a commercial basis. King Abdulaziz took a major step that affected the physical development of the city, when he moved to Almurabaa palace, built outside the city wall. He used the car to travel between the new palace as a residence and the old palace at the town remain as the seat of Government. <p>1939:</p> <ul style="list-style-type: none"> No. of cars estimated is 300. 	<p>1942:</p> <ul style="list-style-type: none"> The first Airplane to land in the city. <p>1944:</p> <ul style="list-style-type: none"> The establishment of Ministry of Defence. The Municipality began their first organised planning, when they divide Mafuha site into a residential lots of 8m. by 8m. and the street width not exceeding 8m. The beginning of the demolition of the city wall <p>1946:</p> <ul style="list-style-type: none"> Oil Income: \$10.4 Million <p>1949:</p> <ul style="list-style-type: none"> Artthritis in the King's knees urged him to use a wheelchair, a lift was installed in Almurabaa palace, and Almurabaa palace became the seat of Government as well as the Royal household. <p>1940s:</p> <ul style="list-style-type: none"> Population: 83,000. Almurabaa palace underwent continuous changes to adopt to the extra uses and functions. The architectural development continued outside the city wall, and new suburbs were established, i.e. Hillat Alqusmar, Hillat Aldawasir, ...etc. 	<p>1951:</p> <ul style="list-style-type: none"> The establishment of the Ministry of Interior. The inauguration of the railway line connecting Arriyadh with Dammam at the eastern coast. <p>1952:</p> <ul style="list-style-type: none"> Oil income: \$ 210.7 Million <p>1953:</p> <ul style="list-style-type: none"> King Saud came to the Throne. The old palace at the town, the masjid jamie, and adjacent buildings in the centre were demolished. The American company Bechtel completed the International Airport. Transferring Government Agencies from Jeddah and Mecca to Arriyadh. Building Alhamra palace to the south of Almurabaa palace to be used as King Saud residence until 1957 were he moved to the newly built Alhaseyniah palace. <p>1954:</p> <ul style="list-style-type: none"> A Council of Ministers was set up. <p>1955:</p> <ul style="list-style-type: none"> Population: 106,000. The Municipality had changed into Mayorality. <p>1957:</p> <ul style="list-style-type: none"> The inauguration of the Ministries buildings along the Airport Road. Almalaz housing development for the Government employees, sponsored by the Ministry of Finance. The inauguration of Riyadh University (King Saud University). 	<p>1960s:</p> <ul style="list-style-type: none"> Modern haphazard development took place in every sector of the city (construction, electricity, telephones, sewage and water treatment), there were no co-ordination between the different Governmental organisation for the execution of their projects. International competition was organised for the Master Plan of the city of Arriyadh. Doxiadis-Associates of Athens won the competition and they started their survey. Population 300,000. City Area 45 sq.km. Oil income: \$ 22.6 Billion <p>1975:</p> <ul style="list-style-type: none"> The establishment of the Ministry of Municipalities and Rural Affairs. The Council of Ministers established the High Executive Committee (HEC) to develop the Diplomatic Quarter (DQ) and the Ministry of Foreign Affairs Staff Housing, and the development of the Qasr Alhokm Area (QAA). The establishment of the Ministry of Public Work and Housing. <p>1976:</p> <ul style="list-style-type: none"> SCET International Consultants were assigned to review the Doxiadis Master Plan and to give a short range planning advice and implementation proposals Albini submitted to the Mayorality a complete set of drawings for the development of the QAA. <p>1979:</p> <ul style="list-style-type: none"> The establishment of the Qasr Alhokm Area Development Office (QAADO). QAADO assigned the Saudi Beeah Group to review Albini's plan and design. 	<p>1971:</p> <ul style="list-style-type: none"> Doxiadis finished their Master Plan <p>1973:</p> <ul style="list-style-type: none"> The Ministries Council approved Doxiadis Master Plan. Franco Albini made the first site visit for Qasr Alhokm Area. <p>1974:</p> <ul style="list-style-type: none"> The establishment of the Real Estate Development Fund (REDF), to help Saudi citizen with a free interest loan to built their private houses, and other commercial investment. The establishment of the High Commission (HC) to organise the city physical development. Albini submitted the feasibility study report to the Mayorality. 	<p>1981:</p> <ul style="list-style-type: none"> Oil income: \$ 102.1 Billion <p>1982:</p> <ul style="list-style-type: none"> The Government approved SCET revised Master Plan <p>1983:</p> <ul style="list-style-type: none"> The establishment of Arriyadh Development Authority (ADA). The nucleus of this was the Bureau of the Project of Ministry of Foreigner Affairs and the Diplomatic Quarter, and the QAADO. The construction process for the first phase of the QAA started. <p>1984:</p> <ul style="list-style-type: none"> Arriyadh Development Authority (ADA) reviewed Beeah plan and proposed an implementation The inauguration King Saud University campus (Riyadh University). <p>1985:</p> <ul style="list-style-type: none"> The inauguration of the QAA first phase, it contained The Emirate, the Mayorality, and the Police haedquarter buildings. The inauguration of King Khalid International Airport. The inauguration of the Ministry of Foreigner Affairs Building. <p>1987:</p> <ul style="list-style-type: none"> The inauguration of the DQ. <p>1988:</p> <ul style="list-style-type: none"> The construction process for the second phase started. 	<p>1992:</p> <ul style="list-style-type: none"> Population: 1.5 Million. City area: 2000 sq. km. The inauguration of the QAA second phase, it contained the Justice Palace building, the masjid jamie, Almeqaiah commercial Centre, Aswaf Aldira, Souq Alawqaf Alkhairiah, the rebuilding of Thumairi and Dokhnah gates, Dira tower, parts of the old city wall, the road network, and the development of the urban spaces and plazas. <p>1994:</p> <ul style="list-style-type: none"> Arriyadh Development Company (ADC) established to participate in developing the commercial area located within the QAA. <p>1996:</p> <ul style="list-style-type: none"> The construction process for the third phase of the QAA started (the ADC first project) located between the Qasr Alhokm building and the King Fahd expressway with a total area of 88,000 sq.m. to be completed by 1999. With the completion of this phase the QAA would have the complete elements that would make it as vitalising centre for a fast growing city. A centre which identify itself with its unique urban and architectural style, and shall remind visitors with its recent past.

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