Durham E-Theses

The urbanisation of Kuwait since 1950: planning, progress and issues

Abdo, Muhammad Fawzi

How to cite:
Abdo, Muhammad Fawzi (1989) The urbanisation of Kuwait since 1950: planning, progress and issues, Durham theses, Durham University. Available at Durham E-Theses Online: http://etheses.dur.ac.uk/1366/

Use policy

The full-text may be used and/or reproduced, and given to third parties in any format or medium, without prior permission or charge, for personal research or study, educational, or not-for-profit purposes provided that:

- a full bibliographic reference is made to the original source
- a link is made to the metadata record in Durham E-Theses
- the full-text is not changed in any way

The full-text must not be sold in any format or medium without the formal permission of the copyright holders.

Please consult the full Durham E-Theses policy for further details.
THE URBANISATION OF KUWAIT SINCE 1950:
PLANNING, PROGRESS AND ISSUES

MUHAMMAD FAWZI ABD
BA; MUP, MScE-Civil (Univ. Wash.)

The copyright of this thesis rests with the author.
No quotation from it should be published without
his prior written consent and information derived
from it should be acknowledged.

A thesis submitted to the University of Durham
for the degree of
Doctor of Philosophy

Dec. 1988
ABSTRACT

Modern Kuwait's urban development as it emerged during the second half of the twentieth century has been the outcome of a sustained planning effort. The idea of adopting and implementing master plans prepared by planning specialists was introduced early in 1951 - only a few years after Kuwait became an oil producer. The country's first master/development plan was completed later that year.

During a period of about three decades, other plans were to follow, generally reflecting in concept and approach the circumstances, influences and conditions which necessitated their creation. Continuous changes in the built environment often progressed faster than the plans had anticipated or provided for. Successive plans gradually adopted a wider scope than the limited location approach of the first plan, and became more regional and national in concept and strategy.

This study examines both the urbanisation process itself and the various plans which have guided this process. Certain issues related to public policy, economic and demographic considerations which influence urbanisation and planning will also be examined. The study shows how the various plans have responded to the specific circumstances and changes, how they related to each other, and assesses them as concepts and guidelines. An assessment is also made of the emerging urban environment in Kuwait City's central part, the hub of government and business activities - the old town of the pre-planning years.

On balance, the study concludes that the planned environment which has emerged as a result of almost four decades of planning effort, is neither poorly conceived and realised nor ideal. It is, instead, the outcome of a combination of dynamic and often unpredictable forces, public policy considerations and changes, and certain constraints on planning, both in terms of its physical as well as practical aspects. The study, finally, is a documentation of the making of urban Kuwait during its modern era.
ACKNOWLEDGEMENTS

The author would like to express his gratitude to his supervisor, Mr. Roy Gazzard, former director of the Centre for Middle Eastern and Islamic Studies, University of Durham, for his interest and advice. The author is also grateful to Mr. Nicholas Bursey, Associate Director, Colin Buchanan and Partners, for sharing his views on aspects of urbanisation in Kuwait and for providing a number of planning documents.

COPYRIGHT

The copyright of this thesis rests with the author. No quotation from it should be published without his prior written consent, and information derived from it should be acknowledged.

M.F. Abdo
Durham, Dec. 1988
# TABLE OF CONTENTS

**LIST OF FIGURES** ................................................................. vi
**LIST OF PLATES** ................................. viii
**INTRODUCTION** ................................................................. 1

## PART ONE

**Chapter**

**I. HISTORY : EARLY SETTLEMENT UP-TO INDEPENDENT STATE** ......................... 7

*Introduction*
Kuwait - Early Settlement and Town
Early European Presence in the Gulf
Kuwait Between 1752 and 1900
  - Autonomous Kuwait
  - The Move to Zubara and Bahrain
Kuwait and Early Wahhabi Threats
Kuwait in the 19th Century
  - Struggle Among the Regional Powers
  - Mubarak ibn Sabah and the European Powers
Kuwait in the 20th Century
  - Kuwait and Great Britain
  - Kuwait and Abdulaziz Al-Saud
  - Internal Unrest and The New Era
*Historical Footnotes*

**II. PHYSICAL SETTING AND ENVIRONMENT** .......................... 46

*Location*
*Topography*
*Climate*
  - Major Climatic Influences
  - Kuwait's Two Main Seasons
*Water Resources*

**III. KUWAIT URBANISATION : THE ECONOMIC CONTEXT** 58

*Aspects of Kuwait's Economy*
*A Reference to Urbanisation and Economic Growth*

**IV. KUWAIT TOWN BEFORE 1950** .............................. 69

*Kuwait Town in Early European Writings*
*The Morphology of Kuwait Town*
  - General Form and Structure
  - The Main Town Elements
  - The Small Settlements*
PART TWO

V. URBAN PLANNING IN THE NEW ERA : A REVIEW .......... 91

The Master Plans
Planning and Plan Implementation

VI. PLANNING FROM 1950 TO 1970 ....................... 111

The First Development (Master) Plan
The Property Acquisition Scheme
The Municipality Development Plan

VII. THE SECOND MASTER PLAN ........................... 125

Objectives and Approach
Aspects of Urban Change and Development
Stages of Urban Growth
Population
Employment
Existing Development and Land Use
Housing
Development Constraints and Opportunities

The National Physical Plan
Master Plan for the Urban Areas
Population and Employment
Housing
District Centres
Transportation
Industry
Strategies for the Urban Areas
The Preferred Strategy

Kuwait Town
Population and Employment
Town Core Expansion
The Proposed Structure

VIII. REVIEWS OF THE SECOND MASTER PLAN .............. 174

Introduction
Plan/Review Objectives
The National Physical Plan
Population and Employment
Natural Resources
Landscape and Recreation
The Development of Strategy
Alternative Community and Urban Growth Strategies
National Transportation

Metropolitan Structure Plan
Residential Areas
Industry
District Centres
Landscape and Environment
Metropolitan Transportation
PART THREE

IX. THE FIRST DEVELOPMENT PLAN AND RELATED ISSUES: AN ASSESSMENT ............................... 231

Comprehensive Master Planning
The Development Plan of 1951
The Foreign Planner/Consultant
Garden City and New Town Concepts
Analysis of Aspects of the Plan

X. THE SECOND MASTER PLAN AND ITS SUBSEQUENT REVIEWS: AN ASSESSMENT ..................... 248

Introduction
Basic Assumptions and General Assessment
Reviews and Implementation
Kuwait City: The Built Environment
Townscape and Urban Design
Climate and Kuwait's Traditional Buildings
City Image and an Alternative City Plan

XI. FUTURE OUTLOOK AND CONCLUSION ...................... 291

The Built Environment
Current Planning
Townscape, Conservation and Renewal
Demography and Manpower

APPENDIX: CLIMATOLOGICAL DATA ............................. 308

BIBLIOGRAPHY ................................................... 311
<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Map of the Gulf, 1765 - C. Niebuhr</td>
<td>13</td>
</tr>
<tr>
<td>2.</td>
<td>Places and Tribes in the 18th Century Gulf</td>
<td>21</td>
</tr>
<tr>
<td>3.</td>
<td>Topography</td>
<td>49</td>
</tr>
<tr>
<td>4.</td>
<td>Winds and Ground Conditions</td>
<td>54</td>
</tr>
<tr>
<td>5.</td>
<td>Kuwait Town: Typical Urban Pattern</td>
<td>76</td>
</tr>
<tr>
<td>6.</td>
<td>Kuwait Town and Environs, Early 1950's - H. Dickson</td>
<td>79</td>
</tr>
<tr>
<td>7.</td>
<td>Kuwait Town: Main Quarters</td>
<td>82</td>
</tr>
<tr>
<td>8.</td>
<td>The Walled Town, Early 1950's</td>
<td>84</td>
</tr>
<tr>
<td>10.</td>
<td>Urban Growth, 1936-1967</td>
<td>96</td>
</tr>
<tr>
<td>11.</td>
<td>The 1951 Development Plan: Main Elements</td>
<td>113</td>
</tr>
<tr>
<td>12.</td>
<td>The 1951 Development Plan: General Land Use</td>
<td>114</td>
</tr>
<tr>
<td>13.</td>
<td>The 1951 Development Plan: Old Town</td>
<td>116</td>
</tr>
<tr>
<td>14.</td>
<td>The Municipality Development Plan</td>
<td>123</td>
</tr>
<tr>
<td>15.</td>
<td>Existing Development and Place Names, 1970: the State</td>
<td>128</td>
</tr>
<tr>
<td>17.</td>
<td>Existing Development and Place Names, 1970: Kuwait Town</td>
<td>130</td>
</tr>
<tr>
<td>18.</td>
<td>Urban Growth until 1970</td>
<td>133</td>
</tr>
<tr>
<td>19.</td>
<td>Population Growth</td>
<td>135</td>
</tr>
<tr>
<td>20.</td>
<td>Employment Growth</td>
<td>136</td>
</tr>
<tr>
<td>22.</td>
<td>Place Names: Urban Areas</td>
<td>140</td>
</tr>
<tr>
<td>23.</td>
<td>Land Use, 1970: Kuwait Town</td>
<td>142</td>
</tr>
</tbody>
</table>
24. Place Names: Kuwait Town .......................... 143
29. Committed and Proposed Development, 1970:
   Kuwait Town ...................................... 169
30. Natural Resources, Constraints and Opportunities
   for Urban Growth .................................. 179
31. National Landscape and Recreation Areas .......... 181
32. Land Use Changes: New Towns ...................... 188
34. National Transport ................................ 194
35. Housing Commitments until 1986 ................... 199
36. NHA Housing, 1986-2005 ........................... 200
37. Residential Areas Nationality Distribution,
   2005 ............................................... 202
38. Industrial Sites: Existing and Proposed .......... 204
39. Retail Centres Distribution: Metropolitan Area ... 206
40. Open Spaces: Metropolitan Area .................... 210
41. Main Road Network: Metropolitan Area ............. 214
42. City Centre ...................................... 216
43. Building Form: City Centre ....................... 219
44. Renewal Potential: City Centre ................... 220
45. Residential Areas, 1982: City Centre ............. 221
46. Roads Network: City Centre ....................... 224
47. Land Use Strategy: City Centre ................... 228
48. Plan, Sief Palace, Council of Ministers and
   Foreign Ministry; Elevations of Council
   and Ministry ..................................... 269
## LIST OF PLATES

<table>
<thead>
<tr>
<th>Plate</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Aerial View, Kuwait Town, Early 1950's</td>
<td>5</td>
</tr>
<tr>
<td>2a.</td>
<td>Eastern Dhow Harbour, Kuwait Town, Early 1950's</td>
<td>68</td>
</tr>
<tr>
<td>2b.</td>
<td>Seafront, Kuwait Town, Early 1950's</td>
<td>68</td>
</tr>
<tr>
<td>3a.</td>
<td>Sief Palace, 19th Century Colonnade Detail</td>
<td>89</td>
</tr>
<tr>
<td>3b.</td>
<td>Bayt al-Sadu Balcony</td>
<td>89</td>
</tr>
<tr>
<td>4a,b.</td>
<td>Bayt al-Badr</td>
<td>109</td>
</tr>
<tr>
<td>5a,b.</td>
<td>Typical Housing, 1950's</td>
<td>110</td>
</tr>
<tr>
<td>6a.</td>
<td>Kuwait Fund, Interior Courtyard</td>
<td>173</td>
</tr>
<tr>
<td>6b.</td>
<td>Kuwait Towers</td>
<td>173</td>
</tr>
<tr>
<td>7a-e.</td>
<td>Ministry of Information Complex</td>
<td>289</td>
</tr>
<tr>
<td>8a-c.</td>
<td>Council of Ministers</td>
<td>290</td>
</tr>
</tbody>
</table>
INTRODUCTION

Since 1946, when the first shipment of crude oil was made from Kuwait, the country has experienced an economic, social and demographic transformation rarely seen in a developing nation. Among other factors, this was the result of the size of the income from oil and from investment of revenues overseas; a small population; and the need for development in practically every sphere connected with the building of a modern society.

Despite the challenges involved, and the expected side-effects, these factors were assets in the process of modernisation and urban development when compared with most other countries and cities in the Arab world (and elsewhere), with ageing infrastructure, decaying urban environment and limited financial resources. Another factor which was of considerable importance in the overall development process was the availability of expatriate manpower with varied skills from several Arab countries and others such as Iran and those of the Indian subcontinent as early as the late 1940's. At that time, in many respects, Kuwait was not unlike a pre-industrial city-state, and the scope for development was almost unlimited.

Modern Kuwait's urban environment as it emerged during the second half of the twentieth century has been the outcome of a sustained planning effort. The idea of adopting and implementing master plans prepared by planning specialists was introduced early in 1951 - only a few years after Kuwait became an oil producer. At the end of that year, the state's first master plan was presented by a firm of British planners. Given the timing of its preparation and the prevailing policy orientation, this plan was of limited scope and approach - both physically and in terms of time span. The
dynamic forces which were later to influence and dictate the pace and pattern of urban development could not have been foreseen so early in the planning process.

During a period of about three decades, other plans followed which generally reflected in concept and approach the circumstances, influences and conditions which necessitated their creation. Events on the ground and changes in the built environment sometimes progressed more quickly than the plans had anticipated or provided for. The four successive plans which followed gradually adopted a wider scope. Concepts of regional planning as opposed to those concerned primarily with limited areas began to be incorporated in the new plans and a state-wide approach to planning guides the latest review/plan completed in 1983.

The planning and creation of urban Kuwait has been the outcome of two basic factors: a dynamic economic and demographic situation which necessitated revisions and reappraisal of plans, and plans which were, within limits, responsive to changing circumstances and policies. These plans progressed to introduce more appropriate concepts and development strategies.

This work examines both the urbanisation process and the various plans which have guided it. A number of policy-related, economic, demographic and social issues which have had an impact on planning and urbanisation will also be examined. The study shows how the various plans have responded to the specific circumstances and needs at the time of their respective adoption and how they inter-relate one with the other.

The different plans and phases of planning are analysed in terms of spatial arrangement, strategies, constraints and opportunities. The study also attempts an assessment of the
emerging built environment and urban design/townscape in Kuwait City's central part, the hub of government and business activities which was previously referred to as the 'old town'.

It is hoped that from this work, both the process of urbanisation in Kuwait and the plans drawn up to facilitate and guide this process will be better understood. It is also hoped that while pursuing this dual objective, this study will have documented, in a sufficiently comprehensive manner, the making of urban Kuwait during its modern era.

A definition of the term urbanisation when applied to a country such as Kuwait requires some clarification. This is due to the fact that this phenomenon seems to fit neither the Western image of urbanisation nor that which one usually associates with the developing countries. Urbanists investigating the world-wide spreading of the urbanisation phenomenon have arrived at definitions which approach a consensus. One investigator adopts a general definition of urbanisation "as being the process of becoming urban, moving to cities, changing from agriculture to other pursuits common to cities, and corresponding changing of behaviour patterns."¹

Another urbanist, in defining urbanisation, refers to "a two-fold change : people change from agricultural work to industrial work, while at the same time changing from rural to urban residence."²

In the case of Kuwait, internal migration has little to do with the movement of people engaged in agricultural activities to cities

---

where they expect to pursue industrial work. This intra-country migration involves either the badu being settled in new government-sponsored urban communities, or Kuwaiti citizens who are moving from one urban area to another - established or new. Another significant characteristic of urbanisation in Kuwait - affecting its extent, density and pattern - is the immigration from the outside: migrants become residents and the urban community gains both population and amenities.

One may also point out that it is generally misleading to describe the expatriates living in Kuwait as immigrants, even if the term is used fairly regularly in the literature on demography and labour-related issues in Kuwait and its neighbouring states. The fact remains that Kuwait does not have a policy of accepting immigrants who are expected to become citizens after a specified period of time. In Kuwait, all non-Kuwaits residing in the country are considered temporary residents regardless of the length of their stay.

Finally, while the terms urban development and urban growth have been used interchangeably in this study, a distinction needs to be made. Urban development has more positive connotations than urban growth, much as, in economic terms, development implies qualitative, social and structural changes rather than purely quantitative aspects. In Kuwait, as the process of urbanisation matures, development and not simply growth can be expected to become more in evidence.
Kuwait Town - aerial view (early 1950's)
PART ONE

I HISTORY : EARLY SETTLEMENT UP-TO INDEPENDENT STATE

II PHYSICAL SETTING AND ENVIRONMENT

III KUWAIT URBANISATION : THE ECONOMIC CONTEXT

IV KUWAIT TOWN BEFORE 1950
CHAPTER I

HISTORY: EARLY SETTLEMENT UP-TO INDEPENDENT STATE

Introduction

Students of what is known at present as the State of Kuwait who have endeavoured, in recent decades, to research and document its origins and historical development, have often been faced with obstacles and uncertainty. This situation has, for the most part, been due to the dearth of recorded accounts directly or specifically related to the subject. A similar problem has also existed in dealing with the history of the other political entities in the Gulf region and Eastern Arabia, although the general outline of that history has now become reasonably well-established.1

This historical development extends back in time to the latter part of the seventeenth century. It spans the era since the original small settlement was established on the Bay of Kuwait, its evolution into a growing trading port and, eventually, into the city-state which became the hub of the modern state.

The rule of Al-Sabah is generally considered to have begun with Sabah ibn Jabir, nearly two and a half centuries ago. Nevertheless, piecing together the various elements and events, from numerous sources, it has not been a straightforward or easy task for the contemporary historian to formulate a reasonably complete and accurate history. The eighteenth and nineteenth centuries represent

---

1 Throughout this study, Gulf or the Gulf will refer to the Arabian Gulf or Persian Gulf, as both expressions are in current use.
a sparsely documented period in Kuwait's history, but the era which began with the early years of the present century has been well-documented.  

While a clear consensus does not prevail as to the exact date for the appearance of the early urban settlement which formed the 'old town' and the city centre of the present metropolis, the general forces and influences which have since shaped its growth and development are now substantially known. This has been possible for the contemporary historian essentially by the utilization of three groups of sources: foreign, i.e., non-Arab, Arabic sources, and local Kuwaiti histories and traditions. The process has been one of judiciously using these three basic groups of historical sources, and by comparing and cross-checking the relevant references and information.  

The foreign sources are divided into three groups: the East India Company records (reports, correspondence, published and unpublished); the writings of the various European travellers during

---


3 See Abu-Hakima, History of Kuwait, Vol. I, Chs. 1 and 7 for detailed discussion of these sources and their contribution to understanding the history of the Gulf and Eastern Arabia.
the eighteenth and nineteenth centuries; and European books and works contemporary with the events or written at a later date.

Arabic sources contemporaneous with historical developments in the region during the last two centuries were either published works or unpublished manuscripts. The latter are dispersed in various libraries throughout the world and constitute, for the most part, the original contributions of the historians of the time and are considered to be the more basic and reliable source of the two kinds. The published works were often incomplete or failed to correspond to the original manuscripts.

Local tradition describing historical events has been known to the Arabs throughout their history, long before attempts were made to document events and happenings of past centuries. Kuwait and the neighbouring sheikhdoms and states, with their relatively recent origins, have also had their local tradition and historians of this tradition. Kuwait's early history was recorded mainly by two historians: Abdulaziz al-Rashid and Yusuf bin Isa al-Qina'i (see footnote 2). The works of these historians are of particular significance not only for providing the local tradition on such matters as the establishment of the early settlement/town and its first inhabitants and rulers, but also for shedding light on aspects such as everyday life, social conditions and community relations.

Before discussing the rise and historical development of Kuwait, it would be relevant to refer to the principal regional powers which were active on the political arena of the Gulf during most of the period in question - i.e., its formative years in the eighteenth century. These were powers each of whom would gain influence and strength or weaken according to the changing circumstances - both within the region and from the outside among
external powers. There were three regional powers: the Persians in the north-eastern and eastern parts of the Gulf; the Ottoman Turks in Iraq; and the various Arab entities and tribal groupings in the southern and western coastal areas of the Arabian Peninsula.

The emergence of Kuwait and its growing importance during this period can be attributed to a number of factors. Chief among these factors are: (1) the growing trading movement throughout the Gulf as a result of the activities of the British, Dutch and French commercial companies; (2) the fact that no great power then had total control of the Gulf; and (3) that Kuwait appeared as a settlement in an area under the rule of Bani Khalid who, as the power in control of Eastern Arabia, had a strong interest in maintaining the peace and facilitating the prosperity of the region through trade.4

Kuwait - Early Settlement and Town

As has already been stated, no exact date for the establishment of the town of Kuwait - or its earlier form as an urban settlement - has been agreed upon. A precise date for the rise of the Shaikhdom under the ruling Al-Sabah family has also been the subject of speculation. Historian Abu-Hakima's research, based on the records of the East India Company, suggest that the town was established about 1716. This view has generally been accepted elsewhere, and the date coincides with the beginning of the Utub's arrival to settle in the area.5

The Utub or 'those who wandered' came to Kuwait after migrating in search for more hospitable terrain from Al-Hadar of Al-Aflaj in

4 Ibid., pp. 48-50.
central Arabia. They first settled in Qatar, and following a stay there which could have been for as long as fifty years, they began moving further north. From Qatar, the Utub seem to have spread throughout the Gulf before arriving in Kuwait in different groups. To these Utub, who hail from the large Northern Arabian Anaza Adnani tribe (as distinct from the Qahtani or Southern Arabian tribal federation) belong the Al-Khalifa, who later were to rule Bahrain as well as a number of prominent Kuwaiti families. 6

At the time of the Utub's arrival in Kuwait, however, it was under the rule of Bani Khalid who belonged to Rabi'a, another Adnani tribe from Najd. The powerful Bani Khalid were the undisputed rulers of Eastern Arabia during the seventeenth century and were involved in political and military struggle with the various Gulf powers during the two centuries which followed. As such they controlled the grazing rights over the area where Kuwait was located and also monopolised much of the trade into the interior of the Arabian Peninsula and the harbours of its eastern seaboard.

The name Kuwait itself is the diminutive form of 'Kut' or fortress. Shaikh Barrak, chief of Bani Khalid from 1669 to 1682 is generally credited with the founding of the settlement as his summer residence. However, Kuwaiti historians al-Rashid and al-Quina'i believe that an older settlement had existed on the site before Barrak's Kut or al-Kut. 7

---

6 See Dickson, op cit., pp. 360-370.

7 The word Kut in southern Iraq and other areas in Arabia and parts of Persia is the house which is built in the shape of a fortress and is usually located near water. Later, the term was given to an entire village built on such a site. See Abu Hakima, The Modern History of Kuwait, p.1, quoting an article by Father Anistas al-Karmali on the naming of Kuwait, in Al-Mashrig, X (Beirut: 1904).
This earlier settlement was known as Grane/Graine for Qurain, another diminutive form of an Arabic word, 'Qarn' (colloquial, 'Garn'), meaning a high hill or a horn. This settlement - Grane - was the site on which Barrak established his Kut sometime before the end of the seventeenth century. It is also the name of an island not far from Kuwait's mainland. Abu-Hakima states that in examining the records of the Dutch East India Company in The Hague, he found a seventeenth century chart which showed the name Grane. Furthermore, the German traveller/explorer Carsten Niebuhr, who was the first to show the name Kuwait (Koueit) on his remarkably accurate map in 1765 (Figure 1) has also used the old name (spelled as Graen) on the same map. By the end of the eighteenth century, however, the town was generally known as Kuwait. It is the origin of the earlier settlement of Qurain which remains in doubt.

Early European Presence in the Gulf

The establishment of the influence of the European powers in the Gulf played a role in the emergence and development of the political entities of present-day Eastern Arabia. Their presence in the region and their rivalry and competing policies were factors which helped shape the common history of the predecessors of these states. The European trading companies in the Gulf used its various ports to pursue both their commercial and also their national interests. They established agencies or factories throughout the region and they re-located factories within the region as circumstances required.

8 Abu-Hakima, ibid.
Portugal was the first European power to have a presence in the Gulf. The influence of the Portuguese began soon after they became the first European nation to reach India, in 1498. By 1575, they had concluded a treaty with Persia, and were able to establish themselves at the Straits of Hurmuz in the southern end of the Gulf. They followed a policy of building a series of forts along the Gulf, and their influence met with little or no challenge throughout most of the sixteenth century. As early as 1601, Portugal's political power in the region began to weaken when it lost Bahrain to the Persians. Twenty years later, Hurmuz fell to British and Persian forces and by 1651 Portugal had to leave the much fortified Masqat under pressure of the Arabs of Oman and Masqat.

This early phase of European presence and commercial activities in the Gulf at that time had little impact on the settlement on the Bay of Kuwait. Yet the Portuguese appeared to have established two defensive positions or forts in the area: one on Failaka (Kuwait's inhabited and most important island), and another on the Bay, where its ruins have not entirely disappeared. As a sea-faring and trading nation, however, Portugal maintained its ties in the Gulf and its ships continued to call at its ports for decades after it ceased to be a political power in the mid-seventeenth century.

Two European powers, Great Britain and Holland, collaborated to bring about an end to Portugal's political influence in the Gulf, when these two nations proceeded to dominate trade in the Gulf during the first half of the eighteenth century. Britain's East India Company was already established in 1600, and a similar Dutch company was founded in 1602 to facilitate the lucrative trade in spices and other goods between India and Europe. France had its own East India commercial counterpart at about the same time, although
its presence in the Gulf was generally more political than commercial except for limited periods during the second half of the seventeenth century and the latter part of the eighteenth. These were periods of political and military rivalry with Britain, both on the Indian sub-continent and in the Mediterranean and Egypt.

The importance of Britain as a maritime power in the Gulf began when the East India Company was given the monopoly of the silk trade in the area by Shah Abbas of Persia in 1619. As the Portuguese were increasingly being challenged, Britain, in turn, had the Dutch to contend with as a rival. The latter were aiming to replace Britain in its growing privileged position in the area and had succeeded in becoming the main maritime European power by 1640. The Dutch were later able to establish a factory in the northern Gulf at Kharij Island, which at that time was under the control of Bandar Riq, an Arab Shaikhdom on the Persian side of the Gulf. The position of the Dutch, however, began to weaken gradually during the following decades until they lost their factory at Kharij Island to Mir Muhanna, ruler of Bandar Riq and his Persian allies, in 1766. The British, in the meantime, were steadily becoming the dominant power in the Gulf - a status which they finally achieved during the second half of the eighteenth century.

As Britain's position in the Gulf grew in importance, its presence, political and commercial, was also to become more visible. By 1764, a British consulate was opened in Basra and a representative of the Government later replaced the East India Company's agent at Bushire (Abu Shahr), on the Persian side of the Gulf.

In 1776, the East India Company's staff who had been evacuated from Basra a year earlier, were transferred from Abu Shahr to
Kuwait. The first postal dispatch to London through Kuwait took place in 1775. As the occupation of Basra by the Persians ended in 1779, the East India Company factory left Kuwait for Basra, although the mail continued to be carried through Kuwait (via Aleppo) to Europe and Britain. In 1793, following a dispute between the Wali of Baghdad and the Mutasallem of Basra (both Ottoman officials), the factory was again moved to Kuwait for two years. H. J. Brydges, the British ambassador to Persia, who was the factor at Basra at that time, cited as among the reasons for leaving Kuwait back to Basra the staff's complaints that the water supply in the former was "infamously bad in quality being at once salt, sweet and bitter." 9

In concluding this brief discussion of the European powers' early presence in the Gulf, it is important to note the interplay of commerce and politics in examining the relations between these principal powers and the political entities in the area. This was not only the case for Britain's East India Company, but also its European counterparts which often had a dual role. Its company's factories in the various ports on both sides of the Gulf had functions which were both politico-economic and commercial. By 1708 its representatives had begun to enjoy a status comparable to that of the consular officers. 10

The Gulf's importance to Britain and to other European powers was evident due to its geographic location between India and Europe. The mail between Britain and the Indian sub-continent was carried either by the Red Sea route to Alexandria or via Basra/Kuwait and


10 See Wilson, op cit, p. 70.
Aleppo - a faster and safer route. The Company's objective as a commercial enterprise was to carry and/or distribute goods throughout the Gulf and between India and Europe. Both the Red Sea Egypt and Basra/Kuwait Aleppo routes were utilised toward that goal - as was the older Cape of Good Hope route. The use of any of these routes was often dependent on the political developments and competition among the European powers, particularly Britain and France. The local Gulf shaikhdoms and states, on the other hand, had become increasingly independent or self-sufficient by building their own fleets in order to be able to trade directly with India, East Africa and within the Gulf.

Finally, the continued predominance of Britain in the Gulf during much of the eighteenth century and the corresponding weakening of the other European powers was accompanied in the latter part of the century by the emergence of other nations who began to compete for influence in the region. These were Germany and Russia, and will be referred to below in the course of discussing Kuwait's development and history since the mid-eighteenth century. As will be seen, Britain continued to enjoy a privileged position in the region well into the twentieth century, when the emerging Gulf states begin to gain political independence and to enter a new era of economic prosperity and modernisation.

Kuwait Between 1752 and 1900

Autonomous Kuwait

As already mentioned, little is known of Kuwait/Grane during the first half of the eighteenth century except that it was within the territory in Eastern Arabia directly ruled by Bani Khalid. With the death of the Bani Khalid Amir Sadun ibn Muhammed al-Hamid in
1722, the struggle for succession within the family had encouraged some tribes to attain a form of local independence, even though power remained centralized.

However, the emergence of a semi-independent or autonomous Kuwait can be traced to about 1752, following the death of Shaikh Sulayman ibn Muhammad Al-Hamid and the continued power rivalry among the family factions. It was consequently possible for Kuwait to become a self-ruling territory centred around the town/settlement on the Bay of Kuwait and for its inhabitants to choose a local amir to administer the affairs of the growing town.

The chosen chief was Shaikh Sabah ibn Jabir ibn Adhbi, the first ruler of Al-Sabah whose descendents continue to rule in Kuwait at present. It may be stated here that an additional factor which further contributed to the weakening of Bani Khalid's control in the region at that time was the rise of a new power and adversary in central Arabia - the Wahhabis. Within a few years of his taking control of the shaikhdom's affairs, however, Sabah was able to establish his authority in Kuwait and the surrounding territory. 11

Kuwait gradually developed in the following years owing mostly to its expanding commercial activities in the region and beyond - as far as India - and it became an important port of call and a centre for desert caravans travelling to and from the north - Aleppo in particular. These caravans carried goods brought earlier to Kuwait from India, often on Kuwaiti vessels, and included also passengers travelling north to Syria and further to Europe. The earliest accounts on Kuwait by European travellers seem to date from this

11 Abu-Hakima's works, cited above, particularly The Modern History of Kuwait and Dickson's Kuwait and her Neighbours serve as the main sources for the historical account which follows.
period, as does the cooperation between the Dutch factory at Kharij Island - which was not far from Kuwait - and Shaikh Sabah in conveying caravans to Aleppo in order to avoid Basra and Baghdad. This measure was often a necessity during periods of strained relations with the Ottoman Pashas and other officials in Iraq.

Sabah's rule lasted for about eight years, until his death, probably in 1762, although there is no consensus among local sources on the exact date of death and succession. The second Al-Sabah ruler was Abdullah ibn Sabah, the youngest son of Sabah, who ruled Kuwait for half a century during a crucial period in the development of the prospering shaikhdom. By the end of these formative years and as Abdullah's rule came to an end in 1815, Kuwait had already established a relatively prominent position for itself among its neighbours.

The development of Kuwait during the second half of the eighteenth century did not pass unnoticed by the various parties who had interests in the Gulf. Powers such as the Persians, the Ottomans (through their officials in Baghdad and Basra) and the British East India Company, however, were all either unable or unwilling to effectively interfere in Kuwait's affairs - each for its own reasons. Although the Wahhabis' centre of power in Najd was relatively far from Kuwait, their attacks were to take place later in the century.

The source of real danger to Kuwait at this stage seemed to have been the various Arab shaikhdoms which had established themselves in coastal settlements and towns on the eastern (Persian) side of the Gulf. These principalities included Bushire, Bandar Riq and Dawraq, and were settled by Arab tribes who came either from Oman or from Najd. These tribal groups had often attacked ships carrying goods on their way to Basra, regardless of their
affiliation. Dawraq's Bani Ka'b in particular (they were from Najd and settled in the northern parts of the Gulf between Persia and Iraq during the seventeenth century) had the power to constitute a threat to commerce throughout most of the Gulf and were able, for a period of time, to resist the forces of Persia and the East India Company, as well as a Turkish/British attack in 1765. (See Figure 2 for locations of places and tribes in the Gulf area).

The Move to Zubara and Bahrain

As some of the Utubi families of Kuwait were becoming increasingly wealthy from trade and pearling, the community began to enjoy stability in its new home. However, Kuwait had to face the mounting pressure and threats from Bani Ka'b who had demanded tribute to be paid. A combination of internal differences on how to respond to this new danger and a desire by some families to spread their profitable activities in other parts of the Gulf, resulted, in 1766, in the movement to the south by Al-Khalifa and others and the establishment of a new Utubi shaikhdom at Zubara on the north-western side of the Qatar peninsula. Qatar was known to the Utubi families since they had settled there before they began to arrive in Kuwait about 1716, following their migration from their original homeland in Najd, as has been pointed out earlier.

Zubara had enjoyed a favourable location as an entrepot and a centre for trade; its development was rapid and it was fortified and surrounded by a wall. Bani Khalid were still the most influential power in the region and its nominal ruler, although some form of self-rule was often practiced, as had been the case in Qatar under Bani Musallam. And while Bani Khalid did nothing to prevent the Utubi families migrating from Kuwait from establishing themselves in Zubara, the Musallams' attitude was less friendly.
Figure 2. Places and Tribes in the 18th Century Gulf
Within a decade, however, Zubara became a serious rival to the existing Gulf ports and more Utubi families were to leave Kuwait for the flourishing town in the following years. As Zubara's wealth continued to grow, it had to face the same adversaries who were threatening Kuwait - the Arab tribes who had settled at Abu Shahr, Bandar Riq and Dawraq. During the struggle which followed, the Utub prevailed and they enhanced their position further by occupying Bahrain in 1782, then within the domain of Abu Shahr's ruler.

The struggle for control in the Gulf among the various powers contemporary with the development of the Utubi towns of Kuwait and Zubara seemed to have had an overall positive impact on these two settlements; they were left alone for the most part and their trade and wealth continued to grow. Two such Gulf powers whose struggle was concurrent with and influenced the development of Kuwait and the other Utubi towns in the 1760's and beyond were Oman and Ras al-Khaimah.

The Omani imam, who had established himself in Masqat, was aiming at the control of the Coast of Oman (Oman al-Sir or Seer, as it was then known - see Figures 1 and 2), which was under the rule of the independent Qawasim of Ras al-Khaimah. The preoccupation of these two adversaries with each other prevented them from becoming a serious threat to the prospering Utubi ports and placed these in a stronger position to face other potential enemies.

Further, there was the enmity between the Persians (aided by the Arab shaikhdoms located on their side of the Gulf) and the Ottomans whose governors were in Baghdad and Basra. The latter city which had hardly recovered from a decimating plague, was attacked by the Persians in 1775, fell the following year and remained under their occupation until 1799. This had resulted in added commercial
advantages for the Utubi towns which continued to operate under
generally safe conditions and adopted liberal trade policies, in
contrast to those prevailing at Basra and Abu Shahr.

As a result of the Persian siege and occupation of Basra,
Kuwait began to deal directly with the representatives of the East
India Company in the Gulf and replaced Basra as a staging point for
the movement of caravans to Baghdad and Aleppo. The trade between
India and Europe (and the Middle East) via the Gulf was now carried
to Kuwait and Zubara. According to Lorimer, the written history of
British-Kuwaiti relations originated in this period; the mail
destined to Aleppo began to be sent from Kuwait - or Grane as it was
mentioned in European writings.

Britain was interested in seeing Kuwait remain free from
foreign influence or occupation in order to secure the continuation
of the flow of goods from India, as access to other ports in the
Gulf such as Abu Shahr and Basra was becoming increasingly difficult
or undesirable. The British policy in the Gulf at that time - as
conducted by the Bombay Government and the East India Company - was
that of a neutral power whose only interest was the protection of
its trade routes and access to the region's ports. It had, for the
most part, refrained from taking sides in the struggle for dominance
that followed among the various Gulf entities.

The wealth and trading activities of Kuwait and Zubara became
an incentive for Persia and its Arab allies to gain control of these
Utubi towns. And while the Utub were in a defensive position
initially as Zubara was under attack, their control of Bahrain in
1782 had, in effect, meant that the pearling industry in the Gulf
had now become almost entirely in Utubi hands. As an urban
settlement, Bahrain enjoyed not only a good geographical location,
but had also water resources, and agriculture. The inconclusive struggle between these two sides was to be gradually obscured by the rise of a new and dynamic threat - the Wahhabis who, as they began to conquer the eastern parts of the Arabian Peninsula, became the Utubi settlements' main source of worry.

Kuwait and Early Wahhabi Threats

During the 1780's and 1790's, the Wahhabis under the political and military leadership of Al-Saud, were threatening the various shaikhdoms and states of the Gulf and were dealing the still powerful Bani Khalid of Eastern Arabia one blow after the other. The fact that Bani Khalid were divided among themselves and had thus weakened their hold over the large territories which they ruled - directly or in name only- had rendered the Wahhabis' objective of bringing their domination to an end easier to accomplish.

Kuwait and the other Utubi shaikhdoms had maintained friendly relations with Bani Khalid throughout the second half of the eighteenth century; they continued to be within Bani Khalid's sphere of influence despite their independence. Both Kuwait and Zubara have provided protection and refuge for the rival Bani Khalid factions on a number of occasions during the latter part of the century as the Wahhabi attacks escalated. At that time it became increasingly clear to the Utub that they needed to build up their forces and to fortify their settlements.

The first Wahhabi attack on Kuwait took place in 1793 when the two sides fought outside the town's walls. Further attacks occurred during the following years but without conclusive results since the Wahhabis had to face other adversaries such as the Ottomans and their allies among the Arab tribes in the region. Zubara, however,
became a target for more serious attacks by the Wahhabis as it was a refuge and a centre for those Bani Khalid groups escaping from al-Hasa and plotting against the new Wahhabi rule there. Although Zubara itself was a well-fortified settlement, it was finally decided in 1798 to flee the besieged town and emigrate to Bahrain, leaving it empty and without the riches for which it had been known.  

Kuwait in the 19th Century

Struggle Among the Regional Powers

As the eighteenth century was nearing its end, the Gulf was gradually developing into a region of interrelated parts which were affected by the same events and developments. The Wahhabis' influence was on the rise, as that of Bani Khalid was waning; the Qawasim and Oman/Masqat were also sea-powers which had their impact on events in the Gulf. The two major regional powers of the century, the Ottomans and the Persians, were now weakening and otherwise preoccupied: the latter with the internal unrest and the former with its conflicts with Russia and the challenges presented by France which had occupied Egypt in 1789.

The beginning of the nineteenth century saw Kuwait still under the rule of Abdullah ibn Sabah who had demonstrated his skill in dealing with the various powers in the region. Kuwait, however, in common with the other Utubi settlements in Bahrain and Qatar, continued to face the mounting Wahhabi danger. The strength of the Wahhabis was greatly enhanced following their gaining control of the

12 The Ottomans' presence in the Gulf region, it may be noted, goes back to 1555, when they seized Al-Hasa; Iraq was added to the Empire two decades earlier, in 1534, and Syria in 1516.
Qawasim's Oman al-Sir whose considerable naval power was to complement the Wahhabis' land forces. Masqat also proved to be a danger to Kuwait and other Utubi settlements.

Following the occupation of Bahrain in 1801 by the forces of Masqat, many Bahrainis fled to Kuwait and were followed there by their attackers. Masqat also claimed that Kuwait owed it certain tolls arising from the Kuwaiti fleet's crossing of Hurmuz. The Omanis' actions were motivated by the wealth of both Kuwait and Bahrain; these two communities must have prospered considerably following the interruption of trade in al-Hasa's major ports of Qatif and Uqair as a result of the Wahhabis' attacks. The Masqati occupation of Bahrain was short-lived (Kuwait escaped capture), however; Masqat's forces had to withdraw in 1802 as Oman itself came under attack by the Wahhabis. Kuwait had been able to repulse the Wahhabi and Qawasim attacks due to the strength of its fleet, the size of its fighting force (5,000-7,000 men by 1800) and in view of the fact that Bani Khalid were still relatively strong.

By the turn of the century, the combined power of the Wahhabis and Qawasim was formidable. At the same time, Britain was emerging as the main power in the region and one which looked upon its ports as outposts of its Indian Empire. Bonaparte's occupation of Egypt was one more threat to its trade routes and a potential threat to India itself. Britain then became determined to achieve a position of unparalleled influence in the Gulf while also isolating the other European powers.

In 1806 and during the following years Britain, through the Bombay Government, saw fit to dispatch armed expeditions to the Gulf against those accused of piracy - mainly the Qawasim of Ras al-Khaimah. While what few instances of British military
involvement during the latter part of the preceding century were normally carried out in cooperation with local allies, Britain was now acting as a power intent on asserting its dominance.

As the threat to Kuwait from the Wahhabi/Qasimi forces began to intensify, and as Britain's involvement in the Gulf grew, Shaikh Abdullah ibn Sabah's interest in a stronger relationship with Britain increased. In 1808, Saud ibn Abdulaziz, the Wahhabi chief, attacked Kuwait after its refusal to pay him a tribute. The attacks failed and his efforts to enlist the support of the Qawasim and Oman for further activities against Kuwait were unsuccessful. As a gesture of friendship to Britain, and to weaken its adversaries to the south, Kuwait offered its assistance (ships and pilots) to Britain when it was preparing an attack on the Qawasim, an offer which Britain did not accept.

By 1815 and even earlier, reports from the Gulf were accusing the Qawasim of piracy. Britain began to take specific actions against their stronghold of Ras al-Khaimah. Britain's efforts to fight piracy in the Gulf, however, seemed to have been primarily aimed at those who attacked British vessels and when such reprisals did not antagonize powers which Britain did not wish to offend. A recent study has challenged the piracy argument and its claims as justification for Britain's domination of the Gulf during the nineteenth century. Indecisive British campaigns against Qasimi territories resulted in ineffective treaties. Finally, in 1820,

13 See Sultan M. Al-Qasimi, The Myth of Arab Piracy in the Gulf (London: 1986). In a recent interview Shaikh Sultan has reiterated his belief - based on his research into the records of the East India Company - that "our sailors were not pirates - they were only defending their native waters." See Thomas J. Abercombie, "The Persian Gulf - Living in Harm's Way," National Geographic, Vol. 173, No.5 (May 1988), 670.
following a devastating attack on Ras al-Khaimah, a General Treaty of Peace was concluded between Britain and the rulers of this shaikhdom, as well as those of Abu Dhabi, Dubai, Sharjah and Bahrain. 14

Beginning about 1810, the Wahhabi power went into decline and the Utub of Bahrain and Kuwait dealt them a serious blow. Bahrain was recaptured from the Wahhabis by Al-Khalifa, who were joined later by Kuwait in a decisive sea-battle against Rahma ibn Jabir (chief of Al-Jalahima of Dammam and a notorious pirate) and other allies of the Wahhabis as they were staging an attack on Bahrain. In 1815, both Saud ibn Abdulaziz and Abdullah ibn Sabah died - within days of one another. By 1818, the Egyptians had effectively destroyed the Wahhabis as a power in Arabia and Bani Khalid re-emerged on the political scene as the new local rulers of Eastern Arabia.

Following the decline of the Wahhabis, which was to last at least until the end of the fourth decade of the century and the Egyptian withdrawal from al-Hasa, the Ottomans emerged as the second major power in the region. Both powers (the first being Britain) were interested in developing friendly relations with Kuwait, now ruled by Shaikh Jabir who had succeeded his father, Abdullah ibn Sabah, in 1815. Jabir and his son Sabah after him, ruled for about half a century, during a period in the state's development which was generally less eventful than that of their predecessor's rule.

Since Kuwait has never been linked to piracy in the reports of the East India Company and others, there seems to have been little

14 The first political agreement between Britain and a Gulf state was concluded in 1789 - a treaty with Masqat.
mention of its affairs in British documents of the period. Also, while Kuwait was not a signatory to the 1820 General Treaty of Peace, it was again chosen, in 1821, as a temporary refuge for the British factors. The British Resident in Baghdad and his Basra representative became involved in a dispute between the Ottoman Governor in Baghdad and a newly-appointed successor. As the nineteenth century progressed, Kuwait seemed to have had both a measure of economic viability and the military power to protect its independence from the various powers competing for dominance in the region.

A third power, Egypt under Muhammad Ali, was also to appear on the scene in Arabia during the first half of the nineteenth century. Between 1811 and 1840, the Egyptian/Ottoman armies occupied the Wahhabi areas in the western and eastern parts of the Peninsula. The presence of the Egyptian forces on both the Red Sea and the Gulf was a matter of concern for Britain which considered such presence a threat to its interests in the Gulf and in India. While the Egyptian forces withdrew from much of the Arabian Peninsula in 1840, the effects of the struggle among the powers on the growth of Kuwait and the other shaikhdoms were to be felt for years to follow.

Britain, in the meantime, continued to safeguard and consolidate its position in the Gulf by concluding further maritime agreements with the states of the region. The last of these treaties was signed in 1861 by the rulers of the Trucial Coast, Bahrain, and Masqat - but not Kuwait. The latter was aware of its position on Iraq's southern borders and may have feared the Ottoman's reaction to closer ties with Britain at that time.

Sabah ibn Jabir died in 1866 and was succeeded by his son, Abdullah ibn Sabah, known also as Abdullah the Second. The second
half of the century was generally a period of increasing regional instability. By 1871, the rivalry for control within Al-Saud family led to the return of the actual Ottoman rule to Najd and al-Hasa—as opposed to nominal sovereignty. Kuwait had helped the Ottomans in their expedition in al-Hasa by offering vessels and the use of its harbour. In 1874, however, the Ottoman rule in al-Hasa was again replaced by that of Bani Khalid, governing on their behalf.

Abdullah the Second's rule ended with his death in 1892 and was succeeded by his brother Muhammad ibn Sabah, whose rule lasted for four years. Shaikh Muhammad shared his responsibilities with his two brothers: Jarrah and Mubarak. The former was entrusted with the financial affairs of the shaikhdom while the latter was placed in charge of the tribal forces located outside the town walls. This division of power among the three brothers has resulted in discord and disagreements, and a struggle for control became inevitable.

Kuwait's policy of neutrality among the Gulf powers continued under Shaikh Muhammad, as had its regional trade and commercial activities. As the nineteenth century was drawing to a close, much of the Arabian Peninsula was ruled by autonomous chiefs who only nominally acknowledged the authority of the Ottoman Sultan. In the Gulf region, most states have been parties to agreements with Britain even as their territories were still not clearly defined. As for Kuwait, it was only in 1899 that it entered into its first treaty with Britain, as will be discussed below.

Mubarak ibn Sabah and the European Powers

The differences between Mubarak and his brothers continued and the former was now determined to take control of the shaikhdom. He was aware of his limited resources and that his marginal functions
among the badu outside the city carried little influence in the state's affairs. He was also suspicious that Yusuf Ibn Abdullah al-Ibrahim, a wealthy and influential merchant, from Basra by origin and related to his two rival brothers by marriage, was conspiring with the Governor of Basra in order to become himself the ruler of Kuwait. Finally, in June 1896, Mubarak made his move - a 'palace coup' which resulted in the elimination of Muhammed and Jarrah. Al-Ibrahim's efforts to regain power in Kuwait for the sons of the two slain brothers were not successful. Mubarak's rule continued until his death in 1915.

The ascension of Shaikh Mubarak to power in the final years of the nineteenth century was an event of vital significance for Kuwait's development; it ushered in a period of considerable changes - political and economic. Kuwait's local historians have called him 'al Kabeer' - 'the Great', and have considered him the founder of modern Kuwait; and there is little doubt that his policies and regional ambitions gave him a position of influence among his contemporary rulers in the Gulf and Eastern Arabia.

The European powers at that time were intent on dividing the possessions of the Ottoman Empire (Europe's 'sick man') among themselves, a goal which was finally accomplished following World War I. During the final years of the nineteenth century, Britain was no longer alone in pursuing its interests in the Gulf; two other European powers, Russia and Germany, had plans of their own for influence in the region, each involving a railroad which would terminate in the northern Gulf. Britain had actually considered the possibility of a railway between the Mediterranean and the Gulf at an earlier date, following the opening of the Suez Canal in 1869. It was to have been an alternative trade route to India and to the Gulf region in times of trouble. The idea, however, was abandoned.
The first of these two European powers, Russia, has had long-standing hopes of extending its influence to the warm waters of the Gulf and the Mediterranean. In December 1898, the Ottoman Government granted Russia the concession to build a railway starting at Tripoli on the Syrian coast and terminating in Kuwait via Baghdad. The other European power, Germany, which had friendly relations with the Ottomans, was also eager to have a foothold in the Levant and Gulf regions in order to open new markets for its exports. The plan was to extend the existing Berlin-Istanbul railway through Asia Minor to Baghdad and Basra (Kuwait was later recommended as the terminus). The Ottoman Government gave its approval to the German plan in November, 1899.

Britain was strongly against the Russian scheme but saw some merit in its German counterpart, to the extent that its execution would prevent Russia from gaining influence in Syria, Iraq and Eastern Arabia. Consequently, Britain became interested in concluding with Kuwait an exclusive treaty generally similar to the other treaties it had with the various Gulf shaikhdoms and states.

Mubarak had his own reasons for recognizing the advantages of a treaty with Britain. In the short term, he became aware of the Ottomans' renewed interest in Kuwait, through their Basra Governor. Istanbul did not approve of Mubarak's coup against his brothers and had accused Britain's Resident in Abu Shahr of complicity. On the other hand, Mubarak seemed to have also been aware of the impending disintegration of the Ottoman Empire in the not-so-distant future and began to realize that the long-term danger to Kuwait would come from the increasingly independent states of the region. It soon became his objective to find a strong ally who would help him
preserve Kuwait's independence and provide protection from potential regional adversaries. Britain, with its considerable influence and interests in the Gulf seemed a logical partner.

The Exclusive Treaty of 1899, as the agreement between Kuwait and Mubarak came to be known, was typical of the kind of treaties Britain aimed at concluding during that period. These were agreements which excluded other powers from the Gulf at a time when certain European nations were beginning to gain a foothold in the region. The treaty required Kuwait not to sell or lease any part of its territory to any foreign power without the prior approval of the British Government. Mubarak, however, demanded that a clause in the Treaty should explicitly commit Britain to Kuwait's defence when under attack. The British Resident in the Gulf, who was in no position to add such a clause, finally agreed to write a letter to Shaikh Mubarak in which the British Government guaranteed such protection as long as Kuwait continued to abide by the agreement.

For Britain, it was essential that Russia be kept out of the Gulf; consequently, Kuwait was able to obtain the security it had required. The Exclusive Treaty was signed in November 1899 just as the German railway plan was being approved and less than a year after the granting of the Russian rail concession. However, the rivalry among the European powers and Mubarak's determination to honour the terms of Kuwait's agreement with Britain were among the factors which prevented the execution of the two projects.

Kuwait in the 20th Century

Kuwait and Great Britain

The beginning of the twentieth century saw Shaikh Mubarak continue his efforts to safeguard Kuwait's independence, to
strengthen its position in the region and to modernize the city state. He continued to foster his ties with Britain and a series of agreements followed the 1899 Treaty.

These agreements included one negotiated in 1900 to bring to an end the thriving arms trade with Afghanistan and other areas in Asia, an activity in which a number of Gulf ports were involved. In 1904, two agreements were arrived at between Kuwait and Britain: the first dealt with the establishment of a postal service in Kuwait and the second gave Mubarak's approval to the appointment of a British Political Agent who would reside in Kuwait. The first British envoy to Kuwait arrived later that year.

Other agreements between the two parties continued. An agreement was signed in 1911 according to which Kuwait was not to allow foreign vessels to dive for pearls and sponges in its territorial waters before consultation with the British Resident. An agreement regarding the establishment of telegraphic service was concluded in the same year. Two years later an agreement/understanding which was to have a direct and decisive impact on the state's development and future, came into being. This was to confirm previous discussions regarding oil exploration and production in Kuwait and designating such activities, in effect, as a monopoly of Britain.

In concluding these various agreements with Kuwait, Britain seemed to have had two related objectives. First, to curtail Mubarak's activities in the region - his relations with the Al-Rashid of Jabal Shammar and northern Najd, for example - and to reduce potential tensions on Kuwait's northern borders with Iraq. The second objective was to keep Mubarak so occupied and engrossed
in these matters that he could not establish any relations with foreign powers other than the British."^15

While Britain's benefits as a result of these agreements with Kuwait were more clear-cut and less ambiguous, Kuwait's gains could only have been mixed with certain disadvantages. The latter part and especially the concluding years of the nineteenth century saw the European powers compete on a large geographical scale, as was pointed out earlier, and Kuwait felt that it needed a dependable ally from among these powers. There was also its fear of the aggressive designs by the regional powers such as the Ottoman Governors in Iraq and Al-Rashid and Al-Saud in Najd and al-Hasa. Later, at a time when the two main European powers were dividing the Ottomans' territories in the Arab east into mandates, Kuwait's northern borders with Iraq were guaranteed by Britain.

The agreements with Britain, however, were a factor in Mubarak's inability to realize his ambitions in the region. For shortly after he became Kuwait's ruler, and in view of the decline of the Saudi power, he aimed at extending his domains to al-Hasa and Najd. He was, instead, restricted in regard to his relations with his neighbours and in matters related to borders definition. Kuwait's inability to deal directly with the question of its borders on its own was to cost her dearly - as will be discussed below - when it had to give up a substantial part of its territory bordering on al-Hasa in the south to Abdulaziz Al-Saud. Ibn Saud, ironically, was helped earlier by Mubarak in re-establishing his family's rule in Najd.

---

Mubarak died in 1915 and his eldest son Jabir became the new ruler. Shaikh Jabir's rule lasted slightly over a year and he was succeeded upon his death by his brother Salim. At that time, during World War I, Kuwait was experiencing an expansion in commercial activities, particularly with Iraq and Syria even as there was a British blockade of the Ottomans due to the on-going Great War. Shaikh Salim, being a devout Muslim, was sympathetic to the Ottoman cause, and along with some other rulers in Arabia, had difficulty taking a stand against the Sultan.

The continuation of trade in arms and goods with Iraq and Syria (and indirectly, the Ottomans) prompted Britain to finally declare that it would not defend Kuwait in the event of an attack unless it modified its attitude towards the Ottomans. As Britain's efforts to control the lucrative arms trade failed, Kuwait and other Gulf ports involved in supplying arms and goods to both sides of the War had finally to face embargoes imposed by the Royal Navy, with its effects on trade and prosperity.

Kuwait and Abdulaziz Al-Saud

Kuwait's position involving its security and prosperity became complicated further by the threat posed by Abdulaziz Al-Saud, who was not on friendly terms with Salim and whose attack on Kuwait was expected. The Saudi chief was consolidating his rule in Najd and al-Hasa and had finally succeeded in ending the Ikhwan's challenge to his leadership and was using them to dominate other parts of the region. That had naturally included Kuwait, with its thriving trade upon which Najd itself was dependent.

Finally, in 1920, an event took place which put to the test the Kuwaiti-British Exclusive Treaty of 1899 and demonstrated
Abdulaziz's hostile intentions. This was the siege of al-Jahra by the Ikhwan/Saudi forces. Earlier that year, an incident near Kuwait's then southern border and Jabal Manifa, in which Kuwaiti forces encamped in that area were attacked by the Ikhwan and sustained heavy losses, left little doubt in Salim's mind as to the looming Saudi danger. Abdulaziz, it should be noted, was unhappy about a treaty which was negotiated in 1913 between Britain and the Ottoman Government and which established the borders of Iraq, Kuwait and Najd. Kuwait's southern frontier as defined then extended some 160 miles south of the present Kuwait-Saudi Arabian border.

Anticipating the Ikhwan's attack, Salim embarked on building a wall around Kuwait Town as an emergency defence measure. Its construction was a communal effort and it was completed in less than three months. The Kuwaiti forces, however, had decided not to wait for the attacking Ikhwan at the town walls but to proceed to al-Jahra to the north which had a strong fort. Salim's forces lost heavily outside al-Jahra and retreated to the Red Fort in an attempt to exhaust their enemy and to delay the assault on Kuwait Town. Finally, the Ikhwan had to withdraw after Britain clearly demonstrated its willingness to interfere on behalf of Kuwait.

The territorial dispute over boundaries in the region continued, with Britain anxious to reach a settlement which would result in internationally recognised borders between Iraq, Najd and Kuwait. For Britain, this had become an important issue as it directly affected oil exploration plans for the region. Finally, in December 1922, the Uqair (a port in al-Hasa) Conference was convened to resolve the borders conflict. This Conference followed an inconclusive meeting earlier in the same year in Muhammara (on the Persian southern border with Iraq) which defined the Iraq-Najd
borders and adopted the Kuwait-Najd borders of 1913. Abdulaziz, who initially accepted the Muhammara accord, later rejected it, thus prompting the British High Commissioner in Iraq, Sir Percy Cox, to arrange for the Uqair Conference.

The outcome of the Uqair Conference seemed to have been consistent with Britain's policy in the region. Britain was in favour of the emergence of a strong regional Arab power which would become a reliable ally. Kuwait's loss to the Sultanate of Najd was substantial - about two-thirds of its territory as defined in previous agreements - and became a source of continued bitterness for Shaikh Ahmad al-Jabir who felt his helplessness to affect any changes. Responding to Ibn Saud, who felt that the new boundaries gave Iraq territory claimed by Najd, Sir Percy Cox had this to say: "My friend, I know how you feel, and for this reason I gave you two-thirds of Kuwait's territory. I do not know how Ibn Sabah will take the blow."16

Britain also hoped that the agreement would put an end to the tribal raids throughout the region. The new borders delineated two neutral zones: one between Kuwait and the Saudi side in the south and another between the latter and Iraq. These neutral zones were to satisfy the needs of nomadic tribes for access to grazing areas in a region which was a geographical and environmental system where borders were a novelty.

While the Uqair agreement was clearly favourable to Najd/al-Hasa at Kuwait's expense, it did not mean the end of the troubles between the two neighbours. An economic war against Kuwait was initiated by Abdulaziz soon afterwards which lasted fourteen

16 Dickson, op cit., p.275.
years. The main reason behind the new differences was Abdulaziz's demand that Kuwait collect taxes from the Najd badu who would frequent its markets each year to buy their needs such as food and clothing, returning the following year to pay in sheep and camels. These transactions, claimed Najd, deprived its treasury of considerable income. When Shaikh Ahmad refused to comply, the Najdis were no longer permitted to buy in Kuwait and the latter's merchants had to face a period economic hardships.

This problem could have only resulted from the arbitrary (as opposed to tribal) boundaries created by the Uqair Conference. The time-honoured practices of the badu who bought their needs in Kuwait and Iraq were simply not going to change abruptly because of the new borders or because Ibn Saud felt that these were not friendly neighbours. The Ikhwan rebellion of 1929-30 and his concern about supplies reaching them was another reason for tightening his blockade against Kuwait.17

Internal Unrest and the New Era

Adding to Kuwait's economic woes of the time, Japan had produced the cultured pearl industry, a development which severely affected the economy and welfare of Kuwait and her neighbours where diving for natural pearls had been a major source of income. Furthermore, there was the world-wide depression of the 1930's with its universally-felt effects.

As a result of all these developments, internal unrest began to surface. The government was perceived as having failed to face the deteriorating conditions, and demands were made by the merchants and

17 Ibid., pp. 276-277.
others for the election of officials who would participate with the Amir in the management of the state's affairs. This came to be known as Harakat al-Majlis - the Council Movement. Shaikh Ahmad initially refused to comply with these demands but finally a Legislative Council was formed in June 1938 as an advisory body to the Ruler. The Council, however, was dissolved six months later. A second Council was formed in March 1939 which was headed by Shaikh Abdullah al-Salim and had a mixed membership: four from the ruling family and nine notable citizens. The new Council did not have a much better chance to tackle Kuwait's problems and it was dissolved amid speculations that the political unrest was instigated by Iraq, the shaikhdom's northern neighbour.

Kuwait's bad economic conditions were to continue until the mid 1940's. In June 1946, an event took place which was to signal the beginning of an era and a process of profound transformation and change. This was the exportation of the first shipment of oil from Kuwait, eight years after it had been discovered in commercial quantities and following the postponement of production until the end of World War II.

Shaikh Ahmad was succeeded in 1950 by his cousin Abdullah al-Salim, during whose rule Kuwait entered its modern era in earnest. In June 1961, Kuwait became an independent state and shortly afterwards joined the League of Arab States and the United Nations. In 1963, the first National Assembly was elected. Kuwait's era of modernisation and rapid change continued under the leadership of Shaikh Abdullah's brother Shaikh Sabah al-Salim (1965-1977). Today, during increasingly challenging and changing times, Kuwait is led by the thirteenth Al-Sabah ruler, Shaikh Jabir al-Ahmad.
Historical Footnotes

As indicated earlier in the present discussion, the urban settlement which developed to form along with the surrounding territory today's State of Kuwait, came into being about three hundred years ago. The hinterland, the islands and the region in general, however, have had a history which although intermittent and lacking in continuity, warrants to be of interest for students of the Gulf.

The Gulf itself was the scene of some early voyages in the pre-Christian era as a waterway linking Mesopotamia with the Indus Valley. It was, in effect, a part of one of the world's ancient great trade routes. Some of its islands, Bahrain in particular, but also Kuwait's Failaka Island as well as Kharij and Hurmuz were known during the early days of seaborn commerce. The area's pre-Islamic and Arab/Islamic history prior to the establishment of the early settlement of Kut or its predecessor on the site generally occupied by the old town of Kuwait lacks the certainty of sustained development although a few references can be made.

Kuwait in Antiquity

Kuwait's connection with the ancient world seems to extend to two different ages and civilizations. Archaeological discoveries of recent decades have established that the Island of Failaka near the mouth of the Bay of Kuwait was known in antiquity as a settlement and a post with connections to the early trade routes between east and west - between the Greek/Mediterranean world and Arabia and the Indus Valley. It was also - archaeological evidence seems to suggest - in contemporary development and association with the

ancient Dilmun-Bahrain, a civilization which dated to the Old Bronze Age of about 2800 B.C. This was the period of Gilgamish and the epic which tells how the survivor of the Flood went to Dilmun and found immortality there. Dilmun dominated trade routes between Mesopotamia and the cities of the Indus Valley and later became part of the Assyrian Empire about 600 B.C.¹⁹

The interest in Failaka and its ancient history grew in the late 1940's with the discovery of a stone which had Greek inscriptions. In 1958, the first serious effort began to unearth whatever evidence could be found in Failaka to investigate the Island's (and region's) links with antiquity. This effort was undertaken by the Danish archaeological team which was at that time in Bahrain investigating its ties with Dilmun. Among the discoveries which followed were the ruins of a Greek temple of the third century B.C., red brick pieces similar to those found in Mesopotamia, and glazed Greek pottery of a kind unearthed in Bahrain.

The temple's era was suggested by inscriptions on a stele found outside the temple concerning the temple's foundation and referring to a message from the second ruler of the Seleucid Empire to the inhabitants of the Island. The year would have been about 239 B.C. The island itself was identified as Ikaros, as it was known to the Greeks and mentioned by Arrian, a historian and chronicler of Alexander the Great's campaigns to India. The Seleucid Empire followed in the wake of Alexander's death and included a vast area extending from the Mediterranean through northern Arabia and Persia.

to the Indian subcontinent. Failaka seemed to have been wooded and had sweet water wells. It was an outpost where the Greek troops established a community and was visited in 325 B.C. by Nearchus, an admiral of Alexander.

The same site included a workshop and a kiln used to produce terracotta figurines and more than a dozen coins. The discovery of the coins bearing Alexander's mark mail (although they were minted after his death - a common practice in many outposts of the Greek Empire) seems to indicate that Failaka was on the trading route from southern Arabia to the Mediterranean.

The Danish team's work on Failaka revealed a small number of bronze-age dwellings, suggesting a settlement dating back more than three thousand years and related to the findings on Bahrain. These dwellings were probably Sumerian in origin; the Sumerian civilization had spread from the southern parts of Babylonia to the Gulf and formed links with the civilizations of the Indus Valley. The Bahrain excavations were more impressive and more conclusive but those of Failaka seemed to suggest a relationship and to conform with what have become known about early Gulf settlements.

In Bahrain, where several levels of culture have been identified through excavations, there has been much evidence to suggest that it indeed was the Dilmun referred to often in the clay tablets of Mesopotamia. One bronze age temple had copper and alabaster objects dating back to 2500 B.C. which were similar to those found in Ur of southern Mesopotamia, and one level of excavations revealed a culture contemporary of Sargon of Akkad - about 2250 B.C. In Failaka, a number of seals and potsherds located in a mound were identical with those found in Bahrain; they are connected to the various cultures which flourished there in
antiquity and indicate cultural and trade links with Dilmun and the civilizations of the Tigris and Euphrates.

Of the history of Failaka and the mainland during the period between the end of the Bronze Age and the time when it became a Greek outpost, little seems to be known. The Greek colony has in turn disappeared following the Roman conquest of the region.

Pre-Islamic and Arab/Islamic References

In pre-Islamic times, only a few large urban settlements flourished on the coast of the Gulf beside such ports as Abu Shahr, Bahrain and Al-Qatif. In the area within Kuwait's present territory, near the northern tip of the Bay of Kuwait was the old settlement of Kazima (Kathima). Excavations in this area suggest that this was an early community which had remained a thriving trading centre and military post for centuries.20

Kazima has also been often mentioned by Arab historians as a strategic post for the Muslim armies. It is known to have been the site of one of the most important battles during Islam's early conquests - the 'Battle of the Chains' which the Arabs fought against the Persians in 634 A.D. Its importance as a settlement, however, began to diminish in the following century and little reference can be found to the area between that time and the founding of Kut, Kuwait's predecessor.

As trade developed between the Islamic world of the eighth century, represented by the Abbasid Caliphate, and the Orient, China and India, much of the trade followed the Persian shores of the Gulf where large coastal settlements and ports belonging mostly to Arab

20 Ffrench and Hill, op cit.
groups originating in the other side of the Gulf had thrived. The mariners of the Arab side probably shared in the new trading prosperity to some extent - Bahrain in particular. This island became incorporated within the Islamic Empire since the rise of Islam, first as a part of Iraq and later, under the Abbasids, formed along with Oman a separate province.21

Finally, historian Abu-Hakima relates that an elevated site in the south of Kuwait may have been the 'Mountain of Wara' mentioned in the history of the pre-Islamic wars between the major Arab tribes/kingdoms. Wara was mentioned by several famous pre-Islamic poets such as Zuhair and Al-'Asha as it was thought to have been the site on which Al-Harith, King of Kinda (an Arab Kingdom of Najd, astern and Northern Arabia which flourished from the mid-fifth century to about 540) lost a decisive battle to Al-Munther. The latter ruled one of the main Arab kingdoms - the Manathirah - centred in al-Hira in Iraq. This battle brought to an end Al-Harith's attempts (he also fought the Ghasasinah of Syria) to create a unified Arab kingdom encompassing most of the pre-Islamic Arabian Peninsula. Both Kingdoms were later to fall with the rise of Islam.22

21 Ibid.
CHAPTER II

PHYSICAL SETTING AND ENVIRONMENT

Physical setting and environment have a considerable impact on a region's inhabitants and on its development. Elements such as aridity and water scarcity, the morphology of its coast and hinterland, its natural resources and its location in the middle of world trade routes connecting east and west are all characteristics of the Gulf region. They have contributed much to shaping the area and its life patterns and relations with the outside world for many centuries. In recent decades, a newly-discovered natural resource - hydrocarbons - resulted in changes which have affected all aspects of life for the communities of this strategically important part of the world.

This survey will concentrate on three basic aspects of Kuwait's physical environment: its location, topography and climate. Reference will also be made to the types of water sources available, while oil as a natural resource will be dealt with elsewhere in this study.

Location

The State of Kuwait is located between latitudes 28°45' and 30°5' North of the Equator, and longitudes 46°30' and 48°30' East of the Greenwich meridian. It comprises an area of about 17,820 sq. km. (less than 7000 sq. ml.), of which about 1000 sq. km. represent the offshore islands, with a terrain which is flat desert for the most part. It is situated in the north-western corner of the Gulf and has a natural harbour, the Bay of Kuwait, which has had a great impact on its development.
Kuwait is bounded from the east by the Gulf, from the south and west by Saudi Arabia and from the north by Iraq. A neutral zone (an area of about 5700 sq. km.) between the state and Saudi Arabia in the south was partitioned in 1966 and the two countries have since shared the revenues from its hydrocarbon resources. Kuwait has about 490 km. of frontier with its two neighbours - Iraq and Saudi Arabia.

The Bay of Kuwait extends about 40 km. to the west and was until the discovery of oil the state's primary natural asset. Good natural harbours are not common along the west coast of the Gulf between Basra and Dubai. The Bay of Kuwait, however, although generally shallow and has a tendency to silt up (as it is actually a fossil river estuary), was sufficiently deep and had the facilities needed for the vessels involved in Kuwait's seafaring activities. The Gulf has a mean depth of only 25 m. and an area of 240,000 sq. km.1

Finally, Kuwait has several islands dispersed along its coast from north to south. Failaka remains populated whereas the others are barren and inhospitable. The largest of these islands, Bubiyan in the north-east was connected a few years ago with the mainland by a bridge. The country has about 500 km. of coastline.

Topography

Except for the oasis/village of Jahra, which lies to the north-west of Kuwait City, the state is largely a desert with only a

---

1 For a general overview of Kuwait's environment and topography, see Ffrench and Hill, op. cit., pp.6-9; M.R. Al-Feel, The Historical Geography of Kuwait (Kuwait : 1972, in Arabic), Chs. 1 and 2; and Dickson, op. cit. Ch.1. For more in depth treatment see Lorimer, op. cit., and W.B. Fisher, The Middle East (London : 1978).
few somewhat fertile pockets of land in the south-east and coastal areas. Kuwait's terrain is remarkably uniform, sloping gently from south-west to north-east, its surface lacking relief in general and occasionally broken by low hills and shallow depressions. The land reaches elevations of 900 ft. or more above sea level, as in the south-west corner of the state (see Figure 3).

As the terrain gradually descends eastwards, the eastern third of the state - which includes almost all its settled areas - has elevations of less than 500 ft. The western uplands are gently undulating gravel plains with occasional sand knolls collected around desert brushwood and salty marsh known as 'hamdh'. While evidence of fluvial erosion is common in this area, the most striking feature of these gravel plains is Wadi al-Batin, along Kuwait's western frontier. This wadi is 8-10 km. wide on average and has a relief of up to more than 200 ft. Throughout the northern, western and central parts of the state, there are desert basins which fill with water after rains and are frequented by the badu with their camel herds.

Apart from the Bay of Kuwait and the Gulf shores, two notable physical features of the state's terrain can be distinguished. First, there is the Jal al-Zor escarpment which runs along the north-west shore of the Bay in an area about 80 km. long and reaches elevations of about 475 ft. above sea level. At Mutla', near the south-west corner of the Bay, limestone formations from the lower to middle Miocene age stand out as a jagged ridge.

The second major topographic feature is the Ahmadi ridge on which is located the company-town of Ahmadi, founded as the oil industry began to develop in the late 1940's. The ridge, which runs parallel to the east coast, is about 8 km. inland, and rises to over 300 ft. above sea level. The ridge has given Ahmadi a pleasant
site and has a slight cooling effect on the town; it also has an optimal elevation for the gravity-fed storage tanks supplying the tankers terminal at Mina al-Ahmadi. Relatively large hills in the southern part of the state such as Wara and Burgan provide other physical features which break the otherwise monotonously level terrain.

Climate

Kuwait has a semitropical climate which is tempered slightly along the coastal areas. This climate has permitted only limited vegetation cover and is regarded as one of the main factors - especially prior to the present era of change - which have strongly affected life styles and activities in Kuwait and other Gulf urban settlements.

Major Climatic Influences

Kuwait and much of the Gulf fall roughly within a region - the Middle East - where no single climatic regime seems to prevail and which can be regarded as a transitional zone between equatorial and mid-latitude climates. Subtropical latitudes are characterised by the prevalence of aridities, with a marked precipitation minimum, over water and continents, centred on 30 degrees of latitude. The dry aridity of the northern Gulf, which is also known throughout much of North Africa, Arabia and Iran, is much harsher than the semi-arid climates of the Levant. Near the 30th parallel, it is also known that a well-developed high pressure zone forms which separates the tropical easterlies from the circum-polar westerlies.2

2. See P. Beaumont, G.H. Blake and J.M. Wagstaff, The Middle East (London: 1976), Ch. 2. See also W.B. Fisher, op.cit., Ch. 3; and Ffrench and Hill, op.cit., Ch. II.
During the summer months (June to September) a strongly developed wind system affects southern Asia and much of the Middle East, with a low pressure zone extending over the Gulf towards Iraq and Syria. This wind system is caused by the monsoonal low-pressure area of the Indian subcontinent which results from the intense heating of the southern part of Asia. The main result of these pressure conditions is that air is drawn from the north and east southwards over much of the Middle East.

As the air related to the lower-level monsoonal system of India moves north of the subcontinent, crossing a series of mountains, it undergoes an adiabatic warming on descent over Iran. And while such air is dry, it is capable of absorbing moisture if it follows a sea track. This becomes particularly the case in the lower layers where the air blows from sea and land, as in the eastern Mediterranean, the Red Sea and the Gulf. Humidities can become extremely high, but hardly any rain falls, and combine with high temperatures to make summer months in the Gulf an unpleasant season.

During winter a belt of strong westerlies known as the Subtropical Jet Stream becomes well established over the entire Middle East, at higher velocity and with its core over the southern Mediterranean coast and the northern part of the Gulf. This creates conditions especially favourable for the elaboration of small low pressure zones (depressions) to form in the lower atmosphere. One of the routes taken by these depressions - which tend to follow a sea track - lies in the south of the Mediterranean basin. An uninterrupted sea track in this case brings rain to the Levant coastlands, and depressions often reach the Gulf.

The position of the Subtropical Jet Stream's core, or line of maximum velocity, varies from summer to winter, especially over the
eastern part of the region. Thus, while its core in July lies over the Caspian Sea, it moves by January southwards along the northern part of the Gulf. The Jet Stream's movement between the two positions have been observed to be abrupt; it maintains its winter position for approximately six months - between October and April - before shifting to its summer position for three to four months from June to the end of September. And while the reasons for the rapid change of the Jet Stream core position are not known with certainty, it appears to be related to atmospheric conditions generated by the existence of the high mountain belt of the Himalayas.  

Kuwait's Two Main Seasons

Climatological data for Kuwait suggest two recognisable seasons: a long dry summer and a short winter, with intervening periods of climatic transition which are mildly warm and sunny (Appendix - Table A1).

During the summer season, between May and September, mean monthly temperatures exceed 30°C, while average night minima exceed 24°, average day-time maxima rise to over 35° and maximum temperature may approach 50°.

Relative humidity during this hot season drops often below 50 per cent, with the resulting dryness of the air facilitating body cooling. This aspect of Kuwait's weather distinguishes it from other Gulf parts such as Bahrain or Masqat, where high temperatures in summer are accompanied by high humidities.

While rain is unknown in summer, winds caused for the most part by the differential heating of the region's land and water masses,

can be relatively strong. Winds in both summer and winter can reach speeds of 20 knots or more and cause sandstorms which may last for several days. In August, more than 30 per cent of the winds exceed 11 knots, with 26 per cent in January.

The prevailing winds in Kuwait (Figure 4 and Appendix - Figure A1) are generally stable; they cover most of the country at all seasons and blow from the north-west. Strong south-easterly winds occasionally occur during summer, bringing with them the humidity known to the coastal areas further south.

As can be expected, water evaporation during the summer is high, reaching 18.6 mm/day in June and falling gradually to 3.1 mm in January, with an annual mean of 9.9 mm. As a body of water, the Gulf's moderating effect on summer temperatures is limited. This is due to the shallowness of its waters whose temperature rises to 30°C or higher during that season.

Two very short intervals separate summer and winter in Kuwait, periods of pleasant warm weather during which the annual bird migrations following the Caspian-East African route takes place. The drop in temperature from October onwards and the rise which occurs in May are equally sudden.

Winter in Kuwait is far less predictable as climate, and is a season of changeable weather compared with the monotony and very low variability of summer. The movement of frontal disturbances through the Gulf accounts for much of the day to day variations in temperature, visibility and cloud cover. Average annual rainfall has a wide range - from less than 30 mm to about 300 mm - and falls mostly between October and April, while sudden cloud bursts can unload more than 50 mm in a single day.
Temperature in winter can fall to the freezing point and frost may occasionally form, particularly in the interior. Furthermore, the cold northerly wind 'shamals' can last for several days when they occur and are often accompanied by fine dust suspended in the air and creating a health hazard, obscuring visibility and causing disruption of communications.

Needless to say, the low rainfall amounts, their unpredictability and their large seasonal and areal variability, combined with high potential evapotranspiration rates, cannot be expected to provide an adequate base for agricultural activities. Kuwait, however, has limited natural water resources, in addition to the fresh water produced in increasing amounts by a number of distillation plants. Efforts through research and the use of modern irrigation techniques such as hydroponics continue, and a limited agricultural base has been developing in recent years.

Finally, owing to the extreme nature of Kuwait's climate, and the fact that very limited means were available in the past to soften its impact on the old town and its inhabitants, it would be in order to include, in this work, a reference to certain features and elements which reflect both common sense and an appropriate response to climate on the part of the builders of traditional Kuwait. As a meteorological factor, a specific climate presents a challenge to the inhabitants of a given area in terms not only of life styles but also of adaption of their living conditions and the creation of a habitat which meets certain requirements - in this case, those of a harsh physical environment. Such a discussion will be made in Ch. X.
Water Resources

There are four sources of water in Kuwait. \(^4\) First, there exist several shallow groups of wells in the country's eastern parts. This water accumulates as a result of percolation in hollows during periods of rain. This has been a traditional water source for the badu in such locations as Jahra, Sabahiyah and others. This kind of water, however, becomes saline in late summer and almost undrinkable.

A second ground water source in Kuwait is that occurring in the Dibdibba formations (Figure 3) at depths of about 30 m. This fossil water was first discovered in 1960 at Raudhatain near the Iraqi border in the north. At that time, this reservoir of fresh water was estimated to contain no less than 100 billion gallons. Its water has in recent years been produced commercially for the local market.

A third natural source of water in Kuwait is that to be found in the Dammam limestone which outcrops at Ahmadi and to the north-east. The proportion of total dissolved salt, however, rises quickly from 500 parts per million in the south-west to over 1,000 ppm. nearer Kuwait Town and its suburbs, thus limiting its usefulness and utilisation in the past.

Distilled sea water is the fourth source of water in Kuwait, and one on which the country has become increasingly dependent due to its rapid urban and industrial growth. The industry began in 1950 with a distillation plant at Mina Al-Ahmadi. Both the oil

\(^4\) Ffrench and Hill, \textit{op.cit.}, Ch. II; see also Al-Feel, \textit{op.cit} Ch.3.
companies and the government have been active since that time in expanding the country's distillation capacity as it has become Kuwait's main source of water.

Water and oil resources will again be referred to in Chapter VIII, on the basis of the latest surveys, when the country's most recent Master Plan (Review of 1983) is discussed.
CHAPTER III

KUWAIT URBANISATION : THE ECONOMIC CONTEXT

The economic development of Kuwait prior to the beginning of the current oil-production and export era has generally been one of simple growth. Along with the relative prosperity brought about by trade and the pearl industry, there were also periods of stagnation and decline caused by the regional and international circumstances. Since its early years as an urban settlement, Kuwait had to live with and adjust to economic factors and considerations originating often on the outside. Kuwait's economic and urban growth seemed to have corresponded, for the most part, to the levels of activities in the Gulf and to its role in entrepot trade.

As the oil sector began to be developed in the late 1940's, Kuwait became almost totally dependent on the new natural resource, and revenues from oil and oil-related exports have become the main source of both financing government expenditure and generating and sustaining non-government revenues and activities. Like most Gulf states economies, Kuwait's oil revenues have accounted for over 90 per cent of government fiscal revenues throughout most of the period since the 1950's.

This chapter will briefly discuss certain aspects of Kuwait's economic development, pointing out some of its unique features; it will also refer to its relationship with the urbanisation process. No detailed discussion will be attempted here, however, of the relationship between these two aspects of modernisation (economic development and urbanisation) or the extent of the applicability of
other countries' experiences to Kuwait's particular circumstances.¹

Aspects of Kuwait's Economy

Kuwait's economy and its economic development have been the subject of a number of studies in the last three decades since the World Bank published its first study on the country's economy.² Several works have appeared in recent years and they have generally dealt more with the socio-economic and political issues involved than with the economy's quantitative aspects.³

Statistics and other detailed information on, among others, industry and employment in Kuwait were unavailable until the first census was taken in 1957. Various bank reports and other sources familiar with the period when the new revenues began to be received, have provided a general overview of the state's economic progress. Later on, organizations such as the Planning Board (established in the early 1960's) with its analytical studies and statistical reports, and the Ministry of Planning, which succeeded the Board, and its Central Statistical Office, have assumed leading roles in the area of development planning and documentation of economic activities. This planning and documentation role complements and

³ Some of these sources are listed in the Bibliography. For additional reference to some relevant works, see Mahmoud A. Kaboudan, "Oil Revenues and Kuwait's Economy : An Econometric Approach", International Journal of Middle East Studies, Vol. 20, No. 1, Feb. 1988, 45-66.
supports that of other organisations such as the Ministry of Finance and Economy, Ministry of Commerce and Industry, Chamber of Commerce and Industry, and the Oil Ministry.

It has been recognised that although the first oil shipments were exported in 1946, tangible changes in Kuwait's economy were not evident until the early 1950's. The additional income itself was modest during these early years: equivalent of KD.4 million in 1950, increasing to 20 million in 1952 and 100 million in 1955. (The KD replaced the Rupee as the country's currency after independence in 1961 and 1KD is now equal to about £2). Its effects on a state in a rudimentary stage of development required a period of time before they could be felt.

Ship-building remained the main domestic industry until the late 1950's - early 1960's, while commerce and pearling continued to play a relatively important role in the immediate post-war years. As a source of foreign exchange, gold smuggling (mostly with India) also had its place in the economy for a number of years.4

As revenues from hydrocarbon resources began an accelerating trend, and have become the primary determinant of the state's pace of development. When increasing amounts of the state's income were channelled to ambitious programmes for infrastructure, housing, schools and hospitals, the results began to become visible - first gradually and later rapidly. Since oil, the source of the new income, was a government-owned resource, the development process in the country began primarily as a consequence of government actions and initiatives. The Kuwait Oil Company had already been steadily creating its own infrastructure, facilities and organisation. Its

---

4 See Hill, Aspects......, Ch.4
demands for labour, which prompted Kuwait's modern immigration wave, continued throughout the 1950's and resulted in the employment of about 7,000 persons, a significant factor in the economic expansion of the period.

The private sector of the economy soon became active in the process: almost every commodity needed had to be imported and public and civil works and projects required the sector's active participation. Kuwait's traditional trading houses entered the field with relative ease while new enterprising companies appeared (and often disappeared) with increasing frequency, adding impetus to the expanding economy.

Demand for labour - both quantitative and qualitative, labourers as well as administrators, professional and skilled technicians - grew to satisfy the needs of the many projects being planned and executed, the companies and businesses and the emerging civil service apparatus. An influx of foreign nationals in increasing numbers began in the early 1950's, accelerating during certain periods thereafter. By the mid-1960's Kuwait's local population was outnumbered by foreign residents: there were 222,000 Kuwaitis and 247,000 non-Kuwaitis in 1965, as compared with 114,000 and 93,000, respectively, in 1957 when the country's first census was taken. This trend was to continue in the years to follow, with the Kuwaitis reaching about 42 per cent of a population of 1.69 million, according to the last (1985) census. Recent signs of a gradual reversal of the trend are expected to continue and estimates of the most recent National Development Plan project Kuwaiti nationals to reach 45 per cent of the total population by 1990.

The process of diverting funds from the public sector to the private one was considerably enhanced by the government's decision to
buy up property and land in the old town within the context of carrying out the country's first master (development) plan of 1951. This was, in effect, an income distribution scheme; the owners of these properties acquired by the government were generously compensated and suburbs beyond the town's wall began to develop rapidly in order to resettle the families who were leaving the old town. During the first six years of the property acquisition programme, about KD 60 million was provided to the private sector and about ten times that amount were dispersed during the following decade. Consumer oriented industries began to appear, retailing thrived, and demand outran supply for certain commodities in the early 1950's as a result of the fast development pace.5

Yet the new dependence on oil as the main source of the state's income has not meant that the oil sector had a proportionate share of employment. Twenty years after oil began to be exported less than 4 per cent of the total employment belonged to the mining and quarrying category of economic activities (which included the oil sector), while more than 68 per cent of those gainfully employed were in the services sector.

This unusual situation where the predominant source of revenue provided directly only a disproportionately small share of employment, while the services sector had a much larger portion continues to characterise the economy of Kuwait and other Gulf states. The government's efforts to spread the wealth within the private sector, the latter's intense activities in an expanding economy, and the trickle-down effect have significantly contributed to this phenomenon. Another factor here is the fact that the

5 Ibid.
hydrocarbon sector itself - particularly as more refining and other
down-stream industrial diversification become established as state 
policy - is generally capital-intensive rather than 
labour-intensive.

Having become the country's main source of income, oil has a 
special significance both as a natural resource and as a determinant of development. Kuwait's oil reserves are estimated at present to 
be nearly 70 billion barrels; and at the present level of production 
(about 900,000 barrels a day - b/d), these reserves can be expected 
to last for two centuries. Production costs are low since the oil is found relatively close to the surface and an optional geographical formation provides a natural gravity which allows oil to flow almost directly into the tankers. The cost of producing a 
barrel of Kuwaiti oil is about 25 U.S. cents.6

In addition to crude oil, associated and unassociated gas, the increased emphasis on refining, petrochemical and down-stream industries, and appropriate marketing strategies are all factors which point to the continued economic well-being of Kuwait. The hydrocarbon sector itself is controlled by the government through three state-owned companies. These companies perform - within a corporate umbrella - three different but related functions: oil and gas exploration and production; refining, internal distribution and international marketing; and industrial production and marketing of petrochemicals and related products.

The dominance of the oil sector in Kuwait's economy has been clear; in the late 1970's and early 1980's, about half to two-thirds of the state's Gross Domestic Product (GDP) was due to this sector;

6 Middle East Research Institute MERI REPORT, Kuwait (London: 1985), p.5.
in 1980, for example, oil contributed over KD 5,000 million of a
total GDP of nearly KD 7,500 million. Since 1970, returns from oil
have accounted for more than 90 per cent of the total reported
fiscal revenues; about 95 per cent in recent years, with 90 per cent
of export earnings. The government's budget, however, does not
include revenues from investments overseas; these are sizable
(US$73,000 million invested by 1983) and have since 1982, been
generating larger income then the oil sector. The government has
also set aside a reserve fund for future generations into which at
least 10 per cent of the government's revenue is deposited every
year.7

The linkage between government spending and oil revenues is
clearly reflected in the structure of Kuwait's fiscal budget.
Planned expenditures by the government are dependent on past,
current and expected revenues from oil export. These expenditures
fall generally into three categories: current, development, and
others. Current expenditures are for the most part wages and
salaries for government employees, and these have grown considerably
with rising revenues. Development expenditures are utilised for
construction and capital formation in industrial investment, and
their determination each year depends on plans already committed and
on the revenues of the previous year. The third kind of
expenditures includes areas such as contributions to the future
generations fund, direct transfers to Kuwaiti citizens and to
foreign governments and organisations.8

7 See ibid., p.10; Kaboudan, op.cit., pp. 47-48; and Jim
Antoniou, Construction in the Arab World (London: 1986; MEED
publication), pp. 38-41.
8 Kaboudan, ibid.
This linkage between oil revenues and expenditures naturally affects all aspects of development. Spending cuts have been made in recent years as oil prices and revenues fell. In the 1985/86 budget, a 15 per cent cut was introduced due to the decline of oil price from US$27 a barrel - the basis on which the budget was drawn - to US$20 a barrel or less. However, since income from investments abroad is not included in the budget, and since payments made into the future generations fund are regarded as expenditures, any budget deficits defined as such in recent years are apparent rather than real. The National Bank of Kuwait had estimated revenues from overseas investments for fiscal year 1986/87 at approximately US$3,500 million.\footnote{See Antoniou, \textit{op.cit.}, and Kaboudan, \textit{ibid.}}

Apart from oil and its central role in Kuwait's economy, various elements such as infrastructure and industry are also important to an understanding of its physical and urban development. Such aspects of the process of development planning will be referred to, when appropriate, in the course of this study. Urbanisation, however, requires a brief reference in the present context.

**A Reference to Urbanisation and Economic Growth**

Until the late 1940's Kuwait's urbanisation was not different from that of the typical trading centre in the region. Urban growth was associated with increased economic activities and growing population. Periods of external pressure or blockades had their effects on the urbanisation process, as has migration into Kuwait by threatened groups from other parts of the Arabian Peninsula. By the
early 1950's a distinct urban community has evolved in Kuwait, which was then at the starting point of a process of modernisation which continues to alter its built environment.

As stated earlier, the relationship between economic and urban growth throughout Kuwait's history up to the modern era has been rather simple; the two aspects of growth, with the accompanying increase in population, primarily as a result of immigration from other parts of the region as well as East Africa, occurred simultaneously. The old town was the main centre of growth, economic as well as urban. As the present era began in the early 1950's, oil revenues were to ensure the execution of development plans which included urbanisation and which went beyond the old town and gradually encompassed the entire state. This process, in turn, resulted in further immigration and further expansion of the country's economic structure.

Despite the commercial growth of the old town as it expanded beyond the confines of its walls into the neighbouring environs, the town itself experienced limited physical change until as late as the mid-1960's. Urban development (mostly residential) and changes in the physical environment were occurring mostly in the new suburbs outside the wall and to a lesser extent in the coastal areas to the south. The suburbs were developing rapidly mainly as a result of the property acquisition scheme adopted by the government and the availability of government loans for those who could not afford to build their own houses in the new neighbourhoods.

As the country's economic growth accelerated, so has its population - local and expatriate - and plans were formulated in order to bring about an orderly and controlled urbanisation process.
The expansion of the old town as a result of the implementation of the first Development Plan of 1951 had the effect that the emerging city was about ten times as large as the old town had been a decade earlier. These plans, their objectives and strategies, and the urbanisation process will be the subject of Part Two of this work, while the old town itself will be examined in the next chapter.
Eastern dhow harbour- Kuwait Town
(early 1950's)

Seafront- Kuwait Town
(early 1950's)

Plate 2
CHAPTER IV

KUWAIT TOWN BEFORE 1950

In the early discussion on the origin of Kuwait/Qurain as an urban settlement it has been stated that the present metropolis began in the latter part of the seventeenth century as a 'kut' or fortress for Barrak, Chief of Bani Khalid, who were then the masters of Eastern Arabia. There has also been general agreement among students of the region that the rule of Al-Sabah in Kuwait began in about 1752 when Sabah I was chosen as leader by the other Utubi families who had begun to settle in the town a few decades earlier. The settlement began to prosper soon afterwards. Regional rivalries and circumstances in the Gulf during the second half of the seventeenth century and the following one, and its ability to maintain its nominal independent status from other powers were factors which contributed to its continued growth.

This chapter will look at the development of the settlement as an urban and trade centre until the early 1950's, when a new and radically different phase of urbanisation and economic growth was initiated. This date signalled the adoption of planned and orderly physical development as a state objective and policy. For it was in 1951 that the first of a series of physical or master plans was prepared for the government by a firm of town planners (Miniprio, Spencely and McFarlane) and steps for its implementation were immediately undertaken.

The following account will highlight the Kuwait Town's earlier physical form and urban pattern. The Kuwait Town as referred to here can best be described as the built-up area between the 'green
belt' which follows the line of the old town wall demolished in the mid-1950's and the sea to the north.

Kuwait Town in Early European Writings

Europeans travelling in Arabia and the Gulf region in the nineteenth century and even earlier provide a few accounts on the form and extent of the old town. Some of these writings have described the town, its environs, its people and certain aspects of social life in terms which are remarkable in that they had a certain validity and a degree of accuracy until relatively recently. While these writings have provided less information on the physical aspects of the town than the more detailed and authoritative accounts by Lorimer or Dickson in the present century, they are nevertheless a valuable source of information on the settlement in an earlier era.

The earliest account of a European writer of Kuwait seems to have been that by the German explorer Carsten Niebuhr. He was the only surviving member of an ill-fated Danish expedition which had left Europe for Yemen in 1761. While it is not certain that he actually visited the town itself, he had sailed up the Gulf and was in Kuwait's vicinity while observing and collecting data for his meticulously researched work.¹ Niebuhr's map of the Gulf (Figure 1) showed (Koueit/Graen) and his narrative of the region shed light on many aspects of its life, inhabitants and geography.

Niebuhr described Kuwait as a dependency of al-Hasa; he clearly disliked the weather and was unaware of the relative merits of

¹ Carsten Niebuhr, Beschreibung von Arabien (Copenhagen: 1772). Two related volumes appeared in 1774 and 1778 (Copenhagen) and a third in 1837 (Hamburg). An English translation appeared as Travels in Arabia and other Countries in the East (Edinburgh: 1792).
Kuwait's climate as compared to the lower parts of the Gulf, particularly during the summer months. Niebuhr wrote:

Koueit, or Graen as it is called by the Persians and Europeans, is a seaport town, three days journey from Zobejer [Zubair] or old Basra. The inhabitants live by the fishery of pearls and of fishes. They are said to employ in this species of naval industry more than eight hundred boats. In the favourable season of the year this town is left almost desolate, everybody going out either to the fishing or up some trading adventure.2

The nineteenth century was a period of increased interest and travel in Arabia and the Arab world in general by Europeans, and the available descriptions of Kuwait give an interesting and informative perspective. J.S. Buckingham, in a book published in 1829, spoke of Kuwait as an important port with a sizable population. He described the town as having a wall and its inhabitants as being mainly merchants.3

Another traveller of the period was J.H. Stocqueler, who stayed in Kuwait for a few days in 1831 after travelling on a Kuwaiti boat from Bombay, on his way to Basra. He described the house of the Kuwaiti vessel's captain 'nokhoda' which he visited: "Passing two or three courtyards, I reached an apartment arched in the centre, where the owner and his brothers were seated smoking...". He then goes on to describe the town:

Koete, or Grane as it is called in the maps, is in extent about a mile long, and a quarter of a mile broad. It consists of houses built of mud and stone, occasionally faced with coarse chunam, and may contain about 4,000 inhabitants. The houses being for the most part square in

---

3 See Abu-Hakima, The Modern History of Kuwait, p.73. The reference is to Buckingham's book Travels in Assyria, Media and Persia, etc. (London: 1929).
form, with a courtyard in the centre (having the windows looking into the yard), present but a very bare and uniform exterior, like, indeed, all the houses in the Persian Gulph. They have flat roofs, composed of the trunk of the date tree. The streets of Koete are wider than those of Musqat or Bushire, with a gutter running down the centre. A wall surrounded the town on the desert face, but it is more for show than protection, as it is not a foot thick.4

Stocqueler includes a lively description of the vessel and of his trip to Kuwait from India. He also comments on the extent of Kuwait's commercial activities and the size of its fleet and mentions the fact that the ruler levied two percent duty on imports. He generally seemed to have liked the town even as it lacked plantations and its water was far from sweet.

W.G. Palgrave, who travelled extensively in Arabia, wrote about Kuwait and its people - although he never visited the town - on the basis of what he had heard of it about the middle of the century:

Among all the seamen who ply the Persian Gulf, the mariners of Koweyt hold the first rank in daring, in skill and in solid trust worthiness of character. Fifty years since, their harbour with its little town was a mere nothing: now it is the most active and the most important port of the Northerly Gulf, Aboo-Shahr hardly or even not excepted.5

He further refers to factors such as good anchorage, low duties and healthy climate which "drew to Koweyt hundreds of small craft which else would enter the ports of Aboo-Shahr or Basra" and to the fact that the town was the only sea outlet for Jabal Shammar.

4 J.H. Stocqueler, Fifteen Months Pilgrimage through Untrodden Tracts of Khuzistan and Persia (London: 1832), Vol. I, p.18. The low population figure of 4,000 given by Stocqueler can be attributed to the fact that the town had just been a victim of the plague. A population of at least 10,000 - as estimated in 1765 by Niebuhr - would have been a more realistic estimate.

Finally, Lewis Pelly, who became the British Political Resident in the Gulf in 1862, visited Kuwait for the first time the following year when Shaikh Sabah ibn Jabir was ruler. His remarks on the town are also of interest - he refers to it as being "compact of about 15,000 inhabitants, built on a promontory of loose sandstone covered with sand", and he further commented on the generally healthful conditions in the town and the system of government and administration - "indeed, there seems little government interference anywhere, and little need of an army."\(^6\)

From these accounts and those by Kuwait's local historians such as al-Rashid and al-Qina'i it is possible to conclude that throughout most of the period from the mid-eighteenth century to after the middle of the following century, the town of Kuwait grew as a settlement and enjoyed relative prosperity and internal tranquility. It would be in order now to take a look at the town's physical form as it continued to develop until the opening years of the 1950's. It has generally been recognized that the town itself had not changed much until that time; it grew in area within its third wall of 1920 and a few small villages and other communities began to develop on the coastal areas to the south of the town - but physical change was slow and limited.

The Morphology of Kuwait Town

General Form and Structure

Until 1946 and the beginning of Kuwait's new era of development, the town's evolvement and urbanisation conformed to

patterns common to the trading towns of the region. Its communal and commercial life was typical of the city-states known to the region as well as to other parts of the world.

The old town of Kuwait (Plates 1 and 2) was founded on a natural and protected bay; and as a function of this location as well as its most important economic activities of trade, pearl-diving and fishing, it was sea-oriented. It had a considerable degree of compactness and was human in scale, with souks and open spaces, and with houses and other buildings built around narrow and winding alleys and walks. Like many of the urban settlements and cities created often at will in the Arab/Islamic world by conquering armies or tribes on the move, the old town possessed the kind of simplicity which only an organic and functional urban setting in harmony with its environment could achieve.

The similarities between the old town and such eminent examples of Arab/Islamic towns such as old Fez, Baghdad or Cairo may not be great or apparent. Yet the underlying rationale behind its form, rhythm and urban patterns and hierarchies simplified as they may be place the old town unmistakably in the same genre of urban settlements along with hundreds of other Islamic and Arab towns throughout a vast region.

Those who knew the town up to the early 1950's, before an era of radical physical as well as social and economic changes was set in motion, recall with nostalgia its organic integrity and the simple aesthetics of its souks, mosques, colourful port, urban communal spaces and houses - the modest mud-walled as well as the large and more imposing homes of the wealthy merchants facing the sea. Those reaching the town from either desert or sea could clearly glimpse the distinct features of an Arab town. Even today,
as the greater part of the old town has disappeared, small areas in the Qibla quarter waiting for the planners' new ideas, retain a measure of charm despite its dilapidated condition, which is indicative of the overall old ambience of the place.

The late Saba G. Shiber, who was an authority on the urbanisation of Kuwait and on the Arab city in general, was an admirer of many of old Kuwait's features. In describing its basic functional simplicity, he wrote: "its buildings were a closely knit labyrinth that repelled heat and sandstorms to the minimum, having thick walls, narrow apertures and properly located slits for ventilation."

Shiber referred to the typical urban pattern of the old town, where "an organic symbioses between men, nature and man-made features was arrived at as a result of the convergence of many factors on this spot of the Arabian desert" (Figure 5).

In describing the old town's urban and social setting, Shiber made interesting observations:

The old city ....... was like a huge apartment dwelling, its bazaars a huge department store, its alleyways and streets - 'jadat' or 'harat' - an interesting network of 'highways'. Its courtyards (ahwash) were centers for family socialization, industry and relaxation. A balance had been achieved - the sort of balance of the Medieval city - between man and man, man and God, man and nature and man and his antagonists: the sea, the desert, the heat, the absence of sweet water....

Shiber's systematic analysis and commentary on the old town as a professional planner was preceded in this century by at least two

---

8 Ibid, p.171.
9 Ibid, p.75.
Figure 5. Kuwait Town: Typical Urban Pattern
writers familiar with Kuwait: Lorimer and Dickson. It would be relevant here to turn to their respective descriptions of it before briefly discussing the major elements in the old town's morphology.

Lorimer's description of Kuwait, its extent and how it looked in the opening years of the twentieth century is both detailed and informative. The images one forms of the town as a result of his accounts are not that much different from those familiar with it gained a half century later. Lorimer, whose work on the Gulf and Arabia appeared between 1908 and 1915, was based on his intimate knowledge of the Arab side of the Gulf as a result of his residence there as a representative of the Bombay Government at a time when Britain's interests in the region were growing. The town at the turn of the century extended in a rough semi-circle about two miles along the shore and a quarter to three quarters of a mile inland: its population was about 35,000, doubling (mostly due to immigration) what it was in 1870. Building activities were much in progress, particularly in the town's south-west quarter. Lorimer observed that:

The streets are irregular and winding, and many of them blind alleys and the town is not laid out in any general plan; the only street of apparent importance, besides the main bazaar which runs at right angles to the sea about the middle of the town, is one which leads from the suq or market square situated at the back of the town near the Murqab quarter, to the north-east of the town but it has no general name. Most of the houses have only a ground floor but appear higher owing to the parapet-wall enclosing the roof; they are generally built surrounding a courtyard.10

Further observations by Lorimer on the old town, in terms of both residential segregation and the tendency of some groups to

10 Lorimer, op.cit., I. pp. 1050-1.
specialise in specific trades seem to have been characteristics of pre-oil Kuwait. His analysis is notable because of its emphasis on race and national origin as bases for differentiation among the urban population but without, however, referring to clear division in Kuwait's pre-industrial society.  

Dickson's more recent description of the town provides perhaps the most complete account of how it looked in the early 1950's, and it remarkably corresponds to Lorimer's observations made fifty years earlier. Dickson's knowledge of Kuwait was complete because he lived there for about three decades - until his death in the late 1950's - first as the British Political Resident and later as a Kuwait Oil Company representative. Describing the old town's site, Dickson wrote:

Kuwait town now measures about three and a half miles along the shore, having extended considerably in recent years towards Ras al 'Ajuzah, where stands one of the palaces of H.H. the Shaikh.... The town's greatest depth, about a mile and a quarter, is near its centre, where the long suburb called Murgab has grown out from it towards the south-west. Slightly to the west of Dasman Palace are the new Political Agency and two large houses......

After referring to some other buildings, including the old Political Agency (Figure 6) then occupied by Dickson and his family, the Shaikh's town palace (the Sief Palace), the customs house, and a large hospital, his description continued:

Here are the entrances to the main bazaar and the new Street of Pillars respectively, at the southern extremity of which, and to the west of the Mirqab quarter, is the large open market-place of the Safat....

12 Dickson, op.cit., pp. 34-36.
Figure 6. Kuwait Town and Environs, Early 1950's - H. Dickson
Reference is then made to a number of buildings on the sea front beyond the customs house - the Gray Mackenzie & Co., Ltd., the newly-opened Ahmadiya School and, at the western end of the town, the hospitals and dwellings of the American Arabian Mission (This location and the area further to the west is the probable site of Barrak's Kut of the late seventeenth century) and Dickson's description went on:

The site of the town is generally flat and sandy, but the south-western quarter stands on somewhat higher ground, with steep lanes running down from it to the beach. The streets, which originally were irregular and winding, are now (1954) being converted into broad and modern thoroughfares. The only street of importance hitherto, besides the main bazaar and Street of Pillars, which runs at right-angles to the sea from Shaikh's town palace and customs house, is the one leading from the Safat to the north-east end of the town and called Shara al-Dasman.

Most of the houses in Kuwait have a ground floor, but appear higher owing to a high parapet wall enclosing the roof. They are generally built around a central courtyard. The better sort are of stone plastered with juss (lime) and have high, arched gateways, a few arches appearing also in upper storeys. There are over forty mosques, of which nine are jami', or Friday congregational mosques. These all have minarets and include the Masjid al-Suq, the chief mosque, which stands on the west wide of the main bazaar....

Dickson then mentioned several mosques before describing the town walls:

Kuwait was originally a walled town and is said to have had seven gates on the landward side in 1874, but since that time it has more than quadrupled in size, and the site of the old gates are now known to very few. For many years it remained an open, undefended town...

He then refers to the last wall, built in 1920 following the Kuwaitis' defeat in the battle of Hamdh, to keep out the threatening 'Ikhwan:
This wall is a little over four miles in length. From Ras al-'Ajuzah it runs approximately south-west for two and a half miles, then west by south for a little over a mile, then west by north to the sea, which it joins a quarter of a mile beyond the headquarters of the American Mission.

Today there are four gates: the Darwazat Dasman; the Darwazat al Burai'isi (now named Darwazat al-Sha'ab) leading to Hawali, Dimnah, etc.; the Darwazat Naif, on the main road to Riyadh; and the Darwazat al-Jahra, leading to Jahra. In addition to the four gates, which are protected by towers, there is a round-shaped bastion - or qala'ah, as it is called - about every two hundred yards throughout the length of the wall. Outside, between the Darwazat Naif and the Darwazat al Jahra, are pitched many Bedouin camps, and there are constant comings and goings of camels and small caravans through the Darwazat Naif. This is known as the Shamiya area .... About quarter of a mile to the south west of the Darwazat al Jahra stood the old Christian cemetery, the ground for which was presented to the British Government in 1931 by the late Shaikh Mubarak al-Sabah...

The Main Town Elements

Looking now at the morphology of the town by the early 1950's, it is possible to distinguish a number of structural elements within a framework of major areas or divisions. The old town was generally divided into four quarters or neighbourhoods, containing its residential as well as its other functional areas. This type of division with further sub-divisions and elements of form and function within the town structure are attributes which are common to Arab and Islamic cities in general. These major quarters each with its own smaller units were four: Qibla in the west, Wasat (middle), Sharq (east) and Mirqab in the south-west. Figure 7 is

13 See Ffrench and Hill, op.cit pp. 34-35; Al-Feel, op.cit., Ch.9; and Shiber, op.cit., Ch.1.
a sketch showing the location of these quarters and Figure 8 illustrates the walled-town as it appeared in the early 1950's.

The Market and Central Square - The bazaar or souk has traditionally been the commercial centre of the Arab town, while the focal point for the town has been a central square or 'saha'/maidan. In Kuwait, a central souk has, throughout the town's development, dominated its wholesale trade and retains at present, with its various sub-souks, a relatively sizable share of this trade.

The Safat Square, an important feature of the town for decades, represents one end for the souk and has served as the point of arrival and departure for the caravans, and was not far from the Customs House on the Sief (sea-front). Tea houses frequented by the badu and the town's merchants were nearby and one or two may still be there today. The souk itself, divided into many smaller souks according to function - another feature of the traditional Arab/Islamic city - extends from Safat towards the dhow harbour and the Sief Palace.

The area between Safat and the Sief was a maze of narrow and twisting lanes, some covered with rough matting of one type or another, and each had a number of stalls selling similar goods. The badu shopped near Safat in stalls which specialised in goods they normally sought most: weapons, leather goods, tents and rope. Various areas within the souk retain their old names and original functions, while a new modernisation plan for the area is being implemented which will preserve the souk's appealing traditional features.

The Dhow Harbour and Sief Area - The sea-front of the old town has always been a lively area of much and varied activity; the dhow harbour was the Shaikhdom's vital point of contact. It was the link
with the outside world, from which goods were carried to storage areas, to the interior or re-exported, and where dhows would begin and end their pearl-diving and fishing trips. Dhow building and repair, and sail and fishing net preparation could be seen along the Sief, and small private harbours called 'naq'a' were common in order to relieve pressure on the small harbour and work on the dhows.

The Residential Quarters - The Residential areas were distributed throughout the old town's four quarters. Qibla and Sharq were the largest residential districts which expanded around the sea-front and have had traditionally the more affluent of Kuwait's population. Many wealthy merchants lived in Qibla and some of their large homes facing the sea between Dasman and the Sief Palace have been restored as remarkable examples of a type of architecture which combined beauty, function and integrity. Sharq to the east was popular with those connected directly with the sea - captains, divers - and it also has some notable examples of good local architecture.

The Wasat or middle quarter, between Sharq and Qibla, has few residential sections but contains the souk, Safat, the Sief Palace and the old Customs House. While the Mirqab quarter is the largest of the neighbourhoods, it is also the farthest from the sea and had, in the early 1950's, the least number of inhabitants. A feature common to the town's quarters was the open spaces or 'barahas' - with names after families or groups where celebrations, dancing and singing could be performed on certain occasions.

The Mosques - Mosques have always been important features of Islamic settlements. For a community of its size, Kuwait town has a relatively large number of mosques, about forty or more, several of which are Friday mosques. The largest and most important (until
recently, with the completion of the impressive State Mosque) was Masjid al-Souk al-Kabir located in the middle of the souk. The other mosques, unpretentious structures often with squat minarettes, were traditionally been built by individuals or families to serve the needs of the local residents of the various sections of the town.

The Cemeteries - As in the Arab/Islamic town in general, graveyards are features of certain uniqueness as areas or plots of land which could not be disturbed. Some of these cemeteries, which are no longer in use, can be seen as open spaces within the built-up areas and were originally outside the walls of the early settlement. They later became within the settlement, as it grew and had a longer wall. One such graveyard, on which burial ceased in 1896 and which is located not far from the town's present centre, was converted into a public garden in the 1960's. An Islamic ruling - a 'fatwa' - was obtained and new earth was added so that no graves could be disturbed. The old Christian cemetery lies immediately to the south-west of the Jahra Gate.

The Small Settlements

As the original settlement within the wall grew in wealth and population, a few small settlements began to appear outside the town wall, some of which are now within the boundaries of Kuwait City. Among the nearby settlements which were outside the town walls and were used generally for recreation and limited farming, are the following (see Figure 6):

Al-Ras - This settlement lies to the south-east of the town on a wedge of land that extends into the Gulf.
Al-Dimna - Also located in the south-east, this settlement has grown considerably to become the modern suburb of Salimiyah.

Hawalli - Located in the south and not far from the town, Hawalli began to develop at about the turn of the century when abundant sweet water was discovered. Today it is a bustling 'town' and the most-densely populated area in the State.

Al-Shamiyah - Located to the south-west near the wall and between the Jahra and Naif Gates; the badu who frequented the town had their tent camp there, and some of the poorest immigrants and other transients built their shacks in the area.

As for the more distant settlements, apart from the Island of Failaka and the company town of Ahmadi which began to take form towards the end of the 1940's, the most important are a group of villages on the coast to the south known collectively as 'al-Qusour' (singular 'Qasr'). These are Finaitis, Fintas, Abu-Halifa, Shuaiba and Fahahil. These villages used to have modest homes built of mud and brick which nevertheless looked impressive to the badu and to others, as they were the only structures built in this fashion outside the town walls.

Fahahil, the largest of the villages, is now a thriving and busy town and commercial centre, while Shuaiba village has disappeared with the development of Kuwait's largest industrial area there, which began in the early 1960's. The other villages have seen much building activities in recent years - groups of apartment blocks for the most part - and Fintas is projected to become one of the largest urban areas in the state as the designated location of a major district centre under the current planning schemes.
In conclusion, the old town of Kuwait experienced no dramatic changes or growth throughout its development, beginning with the urban settlement of the mid-eighteenth century. The town was functional, its expansion was organic and measured, while its form, urban patterns and morphology reflected a number of features known to the traditional Islamic/Arab city. As the new era began in the second half of the twentieth century, few in Kuwait were prepared to foresee the dramatic changes in the built environment which were to follow. Part Two of this study will examine the various plans which have been formulated and the urban growth which has been in progress since the early 1950's.
PART TWO

V URBAN PLANNING IN THE NEW ERA: A REVIEW

VI PLANNING FROM 1950 TO 1970

VII THE SECOND MASTER PLAN

VIII REVIEWS OF THE SECOND MASTER PLAN
CHAPTER V

URBAN PLANNING IN THE NEW ERA:
A REVIEW

The urbanisation of Kuwait can be divided into two distinct periods corresponding to the pre-oil and post-oil eras. The first era dates back to the establishment of the early settlement and its gradual evolvement into the Kuwait Town of the mid-twentieth century, and is essentially concerned with this old town and its environs. This was followed by the second era which began shortly after Kuwait's entry into the world of oil exportation. The first era was substantially a period of organic and, for the most part, slow growth much as has been the case for hundreds of years with the vast majority of urban settlements and towns in the Gulf region and the Arab world generally.

The Master Plans

This chapter looks into the planning background and the preparation of urban development plans during the era of planned urban growth and regional development, beginning in the early 1950's. It also briefly discusses the apparatus and mechanism for planning and plan implementation, and how these controls operate within a changing and modernising society. The plans themselves are shown in a matrix form in Figure 9. These plans are:

1. The First Development (Master) Plan of 1951/52 by Minoprio, Spencely and MacFarlane;

2. The Kuwait Municipality Development Plan of the 1960's;
<table>
<thead>
<tr>
<th>Plan/Decade</th>
<th>1950s</th>
<th>1960s</th>
<th>1970s</th>
<th>1980s</th>
<th>1990s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minoprio Plan</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Municipality Plan</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Master Plan -</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Buchanan</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MP- Revision 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Shankland Cox)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MP- Revision 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Buchanan)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Before the 1950's, there was a period of slow, organic and generally orderly growth within the walled old town.

Figure 9. Master Plans Matrix, 1951-1983
3. The Second Master Plan (1970/71) by the Colin Buchanan Partnership;
4. The First Review of the Second Master Plan (1978) by the Shankland Cox Partnership;

In Kuwait, even before the oil revenues began to have a major impact on the economic and social life of the expanding environs of the old town, the government had decided, in 1951, to take an important step towards formulating the necessary plans and guidelines for the process of orderly urban development. A number of considerations made that step a necessary and logical undertaking. First, there was the modest but rising State income, and the spreading of wealth among the Kuwaiti citizens who were eager to build better homes and to move to less confined conditions. Secondly, Kuwait began to witness the arrival of increasing numbers of foreign nationals seeking work opportunities and the need to find them suitable accommodation, and providing the necessary amenities for everybody based upon an infrastructure which was at that time almost non-existent. Thirdly, there was the advent of the automobile and its alarming popularity. In 1951 there were more than a thousand cars in Kuwait with hardly a paved street in the old town, and there was a clear need to cope with the far-reaching effects of the car on the urban environment.

Consequently, in 1951, the first master plan - the Development Plan, as it was called - was prepared by the town planning firm of Minoprio, Spencely and MacFarlane of Britain. This controversial plan was prepared hastily by a team of professionals who were unfamiliar with Kuwait, were working with little data and who had
only limited vision as to the course and scale of the future development of the State. This plan was however to have a lasting impact on Kuwait and to set the tone and pattern of much of its post-oil development.

Essentially, the Minoprio Development Plan consisted of a network of concentric ring roads and radials extending outwards from the old town wall into the new residential neighbourhoods and industrial areas. The old town expanded to an area several times its original size and a population of 250,000 was seen as a target for the plan. The scheme was principally influenced by the Garden City concept.\(^1\)

As the development guidelines incorporated in the new plan were established, work on their implementation proceeded without delay. The planned residential suburbs or townships, which were a priority during most of the 1950's soon became visible - unfortunately, often as showpieces for houses and villas of poor design and taste. Towards the end of the decade, the old town itself began to receive more attention by the construction of large public buildings. The old town in its original form was now disappearing as buildings were razed indiscriminately. The plan as a whole seemed to have been almost 'implemented' within no more than a decade.

The transformation of the old town in the late 1950's and the years that followed have been a controversial issue among Kuwaitis and others who were familiar with it before it surrendered to the bulldozer. Saba George Shiber, the Arab planner who became an adviser to the Department of Public Works (predecessor of the Ministry of Public Works) and to the Kuwait Municipality in 1960,

had a limited success in curtailing the massive demolition process and also tried to reverse the course of piecemeal development in the expanding town and the new townships.

Stephen Gardiner, who studied the City of Kuwait and wrote eloquently about it, gave credit to Shiber for the constructive influence which marked a turning point in its development. "If the Kuwaitis were dissatisfied with the way things were going," wrote Gardiner, "Shiber was horrified at what had been done." Shiber, he continued, "set about putting an end to the indiscriminate and random building of five-and-six storey blocks of apartments and shops. He saved the Souk from demolition, froze the 1952 Plan until another could be developed and... laid out proposals for the heart of the city round the Sief Palace that included commercial and residential development."²

By 1961, the population of Kuwait reached about 322,000, from approximately 110,000 in 1950. The Minoprio Plan was overtaken by this population growth and the unprecedented pace of physical development. The extent of the expansion in the built environment that had taken place in Kuwait in the 1950's is shown in Figure 10. Shiber noted that, "the building boom of Kuwait has become a craze".³

The condition of the built environment in Kuwait during the hectic years of the 1950's and most of the 1960's deserves a comment. These were supposedly the first two decades of planned development, but they saw the mushrooming of some of the ugliest (mostly residential) buildings on a scale rarely seen before. A

² Ibid. pp.53-55.
³ Shiber, op. cit. p.94.
Figure 10. Urban Growth, 1936-1967
valuable opportunity to build with imagination and understanding; to exploit the almost unlimited possibilities or to experiment with and create new forms without losing what was positive in the old seemed to have been wasted. The influences on the building styles were varied from the Arab world and the West.

While many of the unsightly buildings have been demolished in recent years, many more can still be seen today: apartment blocks with their peeling chequerboard facades and slum conditions (Plate 5), and, to a lesser extent, better maintained houses and villas which are alien to their environment and surroundings. These were either rows of dull structures poorly sited in monotonous rows or villas with contrived forms and lines. Buildings of both types - the rented apartment blocks built by Kuwaiti investors for the foreigners, and the detached houses and villas built by and for Kuwaiti families moving to the new suburbs - show a remarkable capacity of ignoring environment, climate, tradition and common sense. In the words of Gardiner, the box-like structures of the apartment blocks were "a precise reproduction of the kind of junk that was being run up in Europe after the war."4 The new Kuwaiti homes of the period reflected both the fashionable tendency of that time to have a house that looked as pretentious and different from the traditional Kuwaiti house as possible, and the unenlightened architectural practitioners who were only glad to deliver what they and their clients considered to be sophisticated designs. There were exceptions such as the Bahbahani residential compound in al-Watia dating from the 1950's, but they were few.

4 Gardiner, op.cit., p.53.
Meanwhile, the need for updating or extending the Minoprio Development Plan was urgent. The Kuwait Municipality therefore initiated action which, in effect, resulted in a new plan for the 1960's which was also a continuation of certain aspects of the earlier one and which was to benefit from Shiber's expertise and ideas. This has come to be known as the Municipality Development Plan. It incorporated additional residential and industrial areas, adding two ring roads and extending radial highways and also made proposals for the development of the commercial centre of the old town. The Municipality Plan also gave consideration to the planning and development of the coastal areas and their villages in the southern part of the State, and to plans for the Shuaiba Industrial Area, also in the south.

While the Kuwait Municipality was carrying out its planning schemes, new pressures again became evident calling for action on a broader scale and wider basis than before. The continuing economic and demographic growth of the 1960's; the unceasing development activities; the wide-spread use of the automobile (96,000 vehicles by 1966) - all were factors which highlighted the need for far-reaching planning. There was also the realisation that the Development Plan and the efforts of the Municipality could not be expected to guide the on-going physical development process into the future, and it became imperative that a more comprehensive approach to planning be initiated.

The process which began with the Minoprio Plan and continued with the Municipality Development Plan did not necessarily mean that a clear vision then existed as to how to proceed from the mid-1960's situation into the future. Hamid Shuaib, a Kuwaiti planner and official of the Ministry of Public Works and later, the
Municipality's Chief Architect played an active role in the planning and implementation of practically all Kuwait's physical plans and had this to say: "The Minoprio Master Plan was eventually completed - space was filled up to the 4th Ringway, but only by additions made by the Ministry of Public Works planning staff. There was no follow-up of the Master Plan because there was no notion how to proceed from it."

Thus, the Municipality saw the need for a revised planning report. A Dutch adviser, J. Thijsse, who was consulted by Kuwait in 1962 for his views on the State's development, together with United Nations planning experts M. Riad and O. Azzam, were asked to advise in 1965. Their report pointed out that master plans for the future ought to be based on demographic considerations. The report also emphasised the need for more Kuwaiti participation in the country's economic life. Thijsse and Azzam were later joined by Colin Buchanan and a further study was presented to the Municipality of Kuwait.

The new report concluded that a comprehensive master plan was required. It pointed out the seriousness of the traffic problems, particularly in the old town, and to the poor architectural quality of its buildings. The study further recommend that a suitably qualified firm of town planners be asked to prepare a new comprehensive plan for Kuwait.

The Municipality accepted the comprehensive master planning concept and, in 1967, established the Department of Physical Planning.

---

5 See ibid., p.56.
6 O. Azzam, C. Buchanan and J. Thijsse, "Policies to be adopted for a Master Plan of Greater Kuwait" (Report to the Municipality of Kuwait, 1965).
(Master) Planning. Soon afterwards, Colin Buchanan & Partners (CBP) was invited to formulate a new master plan. This plan was to concentrate specifically on four major elements: (1) a long term development strategy, (2) the State, (3) the urban areas, and (4) Kuwait Town. Two action area studies dealing with traffic and new housing developments were also to be prepared. In 1970 and 1971 the plan was published in two reports comprising five volumes which addressed the problems specified by the Municipality. In order to ensure continuity in planning functions and to create conditions for mutually rewarding learning experiences, a counterpart team of Municipality employees (mostly Kuwaitis but including other Arab professionals) was assembled to work with the Consultants team.

The CBP Master Plan was based on the premise that the population of Kuwait would increase from an estimated 725,000 in 1969 to two million at some future date depending on the rate of future population growth. It was assumed that this population level could become a reality as early as 1985 (the 1985 census has an actual total population of 1.69 million) should no changes occur in the rate of natural increase or in the average rate of immigration for the period 1965-69, of approximately three per cent. On the other hand, the two million inhabitants was projected for 1997 in the event that the net immigration was nil. The Long Term Development Strategy was divided into four phases, each between five and seven and a half years long, with the first two phases comprising the Short Term Plan.

Many of the CBP Master Plan's elements and recommendations have been realised and implemented. This included its main highway framework, the new residential areas between the 4th, 5th and 6th Ring Roads along the coastal corridor in the south-east, and the expansion of Jahra village and other settlements.
As the Buchanan studies were being prepared, the economic boom was adding to the development pressures in several areas. The government therefore found it necessary to freeze the development potential in these areas in expectation of the planning studies. One area in particular - the old town - was receiving particular attention at this time. It was felt that an action plan for its development could be formulated in parallel and coordinated with the CBP Master Plan under preparation.

Omar Azzam was again contacted for advice, and together with Leslie Martin and Franco Albini, formed a committee of advisers for the new master plan and the urban design and architectural schemes which were to be developed. The old town was to be retained as the state capital and there was a new emphasis and a new attitude towards architecture. Concurrently with the CBP planning work, four internationally known architectural firms were commissioned to present concepts and designs for four important areas/schemes within the framework of the old town development. These were specifically: 7

1. Reima Pietila - Finland: the expansion of the Sief Palace, official seat of the Ruler;
2. L.B. Belgiojoso, Perusetti and Rogets (BBPR) - Italy: studies and proposals for the old town's souk area;
3. Peter and Alison Smithson - U.K.: a new Ministries Complex;

The first three of the four schemes have been substantially completed. The Ministries Complex, however, was designed and executed by the Ministry of Public Works, the Candilis housing project was dropped and later assigned to another firm; and the souk is being preserved and work on reconstruction there continues. In addition to the Sief Palace, Pietila was also to design the Foreign Ministry and the Council of Ministers in the same area on the waterfront. In later years several other schemes were to be added to this group of projects. Chief among them was the National Assembly by Jorn Utzon and the Central Bank by Arne Jacobson, the State Mosque by Mohamed Makiya, and the Kuwait Fund for Arab Economic Development by The Architects' Collaborative.

The location, size and scale of these projects have naturally reflected their importance as civic undertakings. These buildings and others to follow became, in effect, an 'architectural plan' which was a logical extension, refinement and counterpart to the CBP Master Plan.

While the general structure and recommendations of the Buchanan Master Plan were being implemented certain forces and development pressures became increasingly visible. Economic and social changes were accelerating in the 1970's: state as well as private income rose rapidly, particularly following the dramatic changes in oil price which began in 1973/74 and there was much land speculation and inflation. Further, population and vehicle registration continued to rise: by 1975, Kuwait's population reached about one million and two years earlier the number of automobiles rose to nearly 200,000. In reaction to land price increases, the Municipal Council then saw fit to raise the maximum allowed floor area ratios for various uses and the result was that general residential and commercial densities
rose beyond those recommended by the Buchanan Master Plan. At any rate, it seemed that the general euphoria and economic boom conditions of the 1970's warranted a review of the plan.

This review (the first of two thus far) was undertaken in 1977/78 by another British firm - Shankland Cox & Partners. The review concentrated on three basic elements and presented master plans for their future development in light of the changing condition since the CBP Master Plan was completed. These elements were: The urban areas, the old town centre and the national physical environment.

The second review of the CBP Master Plan was undertaken in 1982 by Buchanan. This review seemed inevitable given the new facts of the 1980's. Lower state income as a result of changing oil production policies and prices, economic problems such as the collapse of the Manakh Market (the so-called parallel stock market) and an economic expansion which was too rapid, a glut of labour and new private-sector housing - all these were factors which brought about the need for an assessment of the earlier master plans and for new guidelines.

Planning and Plan Implementation

Established in 1930, the Municipality of Kuwait was one of the earliest of Kuwait's governmental agencies. It serves at present as the state's principal urban planning and administration authority. Its functions include the preparation of planning-related proposals and/or their coordination, urban development control and land purchasing, and cooperation with other authorities which execute projects and provide services dealing with the built environment. The Municipality is normally run by a Municipal Council which is
composed of ten elected members and six appointed by the government. The Council is headed by a president elected by the members while the Municipality has a director-general who is appointed on the recommendation of the Municipal Council President and who is responsible for the day-to-day functioning of the organisation and acts as a close assistant to the president.

For a number of years, however, the functions of initiating planning proposals and overseeing the implementation and administration of regulations and laws (and, later, master plans) pertaining to physical development have alternated and overlapped among a number of institutions. By the early 1950's, the Municipality had already been a functioning agency for over two decades; the scale of its operations as well as its resources, however, were modest. In 1953, the Development Board was established in response to the need for a body which could directly address the emerging development problems and deal with specific projects.

This was the time when construction activities were accelerating under the new economic impetus and the Board was to coordinate all aspects of project development, within the framework of the responsibilities of the Public Works Department, established a few years earlier. At that time, the latter was responsible for what limited town planning activities and implementation were performed, mostly centred on the old town, in cooperation with the Municipality.

Two developments with ramifications for planning took place in the early 1960's. First, the function of urban planning was

---

8 The Municipal Council was dissolved in 1986 and a Minister of State for Municipal Affairs became the Municipality's highest official, a step which may or may not be permanent.
transferred, in 1962, from the Public Works Department to the Municipality. This step put an end to the confusion which was already evident due to overlapping jurisdictions and duties among the Municipality, the Development Board and the Public Works Department.

The second development was the creation of the Planning Board, the nucleus of the Ministry of Planning established in the late 1970's. Unlike the Development Board (dissolved earlier) the Planning Board was planning-oriented. It also set about to conduct studies and produce statistics and other reports needed for proper long-term development planning, establishing areas and procedures for this type of work which were later to be incorporated within the functions of the Ministry of Planning. This step gave planning - economic, social and physical - a new and needed dimension.

The procedural framework for carrying out plans and planning proposals within the Municipality is generally consistent; it varies only to accommodate the unique features of a given proposal. In the case of local proposals, as opposed to national plans submitted by outside consultants following consultation with the Municipality, such proposals are prepared by the full-time officers of the Municipality. They are then referred to the Municipal Council for approval. Following discussions and possible modifications by the Council, the planning proposals are sent to the Council of Ministers where further deliberations take place. Ministers affected by the proposals can raise statutory objections within a certain period of time, which may result in modifications or changes if necessary. The process of implementation then follows and normally involves other organisations. ⁹

⁹ See Shuaib, op. cit.
Proposals and projects of public utilities and infrastructure are implemented by one or more of the services ministries - Public Works, Electricity and Water, and Communications. Land and rights-of-way required for such projects are secured by the Municipality, on government-owned land or by exchange or acquisition of private land.

Projects involving public facilities such as schools and hospitals are programmed and controlled by the relevant ministries - Education and Health while land is also provided by the Municipality. The execution of these projects is assigned to the Ministry of Public Works.

The Municipality, within the framework of planning for housing, now designates and hands over to the National Housing Authority (NHA) - established in 1974 - lands required for the Authority's comprehensive housing schemes. These housing schemes constitute the government's on-going programme of providing Kuwaiti citizens with government-built homes and their implementation is the responsibility of the NHA.

The administrative functions of urban planning in Kuwait are the responsibility of the Municipality's Chief Architect, who heads an organisation which has three departments involved in these functions: the Planning Department, the Building Department and the Survey Department. The Municipality has also a Construction Department which is responsible for implementing certain projects.

Aspects of planning and building such as building heights, facades and urban design considerations are dealt with by special committees. There is also the Technical Committee, to which are referred schemes of private developers which have not been approved by the Planning Department due to conflict with other projects or
for other reasons. The Technical Committee which operates as an organ of the Municipal Council decides on these matters and refers its decisions to the Council for ratification.

The earliest municipal legislation in Kuwait appeared in 1931, shortly after the establishment of the Municipality. The First Article of the new law stipulated that the Municipal Council be made of twelve elected members and a president (from the ruling family) appointed by the Ruler. The Municipality naturally began as a simple institution with a few employees; its functions were mostly limited to maintaining clean and orderly souks and the collection of fees. As its functions grew, various municipal laws were issued. The 1931 law was replaced in 1954 by another more suitable to the evolving stage in the state's development and to the Municipality's expansion of its civic functions. Following Kuwait's independence in 1961, a new law was enacted to reflect the new era's development progress. The President of the Municipal Council was to be elected by the Council members which were raised to fourteen - ten elected and four appointed.

The Kuwait Municipality Law No. 15 of 1972 has, to a considerable extent, provided the general framework governing the Municipality's functions in recent years. Article 19 of this law assigns the Municipality responsibility for urban development and municipal services and refers to land survey and town planning. The new law also amended previous wording to clarify the fact that the Municipality's role in projects was confined to planning decisions.

---

10 For detailed account of the Kuwait Municipality's functions and development throughout the years see Najat A. al-Jassem, The Municipality of Kuwait in Fifty Years, (Kuwait: 1980, in Arabic).
and does not include general implementation (execution), in order to avoid conflict with the functions of other government agencies.

Article 20 of Law No. 15 lists a number of the functions to be carried out by the Municipality; these include building control, acquisition of land, and planning of development projects and roads. Clause 13 of the Article, however, clearly states its urban planning responsibilities: "The formulation of master plans and regional plans, the creation and planning of residential, commercial, industrial and other areas, as well as any necessary amendments to land use."\(^{11}\)

With this review of Kuwait's various plans, the progress of planning effort and the administrative and implementation framework of plans and projects, the following chapter will concentrate on the plans of the first two decades: the Minoprio Development Plan of 1951 and the Municipality Development Plan of the early 1960's.

\(^{11}\) Shuaib, op. cit., p.82.
Bayt al-Badr
Typical housing of the 1950's

Plate 5
In the previous chapter, a review was made of the efforts undertaken since the early 1950's to introduce the concept and processes of comprehensive master planning in Kuwait. There was then an urgent need for taking the appropriate planning steps amid the economic and construction boom of the new era, and time was a critical element. Planning, in effect, became institutionalised.

The First Development (Master) Plan

The government was clearly the only party directly responsible and in a position to take the required action. Its economic predominance as the owner of the state's new source of income - the hydrocarbon reserves - was further enhanced by its property acquisition programme and by sponsoring a number of construction projects which also benefited the local economy. These programmes and projects have, in turn, stimulated the national economy and created the circumstances for physical development on an accelerated and large scale.

Consequently, in early 1951, the British firm of Minoprio, Spencely and MacFarlane, architects and town planners with a reputation as planners of new towns, was commissioned by the Government of Kuwait to prepare a master plan to guide an urban development process which seemed imminent. The consultants' terms of reference were basically to study Kuwait's urban development needs and problems and to present a master plan which would both
define the areas required to accommodate urban growth beyond the old
town and the latter's own pattern of development for the future.

The resulting Development Plan, submitted in late 1951 and
adopted with minor modifications the following year, was immediately
put into effect.\(^1\) The Public Works Department, which at that time
had the responsibility for whatever limited urban planning and
follow-up functions were undertaken in previous years, began working
on the plan's implementation and the coordination of the various
activities involved. For the Public Works Department, this was a
task unlike any it had attempted before. The Department lacked both
the appropriate manpower (properly-trained planners and other
professionals and technicians) and the time needed to sufficiently
evaluate the plan's elements and ramifications and to control the
unfolding urban growth. These factors were to contribute, at least
in part, to the hectic conditions which prevailed throughout the
1950's and early 1960's, and particularly to the chaotic and
unguided growth that had taken place beyond the so-called planning
area.

The new Development Plan's main points of reference were
well-defined, and its distribution of land use for the various
purposes was clear-cut and simple (Figures 11 and 12). Kuwait town
was to continue its role as the centre of the growing urban region
where both government and business activities would concentrate
within its old boundary wall. The wall itself was to be pulled
down. The basic elements of the plan can be summarized as follows:

1. As reference points, the Development Plan consisted of radial
   roads converging on and providing access to the old town as

\(^1\) Minaprio, Spencely and MacFarlane, "Plan for the Town of Kuwait" (London : 1951).
extend through its wall gates, and concentric roads running parallel to the line of the town wall, with the first of several ring roads forming along the southern limits (wall) of the town. These roads intersected at a series of roundabouts. (Some of these roundabouts were gradually eliminated as traffic problems mounted at some intersections).

2. The resulting pattern outside the town wall was the formation of over twenty 'super-blocks', surrounded by the road network. These blocks were for the most part residential neighbourhoods measuring about two sq. km. (areas A - Q, Figure 11), with each containing its own social and civic facilities such as super-market cooperative, shops, clinic, mosque, post office in a central area, in addition to a number of schools located in more than one location. The remainder of the superblocks were designated for industrial, educational and health uses.

3. The semi-circular line representing the old town wall (of which only the gates were to be left standing) with a width of about 250 metres, was reserved as a recreational strip which came to be known as the 'Green Belt'.

4. As for the old town itself, the plan basically provided for the widening of its main roads (Figure 13) rather than creating a different circulation pattern, with zoning for various types of land use.

5. The old town was targeted for large-scale re-development as the focal point of business and government for the expanding city - 'Greater Kuwait' - with only limited use as a residential area. The Development Plan made recommendations on a number of issues: the formation of a state planning body and of technical offices for engineering and planning work; the enacting of building
Figure 13. The 1951 Development Plan: Old Town
codes, and conducting of surveys; the preparation of plans for the new residential and other areas, the business district in the old town; and the designation of required sites for the public buildings.

The new Plan, through its implementation during the 1950's and early 1960's, and because of its features and given the time of its adoption and pace of development which followed, had, in effect, determined the general direction of Kuwait's future urban growth and left a permanent impact on the State's physical development. This outcome came about despite the fact that subsequent plans/reviews were more comprehensive and were backed by appropriate studies and statistics and required more time and effort in preparation.

However, this is not say that the pattern of urbanisation and other aspects of development could not be altered - for no plan can conceivably be expected to be so rigid an instrument. Rather, the purpose is to point out its importance and uniqueness as the first master physical plan for an old settlement which could at the time of the plan's adoption almost be moulded or shaped at will.

One of the most interesting and significant consequences of the Development Plan of 1951 was that it had, in effect, initiated the process of residential segregation between Kuwaitis and non-Kuwaitis. While segregation itself was not decreed by law, it has become, for all practical purposes, a de facto institution. The new neighbourhoods were developed for Kuwaiti families leaving the old town or otherwise provided with homes or plots of land on which to build single family units. The non-Kuwaiti population were not allowed to buy property (nor can they at present, except under very rare circumstances and on an individual case-by-case basis) regardless whether it was government or privately-owned.
Villages or communities such as Salimiya or Hawalli, which later developed as major residential and business districts for non-Kuwaitis (mostly Arab expatriates) were given little attention in the early stages of physical planning. They grew more freely in later years mainly due to their designation as non-Kuwaiti areas.

As a corollary to the policies adopted in conjunction with the new Development Plan, and due to the continuing flow of foreigners into the country in the 1950's, population distribution in the old town began to experience a demographic shift in favour of the new arrivals. The number of Kuwaitis living in the old town dropped from nearly 60,000 in 1957 to about half that figure in 1965, although the old town's total population of about 100,000 remained roughly the same.

The implementation of the Minoprio Development Plan was accompanied and facilitated by an important scheme which was to have a clear impact on the entire urban growth phenomenon. This was the property acquisition programme enacted then by the government and which continued to play a role in the growth of urban Kuwait ever since.

The Property Acquisition Scheme

The property acquisition or purchase programme initiated by the government in the early 1950's has been an important element in the overall process of development in Kuwait - urbanisation in particular. On the one hand, it has served as the means through which large sums of money were channelled into the private sector of the State's economy - a process of income redistribution to the country's citizens. The scheme, on the other hand, has been instrumental in facilitating the process of implementing the
Minoprio Development Plan and the re-building of the old town. The compensation offered by the government for privately-owned property in the old town (and later, elsewhere) was deliberately inflated for two reasons: to encourage the owners to move into the new residential districts, and to provide Kuwaitis with extra capital in order to stimulate the local economy.

A Valuation Committee was formed to determine the price to be paid for each property; this could be undeveloped land, a walled but undeveloped land 'hauta' or a house or other building on its own ground. A property's location was the general basis for valuation, although no rigidly standardised measure seems to have been used. The compensation given for houses and buildings was slightly more than twice what was paid for the two other types of property, which were valued almost in identical terms.²

The concept itself seemed both simple and logical. In reality, however, its success in accomplishing its stated goals were mixed and not without a certain cost, and criticism from a number of quarters have been made. The I.B.R.D's study of Kuwait's economy referred to early (Chapter III) criticised the programme, as have some of the government's economic advisors. During the six years before 1964 it had cost the government 50 per cent more than what was spent on public capital projects. Between 1952 and 1967 (just before the state's principal comprehensive plan was commissioned), the amount of money disbursed for the programme reached almost KD 600 million.³ Further, during the two key decades until 1972, 22 per cent of all public expenditure still went into the

² Hill, op. cit., pp. 144-145.
³ Ffrench and Hill, op.cit., p.35.
implementation of the scheme and the proportion as late as 1982/83 was about 9 per cent.\(^4\)

An economist looking at the property acquisition scheme in the mid-1960's explained how he and others felt about its drawbacks and abuses:

Since the process was confined at first to annual disbursement and receipts of money, control of the public land was overlooked; and so long as realty was not of great economic significance the oversight was not serious. But then real-estate prices rocketed. Meanwhile, large tracts of worthless desert had been seized and fenced in by those who either had the foresight or fore-knowledge to anticipate the coming public projects; and they subsequently were compensated handsomely by the State. With a rapid turnover of land and in the absence of legislation covering the acquisition of land for public uses, the cost to the Treasury was fantastic.

The process within the city itself differed somewhat from outside the old city wall. Land was purchased in excess of what was actually required for public projects, and the surplus was later sold back to the public, often at a fraction (estimated at 4 per cent) of its cost to the Treasury. Enormous private fortunes were amassed by both selling to, and buying from, the State...\(^5\)

The writer further states that "only a limited amount was piped into the local economy" and that "by far the larger part was remitted abroad either directly, or indirectly through the banking system."\(^6\)

Finally, despite its negative aspects, the scheme seems to have resulted in hastening the country's economic development. It also


\(^6\) Ibid.
brought about the ambiguously successful outcome regarding the rapid re-development of the old town. This process was considerably facilitated by one aspect of the scheme's outcome - namely, the grouping of small privately-owned parcels into larger blocks under government ownership which were suitable for certain civic and other projects. The mixed effects of the scheme, however, seem to continue.

The Municipality Development Plan

With the transfer of town planning functions from the Public Works Department to the Municipality in the early 1960's, the latter began actively to become involved in the urban planning process. At that time the Development Plan of a decade earlier had, for the most part, been implemented, the Planning Board was established and Saba Shiber was advising both the Board and the Municipality on the country's urbanisation problems.

The implementation of the 1951 Development Plan took place rapidly, in view of the pace of development and construction activities following its adoption. Overspill into areas outside the plan's designated districts was also occurring. Little was done to stop it, however, despite the concern of some officials and Shiber's repeated attempts to draw attention to the seriousness of the problems associated with the urban sprawl and urban 'rash' which became characteristic of many areas of the country.

By 1965, all of the sectors or super-blocks created by the Development Plan - except the three which were then occupied by the airport of the time - had been filled in. The radial roads of the plan had been extended to serve the areas devoted for non-residential uses notably the port at Shuwaikh, and those zoned
for health, education and light industry. The roads system was also extended to the south-east as far as the promontory on which the village of Salimiya was expanding and to Hawalli, another rapidly expanding community. At that time, it was estimated that about 75,000 people - nearly a third of all foreigners in the state - were living in these two growing settlements. The population of Kuwait was then about 467,000 and the problems of traffic congestion, particularly at some of the roundabouts/intersections of the radials and ring roads and within the old town were on the increase.

The Municipality did what it could to cope with the rising problems, in the absence of a sequel plan to that which had already been overtaken by events or implemented. The steps taken - in the form of planning schemes, projects, and proposals - and those expected to guide the urbanisation process until about 1970 were finally collected and formulated by the Municipality in 1967 as the Municipality Development Plan (Figure 14). In practical terms, the plan itself went into effect in the early 1960's.

The importance of the Municipality Plan stems from the fact that it had filled a void at a time when no comprehensive plan existed; it had, in effect, managed to guide the country's physical development during a critical period prior to the adoption of the country's first comprehensive master plan. It provided the context for the planning of a number of residential districts (such as Khalidiya, Idailiya, and Rumaithiya) as well as commercial development in the old town's business district and progress in the industrial areas. The road network was expanded and plans were made for the 5th and 6th Ring Roads, while increased attention was given to the coastal villages in the south-east and the Shuaiba Industrial Area began to take form.
Figure 14. The Municipality Development Plan
The Municipality Plan's capacity for population and employment had proven to be more than adequate even as it lacked the necessary studies. The studies conducted later by Buchanan in preparation for their plan, estimated that the Municipality Plan had provided for a total of approximately 1,140,000 people within the greater urban area, with a working population of about 500,000. By comparison, the figures reached in early 1969 were 725,000 and 250,000 for population and employment, respectively. The plan's anticipation of a reduction of the residential population in the old town was consistent with early predictions by advisers and others, as well as with the consequences of the 1951 Development Plan although, like all other parties, it tended to underestimate the town's 'pull' for foreign workers in search of cheap housing.

By the late 1960's, a comprehensive plan for Kuwait was long overdue. Kuwait acted then on the recommendations of the various advisors and in response to the concerns of many citizens. The result was the State's first comprehensive master plan - the subject of the next chapter.
CHAPTER VII

THE SECOND MASTER PLAN

Kuwait's policy makers had realised by the early 1960's the need for having a comprehensive master plan for the country's future development. A number of recommendations were made by the planning experts - Azzam, Buchanan and Thijsse - who presented their report in 1965.

First, they suggested an interim strategy of development: containment within the 4th Ring Road, with maximum use of infill sites, except in the south-east, between Salimiyah and Ahmadi, where new coastal development areas both for housing and employment purposes were recommended. Secondly, it was concluded that a master plan would be required to incorporate the recommended strategies. Thirdly, it was suggested that more detailed 'action area' plans should be prepared for these places where development was imminent, either to fill vacant sites or replace obsolete buildings.

The group of advisers recommended the appointment of consultants of international reputation to prepare the plans, and the establishment of a counterpart team, separate from the Municipality's Planning Department. This team was to work with the consultants, learning their methods, and in order to carry on with the plans when the consultants' work had been completed. Both the Master Planning Department and the Counterpart Team were created during the next two years.
Objectives and Approach

The broad objectives and terms of reference of the proposed study and plans, as agreed upon by the Consultants, the Municipality and the Planning Board were:

1. To review existing survey material and conduct additional surveys for the establishment of a comprehensive and reliable data base on all matters related to the plan. These were topography and climate, demography, employment, industry, land use, architectural and aesthetic considerations, transportation, and public utilities.

2. To prepare a national physical plan for the state which takes into consideration the goals of the government's Five-Year Economic Plan.

3. To prepare a master plan and reports for the development of Greater Kuwait, extending from Shuaiba to Jahra.

4. To assist in preparing the terms of reference for an architectural competition on the development of Kuwait Town.

5. To prepare and elaborate the plans and reports after obtaining the government's views on the draft plans, incorporating the architectural concepts for the civic area development.

6. To prepare detailed studies and designs of communities where development or renewal may be anticipated in the next decade.

7. To advise on legislative measures required for the plans implementation.

The programme for plans preparation had two main stages: the first, responding to the first three tasks, above, with a duration of fifteen months. The second stage, catering to task 5, required another nine months, and was basically one of refinement and
elaboration. The remaining tasks except for 6 which had to follow at a later date when the 'action areas' had been sufficiently defined were to be dealt with in the course of the study.

In July 1969, eight months after work had begun on the studies, a revised programme was agreed upon due to a number of factors. First, the basic planning data collected by the Consultants within the allocated time proved to be inadequate. Also, as estimates of growth began to appear, they underlined the magnitude of the problem involved in adapting the state's physical structure and economy to accommodate the projected population increase and other aspects of rapid change. Such growth posed questions of policy so important that the government's response under the programme required additional time. An interim report was presented after fifteen months, with recommendations on the phasing and form of both state and urban development in the long term. The government, in the meanwhile, was considering the major policy issues, and the remaining studies and plans of short term development problems were then prepared within the context of the preliminary conclusions of the Long Term Strategy.

The plans prepared by CBP appeared in two reports: the First Report embodying the Long Term Strategy, in 1970, and the Second Report, in four volumes, in the following year.1 The four volumes are listed below while Figures 15-17 provide a general view of the areas concerned.

Figure 15
State of Kuwait
Existing Development and Place Names

Umm al Shiqaya
Salimia
Jahra
Kuwait Town
Shuaiba
Fahahil
Fintas
Abdaly
Bubiyan Island
Faluka Island
Kubbar Island
Ras al Jilal'a
Khor al Mafattah
Wafra
Figure 16

المناطق الحضرية،
التنمية القائمة حالياً وأسماء الأماكن

Urban Areas
Existing Development and Place Names
Figure 17

Kuwait Town
Existing Development and Place Names
This chapter examines the major components of the Second Master Plan as defined by the terms of reference. These deal with the National Physical Plan for the State, the Master Plan for the Urban Areas (referred to above as Greater Kuwait) and the Kuwait Town Plan. In the process of formulating their plans, the Consultants have realised that the distinction between the first two components of the plan was somewhat artificial, as the problems and issues involved seemed to overlap and merge. This was reflected in their treatment of The Long Term Strategy which addressed the inter-related problems of both and which, along with a number of aspects directly related to the understanding of urban development and the formulation of comprehensive plans, is included in the present discussion.

Aspects of Urban Change and Development

In formulating comprehensive plans for the future, it is essential for the planner to gain sufficient knowledge of various aspects related to past and existing development and growth, and of the factors, positive as well as negative - economic, demographic or physical - which have an impact on the patterns and pace of change in the urban environment of the future. The elements highlighted below provide a necessary background in the context of discussing and analysing the urbanisation and development strategies presented by the Second Master Plan.
Stages of Urban Growth

From the previous discussion, it is possible to formulate an overview of the stages and some other aspects of the growth of urban Kuwait - from the early settlement to the adoption of comprehensive planning. Figure 18 is a recapitulation of these stages prior to the preparation and implementation of the Second Master Plan. The three main stages as illustrated in this figure refer to: the pre-planning era (before 1950), the period beginning with the Minoprio Development Plan and, a decade later, the years of the Municipality Development Plan. The generalised pattern of development as seen in 1970 became, in effect, the starting point for the new plan.

Population

Population and employment constitute two sides of a key element in the preparation of plans for urban development. Projections of changes in their levels, based on rational and reliable assumptions, are important determinants of such plans. The problem with which the Buchanan planners were faced from the outset was that their forecasts depended on two unknown factors: future changes in fertility rates and the rate of immigration into the country. The latter was of particular significance due to its policy, social, and political implications. The planners had concluded that a population of approximately two million was a realistic long term forecast for the purposes of the plan.

Of four combinations of fertility and immigration rates, two were finally selected on which to estimate a late as well as an early date when the two million population figure would be reached. Under the first set of assumptions, death and fertility rates did
Figure 18. Urban Growth until 1970
not change, and net immigration into the country was reduced to nil after 1969; the two million inhabitants under these circumstances could be reached as late as 1997. The second combination of assumptions changed the net immigration rate to 3 per cent - the rate in effect during the period 1965-69 - resulting in reaching the target two million population in 1985 (Figure 19).

Employment

Levels of employment used by the new plan were projected on the basis of the population forecasts referred to above. This was accomplished by applying 'activity rates' which represent the number of people actively engaged in paid employment per thousand persons in the two main population groups - Kuwaitis and non-Kuwaitis. Activity rates were determined on the basis of the 1965 census, for both sexes and in various age brackets, and their overall values ranged between 76.9 per cent for non-Kuwaiti males to 1 per cent for Kuwaiti females, while the rates for Kuwaiti males and non-Kuwaiti females were 37.3 and 10.4, respectively.

Thus, activity rates were applied to population totals and two employment figures were arrived at in connection with the two million inhabitants plan forecast. If this population total was reached by 1985, some 800,000 jobs were required (Figure 20). On the other hand should the target population become a reality only in 1997, the number of jobs needed would be 625,000. The difference between the two total employment projections is due to the fact that faster population growth meant greater proportion of non-Kuwaitis and a higher activity rate for the population. In determining the various land use requirements, the Consultants adopted the higher figure of 800,000 jobs so that the Long Term Strategy would not
Figure 19. Population Growth

Figure 20. Employment Growth
inhibit the expansion which could occur if the circumstances were favourable.

The plan's estimates of the employment and its distribution between the types of activities and between the existing urban areas and those to be developed during the period of the long term plan had particular importance for three planning elements. These were future land use demand, the relationship of the employment centres to each other and to the major roads and residential areas, and volumes of traffic generated or attracted by the various traffic zones and their distribution in the road network.

On the basis of its estimates of total employment requirements for the various categories of industrial and service activities, the plan concluded that a total of about 560,000 new jobs were required, in addition to about 246,000 which already existed in 1969. This additional employment was further divided between two categories: the 'fixed' areas (existing urban areas or those committed for development) and the 'proposed' areas which were allocated by the plan for new development. The fixed areas were to have an additional 48,000 jobs whereas the proposed areas were estimated to require about 510,000 new employment opportunities.

Existing Development and Land Use

Before defining the various potential urban strategies for the future, the Second Master Plan needed to take into account the extent of existing development and to have an overall understanding of the land uses prevailing throughout Kuwait.

Kuwait's urban structure, like other urban communities, is dominated by a number of land uses - residential, industrial, commercial and others. While residential land use is included in
the discussion of housing below, other elements of land use, important as employment areas, are briefly examined. Figure 21 illustrates the 1969 land use pattern in the urban areas of Kuwait (not including the old Kuwait Town) and place names are shown in Figure 22.2

By 1969, Kuwait had a number of major employment areas beside Kuwait Town, with several types of land use. These included the industrial area of Shuwaikh south of the port and adjacent to the distillation plant and power station, and the Mina al-Ahmadi/Shuabia/Mina Abdullah complex in the southern part of the state where primarily oil-related industrial activities concentrated.

As for commercial centres, Kuwait Town was predominant while secondary centres were evident in Salimiya, Hawalli and Fahahil, followed by smaller centres in the planned neighbourhoods and other communities such as Jahra, Farwaniya and Abraq Khitan. Both Salimiya, with about a fifth of Kuwait Town's employment, and Hawalli were having severe traffic problems: the first had a relatively large catchment area while the latter's smaller area was densely populated. Ahmadi and Fahahil provided the commercial activities primarily for the areas south of the 6th Ring Road.

By the late 1960's, Sulaibikhat, to the west of Shuwaikh, contained the state's expanding large health facilities, occupying extensive tracts of land. Kuwait Town had the old Amiri Hospital (rebuilt and enlarged in recent years), while the Ahmadi area was served by its General Hospital established by the Kuwait Oil Company.

---

2 Kuwait City defines the Metropolitan Area including Kuwait Town and other continuous development as far as the 6th Ring Road.
Figure 21. Land Use, 1970: Urban Areas
Figure 22. Place Names: Urban Areas
Land required for public schools in Kuwait was already fairly extensive in 1969 (about 650 hectares) with facilities distributed throughout the urban areas. Since public schools in Kuwait are primarily for Kuwaiti children, there were also private schools catering to children of expatriate residents. The Shuwaikh area had the Shuwaikh Secondary School and a Technical College dating to the early and mid-1950's. The University, which in 1969 had not yet been moved to the Shuwaikh Secondary School as its major campus, had three small divisions in Khalidiya, Idailiya and Kaifan.

As shown in Figure 21, public services facilities occupied a number of sites in the urban areas. They included a sewage treatment plant west of Jleeb al-Shuyoukh, a refuse incinerator south of Jahra Road, a composting plant south of Sulaibikhat, the Central Prison also south of Sulaibikhat, and a used car dump south of the 4th Ring Road.

The urban area's open spaces in 1969 included the cemeteries, occupying a considerable area in Kuwait Town, the Green Belt and one or two parks. The residential districts had open spaces associated with the schools and sports clubs, and there was an abundance of vacant land, mostly bordering the main roads. Green areas were rare and vacant land was used for varied purposes such as car parking and for accommodating transitory visitors on Haj journeys. Lands with views or access to the sea in the coastal areas were used for open air recreation during the summer.

Finally, a brief analysis of Kuwait Town and its land use patterns (Figures 23 and 24). Prior to the modern era this area between the sea and the old wall had predominantly traditional housing, in addition to the souk/Safat Square sector and the cemeteries. The development pattern in the late 1960's represented
Figure 23. Land Use, 1970: Kuwait Town
an intermediate stage; the Kuwait Town's resident population was about 80,000 (mostly non-Kuwaitis) and it employed about 77,000 people - a third of the state's total employment. The souk was still Kuwait's most important shopping area, attracting two-thirds of all people who shopped in Kuwait Town. New shopping facilities were already appearing, such as in commercial area 9 and along Fahd al-Salim, Ahmad al-Jabir and Mubarak al-Kabeer Streets.

The old town's predominant form of new residential development as could be observed by the late 1960's was the unsightly mixture of three and four-storey apartment buildings (often over ground floor shops) which came to characterise most of the housing built for the foreign residents for more than two decades. A few small areas for limited income housing at East Maqwa and on Abdullah al-Salim Street were also provided, as were a number of clinics and schools.

Other uses within Kuwait Town included government facilities such as ministries and other departments. Some of these were housed in new buildings (state-owned or rented) while others occupied old structures. The old town had a relatively large number of offices, many of which were developed along with the new shopping facilities, occupying the upper storeys of many buildings along Fahd al-Salim Street and others. As for industry, Kuwait Town had very little although an area between Soor and Mutanabbi Streets were set aside by previous plans for such use.

Housing

The predominance of residential land use in the urban areas in 1969 was clear. An estimated 111,600 dwellings existed in January 1970, distributed among five categories, with the number of dwellings and their standards varying from one locality to the
other. These categories were:

- Detached houses on plots: 9,000 (8%)
- Limited income group houses: 12,500 (11%)
- Traditional houses: 17,600 (16%)
- Shanties: 28,000 (25%)
- Flats and other dwellings: 44,500 (40%)

The first group of residential units comprised the large modern 'villas' of the planned neighbourhoods, accommodating about 900 houses each, mainly between the Green Belt and the 4th Ring Road. These were built on plots provided by the government to Kuwaiti families primarily under the property acquisition scheme. These buildings were individually designed, had plots of either 750 or 1,000 sq. metres and an average floor area of about 800 sq. metres each. Despite the fact that these houses were costly (KD 40,000-80,000), construction and design standards were generally poor and considerable rebuilding was already in evidence in the late 1960's.

The limited income group of houses were government-built for Kuwaitis with income of KD 150 per month or less (raised in later years), in a programme that began in 1953. Priorities were later determined by other criteria as well - property owned, present housing conditions and family size. While neighbourhoods with plots may have had some such houses, districts which were exclusively for limited income housing were emerging. The houses were located in groups, with minimal attention given to siting and design refinements.

Kuwait's traditional houses were built for the most part before 1950. They are usually single storey with roof parapets and an
internal courtyard, and built of local materials such as mud, gatch and coral. By the late 1960's, there were about 4,000 such houses left in Kuwait Town, more than 3,000 in Jleeb al-Shuyoukh (many built in the 1950's) and between 1,000 and 2,000 units in practically each of the urban settlements of the pre-oil era.

Shanties or 'ashish' in Kuwait have been long-established in a number of areas, mostly outside the main settlements: at places such as Wara, Magwa, Doha, Jleeb al-Shuyoukh, Jahra and Sulaibiyah, many of which were originally sites of wells used by the badu. As a feature of Kuwait's landscape, their growth was helped by the fact that materials needed for their construction were cheaply available. They are invariably owner-occupied while the site is generally a government property. Many of the badu were also living in these shanties in the late 1960's; they came to Kuwait from various parts of the Arabian Peninsula and many have taken generally low-paying jobs. Kuwaitis were estimated to be 20 per cent of shanty dwellers. Several schemes were launched from the late 1960's on to end this phenomenon and resettle the ashish dwellers; the process, however, have been slow amid the other pressing housing needs and objectives.

The last and largest group of dwellings in Kuwait in 1969 were the flats in apartment buildings. Located in well-defined areas, with Kuwait Town, Salimiya and Hawalli containing by far the largest number, they were (and remain) occupied mostly by non-Kuwaitis. The rapid expansion of Salimiya and Hawalli during the 1950's and 1960's, without sufficient control or adherence to a master plan, and the influx of foreigners in large numbers to these areas have led to substantially higher residential densities there (by the standards of a newly urbanised country) than in the planned neighbourhoods - 65 per hectare for the latter, as compared with 136
and 215 for Salimiya and Hawalli, respectively.

Finally, reference can be made to two different kinds of dwellings which remain in use at present. The first comprises a group of about 3000 dwellings built by the government in the early 1950's in Shuwaikh and Sulaibikhat which could be rented mostly by its foreign employees - those on contract and of somewhat senior level. The second group are the detached houses of Ahmadi, built by the Kuwait Oil Company for its employees in the early 1950's and expanded in the following years to form the predominantly residential and generally pleasant and distinctive town of the present.

Development Constraints and Opportunities

An initial look at Kuwait's abundant undeveloped land at the time of the Second Master Plan preparation may lead to the conclusion that almost unlimited future urban growth could be accommodated. In reality, however, there were then certain constraints or factors which precluded or restricted development in parts of the state for one reason or another. The main such factors were: the existing built-up areas, the oil fields, the water fields, and the land requirements for agriculture and defence. Physical and climatic factors were also evaluated but it was concluded that they did not in themselves determine the location of urban development, with topography as likely to be more important than others.

The Master Plan divided these constraints into three categories or orders (Figure 25), depending on how absolute they may be. The present urban area, for example, was considered as an absolute constraint (first order), while the oil fields (second order) were also treated as absolute constraints, although parts could, in
Figure 25. Development Constraints, 1970
special circumstances, be used for other activities. Further, some of the area suitable for agricultural development (third order) might be appropriated for urban development if necessary. When all the constraining factors have been taken into consideration, opportunities for development, also divided into three orders, were also defined (Figure 26).

The assumption was then made that the most important influence on the location of new urban development was what the plan referred to as the property line which contained most of the built-up area (see Figure 21) even as extensive renewal of much of the urban structure was anticipated. It was also realised that shanty areas presented few obstacles to urban development physically but were more complex as a social problem.

The plan also concluded that certain areas with underground water resources should, if possible, be avoided as locations for urban development. This includes the Sulaibiya water field between Kuwait City and Jahra, a complex which constituted a major restriction. Another underground water reserves area considered to be a restriction on urban development is Rawdhatain which also falls in part within the oil fields of north Kuwait.

Since certain parts of Kuwait have soils with agricultural potential, the plan defined three such areas: Sulaibiya, Abdaly in the far north and an area in the south-west. Two areas were suggested for planting forestry belts - one north of the Sulaibiya water field and the other in the Doha peninsula - although that was not a fixed commitment.

Finally, military installations and reserves, although located close to the urban areas and in some cases within them, have been considered as constraints on urban expansion. The future use of
Figure 26. Development Opportunities, 1970
such lands could only be determined within the context of wider policy decisions.

As shown in Figure 26, a number of sites for future development opportunities were identified. This figure also illustrates the fact that the entire territory of the state could be divided into two distinct regions with completely different characteristics. These are the coastal belt (where almost all urban development has occurred in the past) and the desolate interior, defined by a line which runs from north to south. These sites varied in terms of attractiveness for development and the problems they presented (change of use, physical and environmental considerations) and which needed to be resolved before their potential could be realized. Briefly the areas are:

1. Above the Zor escarpment;
2. Below the Zor escarpment;
3. The Doha peninsula;
4. The Slopes between Jahra Road and the Sulaibiya water field;
5. West of South Shuwaikh/Farwaniya extending as far south as the cemetery and Central Prison;
6. Between Abrak Khitan and Rumaithiya north of the 6th Ring Road;
7.Immediately below the 6th Ring Road stretching to Ahmadi;
8. South-east of Ahmadi ridge;
9. Between Fahahil Road and military reserve in the south-west.

The National Physical Plan

The National Physical Plan proposed by the Consultants comprises long term strategy objectives as well as short term elements. This analysis examines the salient points of this plan before looking into the proposed urban development strategies and
the preferred strategy. The National Physical Plan naturally set aside a larger area for future urban uses than those defined by the urban strategies in order to facilitate modification as a result of further studies and revisions. While the plan's components were considered primarily in terms of the principal land uses, areas with constraints and impediments insofar as urban development was concerned were treated in a more constructive sense within the context of the Long Term Strategy.

The main component of the State Plan was that concerned with the urban areas. In the Long Term Strategy, it was suggested that the urban areas be expanded southwards to include a satellite settlement, south of Ahmadi, of about half a million, and a considerable expansion of Sulaibikhat and Jahra. The National Physical Plan (Figure 27) however, provided for this objective while refining the strategy by distinguishing between the following areas outside the urban areas of 1969:

1. Areas proposed for development in the short term to accommodate one and a quarter million people (an addition of about 520,000 people) within the coastal strip to Ahmadi, and some expansion of Sulaibikhat and Jahra.
2. Areas proposed for urban development in the long term to accommodate the plan target population of two million. This growth includes a new satellite town south of Ahmadi and further expansion at Jahra and Sulaibikhat.
3. Other potential areas for growth beyond the two million population - lands beyond the areas defined above.

The State Plan also made provisions for a number of settlements, in locations remote from the urban areas. These were
Figure 27. National Physical Plan, 1970
either border settlements in the north, south and south-west, or sites for second homes - at Doha, west and south-west of Jahra and near the southern border - with strict regulations as to layout, height, landscaping, and setbacks.

Other land uses defined by the State Plan included those for recreation (holiday villages, camping, boat facilities, a national park and a national reserve), conservation (ground-cover vegetation, forest planting, pollution combating), natural resource exploitation (oil and natural gas, underground water and minerals, fishing), agriculture, military camps, and power and distillation plants.

Master Plan for the Urban Areas

As envisaged by the plan, the urban growth strategy to be chosen from the alternative strategies which were formulated was basically concerned with the future location of the various elements of the future urban areas. And as strategies, these plans had limited concern with the tactical or detailed aspects of design or questions directly related to specific forms or patterns of urban environment in the state's urban centres. Such questions, based to a considerable extent on cultural and social considerations and preferences, were thought to be more relevant to the studies on Kuwait Town which were then under preparation by the four architectural consultants referred to earlier. On the strategic level, then, the plan for the urban areas underscored Kuwait's growth as an urban culture with commercial and industrial base and with no likelihood that nomadic or pastoral life would be retained or restored.

Before examining the development options and urban strategies of the plan, it would be relevant to look into a number of elements
in the urban structure which are vital to the determination of future plans and growth.

Population and Employment

In the short term the first two phases of the Long Term Strategy constituted the Short Term Plan. The Consultant's studies stipulated increments of 225,000 people in the first phase, and 300,000 in the second phase. Since the 1970 census revealed a 1969 population of 733,000, the population target for the end of the short term period was 1,258,000. As was the case with the overall two million population target, the date when the short term figure could be reached depended on net immigration. If the net immigration was to run at 3 per cent a year, the first phase (958,000 people) would last only until the end of 1973, while the second phase (1,258,000) would take another four years. If, however, the net immigration were to fall to zero, each of the two phases would have required about seven and a half years.

The plan projected its employment figures for the short term period on the basis of the Long Term Strategy assumptions, since the full results of the 1970 census were not available. It forecast the additional employment in manufacturing (and services oriented to production) to be between 42,000 and 105,000. Service industry employment was projected to increase by 163,000-240,000.

Kuwait Town, under its proposed Structure Plan was to have a total of 95,000 jobs, of which 89,000 were to be in the service sector - an increase of 25 per cent over 1969 levels, as opposed to a projected increase in service employment throughout Kuwait by 65 to 85 per cent. A further 49,000-61,000 service jobs (depending on the rate of population growth) were expected to go to existing and near district centres.
Housing

Residential areas and their planning and expansion are common to all urban growth strategies. In 1970, the housing situation in Kuwait could be summed up by the following conclusions:

1. Not enough housing was being built to keep pace with the growing population - for the urban Kuwaitis, the non-Kuwaitis and the shanty areas dwellers.

2. Neither the plot distribution scheme nor the limited income group housing construction programme were sufficient to satisfy demand.

3. For the non-Kuwaitis, housing for many was grossly substandard and overcrowding was common - particularly for those with low incomes.

4. Adequate housing at affordable prices was the most urgent need, also allowing for the clearance of obsolete dwellings.

5. The housing situation for non-Kuwaitis was closely related to issues of policy.

6. The removal of shanty areas and the resettlement of their dwellers needed to be realised within the context of the total housing requirements of the sector of population involved and the rate of badu absorption into the urban areas in the short term.

The plan estimated the total long term population capacity of the 'fixed' urban areas to be 853,000 - including about 90,000 people for Kuwait Town. These areas, excluding the shanties, had a population of 620,000 in 1969, while dwellings committed to construction could accommodate about 238,000 people. The proposed new residential areas were then seen to provide housing for the
404,500 people which made up the balance of the short term population of 1,258,000.

The plan also predicted that by the end of Phase 2, the population of the new residential areas would be between 318 and 335,000 people. Provisions to reduce overcrowding, on the other hand, required about 154,000 new dwellings, while a further 54,000 were needed to replace group accommodation, and 41,000 to replace obsolete traditional housing outside the committed areas.

The plan saw most new residential development for Kuwaitis in the short term in the form of houses built at two densities: a lower density of 10 dwellings per hectare and a medium density of 25 dwellings per hectare. As for non-Kuwaitis, an increase in demand for family houses was forecast - about 38 per cent to be accommodated in medium density houses, and the remaining 62 per cent in flats, at a high density of 55 dwellings per hectare. The high, medium, and low residential densities were to have corresponding population densities of 265, 120 and 50 people per hectare, respectively.

District Centres

Initially, the Consultants looked into the possibility of developing a completely new centre outside Kuwait Town, in addition to a series of other smaller centres, which would replace the Town as the main focus for government and business activities. The idea of replacement was later abandoned due mainly to locational requirements and time limitations, and a second major centre was designated instead. What evolved finally was a hierarchy of centres as follows:

1st. Order Centre: Kuwait Town;
2nd. Order Centre: one new major centre, near Fintas;
3rd. Order Centres: seven district centres, existing and new;
4th. Order Centres: the existing neighbourhood centres and new township centres;
5th. Order Centres: local centres within the residential areas.

The choice of the Fintas area for a second major centre in the context of a preferred urban strategy, as an alternative to Kuwait Town for some commercial, government and other facilities, was due to its location in an area where much development was already taking place and where population growth was rapid. None of the existing centres was suitable and the need was seen for a centre planned and designed for the purpose.

The district centres were chosen primarily on the basis of potential future growth of existing centres. Other locational factors were related to well populated areas not adequately served and proposed residential areas which could develop in association with the district centres in the short term. The designated centres were in Hawalli, Salimiga (both already thriving centres), Farwaniya, Sulaibikhat, Fahahil, Jahra, Messila and Fintas - the latter being also the second major centre. Each had a catchment area of about 5 km radius and a population of 100,000. These centres were to provide a wider choice of goods and services than could be found in the local neighbourhood centres, but less comprehensive than those available at either Kuwait Town or the second major centre at Fintas.

Transportation

The highway network which existed in the late 1960's had some
critical problems. First, the rapid growth of traffic had resulted in the frequent overloading of major sectors of the network. Secondly, the main roads were carrying both long and short distance traffic, causing inefficient use of road space and lengthening travel time. Thirdly, there were obvious and acute traffic and pedestrian conflicts in the major existing centres such as Kuwait Town, Hawalli and Salimiya, as the main roads cut through the shopping areas. Finally, widespread street parking in these centres and in the residential areas seriously hampered the flow of traffic.

In developing the alternative urban strategies, the planners clearly realised the absolute necessity of providing a transportation system that could not only address these problems, but also, by the end of the short term, carry the greatly increased amount of traffic, particularly the longer distance journeys. The proposed system consisted mostly of primary roads (which were seen as an important determinant of the pattern of urban development proposed) and district distributors and local roads.

A rapid transit system was also seen as an important element in the structure of the new urban areas, particularly along the coastal strip, for people travelling longer distances to work-places in the existing and new areas, especially to Kuwait Town, to the second major centre and to the new industrial areas. The existing Kuwait-Basra and Kuwait-Fahahil Roads were both incorporated as parts of the primary road network, and their influence upon the location of development in the short term was recognized.

Industry

At the time when the Master Plan for the Urban Areas was prepared, Kuwait had two main industrial areas. The Shuaiba
Industrial Area, which was only 30 per cent developed and contained some of the country's largest and most important industries such as refining and power and distillation, in addition to a port; and the sprawling Shuwaikh Industrial Area, which had mostly light manufacturing, garages and storage, south of the state's first power and distillation plant. There were also commitments for expansion south of the 4th Ring Road near Shuwaikh and for other industrial plants (cement, petrochemicals, power and distillation) in Shuaiba.

The plan estimated that industrial employment growth (excluding heavy industry) would be 30,320 and 90,750, for the slow and fast rate of population growth, respectively. Of these, between 7,000 and 10,500 would take place in the existing and proposed residential areas while the remainder were to occur in the industrial areas - both existing and proposed. Total land requirement to accommodate this projected growth was estimated at 693 and 1897 hectares, depending on the growth rate and assuming that only 50 per cent of the area would be occupied directly by industries.

The net area of land required for heavy industry employment growth was estimated to be about 500 hectares (representing a gross demand of 600 hectares), based on fast population growth. Of this, 390 hectares were available then at the Shuaiba Industrial Area, which was to be expanded by incorporating the nearby Shuaiba village. (The Shuaiba Industrial Area was substantially enlarged in recent years with the addition of a large industrial tract west of Mina Abdulla).

Other land use elements considered and provided for by the plan and which will be mentioned here without elaborating, include ancillary land uses in residential areas such as schools; health and educational facilities, public utilities, open space and recreation.
Strategies for the Urban Areas

In formulating a synthesis for the future urban development of Kuwait, the Second Master Plan drew up several alternative strategies which embodied different concepts of development. The short term development had less widely different concepts due to the fact that the broad locations of short term development and many of its characteristics were already determined by the preferred urban strategy.

The plans recognised a number of basic elements or 'building blocks' which, through a variety of arrangements in relation to land with the best potential for development, produced different urban strategies. These basic elements were: housing, centres, transport, industry, and open spaces - with phasing as an essential planning and implementation refinement. In arranging these elements, the importance of existing development as a factor was also recognised.

The planned growth of existing cities and urban areas poses different problems, and requires different solutions, than those associated with the planning of new towns. The former situation can broadly be accommodated by three strategies: accretion or continuous addition to the built-up area, satellite or the development of new units, and corridor-linear extensions of the existing development in certain directions. None of these theoretical growth strategies, however, could be applied in a pure form when practical considerations were taken into account, for these would often result in changes or distortions in the theoretical structure.

The resulting urban strategies looked at both the generally less desirable accretion pattern of development as an option and the
two other healthier and more suitable theoretical structures - the satellite and the corridor-linear extensions. The strategies also had some common approaches and assumptions - to be truly comparable for evaluation - such as growth data, avoidance of use of the least attractive lands for development except when necessary to test the consequences of development regardless of constraints, and the ability to accommodate urban expansion beyond that needed by a population of two million.

Common to all five strategies which were considered was the development of almost the entire southern coastal strip - the area from the 4th Ring Road to Ahmadi, between the sea and the edge of the oil field. The interior of the state was considered for development but studies have shown that it lacked sufficient potential for environmental, locational and other factors. This, in effect meant that all urban growth strategies would have to designate their land uses in areas which lie roughly within twenty km. of the coast. (To get an idea about these strategies, refer to Figure 28 which illustrates the preferred strategy, along with Figure 22 for the names of places).

Strategies 1 and 2 - These two strategies were, in effect, the application of the principle of accretion, with a certain distortion of the usually circumferential pattern of accretion, due to constraints such as the International Airport and oil fields reservations. Both strategies meant considerable expansion in the west (Strategy 1 with the addition of a major centre north of the Sulaibiya wells), bounded by the Sulaibiya water field as its southern limit, extending as far west as Jahra, and avoiding lands in the Doha area in the north below the five metre contour.
Figure 28. Preferred Urban Strategy, 1970
Strategies 3 and 4 - Two possible satellites formed the basis of these two strategies: Strategy 3 designated a major satellite to the west in the vicinity of Jahra, while Strategy 4 saw such a satellite location in the south near Ahmadi. The Jahra satellite was situated on either side of the Zor escarpment, providing an environment of visual interest, and its development was to begin with the expansion of the existing Jahra village and with providing industrial development to its south-west. Its total population was estimated at 800,000.

Strategy 4 stipulated a similar population figure for an alternate satellite south of Ahmadi, between the southern limits of the Exclusive Surface Rights Area and the old Neutral Zone boundary. This area has the advantage of proximity to the most important stretch of recreational coastline and the mixed positive and negative effects of being close to the Shuabia Industrial Area.

Strategy 5 - Largely because of the physical constraints and the need to locate new development near the coast, all four strategies above proposed linear solutions. They could all benefit from a major spine or mover of transportation (including rapid transit) along which movement generators would be clustered, and which were compatible with phased implementation. Strategy 5 had elements in common with the other four plans and was also based on a linear development concept. From Kuwait Town, development would have reached westward to Jahra, mainly south of the Basra Road on the more undulating higher land. It would also have extended south to Ahmadi, with some development south of the Exclusive Surface Rights Area.

In testing the five alternative strategies to obtain sufficient information on which to base recommending a preferred strategy, a
number of evaluation criteria were employed. These criteria were divided into six groups as follows:

1. Movement;
2. Environmental factors and recreational potential;
3. Conflicts with existing and potential uses;
4. Accessibility and centres;
5. Phasing and implementation;
6. Capital costs

The movement criteria group was considered the most important in the evaluation process, while the relative importance of the other five was determined by weighting of the criteria, group by group and criterion by criterion, and a system of scoring. The assessment was concerned with the unique element of the plans rather than with their common features. From the analysis of the movement demands, the evaluation looked into four related matters - the distribution of employment, the influence of Kuwait Town, parking in Kuwait Town and the implications for public transport.

The Preferred Strategy

The process of evaluation of the five alternative strategies resulted in the selection of Strategy 4 (major satellite to the south) as the basic framework for a more refined preferred strategy. Strategies 1, 2 and 5 were largely based on accretion, with a second major centre (except Strategy 1) and linear development, and they all fell behind the satellite strategies with regard to general performance. Between the two satellite strategies – 3 and 4 – the latter was considered to be a better choice. They were equal in terms of criteria groups 2 - 5; but while Strategy 3 had a better
movement performance, it was more costly. The extra costs in respect of movement facilities such as highways in Strategy 4, were only a fraction of the additional cost of water and power distribution required by Strategy 3. Also, accessibility in terms of distance from Kuwait Town and Shuwaikh was compensated for by a sizable potential catchment for a second major centre.

The Preferred Strategy (Figure 28) proposed new development mainly to the south of the existing urban area but also in other localities, as follows:
1. The coastal strip between the 5th Ring Road and the committed developments to the north of Ahmadi/Fahahil:
2. A major new satellite south of Ahmadi;
3. Extensions to Ahmadi;
4. An area south of Sulaibikhat;
5. Extensions to Jahra village

The total population which could be accommodated in the new areas was estimated at 1,105,000. This figure, however, did not include the population which could be accommodated by residential development already committed in a number of areas such as Jahra or the coastal strip north of Ahmadi/Fahahil.

The plan also proposed two major centres rather than one- as assumed in the five strategies. This was mainly due to the fact that there were three well defined commercial and administrative catchment areas: Kuwait Town, the eastern coastal strip and the satellite in the south. Two other reasons were the need for more employment in the eastern coastal strip; and that considerations of phasing weighed strongly in favour of two centres since the satellite would take a relatively long time to develop and a centre
would be needed to relieve the pressure on Kuwait Town at an earlier stage and relatively close to the town - at Fintas, as stated above.

Other positive aspects of the Preferred Strategy of southern satellite development was the potential employment opportunities within the development area or adjacent to it in the expanding industrial zone, its closeness to the coast with its recreational assets, a compatible transportation system, and its provision for allocating two major sites as land reservations.

**Flexibility and Phasing** - The Preferred Strategy was considered to be a flexible and adaptable concept which could be realised in more than one pattern of development. Three such patterns were defined: a spine of high density development, dispersed low density development and the growth of separate communities.

The phasing assumed that all committed development would be carried out during the first phase and aimed at the substantial completion of development in the coastal strip northwards from Ahmadi/Fahahil by the end of phase two. Other features of the phasing plan included the early development of housing west of Shuwaikh, the early use of the land with the best environmental conditions and links with existing development, the later development of the satellite, and the avoidance of concentrating development in a given phase in one area.

On completing the short term studies, the Consultants concluded that the recommended urban strategy was valid as a framework and an outline but needed modification in some detail. The main elements involved, however, were not substantial and dealt with avoiding development in certain areas such as north of the Basra Road at Jahra, and some belts of land in the coastal strip, while
encouraging development in parts of the area west of the north-south motorway.

Kuwait Town

At the time of the Second Master Plan preparation, building activities were taking place in various parts of the Town. Elements of the Municipality Development Plan were being implemented and a number of government projects had already been committed. The fixed areas of committed and proposed development (Figure 29) amounted to about 485 hectares of Kuwait Town's total area of 805 hectares, leaving 320 hectares of the Town for new development within the framework of an overall plan. The sites included in the architectural competition referred to earlier and their development proposals by the four architectural teams, were to be incorporated with the Kuwait Town Plan.

Population and Employment

The population structure of the Town was undergoing rapid changes since the 1950's; by 1970 it had fallen to 80,000 (from 100,000 only five years earlier) with the Kuwaitis comprising only 21,000 of this total. Initially, the plan assumed the resident population would be brought back to its 1965 total of 100,000 by the end of the short term plan, with 78,000 (30,000 Kuwaitis) persons in family households, requiring 14,400 dwellings and 22,000 single males living in shared lodging.

The employment level was estimated at 104,000. The employment structure envisaged by the plan accommodated the growth of activities which must locate in the Town or which served the resident population or for which development is already committed.
Figure 29. Committed and Proposed Development, 1970: Kuwait Town
It discouraged, as far as possible, the growth of those activities for which a central location is not essential.

Town Core Expansion

Kuwait Town’s central business district or its core has always been regarded as its most important element. The expansion of this core was inevitable if the Town was to keep its status as the state’s governmental, business and cultural centre. The plan saw employment rising by about 20,000 in the core (to a total of about 45,000) and the choice was between two expensive concepts: in and next to the existing core, or the dispersal of some or most of the additional employment to other parts of the Town. Evaluation of a number of practical variations on these two concepts revealed the advantages of a core growing to the south or south-east. New development in the east was seen necessary to balance this growth, reducing movement from Sharq to Mirqab.

The Proposed Structure

As a result of evaluating and refining two practical plans which were based on the estimates and concepts discussed above, a structure for Kuwait Town was proposed whose main features were as follows:

1. Kuwait Town’s dominance in the overall urban areas structure remained - as capital and main administrative and commercial centre.

2. The plan provided for employment of 95,000 - about 19,000 more jobs than in 1969 - with 20,000 added in the core area.

3. Resident population remained at its 1969 level - about 80,000. Changes in composition, however, were expected. As the Town is
rebuilt, the plan assumed that more Kuwaitis would return to live there. An increase of about 9,000 Kuwaiti residents, would be offset by a decrease in non-Kuwaitis.

4. The Green Belt remained free from development and the core growth was to occur in three main areas. One was along Abdullah al-Salim Street, stretching south along this approach road. A second and more concentrated area of core activities was to be developed between Abdullah al-Mubarak and Mubarak al-Kabeer Streets next to commercial area 9. The third growth area of the core was a new satellite centre in the eastern part of the Town, with the crossing of Jabir al-Mubarak and Ahmad al-Jabir Streets as its focus (Figure 24).

5. The plan provided for 48,000 parking spaces (130 per cent more than in 1969), including multi-story garages, with priority given to short-stay parking for shoppers and business visits. Long stay parking was to concentrate mainly at the periphery of the Town, where cars could be left and people transferred to public transport.

6. The existing road network in Kuwait Town formed the basis of the primary roads proposed. It accommodated the increased demand for movement but was also expected to reduce traffic in certain busy areas such as Fahd al-Salim Street and Safat Square.

7. An important element in the road network was al-Hilali Street, designed as an urban motorway linking together all the radial roads and the existing core and the new centre, and as the major distributor road inside the Town. A new radial road through the Qibla section of the Town was also suggested, continuing across the north side of the souk (where it would go
below ground) to relieve Fahd al-Salim Street of through traffic. General improvements for a number of other streets in the Town were also proposed.

In conclusion, Kuwait's Second Master Plan - as a major comprehensive planning step - was a serious and timely response to the country's long-term planning needs. The two reviews which were undertaken within the following decade were necessitated not only by the continuing changes and evolving circumstances and requirements, but also by the fact that master plans, meant to guide development rather than to serve as detailed programmes for action, require periodic reviews and evaluation throughout the process of implementation.
Kuwait Towers

Kuwait Fund - interior courtyard
CHAPTER VIII

REVIEWS OF THE SECOND MASTER PLAN

Introduction

The adoption of the Buchanan Master Plan provided Kuwait with its principal framework and guidelines for development and urban growth. The earlier Development Plan, with its emphasis on the old town, the expansion of urbanisation to the adjoining areas, and on related circulation and access network, was an initial planning effort. Along with the Municipality Development Plan, it had substantially determined the direction of urban growth in Greater Kuwait or Kuwait City and, to a lesser extent, the rest of the country.

As the Second Master Plan was being implemented during the 1970's, new forces - mainly economic - were creating additional pressure for wider and accelerated commercial, industrial and residential development activities. The period which began in the latter part of 1973 and lasted into the early years of the following decade, witnessed sharp rises in crude oil prices and state and private sector personal income. Residential and commercial densities and land uses saw higher levels than was recommended by the plans. By 1977, a review of the Buchanan Plan was also justified by the fact that several years have passed since the plan's adoption and the beginning of the short term plan implementation.

Consequently, Shankland Cox and Partners, a British planning firm, was asked to undertake a review of the Buchanan Plan in the light of the changing circumstances and policies. The resulting
studies - the Master Plan First Review (MPR1) - were completed in 1978 and presented in three parts: Metropolitan Structure Plan, City Centre Structure Plan and National Physical Planning Strategy.¹

Four years later, in 1982, amid signs of further changes in the economic and development conditions as a result of declining oil prices, as the overheated economy began to re-adjust and following further planning implementation, a second review of the 1971 Master Plan was commissioned to the firm which prepared the original plans - Colin Buchanan and Partners. The Master Plan Second Review (MPR2) updated the earlier plans and evaluated MPR1 recommendations and provided a more up-to-date guide on the required scale and timing of development, as well as a realistic context in which local planning could take place.

This chapter focuses on this review - MPR2 - as it constitutes the latest planning effort; it benefited from both twelve years of Master Plan implementation and a previous review - MPR1 - by a different Consultant, and it was made at an important juncture in the country's development. References will be made to MPR1 for comparison and to help explain the background of certain aspects of the up-dated plan.

The MPR2 appeared in final form in 1983; it comprised three volumes dealing with the three basic elements defined by the previous plans: the National Physical Plan, the Metropolitan Structure Plan, and the City Centre Structure Plan. The strategy itself (incorporating all three elements above as well as the basic

projections and implementation) was the subject of Volume 1 - Planning and Policy - whereas the background and detailed studies were included in Volume 2, on Economics, Demography, and Utilities, and Volume 3 which dealt with Land Use and Transport Studies.  

The Metropolitan Area covered by the Metropolitan Structure Plan in both reviews refers to the area extending from Jahra in the north-west to Mina Abdullah in the south. The term City Centre defines the area north of the 1st Ring Road to the sea - what was referred to before as Kuwait Town.

Plan/Review Objectives

The main objectives sought by MPR2 grew from those defined for the original CBP Master Plan, taking into account MPR1 and its proposals, the changing circumstances as well as the lessons learned from past implementation effort. It aimed to provide the planning structure for:

1. Sufficient housing, with good standards and layout;
2. Sufficient and suitably located and serviced land to support the required employment levels;
3. An efficient transport system, for both people and freight;
4. Adequate and accessible community facilities and centres;
5. Adequate and appropriately distributed retail space;
6. Opportunities for a wide range of recreation and leisure activities;
7. A city centre of national importance and easily identifiable character;

8. Urban, desert and coastal environments of high quality;
9. Conservation of natural resources;
10. Further development beyond the plan period;
11. The efficient use of existing or committed infrastructure and facilities;
12. Realistic implementation programmes.

The National Physical Plan

The present analysis begins with a review of the basic population and employment forecasts, followed by a description of the main natural resources on the basis of updated surveys and of landscape and recreation elements. This will be followed by an analysis of the recommended urban growth strategy of external growth and a brief description of the three other alternative community development scenarios. It concludes with discussing the transport system provided for in the plan.

Population and Employment

The period covered by the plan is 1980-2005, during which the plan expected the total population of Kuwait to increase by about 83 per cent - from 1.367 million people to 2.505 million. This period is also expected to witness increased Kuwaiti participation in a more diversified national economy and a declining proportion of foreign residents, with Kuwaitis in 2005 constituting 55 per cent of the total population, as compared to 42 per cent in 1980.

Development and economic growth in all sectors during the 25 year period ending in 2005 was seen by the plan to result in a rise of 74 per cent in employment over the 1980 levels - from 484,010 to 842,000. It was assumed that a policy of encouragement of
diversification would lead to significant growth in the manufacturing, business and services sectors, and that the proportion of Kuwaitis in the labour force will rise to 45 per cent, doubling its 1980 portion.

The plan's employment forecasts were based on the long term relationship between growth in the domestic economy and employment, and anticipated strong industrial development policies and more restrictive controls on new foreign labour. The population forecasts were based on an employment-led model which sought to balance employment supply and demand in each five-year period through manipulation of the non-Kuwaiti element of the population. The model's main variables were the total employment growth, the natural change of Kuwaiti and non-Kuwait population and related labour supply, and the net migration of non-Kuwaiti population to balance the difference between the two other variables. Assumptions in relation to economic growth and employment, trends in fertility, mortality and activity rates were all factors in the forecasting model.

Natural Resources

Oil - Boundaries of the oil fields and the oil rights areas have changed since the 1970 Plan. The Kuwait Oil Company's Exclusive Rights Areas include the major oil fields as well as other land with possible oil production potential. These areas are mainly in the southern part of the state, in addition to a large area in the north, with potential exploration at Khiran, Kuwait Bay, Bubiyan Island and off Failaka Island. Figure 30 shows these areas as well as those associated with water resources, and illustrates the constraints and opportunities for non-metropolitan growth.
Figure 30. Natural Resources, Constraints and Opportunities for Urban Growth
**Water** - Brakish water fields have already been developed at Sulaibiya and Shigaya, with potential yield of approximately 330 Mld. Water fields at Wafra under development are expected to contribute about 114 Mld. Areas of future development west and north of Shigaya and Umm Gudair could add another 294 Mld. Further brackish water sources are at Abdaly and Wafra for private farms in these areas and produce about 180 Mld., while Kuwait Oil Company produces about 70 Mld. at Abdaliya for its own use. As for fresh water fields, they are located in the north-west of the state at Umm al-Aish and Rawdhatain and contribute about 5 Mld. to the fresh water supply. The contribution of the agricultural sector to the domestic output, which has been small but growing, is expected to grow further as water resources are developed and due to current policies to promote local food production.

**Minerals** - Many sand and gravel pits have been excavated during the past 25 years in many parts of the country. Areas south of the Airport at Abbassiya and south of the Jahra Road between Jahra and Sulaibikhat continue to be worked while the main area identified for further mineral exploitation is south of the oil fields of the north and west of the Abdaly Road.

**Landscape and Recreation**

As the urban areas grow, development pressures increase and it becomes necessary to resist such pressures with regard to certain areas designated to be conserved for environmental, ecological and recreational purposes. Such natural assets in Kuwait were recognised by both MPR1 and MPR2, and they comprise mainly the Zor Ridge and Wadi al-Batin, the southern coast and the two major islands of Failaka and Bubiyan (Figure 31).
Figure 31. National Landscape and Recreation Areas
The Zor Ridge and Wadi al-Batin - The earlier plans designated a National Park area north and west of Kuwait Bay. Except for Subiya, the site of a new town, the area proposed along the Zor Ridge remained mostly unchanged since MPRI, although its essential natural qualities need to be protected from existing and proposed land uses if the concept of a National Park is not to be compromised further. However, the conflicting uses already existing or planned and the need to concentrate resources, were factors which prompted MPR2 to reduce the boundary of the designated area considerably. The plan saw that the north side of Kuwait Bay required protection through controls in order to retain its natural character, particularly in the conservation zone in the core of the National Park, as it will represent the state's only remaining natural coast.

The Wadi al-Batin in the west, which remains a relatively isolated conservation area of considerable value, is a habitat for a variety of flora and fauna. The plan has designated the Wadi as a landscape conservation area so that future policies can be aimed towards its protection.

The Southern Coast - This area has witnessed much illegal 'chalet' development in recent years. The remaining unspoiled beaches in this strip also require protection, according to MPR2. The zone to be designated for conservation, however, had to be realistically reduced and to be associated with more detailed zoning and a workable management plan. As in the case of the National Park and coastal conservation zones in the north, the conflicting demands in this area are numerous and even more threatening. In addition to the chalets, proposed developments include power/desalination plants, a new coastal road to Khiran (a new town/resort), a gas pipeline to Mina Abdullah and docking facilities. The development
of Khiran itself would underscore the need for a carefully zoned and managed recreational hinterland.

Failaka and Bubiyan - MPR2 recommended more active promotion of Failaka Island's archaeological sites, in addition to small-scale hotel development and pleasure boat facilities. It has a suitable location for both Kuwait City and the future Subiya, particularly for week-end recreation. Bubiyan, Kuwait's largest island, is now connected to the mainland by a modern bridge. Since it is also probable that oil reserves exist along its southern part, MPR2 suggested that the time was appropriate to plan positively for controlled development on the island. The island, however, has difficult site conditions (with inundation and swamps) which limit development. A road link has been suggested from the bridge to the eastern side around the southern coastline, with limited recreational development in the south-west and the allocation of land on the north-west coast for military use.

The Development of Strategy

Under the provisions of MPR2, the Metropolitan Area would continue to be the state's principal urban community. During the plan period, however, two other large communities outside this area would be developed: Subiya in the north and Khiran in the south. Smaller rural settlements would also continue to grow. The present analysis provides the background for the development of the proposals for the non-Metropolitan communities growth options and the recommended urban strategy, and also includes the Metropolitan Area and the City Centre.

MPR1 estimated the residential capacity of the Metropolitan Area to be 1,706 million, allowing for the development of new areas,
some infill of unused sites and consolidation and redevelopment at higher densities. While this figure was higher than the 1971 Master Plan estimate of 1.258 million, population changes between the 1975 and 1980 censuses suggested that even the MPR1 estimates needed to be revised upwards. Significant increases in population were recorded in areas where no additional capacity was assumed, suggesting much higher capacities than previously allowed for. MPR2's investigation of these changes showed that an acceptable residential capacity in the Metropolitan Area (with overcrowding and illegal subdivision of dwellings eliminated) would be 2.08 million.

It was clear to both MPR1 and MPR2 that over the plan period, a substantial number of people would require housing who had to be accommodated outside the Metropolitan Area - with higher projections made by the earlier MPR1. The New Towns Strategy subsequently emerged as the means to achieve this task and Subiya, in the north, was adopted as the first of the two proposed towns. A range of urban growth strategies, however, was considered by both reviews. MPR1 examined three such strategies: dormitory satellites at Multa (north) and Burgan (south), similar in concept to the expansion areas of the 1971 Master Plan; two self-contained new towns, each accommodating about 0.5 million people; and Metropolitan Area growth by infill and peripheral expansion.

The New Towns Strategy was adopted by MPR1 on the assumption that the Metropolitan Area capacity would be 1.706 millions and that the population of Kuwait in 2000 would reach 2.760 million. For MPR2, a number of factors determined the framework within which its alternative strategies were formulated. These factors were:

1. The earlier (MPR1) commitment to Subiya and the fact that any alternative strategies had to take that, as well as the new town's growth rate, into consideration;
2. A higher degree of maturity and fixity in the Metropolitan Area, with further consolidation expected before the year 2000;
3. Higher acceptable densities and capacity for the Metropolitan Area;

In adopting the External Growth/New Town Strategy, certain advantages were recognised - these were:
1. The availability of suitable sites would make it possible to provide sufficient housing of the appropriate kinds to meet the demands;
2. Further transport infrastructure would not be needed in the Metropolitan Area;
3. The potential for further development beyond the plan period.

The downward revision of the state's population (from 2.760 million in 2000 to 2.505 in 2005) and the higher projected capacity of the Metropolitan Areas (2.08 as compared to 1.706) meant that a somewhat narrower scale for the review/planning task at hand. These revisions also meant that the 'overspill' population to be accommodated in the new towns could be reduced from about one million (under MPR1) to about 375 million, in addition to about 50,000 people in rural settlements comparable to those existing. Two other factors, related to the New Towns Strategy of MPR1, were also recognised by MPR2 and were reflected in the urban growth strategies investigated. These were the uncertainties surrounding the speed with which the New Towns Strategy (Subiya) of MPR1 could be implemented and the effectiveness of development control measures in the Metropolitan Areas. The pressure for continuing growth in
the Metropolitan Areas was already beginning to have a negative impact on the overall urban strategy and to undermine the new town approach itself.

Alternative Community and Urban Growth Strategies

The urban growth alternative plans developed by MPR2 were described as scenarios rather than strategies in the normal sense. This was due to the fact that the commitment to Subiya and the New Town Strategy has affected the new review's freedom to adopt geographical and spatial strategies or planning control. Four such scenarios were considered, with their basic themes as follows:
1. External growth - new towns;
2. Peripheral expansion of the Metropolitan Area;
3. Infill and controlled density changes in the Metropolitan Area;
4. Continuation of present trends of increasing development densities in existing residential and commercial districts.

The New Towns Strategy - In evaluating the implications of the four growth scenarios, and as a result of discussions with the Municipality, MPR2 concluded that the External Growth Strategy continued to be appropriate policy, but also saw the need to incorporate certain aspects of the other Metropolitan Area policies. The constraints on urban growth limited the possible sites to the already committed site of Subiya and a southern location in the vicinity of Khiran (sites A and B, Figure 30) - the latter, being in a region of economic and industrial expansion, offering the only realistic chance of providing employment without detracting from the basic employment structure of Subiya.
Few changes have taken place in and around the Subiya site since the MPR1 proposal and the assumption remained that the new town would be located there. The Bubiyan Bridge is a notable addition in the region while the southern tip of the Subiya peninsula was a possible location for a Ministry of Electricity and Water power/water plant (Figure 32). Several factors, however, affected the land availability of the other new town site - Khiran. A few small zones, for exploratory oil drilling and future exploitation in the general area have been identified by the Kuwait Oil Company.

There was also the potential power/water plant site at Ras al-Zor, resulting in trunk power and water lines being located nearer Khiran than was assumed earlier. The potential location of a new airport in an area south of Shuaiba, however, would have an impact on Khiran by stimulating its growth. Further, the sprawling chalets development on the southern coast underscored the importance of conservation of the Khiran area coast and the need to protect it from possible encroachment associated with the development of the new town.

The population targets for the year 2005 as adopted by MPR2's proposed strategy and on the basis of consultations with the Municipality and within the overall 2.505 million people target (Figure 33) were:

Metropolitan Area : 2.080 million
New Towns : .375 million
Subiya : .250 million

3 It is worth noting that earlier projections, in the Subiya Study, on which MPR2's new towns scenario was originally based, placed Subiya's population in 2005 at 120,000. The 125,000 target figure for Khiran includes 10,000 people in a new border settlement at Wafra.
Figure 32. Land Use Changes: New Towns
Figure 33. Population Distribution: New Towns
Khiran : .125 million  
Other Areas : .050 million

This projection meant an average annual population growth rate of 12,500 people over a twenty year period (1985-2005) for Subiya, and over a ten year period for Khiran, considerably lower and far more realistic than the earlier targets set by MPR1. As for the Metropolitan Area, it was assumed that it would begin to grow more slowly after 1990 as a result of strict development control policy - at an annual rate of about 13,000 from its 1990 base of 1.88 million. This, in turn, meant a corresponding faster growth rate for the new towns during that period.

The recommended New Town Strategy estimated Subiya's employment by 2005 to reach a total of about 89,000 - including the remaining 10,000 construction jobs from a peak of 25,000 between 1995 and 2000. Of this total, basic employment was estimated at 26,400 or 33 per cent, of which 16,000 were expected to belong to the government/personal services sector and the remainder to be in the non-basic (i.e. related to the resident population) sectors. The underlying assumption in forecasting such growth was that of clear policy commitment towards locating government employees at Subiya.

Khiran - whose proposed MPR2 site lies to the north-west of that designated by MPR1, with additional land for expansion to the west had a different projected employment structure than that of Subiya. Apart from employment associated with the population of the town, some basic employment could associate with the surrounding oil and power facilities, the military bases, and the agricultural area of Wafra. Projections for these by 2005 were 6,900 jobs while for the non-basic jobs were 19,100 and for the construction workforce
about 20,000. It was assumed that construction workforce for both new towns would be drawn from the resident (mostly non-Kuwaiti) population and was included in the population targets. It was also estimated that about 5,100 Khiran residents would have jobs in the Metropolitan Area due to the difficulty of establishing sufficient basic employment in competition with the needs of Subiya.

Finally, the development programme and implementation were to reflect a number of principles:

1. That growth in the Metropolitan Area can only be progressively reduced as other opportunities arise and as controls are used more effectively;

2. That the growth of the two new towns would be linked to the development of employment there, and that their employment structures would vary from one to another in terms of sectoral composition and phasing;

3. That Subiya should lead Khiran if it is to reach its target size by 2005;

4. That the Kuwaiti element of the population at Subiya would be about 60 per cent and at Kiran about 50 per cent - the non-Kuwaiti construction workforce included in the balance of 40 and 50 per cent, respectively;

5. That the housing programme for each of the two towns would give public authority control of 50 per cent of the housing development, leaving the other half for the private sector.

**Peripheral Satellites** - In this scenario, expansion was to take place in smaller urban units on the periphery of the Metropolitan Area and linked to existing employment centres. Four such sites were considered by MPRI1 and were reduced to three by MPR2. These were: the Doha peninsula on Kuwait Bay, Burgan in the south - near
the Mina Abdulla Industrial Area and north of Wafra Road - and Sayid al-Awazim to the west of the International Airport. Their population was projected to reach about 255,000. All of these sites had both location related problems/constraints as well as some positive factors. Overall, the concept itself had a number of clear advantages although the external expansion strategy was eventually preferred. These advantages were:

1. Expansion would be easier to implement than new settlements, while phasing could be planned in small increments mostly of local facilities;
2. Higher-order facilities would be existing or provisions made for added capacity and extension;
3. Extra load on infrastructure would be easier to spread, and employment in remote sites, and corresponding travel to work, would be minimal.

**Metropolitan Infill** - This alternative way of enhancing the capacity of the Metropolitan Area aimed at increasing designated residential areas and by raising permitted development densities mainly in the coastal corridor and around District Centres. A high-quality fixed-track public transit system was also envisaged in order to serve the high-density areas along the coast and for movement between an enlarged employment area east of Jahra, Jahra itself and the suburbs north of the 6th Ring Road. MPR1's designated infill sites within the Metropolitan Area would have accommodated about 131,000 people.

**Trends Continuation** - This scenario assumed continuing development pressure within the Metropolitan Area and no great reduction or relocation of population. Existing and designated
residential areas would be fully developed by 2005, though not to their ultimate capacities, with the continuation of overcrowding and subdivision of buildings. The population of the Metropolitan Area would have reached 2.404 million in 2005.

In evaluating the implications of the four scenarios, MPR2, while recognizing MPRI's preference for the New Towns Strategy and the level of official commitment to it, had looked into a number of factors in view of the objectives of the plan/review, before endorsing the strategy. These factors were related to housing, centres development, industrial land, transport, utilities, landscape and environment, use of existing resources, and implementation feasibility.

National Transport

Under the revised plan, the country's three major regional roads (Figure 34) linking the Metropolitan Area to the north, south and west were to be improved to dual carriageway standard. These roads are mainly used by trucks carrying freight to or from Kuwait and in transit, with traffic on the northern section to Abdaly and Iraq continuing to be the heaviest.

Other important national roads link the oil industry centres with the main highway network and the highway linking Jahra and Subiya. The growth of urban areas under the plan was seen to lead to higher traffic flows on certain sections of the existing roads, particularly between Jahra-Subiya, Jahra-Abdaly, Mina Abdulla-Khiran and Khiran-Wafra. The improvement of the Jahra-Subiya road or the building of a new road on an alignment to the north of the Zor Ridge was recommended in order to carry high volumes of construction
Figure 34. National Transport
traffic initially, and later for efficient travel between the Metropolitan Area and the new town. The direct link between Subiya and Abdaly was expected to have positive effects on the development of both communities.

The projected railway followed an alignment further to the west of that proposed by MPR1 and would carry mostly freight, with the possibility of transit passenger traffic at the time of the Haj. The plan foresaw the need for long distance coaching services as the development of major urban areas accelerated. The existing transportation system operated by the Kuwait Transport Company, was to be strengthened by adding high speed express coaches for limited-stop urban services.

Finally, MPR2 recommended a high speed sea link across Kuwait Bay to Subiya from Kuwait City Centre, to become operational in the early 1990's. The Failaka ferry service presently being operated by the Touristic Enterprises Company could be extended in the longer term to Subiya if recreation facilities on Failaka were developed and demand warranted such extension.

**Metropolitan Structure Plan**

During the five-year period between MPR1 and MPR2, nearly all development activity associated with the growing population continued to be within the Metropolitan Area. Housing (public and private), highways, major utilities, leisure and recreation, government buildings in the City Centre - these were all areas in which considerable progress was made as implementation of the 1971 Master Plan and MPR1 continued. Two elements of these plans, however, had fallen behind by the time MPR2 was underway: the
District Centres programme and the landscaping schemes of forestry belts and open spaces.

The MPR2 expected the Metropolitan Area to reach capacity during the twenty-five year plan period, and further development to be mainly renewal rather than new construction. The resulting plan followed the broad principles of the 1971 Master Plan and its first review of 1978, and is outlined below, followed by an analysis of its main elements.

1. Urban growth beyond the area defined by MPR1 as the Metropolitan Area is severely constrained by oil and other natural resource locations. Further development beyond this area along the coastline is to be avoided as a result of the commitment to the two new towns of Subiya and Khiran.

2. The Metropolitan Area plan is conceived within the context of the New Towns Strategy while also recognising its ambitious targets.

3. Programmes for residential areas defined in the earlier plans would continue - for the short term in various locations and for the long term at the southern end of the coastal corridor.

4. New industrial areas were identified as a result of the re-appraisal of the amount and distribution of industrial land and government policy.

5. Open space and forestry belts areas were changed to reflect new commitments in the use of treated effluent, and became more closely related to the western edge of the urban area.

6. Residential areas would continue to be served by a hierarchy of shopping centres, with Fintas developing as a large District Centre rather than a 'second tier' centre.
7. The major road network, as an important element within the overall plan, needed timely and orderly implementation - motorway standard roads, links to industrial areas and roads for efficient public transport.

Residential Areas

The residential capacity of the Metropolitan Area was estimated by RMP1 to be 1.706 million, including new areas development, infill of vacant sites, and consolidation and redevelopment at higher densities. Although this figure was higher than the 1971 Master plan projected capacity of 1.258 million, as pointed out earlier, it proved to be lower than the actual capacity in view of the recorded population changes between the 1975 and 1980 censuses.

The community and urban strategy programme described earlier in this chapter aimed to present a balance between the need to promote growth in the new towns and to reduce growth in the Metropolitan Area, while remaining within the 2.08 million capacity. A progressive reduction in population growth rate was seen by MPR2 for the Metropolitan Area throughout the plan period. The Metropolitan Area element of the total housing construction required between 1980 and 2005 (estimated at 369,000 dwelling units) was expected to be about 80 per cent. MPR2 also assumed that of the housing stock existing in 1980, or committed for completion by 1986, all of NHA's 14,400 units would remain in 2005, in addition to 84,400 units belonging to the private sector and representing about half that sector's 1980 total. Metropolitan Area dwelling stock planned for would reach about 394,800 in 2005.

Housing Development - The National Housing Authority's housing programme for the short term (until 1986) included 5,400 units
carried over from previous years, to be added to the 14,400 units, above. The units were divided among the Limited Income Group (LIG) and Average Income Group (AIG) and were mostly villas with flats (for the latter group) amounting to about 2,300 units of the 19,800 total. Figure 35 illustrates the locations of these housing development sites, as well as those committed for private housing. In addition, NHA was committed to developing 10,000 units (villas) at Sabah al-Salim and Fnaitees - scheme 9 on Figure 35 - after further study.

Private housing commitments in the Metropolitan Area amounted to 43,300 units, most of which (32,550) were flats, and were expected to accommodate about 14,350 Kuwaiti and 29,725 non-Kuwaiti households. Locations of these housing developments are shown in Figure 35 as sites 13-19.

In addition to the short term commitments of the NHA housing programmes, the Metropolitan Structure Plan (not including the City Centre) allocated several other sites for the NHA during the period 1986-2005. These sites (Figure 36) are generally in the west of Jahra and in the coastal corridor and are expected to have about 25,000 dwelling units, with the majority (about 21,000) being houses. MPR2, however, recognised the fact that the NHA role in the public housing sector was a matter of government policy which could be changed within the overall programme, with implications for private sector housing and for new town housing development.

The proportion of flats, about 15 per cent, reflected the need to maintain the pre-new town standards of housing provision (in terms of number of units) in the Metropolitan Area, as well as an extension of the practice begun in recent years of building large flats for Kuwaitis.
Figure 35. Housing Commitments until 1986
Figure 36. NHA Housing, 1986-2005
Finally, MPR2 envisaged a phased housing development which would continue throughout the twenty-year plan period, while the new town programmes gather momentum. The development of flats for Kuwaitis by NHA were expected to be included towards the end of the plan due to the uncertainty over the policy. Of the total expected Metropolitan Area housing stock of 394,800 by 2005, MPR2 estimated that renewal construction would amount to nearly 81,900 units while new non-NHA construction would be about 54,800 and NHA housing 159,400 units. Housing programmes for the new towns of Khiran and Subiya were to add to the national stock about 17,400 and 44,500 dwelling units, respectively. The general distribution of Kuwaiti and non-Kuwaiti residential areas by the end of the plan period (2005) was projected as depicted in Figure 37.

Industry

In making its recommendations regarding industrial sites locations, MPR2 assumed that during the plan period, most of the industrial activity would take place within the Metropolitan Area. It also was aware of the fact that land allocation was to reflect the stated national objectives of diversification and expansion of the industrial sector. (In actuality, however, the official policy with regard to industrialisation has been less than clear due mainly to the basic question of manpower requirements but also in view of other factors such as the small size of the Kuwaiti market).

The total industrial land requirement by 2005 was estimated to be 5,400 ha., with only 250 ha. allocated to the new towns. In the early 1980's, there were already large amounts of industrial land committed in the Metropolitan Area which were in excess of the forecast needs through the plan period. The land supply, while
Figure 37. Residential Areas Nationality Distribution, 2005
extensive, was unevenly distributed, however, and concentrated towards the extremities of the two urban corridors - west and south. MPR2 recognised the disadvantages of that situation in terms of transport, economics and environment, and its proposals provided for a more balanced spread.

The Buchanan Master Plan had an industrial location strategy which was also endorsed by MPR1 and took into consideration a number of principles. These principles were still valid in 1982, MPR2 had concluded, and they are summed up as follows:

1. Industries should be located in specified areas;
2. Industrial sites should not be in close proximity to residential areas;
3. Industrial sites need to be well-related to residential areas to reduce commuting and traffic congestion;
4. The environmental impact of industrial activities should be minimised.

In order to satisfy these considerations and to meet the forecast level and type of demand, six new industrial sites (Figure 38, sites A and M-Q), varying in size from 50 to 400 ha. were proposed within the Metropolitan Area, three of which were already proposed under MPR1. Government policy considerations, such as the encouragement of local production of imported goods (import substitution) and the expansion of the petrochemicals and oil-related sectors were expected to create functional relationships which could be enhanced by reserving sites for particular sectors and processes. MPR2 saw the benefits of a site allocation policy which ensured co-ordinated and simultaneous development of several
Figure 38. Industrial Sites: Existing and Proposed
types of industrial sites in terms of size, level of infrastructure and service development and need throughout the Metropolitan Area.

District Centres

At the time of MPR2 preparation, the main principles underlying the centres policy of the 1971 Master Plan were still generally valid, although the overall objectives had to be adapted to accommodate the changes which had taken place as a result of rapid economic and population growth. A basic objective of the centres programme has become the early implementation of the centres at Jahra, Sulaibikhat, Mishrif, Abrak Khaitan and Farwaniya. This was seen as necessary in order to deflect the considerable pressures for further development in the City Centre, Hawalli, Salimiya and Fahaheel which were also undermining the New Towns Strategy.

MPR2 retained the main principles, hierarchy and central provision of the centres policy reflected in the scale and range of facilities provided, and the latter ensuring the grouping of facilities. Under the new proposals, the City Centre remained as the only first order centre and primary focus of commercial activity whose importance was based on the quality and type of goods and services it provided. Figure 39 illustrates the distribution of centres throughout the Metropolitan Area.

Second tier services and facilities were proposed for three existing District Centres (Fahaheel, Salimiya and Hawalli) and six new ones (Mishrif, Farwaniya, Abrak Khaitan, Sulaibikhat, Jahra and Fintas), while the importance of the commercial role of the Shuwaikh area was also recognised. The third order neighbourhood and local centres were to vary in scale and, at least in the short term, in function, as some would be located in areas of rapid growth which
Figure 39. Retail Centres Distribution: Metropolitan Area
did not have District Centres. The fourth level in the hierarchy was the small local shops within residential or industrial areas.

The MPR2 proposals for District Centres had two main differences from the MPR1 hierarchy: Fintas and Shuwaikh. Fintas, which was originally conceived as a second major centre which followed Kuwait Town/City Centre in importance, became one of several second tier centres. This was due to the expansion of existing centres with the growth of commercial activity as the new District Centres lagged behind in floor space development, thus reducing the likelihood that Fintas would be able to fulfil its role as a second focus of higher order goods and services. Also, Fintas was originally to serve as an administrative centre and a location for government office employment in addition to its retailing functions, a prospect which seemed more remote in 1982 than before.

As for Shuwaikh, the sprawling industrial area with a mixture of light industry, storage, garages, automobile and machinery companies there was uncertainty about its future in the early 1980's and there were plans to remove a considerable part of its activities to new locations. (MPR2 actually allocated 500 ha for such relocation in the Metropolitan Area). MPR2 realised its attractiveness to commercial firms and proposed its development as a specialist commercial centre. This centre would accommodate commercial activities which were not available in the City or District Centres - showrooms for cars, machinery and industrial plant, certain import agencies, and specialist office services and printing.

Finally, MPR2 estimated the total demand for commercial floor-space by the end of the plan period to be 5.172 million m². The City Centre's attractiveness for commercial activity would
continue within the overall provisions for the Metropolitan Area, although its share of commercial floor-space would be reduced in 2005 to 41 per cent, as compared to 56 and 50 in 1980 and 1990, respectively. The corresponding shares for the District Centres were 39 (in 2005), 33 and 38, and for the neighbourhoods/local centres 8, 9 and 9 per cent. The new towns' portion of floor-space was projected to be 12 per cent by 2005. The City Centre was also predicted to continue to contain the majority of important offices, with gradual but significant increase in floor-space allocated to other centres such as Fintas, Fahaheel, Salimiya and Hawalli.

Landscape and Environment

In common with contemporary planning practices, MPR2 considered planting and landscaping as an integral part of the open spaces policy for the urban environment, in terms of allocated public gardens as well as the spaces between building developments and transport corridors. This meant that planning for landscape and the urban environment had to go beyond the provision of recreation alone. While a similar approach was taken by MPR1, little has been accomplished in the years between the two reviews in the way of implementation, due mainly to problems of water availability and distribution, the fragmentation of responsibilities, and the lack of clear definition of such terms as 'recreation' and 'landscape'.

A number of major landscaping and recreation schemes in the Metropolitan Area were either committed or under construction in the

4 Responsibility for landscaping, planting and related functions was assigned early in 1988 to the Agricultural Affairs and Fish Resources Authority. See The Kuwaiti Digest, July/Sept., 1988, p.21.
early 1980's. These included the Amusement City at Doha, the Kuwait Waterfront Project, Shuwaikh Bay coastal recreation development, afforestation belts adjacent to highways, highway landscaping, and other committed open spaces for the City Centre.

The proposed MPR2 plan for urban open space endorsed aspects of the MPRI proposals such as the standards for provision of local open space and its general concept and open space hierarchy. The resulting scheme (Figure 40) of urban open space classification sought also to define more closely the planning, implementation and management responsibilities among the various authorities.

**Regional Parks** - Five such parks were defined, in addition to the Green Belt, which varied in area from about 170 to 400 ha. The identification of these parks was based on existing physical factors such as topography rather than hypothetical population standards, and on a design strategy incorporating one or several landscape types and facilities for active and passive recreation. Detailed design and implementation were seen as a Ministry of Public Work (MPW) function.

**District Parks** - These parks, with areas between 30 and 250 ha, were proposed for ten locations throughout the Metropolitan Area, including one for the Airport Road which was expected to develop in a linear form and to include recreation facilities. Design and implementation of these parks which could also be part of large NHA developments were also considered a MPW responsibility.

**Public Gardens** - These are small formal local open spaces planted, grassed and provided with children's play facilities. Areas were to be specified in local and parcellation plans by NHA/Municipality, with design and implementation to be undertaken by MPW.
Figure 40. Open Spaces: Metropolitan Area
Incidental Open Space - These are generally open areas adjacent to highways and at centres. MPW would manage these spaces as part of its local area management responsibilities.

Afforestation - Both the 1971 Master Plan and MPR1 emphasized the need for forestry belts in Kuwait. In addition to their visual effect, they provide buffers between conflicting land uses, reduce the amount of wind-blown sand and provide a protective shield from sand storms. By the early 1980's limited implementation of forestry schemes was already taking place - in the Doha Peninsula, in the Jahra area, adjacent to some major highways such as the 5th Ring Road and Fahaheel Expressway. Irrigation by treated effluent has been used in areas where there is no groundwater.

Finally, MPR2 pointed out the importance of developing Kuwait's shoreline for active and passive recreation purposes, thus capitalising on the coast as a valuable environmental asset. Kuwait's urban settlements have traditionally been near the coast and this proximity has been one of the positive factors which shaped planning since its early efforts. Within the plan period, the Waterfront Project from Ras al-Ardh east of Salimiya to Shuwaikh is expected to be completed, and the portion north of the City Centre is seen as an area of high priority once the City Centre's road network has been completed and new traffic circulation patterns established.

Metropolitan Transportation

Since the mid 1970's, Kuwait has witnessed the rapid development of its metropolitan transportation network, with considerable construction completed or in progress in recent years
and commitments in current programmes. Most of these fall in the category of motorway/expressway such as al-Safar Motorway from Ahmadi to the 5th Ring Road and the Fahaheel Expressway, and include the road from Jahra to Subiya, grade separation of junctions on a number of streets, and major distribution roads in association with development in the coastal and western corridors.

In conducting its transport analysis, MPR2 was concerned with two main policy issues:
1. The level of traffic demand that can be accommodated by the main network both existing and committed and the development levels associated with them;
2. The strategic long term issues which affect public transport and how they are affected by traffic policies.

MPR2 utilised the traffic model of the Kuwait Transport Study for the analysis and forecasting of traffic for the Metropolitan Area. While no details are given here on work carried out on the process of re-calibration of the model and its use in testing the alternative land use dispositions (see Vol. 3 of MPR2) a few statements on the results and forecasting methodology seem in order.

This process resulted in 24-hour directional assignments to highway networks of private cars and taxis which were then converted to peak hour total traffic flows by applying peak hour and composition factors derived from the surveys. The predictive capability of the model was then examined by comparing the assignments derived from 1980 planning data inputs and survey observations. It was concluded that this predictive capability was adequate for strategic planning and that the assignments should be
used for comparing corridor and screenline flows and capacities rather than individual links.

MPR2 traffic analysis showed that the highway capacity of the Metropolitan Area would be fully utilised in peak hours when the proposed development limit of 2.08 million people had been reached by the end of the plan period, with the growth of the new towns and the phased growth of the Metropolitan Area. The road network associated with the preferred strategy was considered to be adequate (peak hour capacity) for all predicted traffic demands except in the Jahra corridor, on the approaches to City Centre and at the northern end of the coastal corridor. Some overloading in peak hours was expected by MPR2 and design for maximum loads was considered uneconomic. The proposed main road network with the appropriate standards (Figure 41) needed to be completed by 1995.

Finally, MPR2 had recommendations on the need to expand public transport use and to improve the quality of its services. It endorsed MPR1's traffic restraint policy recommendations for the City Centre and pointed out the urgency of its implementation. The aim of the policy has been to reduce by 40 per cent the 'unrestrained' demand for travel to work by car, a development which would mean an increase in peak hour public transport patronage by 7,000 passengers.

City Centre Structure Plan

Kuwait Town/City Centre has witnessed considerable rebuilding activities during the late 1970's, a process which continues at present. While MPR2's scope seemed somewhat less than that of MPR1, elements and concerns of strategic planning remained the same. The present analysis looks into the main components of the proposed plan
Figure 41. Main Road Network: Metropolitan Area
for the City Centre. It begins with a brief review of certain changes which occurred in the years prior to MPR2 in the context of this rebuilding process, including expected changes and commitments and is followed by an analysis of the basic elements of the Structure Plan.

Employment

Between 1975 and 1980, the City Centre employment grew by 18 per cent (from 83,000 to 98,000), as compared to 10 per cent during the previous five-year period. The sector most responsible for this growth was the banking and financial services. Employment concentrated in the Salihia/Qibla and Souk/Safat districts (Figure 42), with the area south-west of Mubarak al-Kabeer Street, encompassing these districts, accounting for 73 per cent of total City Centre employment. Private offices, mostly financial and business, grew to about 35,000 jobs and at rates which were higher than other sectors, with a significant impact on land values and office rent. Government employment accounted for about 26,000 jobs in 1980, while 2,500 jobs were in shops, 4,600 in other commercial (sales offices, airlines, hotels) and 2,500 in health and educational facilities. MPR2 predicted changes in the employment structure as unoccupied buildings and others under construction for both the commercial sector and government are utilised as office space.

Population

City Centre has experienced a decline in population since 1975 - from 78,100 to 60,400 in 1980 - which was the continuation of past trends. This accelerated decline was similar to that seen between
Figure 42. City Centre
1965 and 70 when the population of the City Centre/Kuwait Town fell from 99,600 to 80,400. The decline, which is mostly due to clearance of old buildings for redevelopment has been marked by progressively lower proportion of Kuwaitis in the City Centre - from 29.4 per cent in 1965 to 26.7, 15 and 7.4 at the end of each of the following three five-year intervals.

The Urban Environment

Land use changes in the 1970's and 1980's in the City Centre have included almost all elements of its urban environment: retail and office floorspace, public buildings, residential, open space and industrial.

The main change in retail floorspace growth has been the construction of the commercial carparks, mostly at the rear of Fahd al-Salim Street but also in the souk area. Most of these carparks are also shopping complexes offering a wide range of goods and services. The area along Mubarak al-Kabeer Street, around the new Stock Exchange and Souk al-Manakh continues to be the centre of financial and business activity. With land in this area being the most expensive in Kuwait, and with development reaching maximum potential, financial institutions and businesses have begun to move south to the other side of Ahmad al-Jabir Street - an area less developed and less expensive.

The main residential areas of the City Centre have been Sharq, Dasman and Mirqab, in addition to small areas in Qibla. In recent years, as land values rose and due to accommodation demand, the housing stock which in the past consisted primarily of traditional courtyard houses and villas is being replaced by modern apartment
blocks. These catered for the demand by expatriate residents, but also included large government-sponsored housing projects.

The general increase in floor area ratio which began to take effect during the second half of the 1970's became evident in numerous major new building and renewal projects in the City Centre. High-rise buildings began to appear in various parts of the City Centre, bringing considerable change in its appearance. This and other characteristics of building form in the City Centre are illustrated in Figure 43.

One major feature of the evolving urban environment has been the spread of commercial buildings along Ahmad al-Jabir Street, leading to the formation of a continuous commercial frontage along both sides of this main road. Hilali Street and Khalid ibn al-Walid Street seem also to have been undergoing similar changes - which all represent a marked departure from the 1971 Master Plan concept of a separate sub-centre at Dasman.

By the early 1980's, renewal schemes for parts of various districts within the City Centre were already complete or being prepared. This included areas of Mirqab, Baloush, Sharq and Watia, as shown in Figure 44. In addition to these, renewal work on a fairly large number of buildings and frontages in poor condition was expected at that time to take place during the early years of the plan period. Most of these buildings were along Fahd al-Salim Street, the northern parts of the souk, and parts of Dasman and Hilali Street. At the same time the status of the residential areas of the City Centre can be seen in a generalized form in Figure 45.

One more element within the urban environment of the City Centre where only limited development occurred in the past and where changes can be expected as schemes conceived in recent years (some
Figure 43. Building Form: City Centre
Figure 44. Renewal Potential: City Centre
Figure 45. Residential Areas, 1982: City Centre
are already in progress) are implemented, is that of open space. Landscaped open space was still quite modest in the early 1980's: a section of the Green Belt, the Municipality Garden near Safat and a few small patches scattered mostly at various crossways. The area designated as open space in previous plans, however, is fairly large and plans have been made for phased improvements although implementation has not progressed well due to problems related to co-ordination, changes in development and transport plans, and uncertainties over the provision of irrigation water.

In recent years, however, there has been stronger commitment to the implementation of urban open space schemes as noted by MPR2. These include a pedestrian plaza at Safat Square, the street crossing scheme at Abdulrazzak Square, walkways through parts of the old souk and approaches to the Sief Palace. Certain phases of the ambitious Waterfront Project were already being implemented in the early 1980's while the Green Belt (Soor Gardens) represent another long term commitment whose early phase calls for extensive landscaping and planting.

Remaining Elements of the Structure Plan

Planning for the City Centre development can be expected to affect the overall urban growth strategy of Kuwait. Were the City Centre to develop to its maximum potential, this would have a negative impact on the target growth for other Metropolitan Area centres and for the new towns. This consideration and others more intimately related to the City Centre itself are factors which influence any planning strategy for its future development. MPR2's proposals in this respect have foreseen this - as has MPR1 - and as was reflected in the two basic parameters of population and employment.
MPR2 stipulated a resident population of 104,000 and an employment level of 140,000. MPR1 had a similar employment target but a higher (117,000) population. The lower population figure adopted by MPR2 reflected the continuing decline in the City Centre population and the need to achieve a higher Kuwaiti element. Of the total resident population of 104,000, Kuwaitis were to account for 27,500 and to have 72,800 jobs of the projected employment figure of 140,000. This employment target, it was realised, presented a greater challenge for implementation than before due to the continuing commercial development following MPR1 and the possibility of reaching the projected target in the short term.

**Traffic and Circulation** - Traffic volumes have continued to rise in the City Centre and its approaches throughout the period of planned development which began in the early 1950's. In the years immediately preceding MPR2, congestion remained generally localised, on some main radial roads and at certain junctions at peak hours, and had been at its heaviest across the Green Belt's southern sector. Construction work on new primary roads and building projects, together with the prevalent practice of on-street parking (including peak hours) have further aggravated this situation.

By the mid-1970's it had become clear that the main road network which resulted from the 1951 Development Plan was quite inadequate and that the problems of congestion and circulation in the City Centre required a new and comprehensive road network. In the road system proposed by MPR2 (Figure 46) which was substantially similar to that presented by MPR1 this main road network of the 1950's became the distributor road network.

This distributor network was expected to provide for all district to district movements within the City Centre and, where
Figure 46  Roads Network: City Centre
possible, direct access to parking garages. The primary roads' basic component was a loop motorway along the lines of the 1st Ring Road and Ali al-Salim Street, running on a viaduct through Dasman and in covered cutting north of the souk. It was planned for completion by 1990.

As was stated earlier in the discussion on Metropolitan Area transport, MPR2 saw the need for revitalisation and promoting the public transport system and for enacting a traffic restraint policy. Two new bus stations were proposed at Watia and Dasman, replacing the Jahra Gate and Dasman roundabout bus stations. Express buses and national coach services were proposed to terminate mostly at the new Mirqab Transportation Centre due to its good connections to the rest of the City Centre via the transit system.

MPR2's traffic forecasting analysis confirmed the necessity of reducing the car journeys to work by about 40 per cent for the City Centre, a requirement throughout the plan period after about 1990 if the planning targets are to be met. Due to the uncertainties associated with a traffic restraint policy and with the degree of effectiveness of parking policy, MPR2 recommended that alternatives should be investigated while the parking policy was put into effect and more was learned about driver's behaviour in response to such restraint measures as increased charges. The City Centre was to have about 75,000 public parking spaces in some forty car parks distributed throughout the City Centre zones.

Housing - The MPR2 Structure Plan for the City Centre provided for housing the 27,500 Kuwaiti and 72,500 non-Kuwaiti residents in a range of dwelling types (traditional houses, flats, villas) which amounted to about 20,000 units. Housing programmes already committed for certain quarters such as Mirqab and Sawaber - mostly
as part of NHA plans - were included in the Structure Plan. Areas within the City Centre districts zoned for residential use but not yet fully parcelled or committed form the main element in the new proposals. These areas extend throughout the City Centre and include Watia, Sharq (Sief), Sharq (Magwa), Baloush, and Dasman. The planned dwelling units would be predominantly (nearly 17,400 or about seven out of eight) flats.

Environment and Townscape - In attempting to improve the City Centre image and to capitalise on certain of its positive attributes as an urban setting, MPR2 identified what it referred to as four Special Environmental Areas. These areas are: the Sief Palace, the souk, Fahd al-Salim Street and Qibla. The Structure Plan advocated comprehensive environmental design studies to be conducted for these areas in order to develop detailed building design guidelines, traffic and pedestrian circulation proposals, planting and landscaping and re-development briefs when appropriate.

For the Sief Palace area, recommendations were made against through traffic, and for high quality street management and landscaping. The commitment of planning policy to souk conservation was supported in the Structure Plan by limiting new retail floorspace in the Centre while emphasising the need to maintain and preserve its fabric and its special characteristics of enclosure and human scale.

MPR2 also envisaged Fahd al-Salim Street to continue as Kuwait's main shopping street despite the poor state of frontage buildings and the negative impact of the commercial car parks behind these buildings. Improving the physical characteristics of the street and its attractiveness for pedestrians in particular seemed both necessary and timely before piecemeal re-development eliminated
opportunities for comprehensive planning. As for the government building areas in Qibla (the now-completed National Museum, National Assembly and State Mosque, and other sites for the Science Museum, National Library and Dhow Museum on the waterfront), the Structure Plan called for landscaping work there to proceed to the extent possible while the construction of the loop road continued.

The Structure Plan saw these environmental areas as forming a statutory element in planning procedures. Development within them - private or public - had to be evaluated for compatibility that goes beyond the simple zoning and building code requirements to include quality of materials, building dimensions, traffic generation and external design.

Open space, already discussed above, assumes added importance in the context of improving the aesthetic qualities of the Special Environmental Areas. MPR2 recognised the need for a comprehensive landscape plan for the City Centre which would define not only the programmes but also the priorities and the required water resources. Areas of the major public projects in Qibla and the Ministries' Complex in Mirqab were considered as landscaping priorities.

**Land Use Distribution** - Under the City Centre Structure Plan, the basic elements of the land use strategy development in the CBP Master Plan reinforced by MPRI, were retained. This seems only natural as the degree of commitment by the early 1980's prevented any major change or departure from the original guidelines. The land use strategy (Figure 47), with assumptions and proposals relevant to all City Centre districts can be summed up as follows:

1. The main commercial areas south-west of Mubarak al-Kabeer Street remain, as would Fahd al-Salim Street's predominance for shopping;
Figure 47. Land Use Strategy: City Centre
2. The residential areas of Dasman, Sharq, Buloush and Sawaber are retained, with additional land for the new schemes;

3. The Qibla/Watia area continues to be a zone for important official buildings in Watia and the conservation of its American Mission buildings and Behbehani Compound;

4. The Salihiya Cemetery is defined as an important open space which would, in time, be planted and landscaped as a major park;

5. The role and character of the souk remains unchanged, with its traditional shopping facilities;

6. Mirqab, for which a local plan was being developed, would continue to have a mixture of commercial, residential and government uses.

Finally, and following the preceding analysis of the CBP Master Plan Reviews, it is possible to conclude that, given the constraints, inherited trends, and changing circumstances, both MPR1 and MPR2 have fairly successfully responded to the problems of the unfolding urban scene and development needs. MPR2, however, due mainly to the timing of its preparation, following nearly a decade of unprecedented economic growth and over optimistic view of growth potential in general, has been more realistic than the MPR1, the latter having appeared at the height of this unusual period and reflected its buoyancy. Further assessment of these reviews/plans will be made in Chapter X.
PART THREE

IX THE FIRST DEVELOPMENT PLAN AND RELATED ISSUES: AN ASSESSMENT

X THE SECOND MASTER PLAN AND ITS SUBSEQUENT REVIEWS: AN ASSESSMENT

XI FUTURE OUTLOOK AND CONCLUSION
CHAPTER IX

THE FIRST DEVELOPMENT PLAN AND RELATED ISSUES:
AN ASSESSMENT

The urbanisation of modern Kuwait has been a process of rapid expansion which began in earnest during the early 1950's. At that time, what amounted to little more than a pre-industrial city-state took its initial steps in planning by adopting the first of several master plans intended to guide its urban growth. In this and the following chapter, an assessment is made of the plans which were prepared and implemented since the Minoprio Development Plan. The present chapter also examines the idea of comprehensive master planning and discusses issues such as the role of the foreign consultant, and the influence of the Garden City and New Town concepts. These two topics have particular relevance to planning in Kuwait during its early stages.

Comprehensive Master Planning

This brief introduction on comprehensive master planning provides a context and a reference point for the understanding of specific plans as well as an appreciation of the usefulness and limitations of the concept itself. While each country or society has its unique conditions and planning needs and solutions, the basic elements of comprehensive master planning are of universal applications and relevance. Kuwait’s master planning initiative can be better understood and judged when viewed within this context.

The nature of comprehensive planning as seen by contemporary practitioners suggests an understanding not only of the physical
environment, but also of the social needs, governmental processes, and alternative planning choices. A number of questions and problems relevant to the planning process require consideration by the planner. The questions are primarily concerned with such matters as the disparity between the planners' traditional notions of rationality and the actual social and political processes by which policies are selected. They are also concerned with the adaptations which have to be made to the planning process - in method, strategy and content - in order to arrive at more rational policies.

Another question which planners have to consider is how to deal more effectively with the elusive problems of goals and values. These and other questions often pose difficulties for those involved in planning which other professionals with better defined areas of technical expertise do not normally have to encounter.

Planning has indeed become comprehensive and few, if any, aspects of community development seem to be beyond its scope. Those responsible for carrying out comprehensive plans view themselves as being concerned with the wider public interest as their goal rather than with any special interest, and usually retain the services of consultants and experts from within or from outside the community itself. They see their responsibility as "establishing long-term development goals which provide a broad perspective and give substance to short-term particularistic community decisions."  

Comprehensive/master plans express graphically long-term goals and show the patterns of land use development as planned and

---

projected for the future. They also describe the general policies as to how the community should be guided in its efforts to achieve the defined goals. These plans also assume that short-term and small-scale development decisions are to be taken within the context of, and be measured against, the overall master plan objectives.

In reality, however, this approach to planning has undergone certain modifications - by adding the important characteristic of flexibility. This characteristic has, in effect, helped in transforming planning into a process and plans into guidelines for public policy. These modifications evolved because it was sometimes desirable to change goals. Also, prediction and forecasts were not always accurate and new opportunities and values with unforeseen side effects often appeared at certain points in time.

Comprehensive planning, as both a concept and a process, continues to be employed with varying results by communities of widely different economic and social systems. Social scientists who have studied the concept have pointed out to its shortcomings and the fact that it is an impossible ideal. The need for it has not been seriously challenged. For the planner, this conceptual process remains valid despite the difficulties which sometimes justify the preparation of a new master plan.

Various reasons are cited to explain the disparity between the ideal and the reality of comprehensive master planning. These reasons include the inability to predict the future much beyond five years at a time or to define universally acceptable community goals, the lack of knowledge of effective means to achieve goals and the incompatibility of the notion of comprehensive planning as serving the public interest with the narrow interests competing for power and influence. Further, the fragmentation of policy choices rather
than their integration often results from the decision-maker's preference to operate at levels where comprehension and prediction are more certain.\textsuperscript{2}

Despite these and other problems which may be peculiar to a given country or situation, critics of comprehensive master planning do not advocate its abandonment or a reliance on unknown and unseen factors or determinants. The main issue therefore remains whether planning can adapt to these difficulties. The ideal planning model and its opposite (no planning, 'invisible hand') then, represent two extreme positions. In reality, however, what sound planning can and needs to provide is a capacity to respond to certain circumstances and conditions in a manner which is carefully calculated and appropriate.

F. Stuart Chapin, in his influential writings on planning, has summed up the process as having to do "with a sequence of action which begins with establishing certain goals, involves certain decisions as to alternative ways of achieving these goals and eventually takes the form of steps for carrying out decisions, followed by evaluation and perhaps a new sequence of action."\textsuperscript{3} Chapin also defined the process as comprising of the following six steps:

1. The development of a first estimate of existing conditions and significant trends in the urban area;
2. The determination of the principal and most pressing problems and needs, briefly evaluate them, and develop an interim program;

\textsuperscript{2} Ibid.

3. The formulation of a detailed programme indicating priorities for undertaking component studies of a comprehensive plan;
4. The carrying out of detailed studies according to programme and priority;
5. The integration of various studies into a comprehensive plan;
6. The revision of plans as conditions alter their applicability.

In looking at the various plans which have been prepared for Kuwait, one may conclude that these plans have, to a considerable extent, conformed to the main requirements of master planning as recognised by contemporary planning practices. This was naturally less true in the case of the first planning attempt, the Minoprio Development Plan which was a special plan prepared under special circumstances and not truly comprehensive in scope. In later plans and reviews, serious efforts were made to respond in a fairly credible manner to their respective terms of reference and the required comprehensive approach. This can be particularly appreciated when seen in the context of the various limitations, constraints and uncertainties which have influenced planning in Kuwait. These limitations and constraints include:
1. The novelty of comprehensive master planning, plan implementation and follow-up;
2. The lack of sufficient and reliable data - particularly during the early efforts - on a number of aspects required as inputs in the planning process;

---

3. The difficulty of making forecasts and projections in view of the uncertainty of official policy on important issues such as immigration and foreign labour or industrial development;

4. The physical and environmental limitations of the land - the need to confine development to its more hospitable parts close to the coast, and to minimise the effects of a generally hostile environment and severe climate elsewhere;

5. The natural resources constraints and limitations: the importance of oil and oil-related areas and activities, subsequently excluding these areas from potential urban growth, and the scarcity of water;

6. The sudden changes and fluctuations in the economic aspects of growth and their effects on development. Adopted plans and their established standards and criteria may lag behind, affecting overall plan implementation;

7. As a corollary to 6, above, the difficulty of restraining growth in some areas at certain times. This was the case during the decade which followed the adoption of the 1951 Development Plan and the Property Acquisition Scheme and during the unprecedented economic expansion of the 1970's.

The Development Plan of 1951

In examining Kuwait's first Master Plan two issues or topics related to this plan which continue to be of interest are: the role of the foreign planner/consultant and the influence of the Garden City and New Town concepts.
The Foreign Planner/Consultant

The rapid pace of development in Kuwait and other parts of the Gulf has, of necessity, meant the introduction of foreign expertise in all facets of plan and project preparation, design and execution. This foreign expertise, usually in the form of advisers, experts and consulting firms from Western (and occasionally from Arab and non-Western) nations has been a subject of controversy since the early years of the development process. How and to what extent has this expertise contributed to healthy development? Is it mainly to blame for poor plans or inappropriate designs? These questions and others are often asked in Kuwait and elsewhere in the region.

There are many detractors from the idea of relying on foreign expertise while others concede its necessity and who are willing to accept its manageable negative consequences. A few may be inclined to defend it. The first group in its most extreme form tends to blame the foreign consultant and the resident expatriate professional for all the problems which may beset a plan or a project. Those who have this attitude take the view that foreign professionals are almost by definition incapable of understanding the planning and development requirements of a country such as Kuwait since to them it is an alien culture.

Arab professionals and experts fare slightly better in this scenario since they are predominantly Western-trained, may have worked and lived in the West for years and their own countries' urbanisation goals and development problems can be very different from those of the new, wealthy and rapidly growing Gulf communities.

It should be noted here that Arab planning experts, Omar Azzam and Mahmoud Riad, were among the U.N. advisers retained by Kuwait during the 1960's. Omar Azzam played an important role in the
developments that led to the adoption of the Buchanan Master Plan and the appointment of four international firms to carry out architectural studies within the old town.

Saba Shiber, on the other hand, was until his untimely death in 1968, the foremost authority on Kuwait's urbanisation and development problems. His late arrival on the scene and his consequent limited success should not obscure his crucial role in addressing the aftermath of the development and building chaos of the 1950's. He also tried to redirect the process of urban growth with his ideas and design proposals during the 1960's, much in connection with the Municipality Development Plan, and to salvage what remained of the old town. His role, however, is rarely if ever acknowledged.

The problem with this view, especially during the early years, is that it offers practically no other alternative to having to rely on foreign expertise. The 1950's and 1960's were years when qualified Arab planners even from outside the Gulf, were few. Arab architects and civil engineers were practicing planning in the best manner that their training qualified them to, but planning as an interdisciplinary field of professional work was substantially unknown in the Arab World. In the early 1950's, when the first Development Plan was commissioned, Kuwait itself probably did not have a single local architect or engineer, let alone qualified urban/regional planners or a planning practice. A plan, at that time, was urgently needed and there seems to have been no other alternative but to seek foreign advice.

Insofar as the 1951 Development Plan was concerned, a number of factors contributed to a situation where the resulting plan was not the best solution to the emerging community's planning requirements. But it is also true that in the prevailing circumstances the plan
was not altogether without merit when seen with the benefit of hindsight, and given the state of the art in traditional planning at that time. These considerations were:

1. The speed with which the plan had to be prepared;
2. The lack of a data base;
3. The inability of both policy-makers and consultants to see far enough into the future and to visualise Kuwait's potential for growth and development;
4. The failure or unwillingness of everybody (understandable perhaps at that time and given the urgency of the situation) to give sufficient consideration to wider national and long-term aspects of planning;
5. The lack of qualified professionals in Kuwait who could critically evaluate the proposed plans, communicate effectively with the consultants, and appreciate the plan's ramifications and implementation problems;
6. The consultant's lack of knowledge of and experience in the region - despite his firm's particular strength in British New Town development.

A critic of the Minoprio Plan who was a member of the Counterpart Team formed by the Municipality to work on the CBP Plan, referred to the plan as "the importation of western technology into an established Arab society." Commenting on the foreign construction companies involved in the country's various projects such as roads, schools, and hospitals in the early 1950's, he went

---

on to say: "Thus, foreign workers and professionals of all disciplines were brought in to rebuild Kuwait as if the country were in ruin or in a desperate situation. This work was done in a piecemeal fashion rather than as a comprehensive economic development programme." While such statements are typical and have a certain measure of truth, they tend to ignore the circumstances and conditions prevailing when the plan was prepared and concentrate only on the resulting plans and their aftermath.

Ghazi Sultan, a Kuwaiti architect/planner whose professional career has been closely linked with Kuwait's urban development for more than twenty years, recently made his assessment of some of the problems associated with the performance of foreign consultants. He said:

Most consultants from abroad are unfamiliar with working in the Middle East and although you may have a prestigious and renowned firm, whom they send to work with you is a different story—they are most probably junior staff who have never worked together as a team before.

The average turnover for a consultant staff is about two and a half years which means, in a project such as the waterfront [an ambitious and costly project whose execution has been slow], you are constantly having to deal with a new staff every few years which in itself can cause major problems. Another drawback is that most consultants do not perform the work here but come periodically which means they never become truly acquainted with the approach to building in Kuwait; what works and what does not and, most important, how to deal with the various Government agencies.

6 Ibid.

7 "Kuwaiti Architect Preserves the Past", The Kuwaiti Digest, July/September 1988, p. 31. Sultan was the leader of the Municipality's Counterpart Team of the late 1960's.
There are, on the other hand, realists who accept the policy of relying on foreign expertise in planning and other development-related activities, citing the paucity of qualified local professionals and the fact that development in certain countries at certain times could not be restrained or slowed down while indigenous capabilities were gradually brought into existence. Both views are valid arguments, and a rational course of action would take advantage of the right type of foreign expertise while developing the local professional cadres, utilising what existed of these cadres, and preparing them to assume the primary responsibility for their country's future development.

Finally, the subject of reliance on the contribution of foreign consultant and expatriate professionals is one which can only be viewed and resolved within the perspective of a long-term overall development process. For this process to be successful, it would involve not just the physical and built environment, or simple economic growth, but fundamental changes in individual and social attitudes towards work and the development and use of human resources.

Garden City and New Town Concepts

The Garden City concept and its New Towns adaptations were the principal influences behind the schemes prepared by Minoprio. The Garden City movement was an ideal which radical social reformers in Britain and later the United States began to promote at the end of the nineteenth century. It was prompted for the most part by the poor urban conditions associated with the Industrial Revolution.
Ebenezer Howard (1850-1928) was one such reformer whose ideas on plans for towns of the future had a considerable impact on his contemporaries. His book, Garden Cities of Tomorrow (published first in 1898 as Tomorrow: a Peaceful Path to Real Reform) embodied the new concept which was given form by a planning practitioner, Patrick Geddes. Howard visualised small towns of no more than 32,000 people on 9000 acres where the built-up areas formed a small element in the middle of the agricultural land which was to provide the inhabitants with their food. People would live in the countryside away from the congested and unhealthy cities, and buildings would be designed to capitalise on the fresh air and sunlight provided by the physical setting of the new towns.

This Garden City concept soon began to influence planners and architects not only in Britain, but also in other parts of the world. Two decades after Barry Parker's first garden city at Letchworth in England (1906) Clarence Stein prepared plans for a Garden City of Radburn, New Jersey. There was also Frank Lloyd Wright's interpretation of the ideal in his Broadacre project of one man, one acre, one cow, and Le Corbusier's Vertical Garden City idea, which kept the area of land occupied by building to a minimum and preserved the countryside.

The extension of the original conception (which was actually a schematic plan) as defined by Howard and explored and adapted by other visionary planners and architects, was to be seen in the plans for new towns. The preservation of surrounding land for agriculture


9 See Stephen Gardiner, op.cit., p. 23.
was to be translated into the green belt which had nothing to do with resources. Also, Howard's theory that old towns generally grew from a central nucleus, within a sequence of rings was used to illustrate a possible order for his conception of the ideal town. This resulted in the concentric road plan which, together with the green belt, was another abstraction. These concentric roads "had to be linked, ring to ring, leading to the radial road systems which, cutting across the concentric rings, converged on the centre, having the albeit wrong-headed abstract satisfaction of a reference to source - the centre of the old town". 10

The associated idea of the neighbourhood unit was to appear as plans for the British new towns were prepared. The neighbourhood was seen by many planners as the ideal planned community of five to ten thousand people. Stein, who originated the concept, applied it in his Radburn plan. This idea appealed to planners because it made it possible for them to exercise considerable control over layout and detailed land use. The plans defined the neighbourhood units which were separated by the radial roads and concentric rings, within a basic arrangement of zones for housing, commerce, education, health, and industry.

The neighbourhoods themselves were cut off from each other by the traffic of the radials and concentric rings, thus creating difficult conditions for communication among their residents. Howard's original objective was the exact opposite of this kind of development. In time adaptations of the Garden City ideas were modified and misinterpreted into standardised formulae which were

taken up in various parts of the world. Eventually his original concept of "a busy, socially rich, self-supporting town where all parts interlocked" became hardly recognisable.\footnote{Ibid.}

Later, the combination of ribbon development and the tower block were used as a means to restructure towns and cities which, together with the neighbourhood unit and the segregation of parts and people by zoning and road systems, resulted in the creation of alien and impersonal environments which began to appear in many countries and different cultures. In Kuwait, the full effect of the application of these formulae was felt in stages: the neighbourhoods and accompanying elements as early as the 1950's, whereas the tower block and ribbon development were to become visible during the later stages of urban growth.

Analysis of Aspects of the Plan

The main feature of the 1951 Development Plan was a road network of radial and ring roads concentric with and radiating outward from the old town wall. They extended into and surrounded the new residential neighbourhoods and other areas of designated land use. In effect, the old town was to expand beyond its walls and become the nucleus of a larger city with a target population of 250,000 people.

The following conclusions regarding certain aspects of the plan examine some of the problems associated with the basic concept, together with some factors which influenced the plan itself, as well as the consequences of development of this kind. These considerations and the above discussion on the Garden City and New
Town concepts, the role of the foreign consultant, and the idea of comprehensive master planning provide a wider context within which such plans and their role can be better understood.

1. The removal of the old town wall was basically a policy decision. The consultants initially thought of keeping the wall; Anthony Minoprio thought that it could make a strong edge for the city's centre. From a strictly planning standpoint, the old wall (and the old town, for that matter) could have been preserved, and there were those who advocated such an approach as a point of departure from the new plan. The wall was finally demolished because it would have kept the cars out and was perceived to hamper the re-development of the old town as the heart of a modern metropolis.

2. The demolition of much of the old town was brought about by the inappropriate application of the New Town approach which was imposed on an existing urban settlement, and resulted in conflicts and incompatibility with its existing urban forms and patterns. This action originated with the 'fresh start' idea and the basic decision of having a new city with new facilities, infrastructure and other elements.

3. The resulting road plan - comprising much of the overall plan itself - of roads radiating from the town wall gates and intersecting with the three ring roads was consistent with the adopted New Town approach which treated the new development areas as if they were suburbs. The new road system for the old town was to conform to this approach and had little to offer by way of creativity. It corresponded to the general pattern in the old town; the proposed roads were naturally wider than
those which existed before, thus contributing more to the
destruction of old town urban fabric. The new wide streets,
while not a direct continuation of the radials, were extensions
of a kind that converged on the centre of the old town and the
waterfront area, with negative effects on traffic movement.

4. This road system of the old town, while following the basic
outline of the existing roads, paid little attention to the
irregular and intricate street and pedestrian way patterns and
the urban features such as the clusters and sequences of
courtyard houses and open spaces which gave the town its unique
character. Such elements were clearly in conflict with the
adopted New Town concept.

5. An important by-product of the Development Plan was the
initiation of the process of housing segregation between
Kuwaitis and non-Kuwaitis. This outcome was inadvertent being
the direct result of the policies of old town re-development,
the Property Acquisition Scheme and the fact that only Kuwaitis
could own property.

6. Another consequence of the plan, made possible through the
enactment of the Property Acquisition Scheme, was the
amalgamation of small privately-owned pieces of property into
larger blocks which the government set aside for various large
civic projects.

7. By its very adoption, and through the number of recommendations
it contained on the need for a state planning body, technical
offices for engineering and planning functions, building codes,
surveys and its related requirements, the 1951 Development Plan
was the first step towards establishing planning as a means for
orderly growth and development in Kuwait.
In conclusion, Kuwait's first Development Plan was not the kind of organic plan one might have hoped for. For one reason or another it did not explore the possibilities of creating a new and imaginative physical environment which would capitalise on the new techniques and knowledge while preserving the old urban patterns and structures. While it is easy to judge it in retrospect, it can be fairly stated that the plan was essentially a product of its time and circumstances.
CHAPTER X

THE SECOND MASTER PLAN AND ITS SUBSEQUENT REVIEWS: AN ASSESSMENT

Introduction

The efforts of Kuwait Municipality to fill the gap created by the fact that the Minoprio Plan had already served its purpose and offered no further phases or revisions, resulted in its own Development Plan of the 1960's. This plan was designed primarily in order to control and guide the on-going urban growth process until a new and comprehensive plan could be put into effect.

By the mid-1960's, Kuwait's population exceeded 450,000, a substantially higher figure than the Development Plan's goal of 250,000. The Municipality Development Plan was, on the whole, fairly effective in managing the urban growth process during those difficult years of the 1960's, given the problems and limitations of the previous plan and the continuation of unrelenting forces for economic growth and construction expansion.

Finally, the commissioning of a new master plan in 1968 and its submission by CBP two years later, provided for urban growth with a ceiling population of two million, to be arrived at between 1985 and 1997. This plan ushered in an era of a more comprehensively planned urban growth and a new approach to planning, whereby new ways of thinking on national development were set in motion. This was significant regardless of the degree of relative success achieved in adhering to the new era's plans and their objectives. Some introductory statements can be made at this point in order better to appreciate the proper context of the new plan and assess its elements and implications.
1. The new master plan came on the scene a decade too late. All indications by the late 1950's pointed to the fact that the Minoprio Plan had greatly underestimated the country's potential for growth. It then became clear that the plan could only be regarded as a first step in the planning process, and that a comprehensive and long-term approach was urgently needed. While the Municipality's Development Plan had adopted a broader scale than did the Minoprio Plan, it was both tentative and opportune. A comprehensive master plan could however probably have been introduced at that time.

2. The new plan had 'inherited' a number of limitations and constraints from the two previous plans thus inhibiting the possibilities for a totally fresh approach to a comprehensive and strategic plan.

3. The new plan had also to be developed and implemented within the confines of certain limitations and constraints. These related to the concept of comprehensive master planning as well as those applicable to the first Development Plan.

Basic Assumptions and General Assessment

When it was presented, the CBP Plan was criticised by various Kuwaiti official bodies. However, before examining some of the criticisms it would be relevant to review certain important aspects of the plan which were issues of concern, difficulty or assumption.

From the outset, the CBP planners realised how difficult it was to prepare long-term physical plans for Kuwait. The uncertainty about the size of the future population was a serious drawback. This was also true of another aspect of the same problem, namely the lack of reliable estimates as to the future proportion of Kuwaitis.
to non-Kuwaitis among the total population. This last problem assumed added significance in view of the fact that at the time of the plan's preparation, the proportion of non-Kuwaitis actively involved in paid employment was at least twice that of the Kuwaitis. This proportion was not to substantially change during the years following the adoption of the plan, and the most recent population census of 1985 shows the participation of Kuwaitis in the labour force to have declined to about one-fifth.

What this meant, in effect, was that a larger proportion of non-Kuwaitis in the country's overall future population would require more employment. Population and employment are two basic elements of any land use strategy, and physical planning is concerned primarily with where people live and work and how they move in the built environment. Obviously the size of residential development and employment growth provided for in the plan and the volumes of movement they were to generate had to be based on correct assumptions. The most important of these assumptions, was the future rate of immigration.

The approach which CBP followed in their attempt to resolve these issues and to accommodate a situation of uncertainty was to consider the various assumptions regarding population growth, as referred to in Chapter VII, by adding a built-in flexibility but not at the expense of level of planning detail. A target population of two million was consequently selected as a realistic long-term forecast to be provided for by the Plan.

An alternative approach which could have been used by CBP and which would have been logical from the stand-point of planning strategy under different circumstances, and whose avoidance demonstrates the uniqueness of Kuwait's planning experience, might
have centred on a target year such as 1990. On the same basis of
projection, i.e., net immigration between nil and three per cent of
total population per year the population by that year would have
varied between 1,250,000 and 2,400,000 (Figure 19). The substantial
difference between the upper and lower estimates would, however,
have given a definite disadvantage to this approach. The resulting
plan would have been too general and its provisions too approximate.

In reality, a population difference of such magnitude would
have required a plan with sufficient flexibility to be still valid
if either forecast had proved to be correct. Alternatively, it
would become necessary to adopt the average of these two extreme
projections. There are problems associated with either solution:
in the first case, the plan would lack sufficient details, while in
the second, more precision would mean that the plan might bear
little relationship to the actual growth.¹

The main source of criticism for the CBP Plan was Kuwait's
Chamber of Commerce and Industry. Its basic argument which was at
the centre of the numerous points raised by its response was that
"the plan was prepared in almost complete isolation from the state's
social and economic plan which defines its goals and draws its
policies ..., etc.", thus rendering the plan "a mere theoretical
concept based on numerous assumptions whose unknown elements far
exceed those which are known".²

¹ Colin Buchanan and Partners, Studies for National Physical Plan
and Master Plan for Urban Areas - First Report: The Long Term
Strategy (Kuwait: 1970), Chapter 8.

² Kuwait Chamber of Commerce and Industry, "Reply to Final Draft
of Studies for National Physical Plan and Master Plan for Urban
Areas", Jan., 1971 (in Arabic); p. 1. See also Jamal, op.cit.
The Chamber's report was specifically critical of the fact that the plan's population projections were less than definite, a problem about which the planners could do little, given the uncertainties surrounding population growth. The response by the Chamber having also mistakenly stated that the plan was based on Kuwait's population reaching two million in 1990, took note of the two extremes of 1.5 (actually 1.25) and 2.4 million, and concluded that the plan has, in effect, been formulated for an unknown total population.

It is interesting to note that the Chamber was particularly concerned about what it considered to be the high population estimates of the CBP Plan. Its own preference was for a plan which provided for a Kuwaiti population of 750,000 by the year 2000 (or one million as a maximum) and a further 250,000 of foreign workers. Given the actual population growth (995,000 by 1975) and the prevailing Kuwaiti/non-Kuwaiti ratios for population and labour during the last two decades the Chamber's extremely low figures effectively demonstrated the difficulties of projection and planning strategy formulation with which the planners of the late 1960's were confronted. It also shows how remote the notion of a development boom was even from the minds of those who were best placed to detect it.

Some of the points raised by the Chamber's response - on aspects of demography, the economy, manpower, and implementation costs - would have been useful as an input for the planners during the plan preparation. That these views were aired late in the process after the plan had already been submitted reflects the lack of coordination and consultation which critics of the plan maintained was one of its shortcomings.
One point which was of particular importance in the Chamber's critique and which has validity for all planning strategies was its belief that the physical plan "is only a part of an inter-related and inter-connected whole - 'the Developmental, Economic and Social Plan' - and that it cannot be realistic, scientific and effective unless it assumed its natural place within, and was based upon, that plan". 3

Other official bodies in Kuwait also criticised the CBP Master Plan, expressing their particular concerns and raising points similar to those made by the Chamber of Commerce and Industry. Again, this was an indication of the lack of prior consultation with, and participation by, those who were in a position both to contribute to the plan and to be affected by its implementation. Furthermore, according to one member of the Counterpart Team, most members were "disillusioned with their role in the planning process" and the lack of "co-ordination of planning methodology between CBP and the Counterpart Team in the production of the preferred strategy". A further criticism was that CBP "did not train an indigenous team of professionals, nor help to create a planning mechanism or establishment that would secure the continuity of work." 4

One more criticism of the CBP Master Plan was its demographic and manpower implications. The fact that Kuwait lacked the required skills and numbers needed to carry out a comprehensive plan could mean increased immigration into the country, and that would further tip the demographic balance by enlarging the size and ratio

3 Ibid., p. 6.
4 Jamal, op.cit., p. 1455.
(vis-a-vis the indigenous population) of its foreign residents. While this argument had its validity, the resolution of this and similar problems was substantially a matter of public policy, and for planning to take place at all, certain assumptions had to be made, in the context of an overall development framework and objectives.

This issue is, of course, a corollary to the basic question of demographic make-up; i.e., what proportion of the total population can be immigrant? The central difficulty of planning for countries such as Kuwait as recognised by policy-makers and planners alike can be reduced to this basic issue: population composition at given points of time in the future. The economic, social, and even political implications of this issue and of decisions made within its context are numerous and have a wide-ranging impact. While a detailed examination of these falls beyond the scope of this study, certain aspects to the manpower/demographic problem are addressed in the final chapter.

A further criticism of the CBP Master Plan was the view that despite its more balanced distribution of people and activities when compared to previous planning efforts, its provision for the concentration of development alongside the coastal corridor, extending from Jahra in the north to Shuaiba in the south, would, in effect, foster unbalanced regional development and result in polarized growth. An example of a scheme which illustrates this

---

viewpoint is the extensive waterfront development programme which includes recreational facilities, landscaping, pedestrian walks, and parking areas along a coastal strip of 20 km., from Shuwaikh to al-Ras in Salimiya.

Apart from the question of unbalanced development, it is feared that the area's problems associated with congestion, concentration of residential and commercial land uses, and traffic will become even more severe. While this can be true, the project may help soften the impact of the multi-lane Arabian Gulf Street as a barrier between the people and the sea and restore some of the accessibility and closeness which at one time characterised this relationship. From the beginning, this busy highway had its critics, and Buchanan had pointed out the negative outcome of the separation.

This aspect of the CBP Plan, which became more pronounced in the MPR1, with its emphasis on two new coastal towns was, however, a function of certain circumstances and pressures and policy considerations. The plan and its two reviews have actually recognised the need to plan for development beyond the conurbation and into the country's interior. The latter, while less hospitable for urban development than the smaller coastal areas, nevertheless holds development potential particularly for agriculture. The congestion and saturation which are bound to become increasingly visible along the coastal corridor will hopefully bring about a new and appropriate response towards the development of the hinterland interior.

Finally, apart from the many physical elements, problems and recommendations highlighted in the CBP Master Plan which, under the circumstances, was a fairly competent response to the task attempted, there was another significant contribution. The plan was
simply a conceptual step made in the right direction. It constituted a departure from the previous limited concept of the Minoprio Plan and the tentative approach of the Municipality Development Plan. The introduction of the concept of comprehensive master planning and the attempt to create a balanced urban growth and development on a regional basis proved to be a landmark in Kuwait's search for appropriate planning strategies.

Reviews and Implementation

This evaluation of the CBP Master Plan's Reviews (mostly MPR2) focuses primarily on some of the important physical aspects and implications of the chosen strategy of external growth - the New Towns concept - and issues related to its implementation.

An examination of the development activity in Kuwait associated with the growing population since the adoption of the CBP Plan reveals the fact that it occurred almost entirely within the Metropolitan Area. Private and public housing projects, highways and major utilities projects, recreation schemes, important government buildings in the City Centre - these were all implemented mostly in accordance with the CBP Master Plan policies or as revised in MPR1. The only two important elements of the Metropolitan Area planning proposals which have fallen behind were those of the District Centres and the landscaping schemes.

Both reviews of the CBP Plan concluded that a substantial number of people would require housing over the plan period and that they had to be accommodated outside the Metropolitan Area. This, despite the fact that they arrived at Metropolitan Area residential capacity estimates that were higher than those projected earlier by the CBP Master Plan. These estimates were 1,706 million (MPR1),
2.08 million (MPR2) and 1,258 million (CBP Plan). Of the various scenarios/strategies which were considered in order to accommodate the over-spill population, with total population projected to reach 2.505 million by the end of the plan period, the New Town approach was adopted, first by MPR1 and, five years later, apparently with little opportunity for introducing fresh thinking, by MPR2. A re-appraisal had however to be undertaken in view of the substantial differences between the population forecasts of the two reviews.

The selection of the New Town Strategy, in preference to the three other scenarios was the outcome of an earlier commitment to the strategy (MPR1 and Subiya New Town) and official policy preferences. The notion however cannot be ignored that had the MPR2 evaluation of the strategy's implications not been influenced by these two factors, it may have led to different conclusions and proposals. The resulting urban growth approaches of the two reviews were otherwise of particular significance in that they attempted to bring an end to, or at least minimise, the continuing accretion to the Metropolitan Area.

The conception of the proposed strategy and its implementation can be seen to reflect a number of principles, some of which may or may not be adhered to. These principles are briefly: the progressive reduction of growth in the Metropolitan Area as a result of opportunities elsewhere and the proper use of controls; the relationship between the development and employment in the two new towns; and that Subiya is to lead Khiran in development in order to reach its target size. Other principles such as the proportion of Kuwaiti to non-Kuwaiti in the new towns (60:40 and 50:50 for Subiya and Khiran, respectively) and the division of the housing programme
development equally between the public and private sectors may however be easier to implement.

Related to these principles are a few basic issues which can be recognised as critically important for the achievement of the strategy. These are:

1. The logistical and administrative structure to be created for the new town development and the speed with which it can be set up;
2. The employment aspect of Subiya's development and the feasibility of establishing basic employment there;
3. The degree of success in controlling development pressures in the Metropolitan Area and redirecting them to the new growth areas.

In further analysing certain basic elements of the reviews and the recommended strategy for urban growth and the implementation of MPR2 policies, a number of points can be made. These will shed light on a number of important aspects or issues of the reviews, and will also emphasise the need for planners and policy-makers to ponder these issues and questions at various stages during the implementation process. The focus here is on the interrelationship and mutual effect on each other of the Metropolitan Area (its future development and how it occurs) and the New Towns Strategy.

1. Although the New Town Strategy was adopted after MPR1 had re-examined the proposed satellite expansion areas defined by the CBP Plan, no appropriate implementation programme had followed. The highly unrealistic population growth rate for the two new towns over a period of 25 years projected by MPR1
became even more unattainable. It is true that the Subiya Study was initiated, but even then the population targets it recommended had to be doubled (from 120,000 to 250,000) as the result of official policy preferences and a clear commitment to Subiya.

2. In the event that the Metropolitan Area's 'acceptable' residential capacity as estimated by MPR2 (2.08 million, as compared to MPR1's 1.706 million) were to change as a result of zoning changes or infrastructure-related factors such as overloaded highways, how can the strategy be adjusted and changes be made? The success of the strategy seems ultimately to be linked with decisions taken about the Metropolitan Area and how these decisions are implemented. Similarly, the extent to which the New Town Strategy might succeed will have a direct bearing on what pressures continue to be exerted on the Metropolitan Area and how it develops in future.

3. There will be considerable difficulty in predicting the balance of growth between the two new towns. The main influences here are official policies, as the government is committed to locating a relatively sizable share of employment at Subiya. Its hoped-for population target of 250,000 by the end of the plan period would prove too high, as both CBP and the Subiya Study have concluded. Yet the Subiya element of the strategy is central for its success in the form in which it has been proposed.

4. It would seem logical to assume that due to its more favourable location in a region of expanding economic and industrial activities, and in relation to the Metropolitan Area, Khiran will be easier to initiate than Subiya. It can also be
expected to grow at a faster rate. This, of course, is contrary to the adopted strategy which gives priority to Subiya, whose development and viability will probably remain one of the crucial uncertainties of the overall strategy.

5. A lower and more realistic target population for Subiya of between 120,000 and 150,000 (the former adopted earlier by CBP and recommended by the Subiya Study) may have to be reconsidered. The implication of this lower figure would be that the growth of the other new town, Khiran, would be faster and to a higher level than at Subiya - provided that Metropolitan Area growth could be achieved as required. This would be compatible with the argument made above.

6. As the Metropolitan Area reaches development capacity, and renewal becomes the predominant form of re-development, what, if any, changes in urban patterns can be expected or recommended to improve the capacity but also the living and working environment in this sizable and crucial area?

7. As an important element of the new planning strategy, to what extent and how can the negative effects of delays (as occurred in the past) in the implementation of the District Centres programme be softened or avoided? What modifications in plan strategy and implementation can be introduced to safeguard the overall recommended approach and control commercial activity in the Metropolitan Area?

8. As a corollary to 7, above, what would be the effect on the New Town Strategy of further growth in unplanned retail development throughout the Metropolitan Area, and of continued pressure for retailing and offices to increase in the City Centre?
9. As the major elements of the road network are completed, and as employment in the City Centre grows, restraints on journeys to work by car will become necessary. Measures, including upgraded public transport services, limited parking time, higher parking fees and similar arrangements, will demand serious attention. The forty public parking areas/garages - accommodating about 75,000 cars - can perhaps be reduced, in line with the success of the public transport system and its appeal to new users.

10. The recommended provision of open spaces (parks system) and forestry belts realistically reflects the current and future availability of irrigation water; the forestry belts similarly are more closely related to the western edge of the urban areas. Their westward extension into the interior may eventually have to be considered, as a medium-term objective.

11. The question of balanced distribution of industrial sites and activities in small areas throughout the Metropolitan Area seems unlikely to be realised. The lack of clarity in official policy on industrial development in general and the fact that the large industrial areas in the southern parts - Shuaiba/Mina Abdulla - contain relatively large undeveloped spaces served by amenities and infrastructure, coupled with opposition on environmental grounds to the siting of industries in certain areas are all factors suggesting a continued re-assessment of the industrial development aspects of the plan.

Finally, the New Town Strategy, which embodies the basic approach of both MPR1 and MPR2 is an ambitious planning programme. The implementation of its various elements without further delay
remains of vital importance for its overall success, although certain modifications in some of its proposals may be necessary in the interest of realism and of arriving at appropriate and timely solutions.

The next section of this chapter examines the city's emerging urban environment - its townscape, image and related aspects of urban design, and describes how the traditional old town buildings were meant to minimise the harmful effects of a severe climate. By the early 1970's, it will be shown, the impact of the various government-sponsored buildings forming the architectural counterpart to the CBP Master Plan, and a new awareness by the private sector of the need for better architecture, were two major factors which brought about the first signs of a changing and increasingly interesting townscape.

Kuwait City: the Built Environment
Townscape and Urban Design

A visitor to Kuwait will quickly realise that Kuwait City - from its centre, or what was known as the old town, to the various villages and communities regarded as its suburbs - is a planned metropolis. The Western architectural influence is evident. Also, many of the new and important additions to the city's skyline have begun to incorporate not only high design standards but also an understanding of the effects of climate and a more than superficial tribute to certain elements of traditional Arab/Islamic architecture. The emergence of this metropolis, with its changing townscape pattern (particularly noticeable since the mid-1970's) has
taken place in more than one stage and has been subject to certain influences and factors. These influences follow from and are related to Kuwait's two principal master plans - the Minoprio and Buchanan proposals. The latter undoubtedly facilitated by the substantial rise in government and private sector earnings throughout most of the 1970's and early 1980's.

At the beginning of the era of planned urban development, there was the Minoprio Development Plan with its radical proposals that eventually resulted in the demolition of most of the old town, while designating its re-developed successor to continue its former role as the centre of government and business activities. At that time, little thought had been given to the possibility that the old town might be preserved, amid the urgent desire to see a new city, centred on the old town, and expanding to encompass its immediate environs.

The demolition of the town wall was inevitably a part of the plan to facilitate the expansion process and to accommodate the ubiquitous automobile. Once the important decision to demolish the old town had been made and implementation had begun, an entirely new situation was present, with results which were both uncertain and difficult to control, in terms of physical development standards, quality and criteria. This applied to the old town as well as the expanding city.

One obvious alternative would have been to keep the old town substantially without any major physical changes other than those necessary to introduce limited modern infrastructure and amenities, and to start afresh outside the walls. There were at that time a
few people who were apparently motivated by nostalgia or foresightedness, who advocated the conservation approach. These were to watch with sadness the bulldozer's indiscriminate onslaught on the old town's neighbourhoods and the elimination of its houses and its urban fabric.6

While one realises that Kuwait did not at that time possess great and imposing buildings of architectural merit or urban vistas, requiring preservation or conservation, the possibility of a preserved and renovated old town has both merit and precedent. Other parts of the world - Europe, North Africa and the Middle East - have old and traditional towns which, as modernisation and expansion became inevitable, have been left within their walls while new modern towns were built beyond.

As counterparts, the two often complemented one another while the contrast and diversity of urban life and form, with the experience it afforded to residents and visitors, enriched the urban environment and gave it a new dimension. Basically, this is the idea of preserving indigenous architecture and urban spaces in the interest of continuity and as a link with the past. It is also a reminder of the harmony of function, form and environment exemplified by the simple designs of simple people which can inspire new forms and patterns for the new city, with roots in its traditional counterpart.

Had such an approach or solution been adopted, the old town of Kuwait ideally would have been preserved as an old township. It

---

6 One such concerned Kuwaiti was said to have run in front of bulldozers as they were razing traditional buildings, as a gesture of protest!
would also to a certain extent have been modernised and restored as a very desirable residential quarter and a centre for traditional activities connected with local arts, certain professions and the sea. It is ironic that such a solution never materialised - or was seriously considered - mainly due to the improper application of the New Town theory which was behind the Minoprio Plan. The development of the desired new city in a different location outside the old town would otherwise have been in harmony with the original concept.

One of the least imaginative and limiting aspects of the Minoprio Plan with implications for urban design, follows from its road system and how it related to or was imposed on a town which was in the process of disappearing. In a sense, this proposed road system was a paradox. It corresponded almost completely to the old circulation pattern in the town, but with wider streets replacing and superimposed upon the roads and pedestrian ways which then existed. Apart from the destructive impact on the urban fabric, this widened roads system had, to a considerable extent, limited the opportunities for creative urban design.

The retention of the old street pattern with widening when such action did not encroach on buildings deemed architecturally or historically important would in certain circumstances have been justified. One such circumstance would be the prevalence of architecture of quality along these streets and the need to keep and preserve the buildings concerned. In this case, drastic changes in circulation pattern could require demolishing such buildings or result in circulation and accessibility problems. Another condition might be the existence of unique topographical features as the framework of an existing street pattern and building siting. In
this case, the concern would be that the adoption of a new circulation plan with a radically different orientation would result not only in the loss of certain visual and aesthetic aspects of the topography but that the new circulation system might substantially violate the natural and topographical features of the land.

Yet, the Minoprio Development Plan proposals resulted in the disappearance of much of the old town buildings while preserving a street pattern which has essentially become little more than a skeleton. Neither of the two circumstances referred to above prevailed in the old town of 1950. The planner and urban designer was severely restricted in his ability to create imaginative and relevant urban design elements with a degree of complexity and ambiguity of form and pattern capable of enhancing the possibilities and attributes of a largely uniform site with few topographical features or variations.

Instead, the Minoprio Plan, had actually "transformed the city's centre into a bridgehead on the Gulf and with its back to the sea, this bridgehead had become surrounded by ever larger suburbs."7 As the old houses and other buildings began to disappear from the city centre/old town, and new impressive buildings slowly appeared, the old town had for many years a desolate look. Empty and unsightly lots and slums-in-the-making became a common phenomenon which, in varying measures, continued to be present in the city and its suburbs after nearly forty years of development and construction. In commenting on the plan's road system and its aftermath, one observer noted that it "imposed a grid of roads that proved almost wholly destructive of the traditional township. Worse

7 Gardiner, op. cit., p.42.
still, little positive planning followed the construction of roads, and they inevitably attracted isolated building blocks, haphazardly sited and bearing no relationship to one another.\textsuperscript{8}

The uniqueness of the circumstances of Kuwait of the early 1950's failed to produce a unique planning solution. The solution offered was determined by a set of conventional planning concepts and formulae. The limitations imposed by time, lack of data, and official policies and preferences may have been factors contributing to this, yet, in the final analysis, it was the city centre which had, in physical and aesthetic terms, been most severely affected by this failure. The loss of demographic balance and the predominance of dilapidated buildings even when, as now, the city centre boasts some world-class architecture and a number of the best-designed buildings in the region, are only by-products of the process of grafting ready-made planning concepts onto situations which require fresh ideas and an awareness of the traditional environment.

The second major influence which had its impact on shaping the city centre/old town urban form and townscape has to be directly related to the CBP Plan. Saba Shiber's influence on the future of the urban environment and architecture of Kuwait, through his intervention in the 1960's, and his efforts to draw attention to the horrors of the construction boom and in saving what remained of the old town should also be mentioned. In the context of the Buchanan Plan, and following the recommendations of Martin, Azzam and Albini, an architectural plan for the future city centre began to take

\textsuperscript{8} Sherban Cantacuzino, "From Courtyard to Street: Recent Changes in the Pattern of Arab Cities", in Ismael Serageldin and Samir El-Sadek (eds.) The Arab City (1982), p.88.
shape. At that time, out of a sense of disillusionment with the city's emerging urban environment and with the inferior architecture and building standards in evidence everywhere, a desire for quality forced a change in prevailing attitudes toward architecture and urban design.

Much of the old town had been demolished by the late 1960's and the scope of work, now encompassing most of the city centre, was in a sense simplified by this fact; the opportunity and the challenge were both great. In Leslie Martin's words, "because its boundaries were still clearly marked out by the line that the old wall had followed, the town was a complete site, a fact which made the work of establishing a brief for the architects, and the execution of drawings of proposals, an easier matter than they might have been."9

The CBP Plan reflected an awareness of the fact that the central area of Kuwait between the town wall line and the sea was capable of regeneration by carefully sited and designed buildings. The siting of public buildings in the plan reflected this principle and important buildings were to be built on the waterfront around the Sief Palace. Thus, adjacent to the Palace we find the Council of Ministers' extension and the Ministry of Foreign Affairs (Figure 48 and Plate 8), with their appealing lines, colours and human scale, in addition to the use of building materials and design elements such as colonnades and courtyards compatible with the Palace. The State Mosque, which is of traditional design but highly effective and of considerable beauty is on a site not far distant. The frontage, however, extended further west to accommodate other

9 Quoted by Gardiner, op.cit., p.67.
Figure 48. Plan, Sief Palace, Council of Ministers and Foreign Ministry; Elevations of Council and Ministry
important public buildings such as the imposing National Assembly and the spacious National Museum.

Associated with this main frontage, two city centre areas designated for development in this urban design context seemed logical: they were compatible with the pattern of organic growth already evident in the central area and followed two directions. The first of these along the lines of the existing souk, while the other extended towards a number of existing ministries where land for further development was available. The sites themselves appeared capable of being well served by the proposed circulation plan. "The central issue", as Leslie Martin saw it then, "was the discovery of an appropriate building form which could fit naturally into the evolving city within the constraints of local culture and climate."\(^\text{10}\)

The four architects chosen for the architectural counterpart or supplement to the comprehensive master plan under preparation by CBP (Candilis, Belgiojoso, Smithson and Pietila) were provided with a design brief which itemised a number of elements expected to influence their forthcoming concepts. Among these was the significant fact that despite the disappearance of much of the old town, traces of its form were still visible in the residential quarters and the souk. It also indicated the new buildings along the main roads which were generally fragmented, and added that enough space remained for quality rebuilding to dominate this pattern of redevelopment. Since much of the area under

consideration was to be utilised for cultural and government purposes, the expectation of quality architecture was to be further emphasised.

The design brief reflected a genuine concern over the mistakes of the past and a desire not just to reverse its trends but also to introduce creative and appropriate architecture by promoting an environment that would be conducive to its wider application. "What is clear", the brief noted, "is that a remarkable opportunity to establish the character and environment of this inner city still remains... The purpose of these studies for the Old City is to provide desirable objectives and guide lines in relation to its physical form which can be reasonably firm in defined areas and in others sufficiently free to adapt themselves to the influence of the Master Plan and to less well-known requirements of the City itself."

The architects' proposals were all strongly influenced by the climate, which has always been a crucial determinant of many features of great architecture. In this particular case of important public buildings and architectural schemes for an environment where climate has always had definite challenging manifestations, this emphasis was both welcome and overdue. In this connection, two points of interest can be made.

First, it was the complete disregard of climate and environmental considerations which, to a considerable extent, brought about the proliferation of the unsightly buildings and inappropriate 'architectural' styles of the 1950's and 1960's (the

11 Gardiner, op.cit., p.67.
response of Kuwaiti's traditional pre-1950 buildings to climate will be discussed below). The second interesting point in this context is that by the late 1960's, the disenchantment with the built environment of the preceding construction boom years made many people apprehensive about new planning efforts. Some even had ideas of their own as to what constitutes good architecture. The Kuwait Chamber of Commerce and Industry's critique of the Buchanan Master Plan illustrates this aspect. The Chamber's report, in its final paragraph, referred to the architectural plan and to the fact that it did not address "the architectural style which it foresees for Kuwait and which responds simultaneously to the climatic needs and the desert-nature of the country while also taking into consideration its Arab/Islamic traditions, and bringing to the fore the qualities of the Arab art of architecture." 12

The attention given to climate in Kuwait's new (post-CBP Plan) architecture, particularly the important institutional buildings, is certainly a refreshing and significant development. The question of Arab/Islamic architecture, on the other hand, while the subject of much debate in recent years, remains elusive as it often means different things to different people. It has a variety of styles and features which are influenced by climate, local culture and tradition, throughout vast regions extending from North Africa (and Spain) to China, but within this range certain unifying themes, forms and colours are always present. This is what Janet Abu-Lughod had in mind when she observed that "while the diversity [in Islamic system of city building] is striking and defies simplification to a

12 Kuwait Chamber of Commerce and Industry, op.cit., p.8.
single genre of either architecture or urban form, it is equally remarkable that one always knows when one is in the presence of Islamic civilization.\textsuperscript{13}

It must however be said that the new government-sponsored architecture has attempted to adopt themes and elements which were both climatically inspired and hinted at local and Arab/Islamic influences - as shown in the examples discussed below. Whether it is Reima Pietilä's intimately-scaled Ministry of Foreign Affairs; Jorn Utzon’s enormous tent-like National Assembly with its covered long courtyard resembling a souk; Michel Ecochard’s National Museum with its five parts built around a central garden; or the Architects Collaborative (TAC) Kuwait Fund for Arab Economic Development with its interior courtyard -- these structures managed to convey a sense of local and traditional influence despite the modern building techniques and complex design considerations.

While the architectural plan was essentially concerned with official projects, the private sector was also influenced by the changing attitudes and the quality of the new additions to the urban scene. The results or manifestations of this development could be seen in a townscape which began to change and acquire a new perspective.

Apart from climate, two of the common interests of the four architects were to be translated in practical terms into their projects and buildings. These were the location of government buildings near the Sief Palace and the preservation of the old souk.

\textsuperscript{13} Janet L. Abu-Lughod, “Preserving the Living Heritage of Islamic Cities”, in the Aga Khan Award for Architecture Proceedings of Seminar One in the series Architectural Transformation in the Islamic World, held at Aiglemont, France, April 1987, pp.61-62.
A third, the return of residential neighbourhoods to the city centre appears to have had inconclusive results. A fourth common interest regarding the waterfront as a public seaside park with cars banned from the Arabian Gulf Street, also had mixed response: maintaining the street while extensive development of the area (the Waterfront Project) was to be planned. Finally, while approval of the Minoprio Plan's boundary park was unanimous, the architects disapproved the continuation of building beyond the 1st Ring Road - a recommendation which proved to be unrealistic at that stage given the extent of scattered development and the fact that the CBP had little choice but to extend the earlier plan.

Finally, it would be relevant at this point to describe two examples of the new architecture mentioned above, in illustration of this healthy development regarding the possible integration of function, environment and tradition. The main inspiration for most of these buildings has been the traditional dwelling courtyard. This can be within the building, surrounded by offices, now high-roofed, cool and often with a central fountain as in the Kuwait Fund (Plate 6a), or an external court which may also enjoy the soothing and aesthetic effects of water, as in the Ministry of Information, below.

1. Council of Ministers/Ministry of Foreign Affairs. This extension to the Sief Palace was completed in 1983 (Figure 48 and Plate 8). The original Palace building dates from the late 19th century, with an addition, including the "neo-classic" clock tower, which was completed in the early 1960's. The main
building of the Palace had features common to Islamic architecture, such as brick colonnades and courtyards, with interesting detail and ornament - in brick relief frames, ironwork and ceilings wood, as well as wooden latticed balconies (Plate 3a).

The Pietilas' main inspiration was the place and the site. The Palace itself, the water front, a central location not far from several other well-designed buildings -- these were all factors which influenced the extension's design. In considering this extension as part of a composition which centred on the Sief Palace, the design incorporated traditional elements, recognised the unique location along the water front, and the result reflected overall balance and a continuation of scale, proportion and unity.

On both sides - facing the sea and the road/city centre - the two-floor extension is framed with colonnades which have interestingly-shaped openings, and the material used is beige brick, in harmony with the Palace. Furthermore, stripes of ceramic of various colours are imaginatively employed, particularly in the Foreign Ministry's colonnades and sea-facing terraces. The use of the glazed tiles in shades of blue and green (with their water imagery), and yellow and other warm colours to frame the angular openings along the colonnades suggest the influence of traditional Islamic forms in geometry and mosaic, while the openness to the sea and its northerly breezes capitalises on the site's assets and aesthetics.

2. The Ministry of Information Complex. Designed by Jacques Satour, this complex is the new headquarters of the Ministry of
Information. As an example of modern buildings with clear associations with Arab/Islamic architecture, the Ministry is perhaps without parallel in Kuwait. Its description as modern architecture, however, applies mainly to building methods and materials, for otherwise it seems to belong almost uncompromisingly to traditional forms of architecture. The main building of the Ministry is a white tower (Plate 7), with sequences of arches which lead in geometrical formation to the converted arches of the parapets. The entrance colonnade, the arcades, the vaults, the canopies and the large pool are all elements which establish an identity rather than a mere reference. Yet the design has also permitted an adaption to modern functional requirements. In the traditional important Islamic building, the exterior was kept simple, reserving ornament for the interior. In the present example, however, where much of the space is for offices and working environment, with modern equipment, the interior remains practically bare while it is in the external elements that decoration is clearly pronounced. The external arcaded court surrounding a large pool adds another traditional element and illustrates again the use of water to suggest coolness and add beauty.

Following this discussion of townscape/urban design and other related aspects of the changing city's built environment, it is desirable, in order to form a proper perspective, to look at how the traditional Kuwait buildings were adapted to the different climatic conditions.
Climate and Kuwait's Traditional Buildings

The traditional Kuwait Town's adaption to its physical environment and its response to the severe climatic conditions of the region seem, in retrospect, to contrast sharply with those adopted by the builders of much of the modern era. As was noted earlier, the built environment which has emerged during the two decades following the early 1950's, reflect an almost complete disregard for climate, local traditions and aesthetics. The reliance on imported European post-World War II design concepts, combined with the desire for pretentious architecture with contrived and often bizarre features, produced the exact opposite of the organic and locally-inspired (in both form and building materials) buildings of the past. The added heavy reliance on air-conditioning - while understandable in high-rise modern structures such as office buildings - was another element which made traditional architecture forms appear to belong to a different age.

In looking at Kuwait's traditional houses and how they were built to meet the challenging climatic conditions while also in harmony with the social customs, a few characteristics can be observed.

The old town's largest houses were normally located on the water front, facing the sea breezes. Behind these, smaller and less elaborate houses extended to the souk and the town wall, through a maze of lanes, with an occasional doorway indicating the dwelling behind. Along these narrow lanes, the buildings were closely knit to minimise the effects of heat and sandstorms and had small and suitably located openings for ventilation.
The traditional house and basic unit of the typical residential quarter had one or two storeys, and its most dominant element was a central courtyard, needed to provide shade and privacy. It was flat-roofed and had a parapet for roof ventilation and also for privacy; its rooms had small windows and high ceilings, for cool indoor conditions. The courtyard and collonade, as architectural elements known throughout various parts of the world from North Africa to India, are a simple but effective device to secure comfort in hot dry climates. They bring shelter from sun, wind and rain as well as ventilation and indirect light to the living areas. The courtyard (the domestic area courtyard when more than one existed) normally had a well for underground water.

Houses often had more than one courtyard, since only a small courtyard can provide the required climatic protection and due to the need for family privacy and the separation between aspects of daily life (Bayt al-Badr, dating from the mid-19th century and an outstanding example of large traditional houses, has five such courtyards - Plate 4). The fact that houses were turned inwards towards the courtyard, with minimum openings on to the heat, dust and noise of the alleys/streets, was also in conformance with the traditional emphasis on the privacy of family life and the seclusion from the outside known to Islamic cities.

One may also observe that wherever possible, it was the custom of successive generations to build their houses contiguously, creating cool and intimately-scaled clusters of dwellings for extended kinship groups. Further, the cooling effect of the narrow lanes of the various quarters was often enhanced by uneven building lines. The walls of the traditional Kuwaiti dwellings were thick
and had an insulative effect since they were generally of mud and coral block and, in some cases, of brick.

Within a wider regional context, it is possible to observe that the wind tower, an element often present in buildings in other parts of the Gulf - notably in the south - was not common in Kuwait. The wind tower draws cool air into a building in a downstream and, through a parallel route, forces warm air out. This lack of interest in the wind tower is due to the location of Kuwait Town, facing the sea in northerly orientation, which results in lower temperatures and humidity during the hot season as winds from the north pass over the water. Other devices such as wind catchers were used in some instances but were not common features of local buildings. These were horizontal air shafts halfway up an outside windward wall with openings at the bottom which can be opened from the inside, permitting breezes to enter a room.

While it is difficult not to be critical of much of the architecture of the modern era in Kuwait (the residential types, in particular) as being ill-suited to climate and tradition, it is nevertheless possible to discern, in the more recent examples of domestic architecture, a trend to incorporate certain concepts and elements which indicate a desire for continuity with the past. And even as the traditional courtyard house as a basic dwelling form has been effectively abandoned and many villas continue to reflect a wide range of architectural styles and eclectic personal preferences, considerations related to function, space and aesthetics are no longer disregarded. Such welcome trends, limited and tentative as they are, may have begun to influence government-built housing schemes as well as some dwellings built by
individuals, often on plots made available, along with loans, by the government. The next few years can well witness perceptible changes in this respect.

City Image and an Alternative City Plan

Following this discussion of the main influences and factors having an impact on the continuing development of urban design and on townscape in Kuwait, it is necessary to view the collective image created, particularly at the city centre where most of the new architecture is concentrated. In the context of this evaluation, one may also speculate on at least one other approach - related to the architectural plan - which may have a certain merit.

A city or an urban environment ought ideally to have a certain distinguishing image or character which emanates from its spaces. This includes how and for what purposes they are used, building forms and styles, and the relationships which exist between the various elements in the built environment and how they are perceived. This is what Kevin Lynch in his classic work on city image calls 'imageability' - "that quality in a physical object which gives it a high probability of evoking a strong image in any given observer. It is that shape, color, or arrangement which facilitates the making of vividly identified, powerfully structured, highly useful mental images of the environment." 14

In Kuwait, the city image which began to emerge as the implementation of a number of civic projects have progressed, and various large and important buildings have taken form in recent

---

years, is highly interesting: exciting in certain respects, but also uneven. It is undeniably different from and far superior to what had earlier prevailed. But the overall impression, despite the opulance and the architectural quality of many of the new buildings, is that a defined image for the city has yet to emerge.

Many of the buildings, when considered separately, are clearly works of integrity and beauty. Their response to the climatic factors and attempts to incorporate local and traditional influences while maintaining high design standards and employing modern techniques are appropriate and much needed. In the style and scale of these buildings however varied, a general or unifying theme seems to be lacking. In other words, the parts have not produced an identifiable whole, and the overall picture is not as aesthetically and emotionally satisfying as its individual elements. Also, the presence of dilapidated buildings throughout the city has the effect of emphasising the disparity between old and new thereby creating a sense of imbalance and disharmony.

A comparison, within the present context, can be made with the renowned urban environment of the Islamic town, where much of its attractiveness was derived both from the skilful and subtle juxtaposition of buildings as well as their merit as individual structures. Kuwait Town, by comparison, seems to offer a number of architecturally distinguished buildings which have not, as yet, created a distinct, intimate and integrated urban milieu.

It is perhaps possible to say that Kuwait City is still groping for an appropriate image to project. The fact that many residents and visitors tend to associate the city's modern image with its Water Towers (Plate 6b) and think of these unusual structures as
symbols of the new city is perhaps an indication of this lack of an identifiable urban design theme and the inability of the new buildings collectively to project a lasting and distinguishing impression.  

As for the private sector's additions to the city's built environment in recent years, some have been prominent if generally lacking the glamour of the official buildings. The most important among them are high-rise office towers, shopping arcades/garage complexes, banking and finance centres, as well as apartment blocks. Many of these are well-designed and executed, but often lack the human scale and intimacy expected in a city centre.

The outlying areas and suburbs, while experiencing an improvement in the quality of new buildings from what was common in previous years, particularly in the residential quarters, continue to have a proliferation of styles and a mixture of influences. However, there are indications at present in private house building, of a tendency to incorporate traditional lines and ideas while benefiting from the knowledge of contemporary techniques. Apartment blocks built by the private sector for the foreign residents have greatly increased in number since the mid-1970's; but while quality has improved, design remains a weakness.

15 These towers of which there are more than 30 in several groups, won an Aga Khan's award for architecture in 1980. The most interesting group (the rest are mushroom-shaped simple structures) is the imaginative three-tower ensemble in the middle of a promontory in the Kuwait Bay. This group, in addition to being used as water reservoirs, contains facilities such as a restaurant, a banquet hall and an indoor garden. (Designers for the Water Towers were Sweden’s Lindstrom, Egnell and Bjorn).
Finally, the building programmes sponsored by the government through the National Housing Authority, have, in recent years, also shown a willingness to create housing developments with variety and flexibility in the design of the residential units and in their spatial arrangement and the siting of buildings. This contrasts with the rigid and monotonous patterns of many of the earlier public housing schemes.

In concluding this analysis and evaluation of Kuwait's built environment and evolving townscape, it is instructive to look at an alternative city framework plan. This alternative approach is of special interest due to the fact that its elements were part of the architectural plan. Out of the four schemes commissioned, two dealt with the city's environment and landscape in a unique and (when combined) fairly comprehensive manner. These schemes were Pietila's Sief Palace extension and waterfront area and Smithson's government offices. Both schemes as submitted were bold and ambitious; they also reflected the enthusiasm of the architects as they realised the potential and opportunities presented by the uniqueness of their respective assignments. However, neither of these two proposals received the consideration or hearing they deserved, although Pietila went on to design the Council of Ministers/Foreign Ministry next to the Sief Palace.

The Smithsons Scheme - The Smithsons were particularly interested in dealing with the local influences in design. In attempting to find a suitable form and environment for their government buildings, they took a more comprehensive approach and went beyond their brief. The resulting plan while concentrating on the ministries covered almost the entire old town/city centre.
The Smithsons scheme provided remarkable elements which combined both their special concern for climate and their desire to revive traditional urban settings. The result of employing a mixture of these elements seems to have produced an effective and imaginative proposal. As described by Gardiner, "the plan view of the ground plane showed a textured mosaic of structures, spaces, lanes, courtyards, walls, sheltered walkways and market places which, punctuated at key points by innumerable mosques, displayed a vivid recreation of life before the car, as centred on the old Souk."16

The Ministries, which were central to the plan, were also closely associated with adjoining city centre areas, and were conceived in spreading form. With minarets as focal points in the city, the street network was oriented toward the ministries. The buildings (Ministries) were continuous with the city centre's cultural area which, in turn, was continuous with the University district. The buildings themselves are relatively low, with three to four storeys; they have a basic servicing and structural grid, and are cantilevered outward on the street frontages to create shaded pathways. The main horizontal circulation in the buildings is provided by the galleries, and the vertical circulation by the stair and service towers.

The Smithsons approach was creative, even as one may be critical of it in certain respects. One observer who described it as being "too dogmatic and too assertive" has also added that "it is nevertheless a system which is well suited to the climate and which

16 Gardiner, op. cit., p.70. See also Martin, op. cit., and Cantacuzino, op. cit.
provides easy pedestrian movements across sheltered spaces."\textsuperscript{17} What it represented, with its shade-creating pattern capable of extension, and overall layout which was linked to the focal visual points of the city, was almost the exact opposite of the image created by the scattered and isolated blocks then still appearing throughout the city.

The Smithsons scheme would have made a difference in the city's spatial arrangement had its detailed elements been incorporated within a more general plan; the government buildings were only an example or a model. The scheme was not, however, sufficient in itself to be the integrating plan for the city centre's urban development. What was needed, in addition and in conjunction with the Smithsons ideas was an overall frame for the city which was less concerned with detail and more with a general city form and presence. This framework, it seems, could have been the essence of the Pietila scheme.

\textbf{The Pietila Scheme} - The proposal submitted by Pietila was, in fact, less concerned with detail, even if it contained certain details concerning a possible waterfront development, and more with orientation, form and landscape. The city form, as conceived by the scheme, had the kind of boldness and vision which may have made it too radical for it to be accepted, and this was a source of disappointment for those who would have wanted an acceptable alternative to a preserved old town.

Pietila had a strong interest in the physical environment through emphasis on landscape and atmosphere and how buildings

\textsuperscript{17} Cantacuzino, \textit{op. cit.}, p.89.
belong to site and region, and in local and cultural attributes as they influence emerging forms and patterns. The question of orientation in the proposed scheme was also of vital importance. The city centre overlooked the sea in a northerly direction, adding one more reason for avoiding high rise buildings on the waterfront, as these would minimise the welcome effects of the northerly winds during summer.

The resulting concept was that of two moderately high banks of buildings with a valley of lower structures, including the souk area, progressing toward the sea, and the strong architectural node represented by the Sief Palace and its clock tower. The strong orientation of the city centre toward the sea and its historical connection with it were also factors which influenced Pietila's studies of such elements such as residential street architecture, hotels, shops, a park and other water-related recreational facilities.

The concept also required the alteration of the road system of the Minoprio Development Plan, using landscape and new building forms and siting factors to determine circulation and movement. Loops and new street patterns were created along with the restoration of old patterns, while eliminating the road (Arabian Gulf Street) which separated town from the sea and the waterfront park. This approach would have resulted in the added advantage of reducing and controlling the traffic into the city centre and its smoother overall flow.

While neither scheme was adopted as such, the influence of the new experiment itself (the four architectural assignments) did have a positive impact on the emerging city of the 1970's and 1980's.
Some of the architects involved in these studies and others equally qualified have contributed to a substantially improved built environment, even if mainly and directly in a relatively small portion of Kuwait City. However, one would wonder as to what might a plan based on a carefully considered mixture of the Smithson and Pietila proposals have created, and what kind of Kuwait Town could have been reborn.

Kuwait Town, in conclusion, was unlike most cities of the Arab world in that it had very few architecturally significant buildings as a part of its traditional heritage. Such buildings can normally be expected to act as focal points for new directions in planning. The absence of such landmarks which can also be seen (the landmarks) as constraints on new additions to the townscape, poses certain challenges for the planner, and the resulting freedom can often - as Kuwait's experience in the 1950's and 1960's in particular has shown - bring about unwelcome and disparate influences on the emerging built environment. The fact that spatial, architectural and historic landmarks were quite limited as foci and examples, combined with a lack of concern about some basic questions such as how to adapt to the physical environment, and how to avoid monotony and imitation, made it difficult for an appropriate Kuwait-inspired urban idiom to emerge.

The difficulties encountered in this respect can also be attributed to the unusual situation of planning and building a city, to be superimposed on a traditional old town with a simple but unique urban matrix and which had to be substantially destroyed. But it is also true that had this old town been spared, with only
certain parts selectively eliminated, it would have been equally
difficult to transform it into the modern metropolis which has
emerged. While the choice has been essentially between preserving
the old town and destroying it to be rebuilt as the hub of a modern
city, it was the latter course that has been pursued. One can now
however be cautiously optimistic since developments on the urban
scene in recent years seem to reflect a realisation of the need to
retain and preserve what can be salvaged of the old town, and to
create modern buildings and urban spaces which are in harmony with
environment and traditions.
Ministry of Information Complex
Plate 8

Council of Ministers
CHAPTER XI

FUTURE OUTLOOK AND CONCLUSION

The process of urbanisation in modern Kuwait and the planning that guided that process began less than four decades ago and has progressed through a number of phases. These phases have ranged from the limited location-oriented and Garden City-influenced approach of the country's first plan, to the more comprehensive and regional concepts of urban satellite and urban conurbation and, eventually, to the reviews/plans which combine continued Metropolitan Area growth with a new towns strategy.

Each plan seems to have been the outcome of certain influences and policy preferences and considerations prevailing at the time of its preparation. The unprecedented affluence of the State and individual citizens which accompanied the arrival of the oil-export era resulted in the need for a succession of plans.

First, there was an urgent need for a plan to transform and expand Kuwait Town into an entirely new City. Consequently, that first plan, which had only a limited demographic and economic data base for forecasting and implementation and was constrained by time, had to incorporate certain ready-made solutions inspired by Western planning concepts. However, this plan has laid the foundation of planning in Kuwait and has substantially influenced its future course.

Continued economic and demographic changes have inevitably created pressure for urban expansion, and existing plans often lagged behind these forces for development. The latest plan (MPR2) at present being implemented is a timely effort to deal with the
aftermath of a particularly buoyant decade during which a realistic approach to the country's future urban development has become necessary.

In looking at the future of urbanisation and planning for urban Kuwait, two areas of concern seem to stand out. The first has to do with physical aspects of the built environment, where plans currently being implemented are expected to provide guidance. The second area of concern, with obvious implications for the first are the social and public policy considerations which may have to be dealt with in a more direct manner than in the past.

The Built Environment

Current Planning

Analysis and assessments have already been made of the various aspects and contents of the current plan (MPR2). The points mentioned in the present context only address some of the basic concerns regarding the plan itself, together with certain elements of physical planning which must be emphasised even if they may not be the subject of current planning initiatives.

1. The new town approach is clearly an ambitious undertaking, even with the lower growth goals and forecasts adopted by the latest review/plan. Uncertainty is an important factor in any such large-scale strategy, where logistics and coordination may prove to be a major challenge.

2. The problems of plan implementation and of generating growth in the new towns while restricting it in the Metropolitan Area cannot be underestimated. Failure in this respect would strongly jeopardise the strategy, as earlier experience with
district centres development has demonstrated in a comparable context, particularly if Metropolitan Area growth is to continue unchecked for a few years during which time little or no progress is made in Subiya.

3. Serious thought needs to be given to the question of Metropolitan Area capacity — in terms mostly of housing and infrastructure — and the time by which such capacity would be reached. With the commitment to Subiya, questions associated with Metropolitan Area growth are critical. This growth cannot reasonably be expected to cease just because a projected population capacity has been reached. The Metropolitan Area has always been under pressure to grow, and the relationship between this growth and the degree of success in implementing new town development will determine the future urban strategy. Also, as the Metropolitan Area approaches capacity the future demand will be mainly for renewal.

4. Subiya's ability to attract employment and residents in order to reach a viable size remains to be seen, even if the government sector is projected to be the main employer. The attraction of the Metropolitan Area is likely to remain high. Comparison can be made with other Arab countries such as Egypt and Saudi Arabia where new towns (10th of Ramadhan City, Sadat City and New Ameria City in the former, and the two industrial towns of Jubail and Yanbu in the latter) have faced difficulties attracting residents despite the incentives. ¹

5. If the availability of financial resources needed to carry out the new town strategy is assumed to be reasonably assured, the

same cannot be said of the required manpower resources - managerial, professional and other skills. The organisation proposed by the plan for the task of new town implementation includes many highly specialised positions which could prove difficult to fill.

6. The need in the not-so-distant future will be to look into the possibilities for developing the empty interior, in the context of a new urban strategy, as the coastal areas become increasingly congested. The experience to be gained from current new town implementation measures will be valuable. The current provisions for open space and forestry belts which are related to the urban area's western edge could be further extended into the interior in anticipation of such an option. The question of water provision for this and other purposes can only be viewed as part of an overall water policy in Kuwait, for which the appropriate solution may ultimately be a Shatt al-Arab scheme. For both economic and environmental reasons, periodic additions to the country's desalination capacity cannot continue indefinitely.

7. Two important questions need to be addressed constantly within the context of housing policy and of implementation. The first of these is related to prevailing (and possibly changing) immigration policies and the future location of Kuwaiti and non-Kuwaiti housing. This question will have a direct bearing on the contents of the various phases of the plan - including the grouping of neighbourhoods and the relationship between housing and employment areas. The second issue here is the feasibility of sustaining a continued allocation of financial and material resources needed for the ambitious housing
programme. Such a programme would be necessary not only for accommodating future increases of population but also replacing obsolete houses and alleviating overcrowding.

8. Other housing-related areas of concern have also to be kept in view, as the implementation of the plan progresses. These include density standards and corresponding adequate community amenities; the provision of different types of residential developments in balanced and creative spatial relationships (even as planners must recognise the difficulty of introducing sudden changes in the Kuwaiti population's prevailing preference for the single house/villa); and giving sufficient attention to the aesthetics of the urban environment being created, by encouraging simple, organic and appropriate designs through means such as architectural control, zoning regulations and certain incentives.

Townscapes, Conservation and Renewal

Since the early 1970's, Kuwait City has witnessed a changing townscape, with new buildings in previously undeveloped areas and as a result of renewal. By the 1980's, parts of the city have been built or rebuilt three times since the new era of planned development began. In the city centre, two main areas have contributed to giving the city its emerging new image.

The first is in Qibla, along the Arabian Gulf Street and focusing on the Sief Palace, where there is a concentration of government buildings. The second major area is a stretch of Mubarak al-Kabeer Street, leading to the State Mosque, with its predominantly finance-related institutions such as the Stock Exchange, Finance Centre and various banks.
Two other areas, further from the waterfront along much of Fahd al-Salim Street (a major shopping avenue) and the middle section of Hilali Street contain a number of buildings of high architectural quality and finish. These include the Salihya Complex and the adjoining Meridian Hotel, the Kuwait Airways building, the Kuwait Fund (KFAED) and others.

However, the positive effect of these additions to the townscape is often undermined by two factors. First there is the quality of the incidental land and spaces between buildings and the need for upgrading it. Secondly, there remains a relatively large number of dilapidated buildings scattered in various parts of the city. Further, the overall effect of the changing urban environment could be considerably improved if earlier proposals for landscaping and tree planting along various streets and for maximising pedestrian areas in the city centre are implemented.

There will also be a need for studies aimed at improving the urban environment generally and enhancing the imageability of various parts of it. MPR2 has already identified four Special Environmental Areas within the city centre for environmental design studies which would capitalise on certain qualities of the urban setting.

A similar approach can be adopted to improve the imageability of other urban centres, and ultimately, the urban image as a whole. Guidelines and criteria regulating building design, circulation, and landscaping are important. A fresh look at zoning and subdivision regulations for possible changes may also be required. In Saudi Arabia, where similar concepts were introduced with Western-originated plans, modifications have been made in recent
years which are better suited to local traditions and climate.\textsuperscript{2}

Conservation measures were proposed in Kuwait as early as the Buchanan Master Plan. However, progress has been slow, although increasingly private citizens have been showing interest and taking action to improve matters. Some individuals were aware of the need for conservation and preservation soon after it became clear that much of the old town could not be saved.

At present, an area comprising a sizable part of the city centre could be considered a conservation district by virtue of the number of buildings and sites of local architectural and historical interest it contains and to preserve continuity and local identity. These include: the American Mission (Hospital), the Bahbahani Compound, Naif Palace (now police station), Shaikh Khazal's 1890 Palace 'diwaniya', the old British Agency (the Dicksons residence), the souk, and a number of mosques, palaces and schools.

Some of Kuwait's old merchant homes along the waterfront have been restored - these include the Bayt al-Badr, Bayt al-Sadu (used as a badu weaving centre) and the al-Ghanim family house occupied by the Kuwait Society of Formative Arts. The gates of the old town's walls have also been preserved, as has the Red Fort near Jahra. With the completion of Kuwait's National Museum, it may become possible to preserve parts of traditional buildings which cannot be kept.

Considerable building renewal and area re-development is likely to become necessary throughout the city during the current plan

period, due to the dilapidated look of many of the buildings of the 1950's and 1960's. Various areas can have their improvement plans (in conjunction with the Special Environmental Area identified by MPR2), with follow-up maintenance programmes to maintain certain standards, reducing the present disparity, and enhancing the impact of the city's more recent higher quality architecture.

Demography and Manpower

It has become increasingly evident in recent years that the issue of demographic change and labour-related matters is one of critical importance for Kuwait and the other Gulf states. For planners - whether policy and economic or physical - the overall population growth and the relative proportions of nationals and non-nationals, are questions which must be dealt with before rational and realistic development plans can be prepared. As the number of foreign nationals in these states grow (increasingly from Asia and the Far East) and amid the uncertainties surrounding the international oil market and regional issues with an impact on labour, concern about such matters is bound to intensify.

Several side-issues and elements - social, economic and political - are present and often interact within the basic question; books and articles clarifying the issues involved and discussing possible courses of action now regularly appear. 3 While

an in-depth examination of these elements is beyond the scope of this study, a brief discussion is offered in order to better appreciate their implications for planning.

Contrary to the commonly held opinion, migration to what are now the Gulf states and within the region is not a recent phenomenon accompanying the discovery of oil. For more than two centuries, immigrants into the coastal settlements of the Gulf from parts of Arabia and from Persia and East Africa and to some extent, the Indian sub-continent, have co-existed and mixed to shape the communities of the present era.4

Kuwait has almost always been a recipient of immigrants, and until the second half of the present century, the natural increase in population was negligible, with demographic growth largely attributed to migration.5 In addition, the pearling season in Kuwait - as Lorimer has documented - attracted thousands of mainly temporary migrants from various parts of the region. The attractiveness of Kuwait during the modern era, despite its magnitude, has been more the result of the economic and political 'push' factors in the labour-exporting countries, which has been the case for a sizable proportion of those moving from several Arab countries. The 'pull' attraction has also been present, but to a lesser extent, even when the financial rewards for many are acknowledged. Those with highly specialised skills and/or belonging to countries with favourable political and economic circumstances


5 Ffrench and Hill, op.cit., p.16.
tend, as a general rule, to stay in Kuwait for limited periods—often only to fulfil a short-term contract.

In Kuwait, policy planners were faced with the question of demographic growth and immigration as early as the late 1960's. The uncertainty about population growth presented those involved in preparing the country's first comprehensive master plan (CBP) with a major obstacle. The implication of the plan's objectives and its adoption, however, meant a recognition of the fact that development, economic expansion and modernisation would inevitably bring a flow of foreign labour whose skills were needed to build and run the emerging state's infrastructure and, particularly in the early years, much of its institutions. In other words, the influx of foreign nationals was a pre-requisite for development.

As development and economic expansion progressed, the proportion of Kuwaitis to non-Kuwaitis in the labour force continued to be substantially higher for the latter. Non-Kuwaitis constituted 77 per cent of the total labour force in 1965, declining to 73 in 1970 and to 70 in 1975, but rising again to 78 and 81 in 1980 and 1985, respectively. Kuwait's latest census of 1985 revealed that foreign nationals comprised about 60 per cent of the total population.

While concern about demographic changes and labour-related matters are legitimate and understandable for Kuwait, and for other Gulf states, the need for an expatriate work force now and in the foreseeable future is recognised by those who have studied these
questions at length. What becomes of critical importance, however, is the extent of this need; the composition of the foreign labour-force between Arab and non-Arab; how it can be reduced to acceptable levels; and how to raise the level of indigenous labour participation. The few points and questions given below are meant to clarify the issues involved, and to indicate some of these ideas. Regardless of what policies are adopted and actions taken, the outcome can be expected to have an impact on physical planning.

Concern about problems of immigration, labour, and social services such as education and housing have been expressed by Kuwaiti observers and others, while questions regarding official policies (or lack of them) have been made. One social scientist was referring in the late 1970's to "the so-called 'expatriate problem' of the Arabs residing in Kuwait," and was seeking answers to queries such as the extent of their rights to education, housing and residence, and whether decisions had been made for "making them feel 'settled', accepted and at peace with their adopted new environment, thus enhancing their productivity and efficiency." He went on to ask whether the Nationality Law has been implemented in favour of those who qualified to become Kuwaiti nationals, and whether the principle of absorbing certain specialised skills had been carried out.

In a study of manpower in Kuwait, another Kuwaiti social scientist had specific suggestions. According to this writer, the

---


Government could, in effect, alleviate its manpower shortage by adopting a policy of naturalisation for skilled and professional Arabs who had lived in Kuwait long enough to have met the legal requirements. The study considers such a policy to be clearly preferable to the granting of citizenship to "such a large number of illiterate and unskilled Arab nomads ..." - a reference to the badu coming to Kuwait from various parts of the Arabian desert.\(^8\)

The same study also warns of the dangers of social and political unrest as a result of the "non-integration of a large segment of society" and its lack of access to social benefits. Further, the author of the study proposes to attract educated Arabs who have migrated to the West, as future Kuwait citizens. He also advocates a more flexible policy towards those who have lived in Kuwait for certain periods of time, by granting permanent residence to qualified manpower as a step towards naturalisation, and to those born and raised in Kuwait and who can be educated and provided with skills needed by the country.\(^9\)

Related to such views are two areas of concern which need to be examined and acted upon and which continue to be of considerable importance for much of the expatriate labour force. Their importance for both Kuwaitis and expatriate residents will continue.

---

\(^8\) Shamlan Y. Alessa, *op. cit.*, p. 108. See Ch. 5.

\(^9\) One may note here that the granting of citizenship to a relatively large number of educated professionals from a few Arab 'labour-exporting' countries has political, economic and social implications also for the latter which are both negative and positive. For a summary of these see Khalid Al-Fishawi, "Dimensions of Migration for Work in the Oil Countries and its effect on Development in the Arab world," *Arab Studies*, Summer, 1984 (in Arabic), pp. 168-178, in review of Nadir Firgani's *Migration to Oil*, (Beirut:1983, in Arabic). See also Mahmoud A. Al-Fadeel, *Oil and Arab Unity*, (Beirut:1981, in Arabic).
even if a portion of the latter become officially integrated and able to gain most of the social benefits which are enjoyed by the Kuwaitis. These two areas are access to public education and decent housing.

During the last two decades, admission to public schools in Kuwait has been limited at all levels. The reasons cited for this policy are lack of space due to the rapid growth in population. This has resulted in the opening of many private Arab schools (in addition to the few non-Arab schools established by the various foreign communities) to meet the escalating demand by the Arab community. These private schools have in recent years become over-crowded and many are ill-equipped, under-staffed and housed in dilapidated buildings. Their pupils are mostly from middle to low income group families who often cannot afford the fees. High income group parents may send their children to some foreign - non-Arab - schools in Kuwait (mainly English or American) while those who are senior government employees enjoy a preferential public school admission policy for their children.

Housing remains today - and for the foreseeable future - a priority in social and physical planning implementation. Following the establishment of the National Housing Authority in 1974, and the continuing expansion of its housing development programmes to meet the accumulated backlog (30,000 by 1985), coupled with demand by Kuwaiti families, the problem for Kuwaitis, who also have the option to receive interest-free loans to build houses on provided plots, is less acute than it has been for the vast majority of the expatriate labour force. Other than the elite provided with government or other employers housing, these expatriates have to rent from the private sector.
While the problem is no longer that of shortages, there are many dilapidated buildings throughout Kuwait City and the Metropolitan Areas, with over-crowding and poor services. Many of these apartment buildings were built in the 1950's and 1960's and were of inferior quality to begin with. Maintenance by owners is almost non-existent and rent has climbed steadily since the mid-1970's (it is permissible to double the rent every five years, although this is not a universal rule).

The present situation is that of a surplus of costly apartments and a severe shortage of low-rent buildings. In 1985, it was reported that 12,000 apartments were vacant, with more at present, and there were calls for the government to rent most of these in order to help the real estate market and to accommodate some of those on the housing waiting lists.

Yet the fact remains that action has to be taken in regard to the many dilapidated buildings and areas and that renewal programmes cannot be avoided in the short term. The existence of thousands of empty apartments can perhaps facilitate such programmes by providing temporary or even permanent housing for some of those who will have to evacuate the buildings in areas to be redeveloped but who cannot afford to move into the empty new buildings. While the current plan expects renewal to take place in various areas of Kuwait during the plan period, detailed studies and surveys may soon be needed to determine more precisely the relative urgency of such renewal programmes, and the way in which the many vacant apartments can be utilised.

The emphasis which many in Kuwait - affected expatriates, policy makers and planners - place on these two aspects of daily life, namely access to education and housing, is understandable.
Other services and amenities which are needed by citizens and residents - health, social and recreational facilities, as well as water and electricity - are also important in the context of planning for expanding urban communities.

The pace at which such amenities and services can be provided for and the extent to which they can be made available, together with the criteria and factors which influence this availability are all matters which policy makers and planners must confront. The development process has both its rewards and costs; to assume that the infrastructure needed to facilitate this process can be built and maintained without creating the conditions for providing the entire population with their basic needs is an untenable view.

Furthermore, if the physical plans are to provide only in part for the needs of a large sector of the growing urban habitat, then it may be well that the most important issues to be examined at present are to look into the 'trade-offs' and 'cost-benefit' considerations and other development-related matters. To the extent that these can be quantified, policy makers can then determine an 'optimum' expatriate population and mix (Arab and non-Arabs, primarily from various parts of Asia, since the needs of the two groups are not identical and the presence of each group means different sets of advantages and disadvantages for the Gulf labour-importing states). This approach would most likely result in a much stronger and more realistic relationship between physical planning on the one hand, and national development planning as embodied in the successive five year plans, on the other.

A case in point in the present context would be industry and industrial policy. Two courses of action towards this issue could always be identified in the past. The first course of action is to
pursue a policy of active and rational encouragement of all economically feasible industrial (and commercial) growth opportunities, achieving, among other objectives, the diversion of a greater proportion of savings and investment in Kuwait and a reduction in the country's reliance on imports. To follow this course, however, would mean facing up to the consequences of the level of immigration that this option would require.

The other policy option on industrialisation is to reappraise the industrial diversification and similar goals of the five year development plans and, if necessary, substantially modify or abandon such goals. Under such circumstances, the alternative policy would be far more discriminating in its choice of industrial development, discouraging labour-intensive industries and keeping immigration and population growth to a low level. In reality, however, neither policy can be pursued without encountering difficulties. Yet a middle and unclear course of action on this issue, such as that which has prevailed over a period of about twenty-five years, can be more detrimental to overall development than the two basic approaches.

In conclusion, Kuwait's urbanisation and the plans which guided the process since 1950 have been subjected to certain circumstances and influences. Speed of development, economic expansion, lack of local manpower and expertise, and the necessity to depend on foreign planners and designers are among the main factors which have been present. On balance, the planned environment which has emerged is neither poorly conceived and realised, nor is it the ideal which many in Kuwait now would have preferred to see. The problems which
have faced the planning and development of urban Kuwait did not arise from a lack of plans, imperfect as they were. These plans had to contend with uncertainty as to the various basic determinants of urban development and in regard to the public policy affecting these determinants. There were also official conceptual preferences, and problems of implementation delays which, combined with periodic dynamic changes, led to the undermining, at times, of planning strategies and produced a negative impact on the built environment.

To make a retrospective judgement on such matters is easy; but it will have little relevance at the present time. What can be hoped for, however, is that as the country's urbanisation and other aspects of its modernisation and development continue, certain lessons will have been learned from earlier efforts, and that a continuing planning process will integrate this small but unique land and create a well-planned and humane environment.
APPENDIX

CLIMATOLOGICAL DATA
### Table 1

**Climatological Data Summary 1955-1964**

#### Temperature in Centigrade

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Rainfall (mm)

<table>
<thead>
<tr>
<th>Year</th>
<th>Rainfall</th>
</tr>
</thead>
<tbody>
<tr>
<td>1964</td>
<td>12.2</td>
</tr>
<tr>
<td>1963</td>
<td>19.6</td>
</tr>
<tr>
<td>1962</td>
<td>7.2</td>
</tr>
<tr>
<td>1961</td>
<td>7.2</td>
</tr>
<tr>
<td>1960</td>
<td>0.0</td>
</tr>
<tr>
<td>1959</td>
<td>9.8</td>
</tr>
<tr>
<td>1958</td>
<td>10.0</td>
</tr>
<tr>
<td>1957</td>
<td>11.9</td>
</tr>
<tr>
<td>1956</td>
<td>0.0</td>
</tr>
</tbody>
</table>

#### Average Maximum Temperature (°C)

<table>
<thead>
<tr>
<th>Month</th>
<th>Average Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan</td>
<td>13.1</td>
</tr>
<tr>
<td>Feb</td>
<td>14.9</td>
</tr>
<tr>
<td>Mar</td>
<td>16.0</td>
</tr>
<tr>
<td>Apr</td>
<td>17.2</td>
</tr>
<tr>
<td>May</td>
<td>18.3</td>
</tr>
<tr>
<td>June</td>
<td>18.4</td>
</tr>
<tr>
<td>July</td>
<td>19.4</td>
</tr>
<tr>
<td>Aug</td>
<td>19.4</td>
</tr>
<tr>
<td>Sept</td>
<td>18.4</td>
</tr>
<tr>
<td>Oct</td>
<td>17.2</td>
</tr>
<tr>
<td>Nov</td>
<td>16.0</td>
</tr>
<tr>
<td>Dec</td>
<td>13.1</td>
</tr>
</tbody>
</table>

#### Mean Sea Temperature (°C)

<table>
<thead>
<tr>
<th>Month</th>
<th>Mean Sea Temp.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan</td>
<td>11.7</td>
</tr>
<tr>
<td>Feb</td>
<td>12.0</td>
</tr>
<tr>
<td>Mar</td>
<td>12.2</td>
</tr>
<tr>
<td>Apr</td>
<td>12.4</td>
</tr>
<tr>
<td>May</td>
<td>12.6</td>
</tr>
<tr>
<td>June</td>
<td>12.8</td>
</tr>
<tr>
<td>July</td>
<td>13.0</td>
</tr>
<tr>
<td>Aug</td>
<td>13.2</td>
</tr>
<tr>
<td>Sept</td>
<td>13.4</td>
</tr>
<tr>
<td>Oct</td>
<td>12.6</td>
</tr>
<tr>
<td>Nov</td>
<td>12.0</td>
</tr>
<tr>
<td>Dec</td>
<td>11.7</td>
</tr>
</tbody>
</table>

#### Average Hours of Sunshine/Day

<table>
<thead>
<tr>
<th>Month</th>
<th>Average Sunlight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan</td>
<td>6.5</td>
</tr>
<tr>
<td>Feb</td>
<td>7.4</td>
</tr>
<tr>
<td>Mar</td>
<td>8.3</td>
</tr>
<tr>
<td>Apr</td>
<td>8.6</td>
</tr>
<tr>
<td>May</td>
<td>7.7</td>
</tr>
<tr>
<td>June</td>
<td>7.4</td>
</tr>
<tr>
<td>July</td>
<td>7.1</td>
</tr>
<tr>
<td>Aug</td>
<td>6.9</td>
</tr>
<tr>
<td>Sept</td>
<td>5.4</td>
</tr>
<tr>
<td>Oct</td>
<td>4.9</td>
</tr>
<tr>
<td>Nov</td>
<td>3.7</td>
</tr>
<tr>
<td>Dec</td>
<td>2.3</td>
</tr>
</tbody>
</table>

#### Relative Humidity (%) : A.

<table>
<thead>
<tr>
<th>Month</th>
<th>Relative Humidity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan</td>
<td>32.6</td>
</tr>
<tr>
<td>Feb</td>
<td>36.5</td>
</tr>
<tr>
<td>Mar</td>
<td>40.0</td>
</tr>
<tr>
<td>Apr</td>
<td>43.6</td>
</tr>
<tr>
<td>May</td>
<td>47.4</td>
</tr>
<tr>
<td>June</td>
<td>50.6</td>
</tr>
<tr>
<td>July</td>
<td>53.8</td>
</tr>
<tr>
<td>Aug</td>
<td>55.0</td>
</tr>
<tr>
<td>Sept</td>
<td>55.0</td>
</tr>
<tr>
<td>Oct</td>
<td>53.8</td>
</tr>
<tr>
<td>Nov</td>
<td>50.6</td>
</tr>
<tr>
<td>Dec</td>
<td>43.6</td>
</tr>
</tbody>
</table>

#### Absolute Minimum Temperature

<table>
<thead>
<tr>
<th>Month</th>
<th>Absolute Min.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan</td>
<td>-25.3</td>
</tr>
<tr>
<td>Feb</td>
<td>-22.2</td>
</tr>
<tr>
<td>Mar</td>
<td>-19.7</td>
</tr>
<tr>
<td>Apr</td>
<td>-16.1</td>
</tr>
<tr>
<td>May</td>
<td>-12.0</td>
</tr>
<tr>
<td>June</td>
<td>-7.9</td>
</tr>
<tr>
<td>July</td>
<td>-4.0</td>
</tr>
<tr>
<td>Aug</td>
<td>-2.0</td>
</tr>
<tr>
<td>Sept</td>
<td>-1.0</td>
</tr>
<tr>
<td>Oct</td>
<td>-2.0</td>
</tr>
<tr>
<td>Nov</td>
<td>-7.9</td>
</tr>
<tr>
<td>Dec</td>
<td>-19.7</td>
</tr>
</tbody>
</table>

#### Absolute Maximum Temperature

<table>
<thead>
<tr>
<th>Month</th>
<th>Absolute Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan</td>
<td>19.1</td>
</tr>
<tr>
<td>Feb</td>
<td>25.0</td>
</tr>
<tr>
<td>Mar</td>
<td>31.5</td>
</tr>
<tr>
<td>Apr</td>
<td>36.0</td>
</tr>
<tr>
<td>May</td>
<td>35.1</td>
</tr>
<tr>
<td>June</td>
<td>34.4</td>
</tr>
<tr>
<td>July</td>
<td>33.9</td>
</tr>
<tr>
<td>Aug</td>
<td>32.6</td>
</tr>
<tr>
<td>Sept</td>
<td>31.4</td>
</tr>
<tr>
<td>Oct</td>
<td>30.5</td>
</tr>
<tr>
<td>Nov</td>
<td>27.2</td>
</tr>
<tr>
<td>Dec</td>
<td>19.1</td>
</tr>
</tbody>
</table>

#### Average Monthly Precipitation

<table>
<thead>
<tr>
<th>Month</th>
<th>Precipitation (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan</td>
<td>0.0</td>
</tr>
<tr>
<td>Feb</td>
<td>0.0</td>
</tr>
<tr>
<td>Mar</td>
<td>0.0</td>
</tr>
<tr>
<td>Apr</td>
<td>0.0</td>
</tr>
<tr>
<td>May</td>
<td>0.0</td>
</tr>
<tr>
<td>June</td>
<td>0.0</td>
</tr>
<tr>
<td>July</td>
<td>0.0</td>
</tr>
<tr>
<td>Aug</td>
<td>0.0</td>
</tr>
<tr>
<td>Sept</td>
<td>0.0</td>
</tr>
<tr>
<td>Oct</td>
<td>0.0</td>
</tr>
<tr>
<td>Nov</td>
<td>0.0</td>
</tr>
<tr>
<td>Dec</td>
<td>0.0</td>
</tr>
</tbody>
</table>

#### Evaporation

<table>
<thead>
<tr>
<th>Month</th>
<th>Evaporation (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan</td>
<td>0.0</td>
</tr>
<tr>
<td>Feb</td>
<td>0.0</td>
</tr>
<tr>
<td>Mar</td>
<td>0.0</td>
</tr>
<tr>
<td>Apr</td>
<td>0.0</td>
</tr>
<tr>
<td>May</td>
<td>0.0</td>
</tr>
<tr>
<td>June</td>
<td>0.0</td>
</tr>
<tr>
<td>July</td>
<td>0.0</td>
</tr>
<tr>
<td>Aug</td>
<td>0.0</td>
</tr>
<tr>
<td>Sept</td>
<td>0.0</td>
</tr>
<tr>
<td>Oct</td>
<td>0.0</td>
</tr>
<tr>
<td>Nov</td>
<td>0.0</td>
</tr>
<tr>
<td>Dec</td>
<td>0.0</td>
</tr>
</tbody>
</table>

#### At the Intake to Distillation Plant

<table>
<thead>
<tr>
<th>Year</th>
<th>At Intake</th>
</tr>
</thead>
<tbody>
<tr>
<td>1964</td>
<td>12.2</td>
</tr>
<tr>
<td>1963</td>
<td>19.6</td>
</tr>
<tr>
<td>1962</td>
<td>7.2</td>
</tr>
<tr>
<td>1961</td>
<td>7.2</td>
</tr>
<tr>
<td>1960</td>
<td>0.0</td>
</tr>
<tr>
<td>1959</td>
<td>9.8</td>
</tr>
<tr>
<td>1958</td>
<td>10.0</td>
</tr>
<tr>
<td>1957</td>
<td>11.9</td>
</tr>
<tr>
<td>1956</td>
<td>0.0</td>
</tr>
</tbody>
</table>

#### Between 0400 and 1600 Hrs.

<table>
<thead>
<tr>
<th>Year</th>
<th>Between 0400 and 1600 Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1964</td>
<td>12.2</td>
</tr>
<tr>
<td>1963</td>
<td>19.6</td>
</tr>
<tr>
<td>1962</td>
<td>7.2</td>
</tr>
<tr>
<td>1961</td>
<td>7.2</td>
</tr>
<tr>
<td>1960</td>
<td>0.0</td>
</tr>
<tr>
<td>1959</td>
<td>9.8</td>
</tr>
<tr>
<td>1958</td>
<td>10.0</td>
</tr>
<tr>
<td>1957</td>
<td>11.9</td>
</tr>
<tr>
<td>1956</td>
<td>0.0</td>
</tr>
</tbody>
</table>

#### Between 1400 and 1600 Hrs.

<table>
<thead>
<tr>
<th>Year</th>
<th>Between 1400 and 1600 Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1964</td>
<td>12.2</td>
</tr>
<tr>
<td>1963</td>
<td>19.6</td>
</tr>
<tr>
<td>1962</td>
<td>7.2</td>
</tr>
<tr>
<td>1961</td>
<td>7.2</td>
</tr>
<tr>
<td>1960</td>
<td>0.0</td>
</tr>
<tr>
<td>1959</td>
<td>9.8</td>
</tr>
<tr>
<td>1958</td>
<td>10.0</td>
</tr>
<tr>
<td>1957</td>
<td>11.9</td>
</tr>
<tr>
<td>1956</td>
<td>0.0</td>
</tr>
</tbody>
</table>

#### French and Hill

Figure A1. Monthly Percentage Frequency of Winds - Kuwait Int. Airport
I. Books


7. Al-Fadeel, M.A. *Oil and Arab Unity (in Arabic)*. Beirut, Centre for Arab Unity Studies, 1981.

8. Al-Feel, M. *Historical Geography of Kuwait (in Arabic)*. Kuwait University, 1972.


27. Firgani, N. Migration to Oil (in Arabic). Beirut, Centre for Arab Unity Studies, 1983.


II. Articles, Studies, and other Sources


84. ———— *Master Plan for Kuwait - First Review 1977, Vol 2: City Centre Structure Plan.*


ILLUSTRATION CREDITS/SOURCES
(Numbers in brackets are with reference to the Bibliography)

Figures

(1) : 1
(3) : 2
(24) : 6
(29) : 48
(42) : 5, 11-13
(56) : 8
(63) : 3, 4, 14, 18-29
(67) : 15-17
(68) : 30, 31, 34-47
(70) : 32, 33
(74) : 10

Plates

(29) : 3a-6a, 7a-8c
(50) : 6b
(63) : 2a,b
(75) : 1