

Kingdom of Bahrain
Ministry of Information, Directorate of Culture & National Heritage

QAL'AT AL-BAHRAIN ARCHAEOLOGICAL SITE



– II –

Site Management Plan

**submitted to
THE WORLD HERITAGE CENTRE, UNESCO**

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QAL'AT AL-BAHRAIN ARCHAEOLOGICAL SITE

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by
The Ministry of Information, Directorate of Culture & National Heritage
(Kingdom of Bahrain)

– Volume II –

Management Plan

Management Plan for the Site of Qal'at al-Bahrain

1 – Introduction	5
A - A Brief Introduction of Site & Context	5
B - Nature of a Management Plan	5
 2 – In Preparation of a Management Plan for the Site of Qal'at al-Bahrain (Management Plan Process Methodology)	 7
A - Identification, Observations, & Description	7
i. Identification of Key Players and Actors (Stakeholder Analysis)	9
ii. The Need for Continuous Documentation	10
B - Assessment & Analysis	10
i. Continuous Assessment of Significance	10
ii. Assessment of Potential Future Threats & Challenges	11
- Development Pressures	11
- Environmental Pressures	14
iii. Assessment of Previous Conservation Work (state of conservation & consolidation)	14
iv. Environmental Impact Assessment	15
v. Management Context Assessment (Constraints & Opportunities)	15
 3 – The Management Plan for the Site of Qal'at al-Bahrain	 15
A - Defining of Management Policies for the Site of Qal'at al-Bahrain	15
B - Management Plan Strategies & Mechanism	15
i. Ownership	15
ii. Legal Status	16
iii. Protective Measures and Means for Implementing Them	17
iv. Existing "Development" Plans Related to the Site (protective & mitigation measures)	17
- The "North City" & Negotiation and Coordination Mechanisms	17
- Establishment of a Buffer Zone (Controlled Urban Growth) as a Mitigation Measure	18
- Environmental Mitigation Measures	20
v. Sources and Levels of Finance	21
vi. Sources of Expertise & Training in Conservation & Management Techniques	21
vii. Visitor Facilities & Experience at the Site	22
- The Planned "Visitor Center" (Site Museum)	22
- Other Facilities & Programs (Tourism Promotion & Visitor Management)	22

<i>viii. Policies & Programs Related to the Presentation, Conservation, and Promotion of the Site</i>	23
- Continuous Conservation/ Consolidation Works & Future Excavations	23
- Interpretation & Presentation Mechanisms	24
. Interpretation/ Presentation Techniques & Promotional Material	25
. The Visitor Center & Its Role in Site Presentation and Interpretation.....	25
. Promotion of Traditional Crafts & Agricultural Industries	25
- The "Golden Jubilee Celebration" for the Discovery of the Dilmun Civilization	26
<i>ix. Staffing Levels (Professional, Technical, Maintenance)</i>	27
- Staffing Levels & Job Description	27
- Research & Assessment	28
- Coordination	28
<i>x. Future Monitoring</i>	29
- Key Indicators for Measuring State of Conservation	29
- Administrative Arrangement for Monitoring of the Site	29

4 – List of Maps 31

- a - Map Showing Bahrain with Main Locations (Size A4)
- b - Main Features of Site & Surroundings (Size A3)
- c - Aerial Photographs from the 1960s with Site Features (Size A4)
- d - Aerial Photographs from the 1970s with Site Features (Size A4)
- e - The Qala'at al-Bahrain *Tell*, and the Location of Different "City Wall Excavations (Size A4)
- f - Existing Zoning & Land-use (Size A3)
- g - Ownership Document of 1993 (with English Translation) (Size A3)
- h -Ownership Map of the Site Owned by the Ministry of Information (Size A3)
- i - Ownership Map Juxtaposed on "Site Features" Map (Size A3)
- j - Ownership Map Showing Future Land Acquisition Planned by the Ministry of Information (Size A4)
- k - Illustrating the Planned Visitor Center (Exterior and Interior Shots) (Size A3)
- l - Illustrating the Planned Visitor Center (Two-Dimensional Drawings) (Size A3)
- m - Geographical Relationship between the Site & the Planned "New North City" (Size A4)
- n - Letter of Assurance from the *Northern Area Municipality* Regarding Impact of the Planned North City on the Site (with English Translation) (Size A3)
- o - Proposed Management Plan Zoning with Buffer Zone (Size A3)
- p - Flow Chart: Details of Staffing Units Proposed for the Site of Qal'at al-Bahrain and the Visitor Center (Size A3)

- q - Flow Chart: Management Plan for the Site of Qal'at al-Bahrain (Size A3)
- r - New Island project offshore Qal'at al-Bahrain (Size A4)

5– List of Images and Photographs 50

- a - Group 1: Panoramic Views of the Overall Site
- b - Group 2: Approach to the Site
- c - Group 3: Main Site Features
- d - Group 4: Nearby Local Community (Strip of Housing)
- e - Group 5: Conservation/ Consolidation Work
- f - Group 6: Features from within the Buffer Zone
- g - Group 7: Features from Beyond (outside) the Buffer Zone
- h - Group 8: Traditional Arts & Crafts From Around the Site
- i - Group 9: Tourists Visiting the Site
- j - Curatorial Management of Archaeological Findings at the Material Conservation Lab of Bahrain National Museum.

6 – Bibliography (Documentation of Resources) 76

- a - Resources on Cultural Site Management and Management & Planning for Archaeological Sites
- b - Books & Articles on Bahrain and Qal'at al-Bahrain (*complements to the bibliography provided in the Nomination File*)
- c - Resources on World Heritage List Nomination Processes & World Heritage Sites
- d - Tourist Promotion Material

Management Plan for the Site of Qal'at al-Bahrain

1. Introduction

The Management Plan will offer a collective vision and provide a decision making tool that would guide future excavations, conservation and intervention on the site. It is value-driven and through a participatory and interdisciplinary process will balance conservation needs and tourism development demands. Being a collective vision to the management of cultural and natural sites, the management plan provides an anchor to accommodate how different stakeholders relate to the site and to its management.

A — A Brief Introduction of Site & Context

The site of Qal'at al-Bahrain is considered Bahrain's most ancient and largest site. The site demonstrates a rich diversity of mainly cultural and archaeological but also natural resources as well. Main features include the Ancient remains from the Early Dilmun (c. 2500 B. C.), Middle Dilmun (c. 1400), Late Dilmun (c. 800) cultures, Tylos (Classical) periods around the turn of the First Century, Islamic periods, and up to the Bahraini contemporary periods. In addition to the main Qal'at al-Bahrain and the ongoing excavation of the ancient Dilmun, Tylos and Middle Islamic levels at the foot of the Main Fortress ("Bahrain Fort"), the site also includes the Coastal Fortress as well as disconnected remains of the ancient Dilmun City Wall. The local village and community adjacent to the site, Palm Tree groves (*Bustans*), nearby communities living in the traditional villages of *Karbabad* and *Karranah*, and the distinctive shore line that extends for miles with continuous traditional fishing activities, movement of migrant birds and other significant flora and fauna, can be also closely associated with Qal'at al-Bahrain site.

B — Nature of a Management Plan

An effective Management Plan should be capable not only of guiding policy makers and planners involved with the site but should also engage with the fullest variety of stakeholders in order to secure a long term and sustainable future for the site of Qal'at al-Bahrain. While internationally recognized for its significance, the site also needs to be treasured at the local level as emblematic of civic pride. This locates

the site between both global (external) and local (internal) stakeholders. The former would include tourists, visiting researchers and students, while the latter would include the neighboring local communities and relevant landowners in addition to local authorities and agencies responsible for its management. Thus in drawing up the Management Plan for the site the following 3 broad principles should be adhered to:

- (1) The Plan allows each stakeholder group to **engage** constructively with the site while recognizing the overall need to protect, enhance and inform. The Plan will require the backing of all stakeholders.
- (2) The Plan takes an **integrative approach** to the management of the site recognizing that its value lies in the relationships between the built environment, the natural environment, and local cultural practices.
- (3) The site represents over 5,000 years of change and is still evolving. The Plan should seek to **sensitively manage the change process** not drive it.

It is obvious that the site exhibits an important interchange of human values and demonstrates outstanding universal values over a span of ca. 4500 years within a certain cultural area of the World (The Arabian Gulf). It bears a unique and exceptional testimony to a cultural tradition (Dilmun culture and beyond). The site also represents an outstanding example (which could be under the impact of irreversible change due to urban growth and development) of a traditional land and sea uses and interaction with the environment (e.g., Palm Tree Groves and the various crafts and local industries associated with the most valuable Palm tree (extracting water for drinking "*Lugah al Maa'a*", food, cloth, and shelter), and their links to the surrounding sea environment and traditional fishing (the Hadra). The site's importance and universal value makes it significant not only for Bahrainis and for Bahrain but for the whole region as well (Cf. main Nomination File).

* *
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2. In Preparation of a Management Plan for the Site of Qal'at al-Bahrain (*Management Plan Process Methodology*)

A — Identification, Observations, & Description

The following are observations and notes about the site in general:

— *Significance of the site (recall, cf. §2a and 2b of the Nomination File):*

The site of Qal'at al-Bahrain is the most important archaeological site of the Bahrain archipelago, and very probably its ancient capital during the Antiquity. It is generally considered by researchers and archaeologists as one of (if not) the most ancient and the largest of all archaeological tells, not only in Bahrain, but in all over the Gulf region. Such a unique site provides a unique opportunity to "read" the ancient and historic past in the Gulf region.

The site is important for being a symbol for the nation of Bahrain and is definitely linked to the construction of national identity. It testifies to the essential role played by Bahrain as a center for trade (export & import) and cultural exchange between Mesopotamia and the Indus Valley since ancient times (Early Dilmun cultures since ca. 2350 BC) until the present (e.g., Bahrain attempting to become a regional financial and trade center). In addition, the interaction between the cultural components of the site (various levels of ancient archaeological occupation and City Wall, succeeding fortresses, natural access channel and moorage area found offshore, etc.), and its natural components (surrounding Palm-groves, traditional modes of cultivation and irrigation systems, rich ecosystem and biodiversity) clearly add to its unique universal value. Qal'at al-Bahrain.

— *The Spirit of the Place (nature of the site):*

The site seems to be still isolated, somehow, from dense urban growth and away from fast highways and shopping malls (even though they are seen in a distance) but the future urban growth might jeopardize this reality. The site is now approached from the East and South through narrow unpaved winding roads. This reality, and to a certain extent, should be preserved and urban growth around the site should be controlled and graduated in order not to end up with two extremes next to each other. The Management Plan and the coordination between the different Bahraini governmental agencies will work to insure this.

— *Nature of the Management Plan:*

It is very important to integrate such values and such holistic understanding of the site's significance into conservation planning and management. In addition, the Management Plan should serve as a decision making tool to guide future excavations, conservations, interpretations, and other interventions. The Management Plan would balance conservation needs and tourism and development demands. It should be a value-driven, interdisciplinary, and participatory process.

— *A Place of Continuous Evolution:*

The site of Qal'at al-Bahrain represents a distinctive place of continuous evolution, as soon as a reduced portion of its superfcy has been excavated up to now. It is thus obvious that archaeological excavations at the site will continue for a

number of years, if not decades; in addition, conservation/consolidation/interpretation works will have to continue as well. Therefore, the site Management Plan should take into consideration this important concept of continuous evolution

— *Visitation to the site:*

Based on collected tourism statistics, it is noticed from a brief glance that the number of visitors to ancient archeological sites (including Qal'at al-Bahrain), or even to heritage sites is by far much less than the number of tourists visiting the Bahrain National Museum or other attraction sites such as shopping malls, resorts, etc.. It is either that these sites lack considerable tourist infrastructure (e.g., proper conservation, site interpretation and representation techniques, visitor centers/site museums, etc.) or that they have not been properly incorporated into tourism promotion, and it could often be both. The Management Plan should address this reality in its various final strategies. Nevertheless, it has been noted that gradually, the number of visitors to the site of Qal'at al-Bahrain is increasing to the extent that it sometimes reaches between 500-600 visitors during some weekends, as reported by the archaeologist superintendent.

— *Future Threats:*

Due to the threats of the planned Northern City (and other recently announced projects, cf. below, §2.b.ii), the site and its immediate surroundings should be protected and excluded from future expansion into the sea (which is now planned for the Northern City about 4 km West of the site); The Management Plan should address sustaining the "setting" authenticity of the site and surroundings as will be explained in further sections of this document.

Moreover, related to the future plans of the North City planned to the west of the site, one cannot help by notice an accelerated increase in the prices of properties (e.g., land planned now with palm trees); this will affect the nature of investments around the site. In addition, an investigation of property ownership is very crucial to understand nature of property ownerships and future measures regarding this issue. In addition, the Management Plan will address mitigation measures to control anticipated urban growth around the site.

— *Local Traditional Crafts:*

The immediate area surrounding the site is very rich with popular local crafts such as traditional fish traps (*Hadra*), palm leaves houses (*Barastaj*), basket weaving, herbal and traditional medicine such as *Ma'a al Luqah* (water from Palm Leaves), indigo dyeing, weaving, production of *dibs* (treacle extracted from dates), etc. In fact, there are several distribution centers around the site that work to promote these local and traditional products. This reality should be taken into consideration when designing the tourism promotion plan for the site and its surroundings. One important observation related to the development of crafts in the region is the recent developments in *Beit al Jasrah* (amalgamation of all crafts in one central area) which presents competition for future developments of a rich and diverse craft industry near the site and in the surrounding areas as well. This needs to be investigated and addressed through the Management Plan.

— *Tourism Development:*

Development of a professional tourism promotion campaign is crucially needed for Bahrain. This campaign might look at tourist site orchestration where different sites of various nature are promoted together (with emphasis on both heritage and archaeological sites as opposed to only sites that are directed to shopping and

entertainment). The Management Plan should further outline this concept of tourist site orchestration, and how Qal'at al-Bahrain should be promoted.

i. Identification of Key Players and Actors (Stakeholder Analysis)

It is very important at first to understand and to identify the different stakeholders associated with the site at different levels. Not only different stakeholders might contribute to understanding the significance of the site, but also the management plan should take into consideration their different interests and perspectives.

— The local authorities and the agency responsible for the site (Ministry of Information / Directorate of Culture and National Heritage) are evidently among the main stakeholders involved in the management of the site. Other governmental agencies are also important stakeholders such as the Directorate of Planning within the Ministry of Municipal Affairs & Agriculture.

— One second important group of stakeholders in the Bahrain case is the group of Bahraini and foreign archaeologists, experts, conservationists who had spent a long period of time working on the site. The history of excavations/conservation of the site is a long and one must mention the Danish Team of the 1950s (P.V. Glob, G. Bibby), but also members of the French Team (M. Kervran until 1988, P. Lombard from 1989), and also a group of local archaeologists and conservationists, mainly in charge of the Main Fortress at the moment (e.g. A. Al Yehia, S. Bel Hajj). It is worth adding, too, a group of masons and traditional builders who have worked on the site for years now. Many of these individuals have dedicated a considerable number of their lives to the site and are as connected to it as its local community; they definitely have a stake in what development occurs on the site in the future and would definitely like to see it protected and conserved for future generations. Any management plan should address the aspirations of such stakeholders into its various mechanisms and future visions.

— A third group of evident, present stakeholders is represented by the local community who reside next to the site (in the housing strip). Recent research conducted with these people has shown that they are willing to be relocated to near-by villages (e.g., Karbabad, Karranah, Maqsha'), as long as they stay together. They have developed through the years a beautiful sense of communal feelings and behaviors (e.g., communal buildings, shared problems and aspirations, shared endowment structures, other). One major factor for leaving the site is the continuous flow of dust from the near-by archaeological site causing continuous health hazards to the community and deterioration of their property. But, if this community was removed from its current location, it is extremely crucial that all effort should be made to first relocate them in a near-by location, and second, that they should stay together, thus sustaining their communal ties that they have developed over the years. The local community is a potential source of employment for the continuous conservation, excavations, and management of the site in addition to being willing to be part of craft and tourism development within the site and its extended domains.

— Other stakeholders would be the private owners of land around the site, communities who reside adjacent or in near by villages but who are directly concerned with the establishment of and the necessary regulations imposed of the buffer zone defined around Qal'at al-Bahrain site, and even also the Bahraini society at large. Included in the stakeholders are, at last, non-governmental societies dealing with the history and archaeology of Bahrain such as the Bahrain Historical & Archaeological Society but also tour operators and businesses dealing with tourism who might be engaged with the site in one way or another.

ii. The Need for Continuous Documentation

The site of Qal'at al-Bahrain represents a distinctive place of continuous evolution, as soon as a reduced portion of its superfcy has been excavated up to now. It is thus obvious that archaeological excavations at the site will continue for a number of years, if not decades; in addition, conservation/ consolidation/interpretation works will have to continue as well. Therefore, the site Management Plan should take into consideration this important concept of continuous evolution

We have already mentionned how Qal'at al-Bahrain is continuously evolving and changing. It is expected that excavations will last for a long period which means that "conservation" and "consolidation" works will be developped simultaneously. Therefore, it is very important to carefully establish continuous documentation for the site and its evaluation in terms of measured drawings, archival reporting (progress reports) and other forms of documentation. In addition, the various conservation works on the site had not been properly documented up to now, and it appears most important to attempt as soon as possible to document previous conservation works. This would be the first opportunity to critically analyze such works and decide if they can be accepted as part of the evolution of site or otherwise be modified or removed.

Obviously, all books and research journal articles published on the site should also be collected and kept for future referencing. Similarly, all kind of technical reports prepared by conservationist, archaeologists, and other experts in addition to newspapers or magazines articles on the site should be recorded as well and kept for future research.

The research facility at the planned Visitor Center/ Site Museum (*cf. below, § 3.vii.1*) would be a suitable place to archive all this documentation. In addition to the measured drawings and sketches, it is very important to provide a continuous photographic record (regular argentic, digital or videographic covering) for the site. This record should also document the events (major public events, tourism activity) that regularly take place in the site.

B — Assessment & Analysis

i. Continuous Assessment of Significance

It is believed that an understanding of the complexities of values and significance of this site (and surroundings) is of ultimate importance that might affect the various components of the management plan (e.g., future conservation work, interpretation and presentation of the site, visitor management, other). A value-based approach to conservation and site management is needed at a site as complex as the site of Qal'at al-Bahrain. Significance of the site is a multi-level, supra-disciplinary reality; it should be based on an in-depth discourse and stakeholder analysis (e.g., significance to whom and why). The statement of significance should be also addressing an assessment of authenticity (e.g., setting authenticity, form and material authenticity, other), taking into consideration that authenticity as a concept depends greatly on the cultural context and on the *locale* being investigated.

As previously mentionned, Qal'at al-Bahrain amply testifies to the role played by Bahrain as a center for trade (export & import) and cultural *regional* exchange between since the Early Bronze Age period until the present. The fact that the site had been continuously occupied adds to its significance. The ancient "cities" at the foot of the Fort (Central Archaeological Area) had provided ample evidence (e.g., through pottery from Early, Middle, and Late Dilmun phases, cuneiform clay tablets referred to Iraq (Mesopotamia), terracotta figurines in the shape of humans and animals, Islamic coins, Chinese coins, Islamic glazed ware, and Chinese celadon & Ming, etc.) that ancient

Bahraini merchants worked to transform Bahrain into a center for trade between Mesopotamia, South Arabia, Persia and India. Ivory, pearls, semi-precious stones, lapis lazuli, costly woods, copper, and many other goods were traded back and forth. The site is considered the most ancient and the largest site of *Dilmun* culture and civilization not only in Bahrain but in the Arabian Peninsula in general.

It is obvious that the site exhibits an important interchange of human values over a span of 4500 years within a certain cultural area of the World (The Arabian Gulf). It bears a unique and exceptional testimony to a cultural tradition (Dilmun culture and beyond). The site also represents an outstanding example (which could be under the impact of irreversible change due to urban growth and development) of a traditional land and sea uses and full interaction with the environment.

Some local Bahrainis have added that the site in general is also very significant to them for being their "First Capital." P.V. As a fact, the Danish archaeologist P.V. Glob interpreted the tell as Bahrain's ancient capital, and from there, the Bahraini's capital moved south to the village of Al-Khamis, and finally moved to Manama more recently. So, the site's significance is extended to be linked with the whole broader history of the country as well.

Beyond Bahrain and its local history, the remarkable archaeological stratigraphy (4500 years of history) displayed at the same locale makes the site of Qal'at al-Bahrain one of the most rare archaeological and historical reference sites in all of the Gulf Region with definitely universal outstanding values and significance. In other terms, the site's importance and universal value makes it significant not only for Bahrainis and for Bahrain but for the whole region as well. With continuous change and excavations, significance assessment should be a continuous process that continues into the future.

ii. Assessment of Potential Future Threats & Challenges

(1) Development Pressures

The north eastern boarder of the site had witnessed land reclamation activity during the 1980s. Notably, Al-Seef reclamation have already exerted adverse effects on the maritime environment near the site. Part of that reclamation land is where the Visitor Center/Site Museum will be erected. These land reclaiming activities certainly have indirect consequences on the site itself. As already stressed in the Nomination file (cf. §5a), the most important consequence is the transformation of the cultural landscape where the archeological tell is located; notably, the historical link maintained between the site and its maritime counter-part is less obvious today, since its coastal border has been reduced in 1986 to about 130 m. Moreover, its north-eastern border has thus been urbanized, and the establishment of the Buffer Zone will attempt to take on mitigation measures so as to control further urbanization projected for the lands around the site.

It is very important to understand the potential future effects of the development of the planned North City (or of the recently announced artificial island placed at one kilometer offshore the site's coastline, but still at the project step up to now) on the site. Encroachment can happen quickly under pressures of unsympathetic growth of cities and rural areas unless certain mitigation measures are put into implementation (e.g., inclusion of Buffer Zone with special regulations).

The area around the site had witnessed a remarkable increase in the prices of land from 2 Bahraini *Dinars* for each square feet in around 2001 to about 6-8 Bahraini *Dinars* today. This increased pressure will tempt property owners of the Palm Tree Groves to change from agriculture and up keeping of the groves

"*Bustans*" to shifting to prime investment unless certain heritage tools (e.g., control without ownership, systems of easements, economic incentives, other) attempt to mitigate such a shift, together with the establishment of the proposed Buffer Zone.

(2) Environmental Pressures

As already mentioned in the Nomination File (§5*b*) the site of Qal'at al-Bahrain is free of any particular industrial atmospheric or sewage pollution.

Of course, one main potential environmental pressure will come from the plans to develop new housing projects in the near vicinity of the site ("North city project", recent artificial island project mentioned just above). One major environmental threat is the disturbance of maritime biodiversity and life due to processes of dredging to create the reclaimed land. This will have an adverse effect not only on maritime life but also the migrating birds finding refuge in this precise location on their journeys north to south.

Furthermore, we must always keep in mind that any close urban growth and encroachment will have an adverse effect on the site. Date palm trees (*Phoenix Dactylifera*) makes up the principal element of the palm-groves in the Kingdom. The surface area of the northern palm-grove of Bahrain has, however, been reduced from 746 hectares in 1977 to less than 350 hectares today, so land around the site is important. Uncontrolled urban growth around the site, especially with increasing land prices, will definitely have an adverse effect not only on the environmental condition and biodiversity of the region, but on the site and its setting authenticity as well. The establishment of the Buffer Zone will help reduce the effect of uncontrolled urban growth. This will be discussed in details in the next sections of this document.

iii. Assessment of Previous Conservation Work (state of conservation & consolidation)

Main Fortress ("Bahrain Fort")

This Late Islamic/Portuguese defensive Fortress was physically and historically described at length in the Nomination File (§ 3.c.4.). Its recent restoration was also largely evoked in the section "Authenticity/Integrity" (§ 2.c) of the same Nomination File.

Some complements to the general assessment of the conservation work on this precise building will be delivered there.

(1) During the decade of the 1980s, and driven by a need to "reconstruct" this Main Fortress (the local and popular "Bahrain Fort"), it can be admitted that, in certain cases or locations, excessive conservation activities or conjecture reconstructions took place. This was more at this time a political decision rather than an expert opinion, that was linked with an official vision of a "finished product" as far as the Fort itself is concerned. Some of these "reconstructions" might be irreversible and might be in certain cases historically or archaeologically incorrect.

Interventions carried out at this period ranged from reconstruction of South-East Bastion, facing of the Fort exterior wall with stone, to complete reconstruction of whole sections of the building. For the most part, they were based on true and good knowledge of the traditional building techniques and materials, but sometimes leading to conservation in conjecture as they are not always based on ample historic evidence and knowledge of previous layers of the site. *Complete reconstruction* seemed to be the

driving force for such conservation attempts without fully exploring other conservation treatments and levels of interventions.

(2) This approach to "conservation" had stopped from a few years and now experts and conservationists are rethinking the past decade of conservation efforts. In certain parts, certain interventions will be eventually reversed (e.g. look-out turret on the North West Bastion). While, and in other cases, certain interventions (e.g., facing of the exterior wall with stone) can be accepted as part of the evolution of the site through time especially that it did lead to structural stabilization.

Currently, conservation works exclusively center on consolidation of existing walls & features in addition to clearing of sand and earth from the building. Traditional mixtures of materials are used for the mortars composed of white sand (cleaned rough sand), traditional materials that gives the mortar moisture, gypsum from Saudi Arabia, local lime (*al nora*), and other materials as well. In general, most of the consolidation work was an immediate response after the excavations (post-archaeological excavation conservation). Also, in certain cases, the conservation work is simply based on stabilization and protection. In addition, traditional *Danshal* Wood that is imported from India and also local Bamboo for the roofing system was also used. For example, there is archaeological evidence that this structure had been used for housing during the 17th century, eventually in several *madbasa* (dates press) found in the building and proved to have been still in use up until the 17th century. Many of these *madbasa* located on the Upper Level Court of the Fortress are nevertheless now simply covered with sand and gravel to protect them and stabilize them until further conservation / site presentation work is possible.

Finally, it is important to mention that this monument is unique by the different layers of occupation and evolution; any conservation / building presentation approach should thus take this reality into consideration through the respect of all different periods of significance and through the conveying to the public at large this multi-level significance of this place.

The Central Archaeological Area:

This Central Archaeological Area witnessed archaeological excavations and research of different periods since the mid 1950s and the different layers of the site were explored (Early Dilmun, Middle Dilmun, Late Dilmun, Tylos, Islamic). More recently, and since 1989, the French Mission has undertaken to complete the clearing of a very significant architectural complex within the Central Archaeological Area known as the "Assyrian Palace" or "Palace of Uperi" dating to Middle and Late Dilmun Phases. In addition, the Central Archaeological Area has also provided evidence of later occupation (Islamic Periods) in the form of domestic construction with very little preserved in elevation.

In general, the archaeologists and conservationists treated this Central Archaeological Area with utmost care. Post-excavation conservation and consolidation works started immediately after excavation seasons with maximum efforts to retain form, material, and setting authenticity. Consolidation work in general was all done in gypsum. Currently, there is a simple, also not intrusive, pedestrian paved path that goes around this Area at the upper level. Of course, there is still need for future site presentation and interpretation interventions.

The Ancient Remains of the City Wall:

All through the years and since the middle of the 1950s, different soundings and trenches were done on different locations on the archaeological tell (*cf. Map 4e*). The Dilmun City Wall, south of the Coastal Fortress was notably investigated by different expeditions in 1975, 59, 64, 65, and 1970.

In addition, other City wall excavations took place more recently in the southern part of the Tell (near the Strip of Housing scheduled for removal and near the Old Village of Qal'at al-Bahrain which demolished in the 1970s. The western part of the City Wall was investigated in several trenches in the 1960s. In general, many of these

trenches have been recovered until further opportunities for future research. Yet, also parts of the remains of the City Wall are still present especially in the southern parts of the site. These different City Wall excavations should be part of an overall site management and presentation plan of the overall site in the near future.

The Coastal Fortress (Hellenistic/Islamic Fort):

This very important Fort located at a lower level from the main Portuguese-Islamic Fortress was totally exposed in the early 1980s by the excavations of Dr. M. Kervran and her colleagues from the French archaeological Mission to Bahrain.

In general, the archaeologists and conservationists treated this very significant part of the site with utmost care. Post-excavation conservation and consolidation works started immediately after excavation seasons with maximum efforts to retain form, material, and setting authenticity. Consolidation work in general was all done in gypsum. Currently, many of the surfaces and mosaics floors that are exposed to the sun are covered with sand for their protection until further conservation/site presentation works are scheduled. Of course, there is still need for future site presentation and interpretation interventions.

iv. Environmental Impact Assessment

Doing an Environmental Impact Assessment (EIA) for this Qal'at al-Bahrain Nomination Project to the World Heritage is very important especially when its features and components (cultural, natural, human and ethnographic) are very interrelated. The EIA would be very helpful in addressing and mitigating any adverse effect resulting from unplanned urban growth, environmental pollution, environmental degradation due to reclamation activities, other. Sections §5 of the Nomination File and §2b.ii of the present document discussed in details the main characteristics of the environment and general environmental conditions and threats. The establishment of the Buffer Zone will help reduce the effect of uncontrolled urban growth. This will be discussed in details in the next sections of this document.

Furthermore, conducting an EIA would also highlight the positive impact on the environment that would result out of the implementation of the Management Plan. This aspect is very important and could endorse this implementation of this Management Plan and encourage monetary donations from local, regional, and international donors. An EIA should also take into consideration conducting a thorough stakeholder analysis at a wider spectrum where not only the cultural values of the site are considered but also its natural values and socio-economic realities (relationships between the local communities and the site, current ramifications of the agricultural economics). The bio-diversity within the site and the surrounding area is of utmost importance. The Palm Tree Groves with their distinctive features, corals and other sea creators, migrant birds, and other different types of fauna and flora are important and significant to this integrative and holistic approach to the management of this site.

v. Management Context Assessment (Constraints & Opportunities)

The site is in need of a legal and management protection system to ensure its safeguarding and continuity for future generations. The Management Plan will provide ideas for different tools and strategies to address this lack of appropriate legal and legislative context. Under the Law number 11 of the year 1995 (article 1 of the law), the supervision, protection, management, other of all archaeological sites is the responsibility of the Ministry of Information (which includes directorates of heritage/antiquities and of tourism). The Ministry of Information owns the site.

Based on Law 11 of 1995 (article 5), ownership of land does not give the right to its owner to own the archeological sites or remains on the land or underneath (see below, § 3.B.ii). But the Law does not provide illustrations for different tools to manage the sites and protect them while respecting and sustaining private ownerships. And the Law does not provide any protective implemental measure, the laws are not implemented, and even if they were, they are very abstract and only provide penalties for transgressors. Therefore, the Ministry of Information should make all efforts to coordinate with other governmental agencies to insure the protection and sustainability of the site, being the key-participant in the future management of the site and in drafting and implementing the Management Plan.

3. The Management Plan for the Site of Qal'at al-Bahrain

A — Defining of Management Policies for the Site of Qal'at al-Bahrain

All the aspects previously discussed lead to these two obvious policies :

(1) The Cultural site Management should take into consideration the fact that the site is in a state of continuous evolution into where conservation, consolidation, excavation, and visitation activities are simultaneously taking place.

(2) The various relationships (historically, geographically, culturally, naturally) between the different components of the site dictates that any management plan should attempt to treat the site as an integrated whole. The main objective is to gain a deeper understanding of the site and make its significance accessible to the public, while maintaining a strong link between Qal'at al-Bahrain and its interrelated communities and stakeholders.

(3) The Management Plan should serve as a decision making tool to guide future excavations, conservations, interpretations, and other interventions. The Management Plan would balance conservation needs as well as tourism and development demands.

B — Management Plan Strategies & Mechanism

i. Ownership

The site of Qal'at al-Bahrain together with immediate surrounding demonstrates three major categories of land ownerships:

— The first category would be the land owned by the government agency with the management authority (Directorate of Culture and National Heritage of the Ministry of Information).

— Another category would be the land that is privately owned (mainly the palm tree groves around the site), several of the Palm Tree Groves are owned by members of the Royal Family (e.g., Palm Grove on the western part of the site).

— A third category is the land adjacent to the site of which the Ministry of Information is in the process of acquiring to add to its ownership and to use for the planned Visitor Center (planned for 2004).

For more details on ownerships, please refer to Maps 4g, 4h, 4i, and 4.

Having said this, the Management Plan should attempt to mediate and coordinate between the landowners (when needed) and the government agency with the management authority for the best interest of the site, but also keeping in mind the respect for private ownership. Details for this coordination will follow in the proposed management strategies.

ii. Legal Status

Under the Law number 11 (Law for the Protection of Archaeological Sites) of the year 1995 (article 1 of the law), the supervision, protection, management, other of all archaeological sites is the responsibility of the Ministry of Information. The Ministry of Information owns the site of Qal'at al-Bahrain is the agency responsible of archaeological excavation, management, and protection of the site and its archaeological findings either on site or in designated museums.

There are protective measures or designation processes outlined in the Law of Archaeological Sites (Law 11 of 1995). The Minister can simply choose any site for designation. Article 3 of the same Law identifies two different types of archaeological entities into two main categories: 1. Fixed and 2. Movable. What is interesting is the details in the definition of the first category where it is defined as the archaeological sites such as hills (tells) remains of human settlements, burial grounds, forts and fortifications, historic and heritage houses and complexes, water wells, channels and springs, religious buildings such as mosques, and other sites on the ground or buried underneath, or in the regional sea waters of the Kingdom of Bahrain. Such a definition is of interest to the site of Qal'at al-Bahrain with its diverse features on ground, beneath ground and in the sea.

Article 5 of the same Law indicates that ownership of land does not grant the owner the right to own archaeological findings on or beneath ground. In addition, Article 7 of the Law calls for mandatory coordination between governmental agencies when planning development projects to take archaeological & heritage sites into consideration. Ministry of Information is responsible of informing other agencies of the location and details of such sites all over the Kingdom. Article 7 of the same Law calls for controlled urban growth in lands adjacent to sites with valuable archaeological remains. And finally, Article 9 of the Same Law grants the Minister of the Ministry of Information the right to acquire any land for purposes of public good (e.g., archaeological site, urban beautification, other). All these protective measures will be used in the case of the Management Plan for the site of Qal'at al-Bahrain when deciding on the Buffer Zone around the site.

iii. Protective Measures and Means for Implementing Them

The above mentioned law includes protective measures or designation processes for the protection of the site of Qal'at al-Bahrain. The Minister can simply choose any site for designation.

The site is provided, and through the Management Plan (*Site of Qal'at al-Bahrain Management Plan of 2003-4*), with an adequate long-term legislative, regulatory and institutional management to ensure its continuity into the future. Within section iv, v, vi, vii, viii this document provided ample information regarding the different components of the site's Management. The agency with the management authority is:

The Ministry of Information
 Directorate of Culture & National Heritage¹
 Kingdom of Bahrain
 P. O. Box 2199
 Manama, Bahrain
 Kingdom of Bahrain
 Tel: (+973) 292977 – or 293300 – or 290210
 Fax: (+973) 292678

Contact Person is:
 HE Shaikha Mai bint Mohammad bin Ibrahim Al-KHALIFA,
 (Assistant-Undersecretary for Culture and National Heritage)
 &
 Mr. Abul Wahab Al-KHAJAH
 (Director of Archaeological Heritage)
 Directorate of Archaeological Heritage
 Bahrain National Museum
 P. O. Box 2199
 Manama, Bahrain
 Kingdom of Bahrain
 Tel: +9973) 293300
 Fax: +(973) 292820

It is important to add here that all Bahrainis individuals, experts, royalties, and groups working or concerned with the cultural and environmental heritage in Bahrain are very much looking forward for UNESCO to recognize this site and its distinctive universal value. They all view UNESCO's recognition not only as an additional "future protection mechanism" but also as an "umbrella of protection and empowerment" for all working on the cultural and environmental heritage in Bahrain and the Gulf Region.

iv. Existing "Development" Plans Related to the Site (protective and mitigation measures)

(1) The "North City" and Negotiation and Coordination Mechanisms

The Physical Planning Directorate of the Ministry of Housing, Municipal Affairs and Agriculture is working on a Development Plan concerning the Northern Area of Bahrain, to the North of *Budaiyah*. The Development Plan notably centers on the construction of a new "North City" on reclaimed land from the sea planned offshore of the northern coastal line of the island west of the site of Qal'at al-Bahrain.

¹ In the future the Directorate will be upgraded into a Higher Council for Culture and National Heritage

Coordination had already been established between the Ministry of Information and the Ministry of Municipal Affairs in order to avoid any environmental or visual adverse effect of such a new development on the site of Qal'at al-Bahrain. After deliberations, it was agreed that the eastern borders of the planned City would be at least 4 km west of the protected archaeological site.

Cf. Map 4m and Document 4n, below.

Important note:

During the few weeks preceeding the delivery of the Nomination File + Management Plan to the World Heritage Center (UNESCO), a new project of construction of an artificial island, offshore of the northern coastline of Qal'at al-Bahrain site, has been brought to the attention of the Directorate of Culture. Such project is definitely planned beyond the limit of the Buffer Zone proposed below but its general extension is worrying as far as such an island could constitute a new threat over the cultural landscape of the site (cf. *Map 4r of the present document*). The Bahrain authorities from the Directorate of Culture & National Heritage are presently looking for the best solution in order to reduce at the maximum any potential visual damage to the whole area submitted for nomination to UNESCO.

(2) Establishment of a Buffer Zone (Controlled Urban Growth) as a Mitigation Measures

In the case of the site of Qal'at al-Bahrain, it is needed to establish a buffer transitional zone to insure the conservation and continuity of the site for future generations and in its totalities. This buffer zone can be defined as an area surrounding the property (e.g., in the sea and land as well) with restrictions placed on its use to give an added layer of protection to the property (please refer to *Map 4o: Proposed Management Plan Zoning with Buffer Zone*).

Coordination Processes (Achieving the Buffer Zone):

It took a lot of coordination between The Physical Planning Directorate of the Ministry of Housing, Municipal Affairs and Agriculture and the Ministry of Information (agency with management authority) to finalize the details of the Buffer Zone and decide on its heritage / planning tools and mechanisms. This coordination will of course continue into the future during the implementation phase of the Management Plan.

Controlled Urban Growth and Integration of Planning & Heritage Tools:

The Management Plan is utilizing different heritage & planning tools to insure achieving the controlled Urban Growth within the Buffer Zone (Illustrated in Map 4o). Different heritage tools (e.g., control without ownership, economic incentive, designation and listing, etc.) should be integrated with other tools used in planning (e.g., regulatory control, transfer of investment rights, regulated zoning, etc.) to insure the protection of the site in both of its components: 1. the part owned by the Bahraini Government (or is in progress of acquisition) by the Ministry of Information, 2. and also the proposed Buffer Zone to be designated on privately owned land.

It would be clear that by no means the Bahraini Government should attempt to own the lands located in the Buffer Zone, this would be an extremely unaffordable, costly and impractical mechanism. What is encouraged by the Management Plan instead is the incorporation of the

various other management tools listed above. Having said this, it is very important to mention that the Ministry of Information is yet working, in progress, to own certain plots to expand on the Ministry's owned protected site (mainly to the East) and to facilitate the establishment of the Visitor Center. Please refer to Map (4j) to illustrate ownerships by the Ministry in progress, and also please refer to Map (4i) to illustrate the exact location of the Visitor Center.

Illustrating Details of the Buffer Zone:

The following is an illustration of the area within the Buffer Zone illustrated in Map 4j in more details:

First: Land that is owned by the Ministry of Information (Protected Site):

- *Archaeological Site Owned by the Ministry of Information* (Shaded Golden Brown) in the Map.
- *Archaeological Site Expansion* (Acquisition by Ministry of Information) in Progress) (Golden Brown Strips).

Second: Lands in Private Ownerships around the Protected Site within the Buffer Zone:

– Unplanned Area (Agricultural Land and Palm Groves Around the site:

The agricultural land and palm grove around the ancient and archaeological site (but mainly to the West and North of the site) are as distinctive and as significant and represents an indispensable element of the site of Qal'at al-Bahrain with its unique cultural landscape and agricultural traditional economy. The Palm Groves directly linked to the archaeological *tell* (currently zoned Unplanned Area), contributes to its specific cultural identity and landscape. This is the main reason that this individualized agricultural zone, currently privately owned, is included as part of the Buffer Zone to insure that not only the integrity of the immediate area bordering the site is protected, but also this surrounding/integrative and distinctive cultural landscape.

Currently this area is zoned & coded as Unplanned Area (white with a dark thick dotted line). But in fact it is mostly agricultural land and Palm groves. Now, and by Law owners can only built up to 5% of their plots. These lands are divided into approximately not less than 6000m² each. After deliberations and coordination, and taking into consideration that there is immense pressure to end the agricultural use of the land and use it for real state development; it was agreed with the Directorate of Planning to enforce the following:

1) For the time being, maintain the exact current codes (Unplanned Areas: for agricultural use), and also maintain the same restrictions of allowed 5% built up area in the form of a small farm house and services for the agriculture.

(2) Most of these lands are owned by members of the Royal Family. It was agreed to start implementing different forms of incentives and heritage/planning tools that will encourage the continued character of this agricultural land and encourage people to maintain their Palm groves. Different forms of incentives that will used include: assistance from the Directorate of Agricultural Guidance and Awareness; providing free pumped treated water for irrigation; and also, an honourly recognition and mention in the Visitor Center as "Patrons of Heritage and the Environment" for such owners who maintain their agricultural land and their associated functions and activities.

(3) It was also agreed that under any exerted pressure excersized over the Directorate and the Ministry of Municipal Affairs; the Maximum

Allowed built up area in these plots will not, under any circumstances exceed 15%. This will allow farmers to built a farm house, some sheds for agricultural products/storages, and accommodations for the cultivators and workers.

– *Unplanned Area East of Site (Residential Area Zoned RB: Private Residential B):*

Even though this area is shown in the zoning maps to be coded (Unplanned Area: white with a dark thick dotted line); in fact it has been zoned at (RB: Private Residential), this translates into low rises of 2-3 storey houses culminating in a low dense/low traffic residential neighborhood. It is included in the Buffer Zone and it means that the area will remain of low density and calm in comparison to other zoned areas. This proposed zoning is very suitable for a land that is right next to the site to the East and is compatible with visions of maintaining a tranquility to the whole site and its immediate surroundings.

Also, and in order not to block the Sea View, along the Shore (from the East), and beyond the extension of archaeological site on the reclaimed land, the Ministry had allowed functions & activities such as sea boat stations, fishing harbor, marina, or other suitable functions with a depth of total (previous & proposed together) reclamation not exceeding 60 meters, subject to approval, in order not to block the Sea View and to maintain a low dense milieu in the vicinity of the Buffer Zone and beyond to the East of the site.

– *Compound (Garden/Residential):*

This small area to the south west of the site is part of the Buffer Zone and is currently zoned "Garden/Residential" and will actually stay the same as this zoning provides a very low dense residential neighborhood with only 35% built up area in a compound spatial organization with only 2 storey buildings allowed.

– *Core of Historic Villages (Karbabad):*

There are different historic village cores around the site (e.g., *Karraneh*, *Maqsha'a*, and *Karbabad*). Only one of them (Karbabad) is included within the Buffer Zone to the south of the site. This area might house a lot of traditional craft activities. It enjoys two zoning ordinances (RHA (houses) and RHB (apartment) with only 3 story buildings allowed.

– *Buffer Zone in the Sea:*

Part of the extension of land in the Sea is owned by the Ministry of information (a land extending about 460 m and is about 210 m wide), but it was agreed with the Directorate of Planning to extend the Buffer Zone further north approximately 400 meters more on privately owned land (*cf. map*). Also, the Buffer Zone extends to the West approximately 1.4 km. The Buffer Zone will only allow functions that are acceptable to the protection of the site such as fishing, the use of the traditional fish traps (*Hadra*), fisheries, and sailing.

For details of Lands beyond the Buffer Zone, please refer to Map (4o)

(3) Environmental Mitigation Measures

The establishment of the Buffer Zone will help reduce the effect of uncontrolled urban growth and environmental degradation. One only has to make a quick comparison of the surface area of the northern palm-grove of Bahrain which has, however, been reduced from 746 ha in 1977 to less than 350 ha today. Therefore, the Buffer Zone will be considered a very important mitigation measure to protect the site and its surroundings for future generations.

But other mitigation measures (recommended by the Environmental Affairs Section) are also included in the Management Plan such as:

- Conserving the coastal area adjacent to Qal'at al-Bahrain, considered of significant environmental importance for seabirds;
- Putting a stop (as much as possible) to neighbouring reclamation activities, and attempting to supervise and control such activities if they were unavoidable.
- Cleaning up the shore from the deposited wastes, and take all necessary measures to stop any waste disposal in the future.
- Carrying out of periodical environmental surveys and State of Environment Reporting.

v. Sources and Levels of Finance

Once this Management Plan is implemented, funding available to the site on an annual basis will be budgeted by the Ministry of Information (agency with management authorities). Before the Management Plan was drafted, there were only budgets for conservation and consolidation works.

Moreover, the Directorate of Culture and National Heritage have already applied to different private sources and donors such as the philanthropist *Abdul Rahman Kanoo* Family and to different local and regional financial institutions and banks. In the past, the following institutions had provided funding for other projects managed by the Directorate of Culture and National Heritage such as:

- Bahrain & Kuwait Bank
- Bahrain National Bank
- Bahrain/Kuwait Insurance Company
- BATELCO: Bahrain Telecommunication Company

Finally, there will be major fund raising activities before, during, and after the Jubilee Celebrations of the Discovery of the Dilmun Civilization scheduled to be held on the site in October/November of 2004.

vi. Sources of Expertise & Training in Conservation & Management Techniques

At the moment, the only local expertise available (and directly in contact with the site) are at both technical & professional levels. They include archaeologists from Bahrain such as professional staff from the Directorate of Archaeological Heritage of Bahrain of the Ministry of Information (specialized in Museums and Heritage Management, museum studies, and archaeology) , a site superintendent (Archaeologist *Abdullah Yehia Hassan*), a conservationist (*Dr. Salem Bal Hajj*), and an architect/conservationist (Mr. *Haytham Sheroogi*).

They also include groups of professional researchers (mainly archaeologists) making up foreign archaeological missions to Bahrain (On the site, exclusively the French Archaeological Mission (*Dr. Monik Kervran* from 1978 to 1988; *Dr. Pierre Lombard* since 1988). In addition, there is a certain number of workers (craftsmen & masons (traditional masons) together with unskilled laborers). Some of the skilled masons are traditional builders with knowledge about local materials and traditional building techniques, but with little knowledge about different conservation mechanisms and levels of interventions and issues of authenticity. The various strategies will address the need for a diversified staff for the implementation of the Management Plan for Qal'at al-Bahrain. Finally, in addition to planned future hiring in different areas, the Directorate is planning

to hold training sessions and workshops on issues related to heritage conservation and cultural site management.

vii. Visitor Facilities & Experience at the Site

The site presently lacks proper access roads, as well as other needed infrastructure: signboards, site interpretation mechanisms, publications, coffee shop, public toilets, other. All site management efforts together with all visitor facilities should aim to convey to the visitors the complex and diverse level of significance of the site concentrating not only on its cultural significance but on interconnections with the site's natural realities as well. The planned interpretation and presentation mechanisms for the site will be discussed in more details in section 3.b.viii. Also, the different facilities provided by the Visitor Center will be discussed in the next section.

(1) The Planned "Visitor Center" (Site Museum)

The Visitor Center will be built on an existing reclaimed land area at the north east of the site, at the bottom of the archaeological hill. With its associated public parking lots, it will provide the official entrance to the whole site. The exhibition areas will provide the visitors with full information on the historical development of the site of Qal'at al-Bahrain, and will display some of the major archaeological finds from the current excavation areas. It will also include a cafeteria and other facilities for the public. The Visitor Center was designed by *Wohlert Architects* of Denmark (*Claus Wohlert*) for the Directorate of Culture and Heritage of the Ministry of Information, in close collaboration with *Dr. P. Lombard* (French Mission) and *Dr. F. Hojlund* (Gulf Danish Expedition, Moesgaard Museum, Denmark). The Visitor Center is laid out as an elongated two storey building facing the sea, with the supporting functions placed in a single storey building encompassing a private courtyard/garden. In the building's northern part, a partially open courtyard provides access to the building.

The idea for the layout of the Site Museum (Visitor Center) Interior is to illustrate the archaeological layers through a succession of planes/floors, rising along and around an "archaeological wall" – the "tell wall". The tell wall is intended to be an informative representation of typical and identifiable archaeological strata, and will, through its roughness, create a strong contrast to the smooth surfaces of the museum. The tell wall will be mirrored by two ceiling skylights, which will expose its rich texture.

The Visitor Center will contain in addition to the Parking and the Podium, a Shaded Courtyard, Foyer, Ticketing, a Gift Shop, Exhibition Spaces (Early, Middle, and Late Dilmun, Tylos, Islamic, Portuguese, and other exhibition areas), Coffee Shop, Shaded outdoor areas, Lecture Hall, Audio-Visual Hall, Reception Hall, Director & Secretary Offices, Conference Room, Rooms for Staff and Researchers & Guest Archaeologists, Storage Area, Rooms for Technical Staff, Kitchen, Public Restrooms, and many other minor spaces.

(2) Other Facilities & Programs (Tourism Promotion & Visitor Management)

A tourism management plan is crucial for the site. Currently, the site receives sporadic visits ranging in the hundreds weekly (while sometimes during the weekends, numbers reaches into the 500s and 600s based on the visitor's register book). Based on collected tourism statistics, one can notice from a brief glance that the number of visitors to ancient archeological sites, or even to heritage sites is less than the number of tourists visiting the Bahrain National Museum or other attraction sites such as shopping malls, resorts, or other (please refer to tables on tourism statistics). It is because these sites lack considerable tourist infrastructure (e.g., proper conservation, site interpretation and

representation techniques, visitor centers, other) and that they have not been properly incorporated into a well thought of tourism promotion plan.

The Management Plan is addressing this reality and works to center on:

— Promotion of the site at unpredicted scales: by the production of brochures, documentaries, and other promotional material.

— Development of tourism infrastructure (including interpretation, and presentation techniques) on site (this will be addressed in section 3bviii of this report).

— Study the relationship between this site and other related archaeological sites (e.g. *Saar, Barbar, Historic Muharraq*), and propose a tourist site orchestration approach where the tourism itinerary for a certain day will have different stops where Qal'at al-Bahrain becomes one of these major stops, but a major one of course where the visit to the whole extended site might last from a couple of hours to a whole half a day.

viii. Policies & Programs Related to the Presentation, Conservation, and Promotion of the Site

The Management Plan accommodates different levels of intervention regarding conservation, interpretation, and management of the site. It is important to mention that conservation, for example, is a very contextual process that is:

- Value-driven,
- Context based, and
- Culturally specific

Of course, one of the conservation mechanisms and levels of intervention is the representation and interpretation of the site; this issue will be discussed separately for its diversity and value.

(1) Continuous Conservation/Consolidation Works & Future Excavations

The site had been through and is still going through different periods of "conservation," "consolidation," and "reconstruction". All previous efforts of such nature should be assisted and reevaluated. Keeping in mind that complete reconstruction is not always the best alternative or the best conservation mechanism, the decision process should be based on a thorough understanding of the significance of the site and its relationship with other sites around it.

Now, the experts (e.g., conservationists, archaeologists) have stopped all conservation works (with the exception of consolidations of walls, clearance of dump earth) and are considering a new agenda of work based on the Management Plan where a comprehensive conservation/interpretation Plan is being sought out. Conservation in conjecture will be reversed (when possible and/or collectively decided). The Plan will explore different levels of interventions (and will not only be based on "reconstruction"). Such new different levels of interventions and approaches will explore site interpretation, presentation, and protection. The Research Unit at the Visitor Center/Site Museum (to be elaborated upon in the following sections of this document) will facilitate such interventions and approaches.

In certain cases (and all depending on a contextual ethics), different interpretation and representations techniques can convey the significance of the site to the public while sustaining its authenticity; notably at the site of Qal'at al-Bahrain, developmental authenticity (how the site evolved through the time) is of ultimate importance. Reconstruction is acceptable only on the bases of complete and detailed documentation and to no extent on conjecture.

In certain locations on the site, protective shelters, of suitable design, will be used to protect fragile remains that have to stay in situ so as their significance is conveyed to the public. For example, protective shelters might be used over the excavated *madbasa* (places where juices from dates are extracted). Currently, the different channels of the *madbasa* that are exposed (either in the Coastal Fortress or in the Main Fortress) are covered with sand or gravel for protection until further interventions are designed, managed, and implemented.

It is important to mention that archaeological excavations will continue for a long period of time (approximately 75% of the site is still unexcavated). The land around the Main Fortress, which extends to the Palm Groves and the edges of the site covers potentially very valuable archaeological remains. There have been several trenches in that particular area (e.g., alongside the external wall of the Early Dilmun settlement, trenches all over this plateau that is now covered with sand and earth), and findings have confirmed the great potential significance of the whole area from an archaeological point of view. In addition, archaeological excavations will also continue in the already excavated sites such as the Coastal Fortress, the Central Archaeological Area, and eventually in places even beyond the site into the Buffer Zone (e.g., Palm Groves). In the early 1990s until now, for example, there was a concentration by the French Mission in Bahrain (lead by Dr. Lombard) on the Late Dilmun period (First Millennium B.C.) which have been predominantly marginalized by previous archaeological excavations.

(2) Interpretation & Presentation Mechanisms

Any interpretation in a site as diverse and significant as the site of Qal'at al-Bahrain should make all efforts to convey its diverse and multi-level of significance to the public and address the complexity of values present in the site (cultural and other). It should address the different and multiple periods of significance that the site had went through (e.g., Dilmun, Tylos, Classical, Islamic, contemporary). The contemporary period should not be under-represented due to the extreme archaeological value of the site since it is crucial for the visitor to understand human-site relations even today. This will be explained not only in the Visitor Center/Site Museum but also throughout the site as well.

(a) Interpretation/Presentation Techniques & Promotional Material

Interpretation techniques must explore different approaches and techniques (e.g., guided tours, drawings and interpretations, virtual reconstructions, brochures, dioramas, models, other). Due to the size of the site and to its integrative and integrated whole, the following interpretation mechanisms are implemented for the better future management of the site. The main objective is to gain a deeper understanding of the site and make its significance accessible to the public:

The Concept of the Interpretive Path (Site of Qal'at al-Bahrain Heritage Path):

Due to the nature of the site (several features and attractions) and the proposed integrative/holistic management approach, it is suggested to incorporate, as part of the interpretation techniques, an interpretive path (*Site of Qal'at al-Bahrain Heritage Path*). It would appear as an interactive journey through the different features on the site with appropriate explanations, drawings (on plaques), eventual models or dioramas, as well as any methods of conveying the site significance to the public and its relationships to other times and places.

In addition, this interpretive path should convey to the public, not only the developmental authenticity (how the site evolved through time) but also the interrelationships between the near-by community and its cultural and natural components. Therefore, this Path might (in certain cases) extend beyond the site's physical boundaries into near-by Palm Groves or other features. This path does not have to manifest itself in physical presence in all areas of the site, but the design of the Path should take into consideration as not to induce any adverse effect on the site or on its authenticity. This Path will be supported by additional exploratory materials such as maps or pamphlets with explanations regarding the route and different stops along the path.

Brochures & Promotional Materials:

There will be brochures and promotional materials developed for the site. These will take the form of general maps, maps with explanations to illustrate the Heritage Path explained earlier, booklets and pamphlets, and many other promotional materials. The Gift Shop at the Visitor Center/Site Museum will also sell books in general on Bahrain archaeology, history, and heritage. In addition, the Marketing Unit will design and manufacture several souvenirs in the form of toys, stationary, cloths, and other that are trade marked: site of Qal'at al-Bahrain. Revenue from the Gift Shop will be directed to future research, conservation, and protection on the site.

Hosting of Events:

The "Golden Jubilee Celebration" for the Discovery of the Dilmun Civilization" is the first event that is scheduled on site, this will be a major event with a lot of ramifications and consequences (discussed in the next sections of this document).

The Directorate of Culture and National Heritage will of course plan other different events that are related to the site or will be organized at the site in an effort to promote it locally and internationally. The wide, inner space of the Main Fortress notably represents a strong potential location for such purposes.

Promoting the Site (getting connected):

Also, part of the major efforts to promote heritage tourism in Bahrain, heritage tourism experts will attempt, and part of the Management Plan for the site, to promote the site for regional and international tour operators. The site will be featured in tourism advertizing and also introduced as a major Archaeological site of Antiquity in the whole Gulf region.

(b) The Visitor Center & Its Role in Site Presentation and Interpretation

The Visitor Center (Site Museum) is situated on the beach to the north-east of the main Fort. It is placed on a podium, which functions as a jetty towards the sea. It is expected that this will facilitate future access by tour boats from Manama. The Visitor Center / Site Museum will act as a starting "initiation" point for the visitor or participator visiting the site. Yet, the Visitor Center will be careful as not to duplicate the site own experience (nor the National Museum in Manama) but complement it through the different exhibits and provides a different angle to the understanding of the site.

It is very important to study and research both the site experience (through the interpretive Path) and the Visitor Center experience so as not for one of them to duplicate the other. The Visitor Center/Site Museum will have the possibility to exhibit many of the archaeological findings and explain about the unique stratigraphy and different layers

of occupation at Qal'at al-Bahrain in more details. In addition, the Visitor Center will be a place to conduct research about the site.

(c) Promotion of Traditional Crafts & Agricultural Industries

The contemporary period should not be under-represented due to the extreme archaeological value of the site since it is crucial for the visitor to understand human-site relations even today. This will be explained not only in the Visitor Center / Site Museum but also throughout the site as well. Traditional crafts will be encouraged and welcomed on site (in certain designated locations, including eventually the Main Fortress, "Bahrain Fort") and off site in the near-by village of Karbabad as well. This will have a positive impact on the villages and on the continuity of the crafts themselves for next generations.

A previous amalgamation of traditional crafts in the area of Beit al Jasra (at the North-West of Bahrain island) proved to be not very successful, not only it took the traditional crafts from their own context (each area in Bahrain is usually famous for a particular type of crafts²), but also, it broke the continuity between the craftspersons and their immediate environment displaying the traditional crafts in a very unauthentic manner. This project will attempt to remedy that by bringing crafts back to their original context.

As already mentioned, the site is very rich with popular local crafts such as traditional fish traps (*Hadra*), palm leaves houses (*Barastaj*), basket weaving, herbal and traditional medicine, production of *dibs*, etc. For instance, there are several distribution centers around the site that work to promote these herbal and traditional medicines or medicinal waters (*Al Jisr Factory* near the site).

Lugah al Ma'aa is exerted from the pulp of the Palm trees when they are not fully ripe yet. A bottle can be sold from about 1 BD to 12 BD depending on quality. Manufacturing of *dibs* (honey treacle from dates) can be another traditional craft that is encouraged in the region around the site. The site surroundings also develop a very authentic old craft tradition that manufactures and sells traditional baskets located on the immediate neighbouring road to Karbabad. All these products can also be displayed and marketed within the Gift Shop of the Visitor Center / Site Museum.

(3) The "Golden Jubilee Celebration" for the Discovery of the Dilmun Civilization

The year 2004 marks the passage of 50 years since the discovery of the Dilmun Civilization in Bahrain. The discovery was a unique cultural event on both the regional and international levels. For this reason, the Cultural and National Heritage Directorate at the Ministry of Information finds it necessary to celebrate the occasion through the organization of a number of cultural activities to show the importance of the discovery of the Dilmun Civilization as an outstanding occurrence in the field of World archaeological discovery as before 1954, the Dilmun Civilization was uncovered news. Dilmun civilization represents one of the great Ancient Near East civilizations, together with the ones of the Tigris and Euphrates Valley, the Nile Valley, Indus Valley, as well as the ancient Persia. The Danish Archaeological Mission to Bahrain since the 1950s mainly through Dr. Geoffrey Bibby, and Professor P.V. Glob contributed immensely to the unearthing of this significant civilization. They both have also

² For example, *Karbabad* is famous for basket weaving, *Bani Jamra* for weaving the *Khalq*, *Ali* for pottery, *Karranah* for the production of *Samim*: a type of cloth to store dates in, etc.

contributed to the founding of the Bahrain Historical and Archaeological Society, the first one of its kind in the Kingdom.

The Golden Jubilee celebrating the discovery of the Dilmun Civilization in Bahrain shows a strong desire to personify the following meanings and goals (as quoted from the Planning Committee and the Technical Committee):

- Uncover the deep-rooted role of the Kingdom of Bahrain among other countries of the World as an original center of civilization that played an outstanding role in enriching the progress of human civilization through the ages.

- Acknowledge the good deeds and actions of a number of persons such as the late Shaikh Sulman Ibn Hamad Al Khalifa who encouraged and supported archaeological discoveries in Bahrain as well as some members of the Danish Expedition who played a major role in the discovery of the Dilmun Civilization on the land of Bahrain and neighboring areas.

- Increase archaeological awareness among citizens through a number of celebration activities especially among the cultured and the new generation of the Kingdom of Bahrain.

- Re-attract attention to the importance of this historical, archaeological, and cultural event on regional, Arab, and international levels.

- Encourage research and study work on the topic of the Dilmun Civilization and its distinctive place among civilizations of the ancient World.

An implementation committee for the planning of this huge event was formed; the committee is headed by the Assistant Undersecretary for Culture and National Heritage. In addition, a technical committee was formed to prepare for a scientific symposium entitled: "Fifty Years of Bahrain Archaeology". In addition, a celebration exhibition at the Bahrain's National Museum will be organized in addition to several activities to be held at the site of Qal'at al-Bahrain.

ix. Staffing Levels (Professional, Technical, Maintenance)

The agency with the management authority (Ministry of Information) is working on addressing the notion of human resources development in relation to the site. Taking into consideration the proposed Visitor Center / Site Museum and the site, the Ministry will implement the hiring of experts, professional, technical, and maintenance staff to fill in the gaps needed for the proper management of the site, including conservationists, archaeologists, cultural site managers (with explicit experience in site interpretation and presentation), museum curators/managers for the Visitor Center / Site Museum, tourism promotion specialists, property managers, administrative and secretarial staff, in addition to maintenance and unskilled laborers. The following section will explain further the details of the Staffing Levels at the site.

(1) Staffing Levels & Job Description (*cf. Map, § 4p*)

The following is details of levels of staffing for the site of Qal'at al-Bahrain and for the Visitor Center / Site Museum:

- **Administration Unit:** composed of the following,
 - o Site Supervisor (1),
 - o Secretary (1),

- o Receptionist (1),
- o Ticket Seller (1).
- **Cultural Site Management / Education Unit:** composed of the following staff,
 - o CRM Specialist / Site Interpretation & Presentation Specialist (1),
 - o Museum Curator (1),
 - o Material Conservation Specialist (1),
 - o Education Supervisor (1),
 - o Guides (5),
 - o Researcher Position (2),
 - o Exhibition Coordinator (1),
 - o Technician (1).
- **Conservation & Maintenance Unit:** composed of the following,
 - o Conservation Specialist (1),
 - o Archaeological Superintendent (1),
 - o Architect (1),
 - o Traditional Mason Builder (2),
 - o Laborer unskilled / Skilled (4),
 - o Air Conditioning Technician (1),
 - o Electrical Technician (1)
- **Tourism Promotion, Marketing, and Public Relations Unit:** Composed of the following,
 - o Heritage Tourism Expert (1),
 - o Public Relations Supervisor (1),
 - o Data Information Management Specialist (1),
 - o Marketing Specialist (1)
- **Security Unit:** composed of the following,
 - o Security Supervisor (1),
 - o Security Guard (5),
 - o Attendant (3),
 - o Watchmen (3).

Please refer to Flow Chart (4p, below): Details of Staffing Units Proposed for the site of Qal'at al-Bahrain & the Visitor Center / Site Museum), which provides more information as to which staff members are already available and which are in progress of being hired by the Ministry. Flow Chart (4p) also provides information as to which staff members are appointed jointly with the National Museum of Bahrain and which are full time employees working at the site and at the Visitor Center.

(2) Research & Assessment

The Visitor Center / Site Museum and the site itself will provide ample opportunity to conduct research on the site or beyond. The Visitor Center / Site Museum will attempt to store all books, articles, research reports, and progress reports written or published on the site and its related archaeology and heritage. In addition, there will be future opportunities for training in areas such as archaeology, heritage conservation, heritage tourism, cultural site management, and other related areas and topics.

(3) Coordination

In addition, it is very much recommended to establish a coordinating committee composed from representatives from the different stakeholders to foresee the implementation of the Management Plan keeping in mind that the Ministry of Information is the agency with management authority. This committee will serve as a scientific committee that provides guidance to the Ministry and insures coordination at all levels. This committee should arrange for public awareness sessions and should promote tourism to the site. In addition, this committee should supervise the work of the implementing agency.

x. Future Monitoring

The Management Plan should be considered a decision making tool to help with future excavations, conservation, and site interpretation and representation. It is expected that the Ministry of Information / Directorate of Culture and Heritage will work to implement periodical future monitoring for the site and the conservation of its various cultural and natural environments.

(1) Key Indicators for Measuring State of Conservation

The following are key indicators that have been chosen to measure the state of conservation/consolidation at the site:

- Measuring the State of Conservation through the investigation of state of the major ruins and features of the site through the production of measured drawings (documentation of evolution of the site), photographs, and material testing. Report on the development and implementation of different interpretation and site presentation techniques.
- Urban Growth and Encroachment within the Buffer Zone and Beyond: to measure the rate at which encroachment of any kind on the property and on the Buffer Zone.
- Tourist and Visitor Satisfaction: conduct periodical surveys eliciting tourists and visitors opinion on the level of services and quality of the experience within the site.
- State of the Environment Reporting: conduct thematic surveys concentrating on the number and characterization of different species (fauna and flora) with emphasis on the number of Palm Trees within the Palm-groves.

It has been agreed that for the first couple of years, the periodicity of the review of these indicators will be every year (once annually).

(2) Administrative Arrangement for Monitoring of the Site

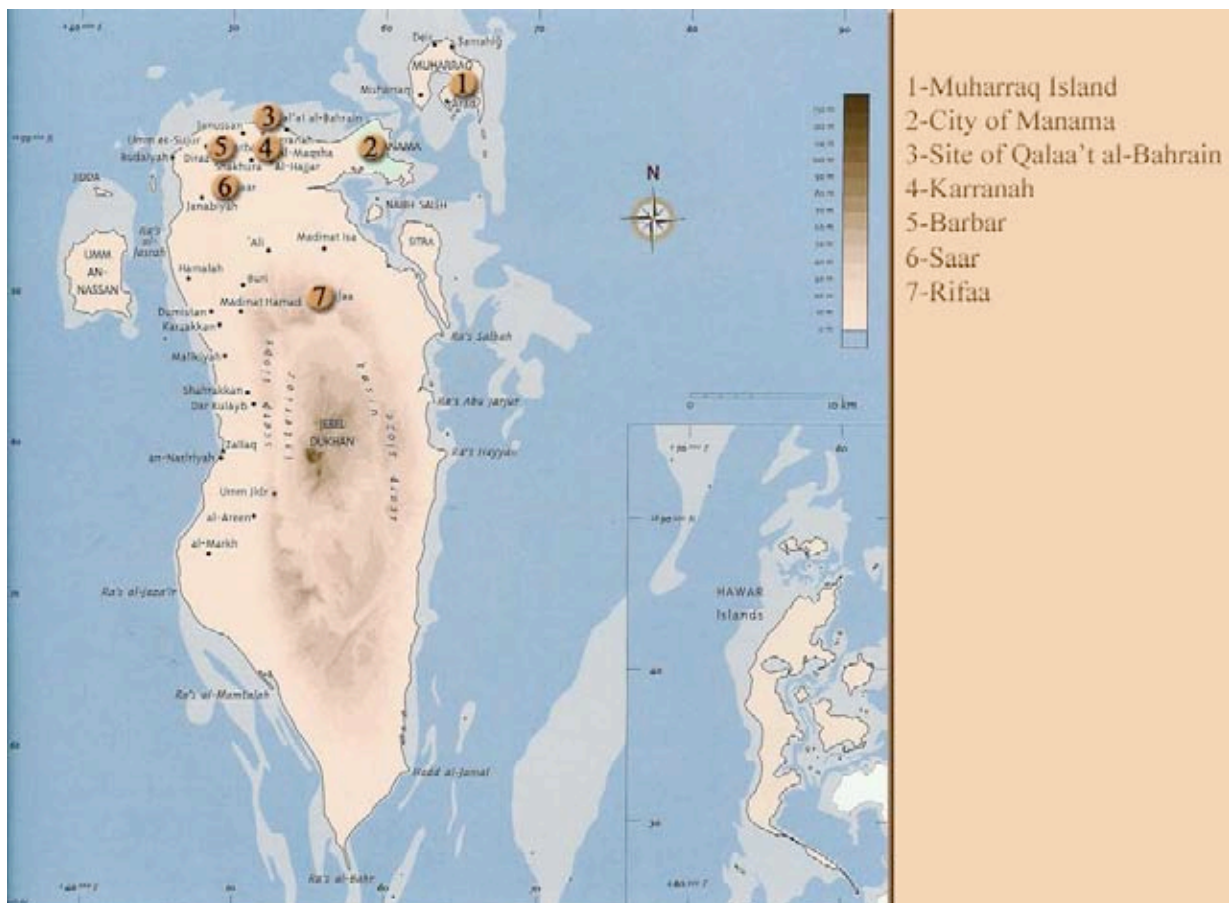
The Ministry of Information will be able to hire experts or use its own staff to conduct the yearly monitoring of the site. Results of the monitoring will be deposited at the Visitor Center and will be available for review by any local or international agency.

4. List of Maps, Charts & Other Documents

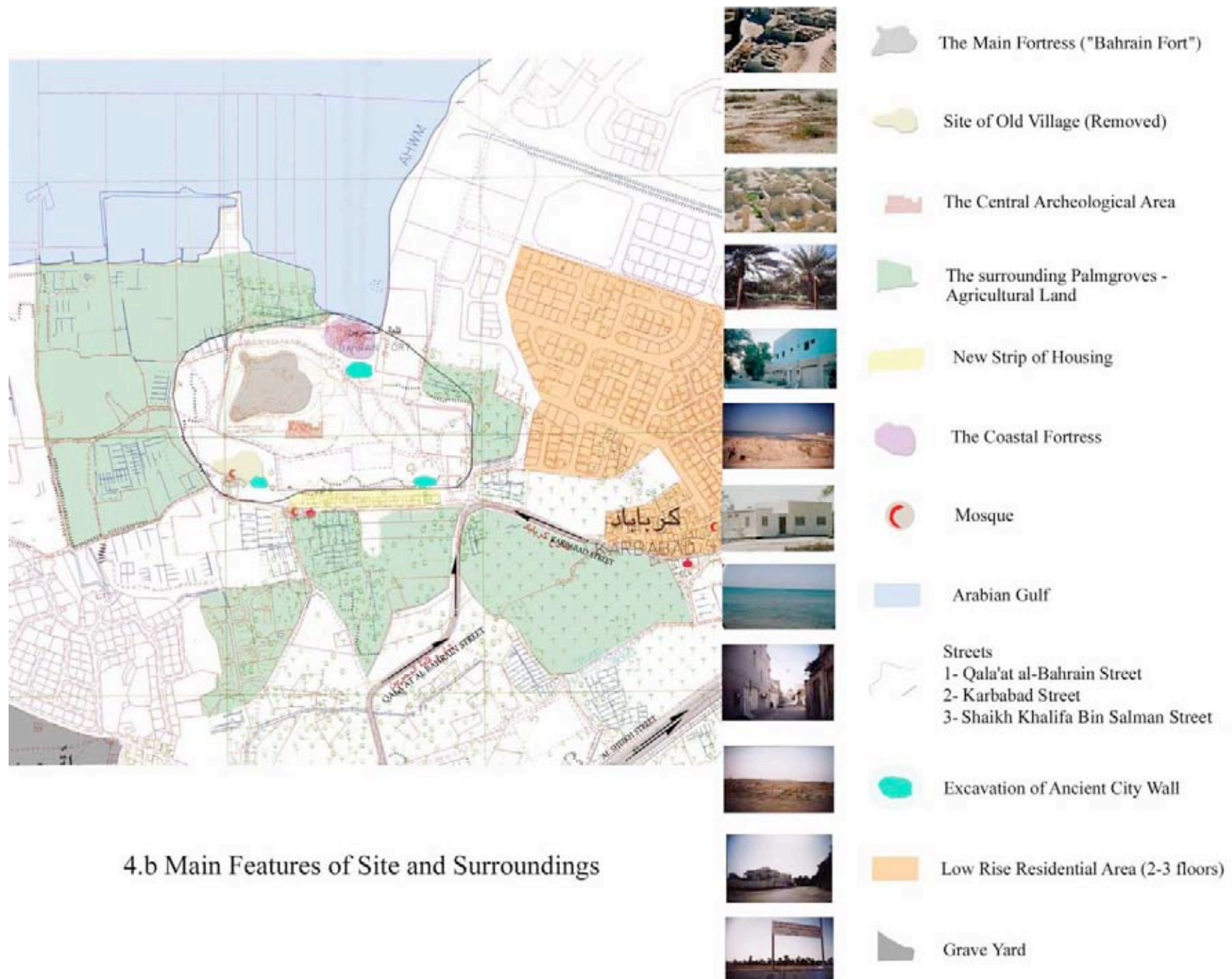
- a — Map Showing Bahrain with Main Locations
- b — Main Features of Site & Surroundings
- c — Aerial Photographs from the 1960s with Site Features
- d — Aerial Photographs from the 1970s with Site Features
- e — The Qala'at al-Bahrain *Tell*, and the Location of Different "City Wall" Excavations
- f — Existing Zoning & Land-use
- g — Ownership Document of 1993 (with English Translation)
- h — Ownership Map of the Site Owned by the Ministry of Information
- i — Ownership Map Juxtaposed on "Site Features" Map
- j — Ownership Map Showing Future Land Acquisition Planned by the Ministry of Information
- k — Illustrating the Planned Visitor Center / Site Museum (Exterior and Interior Shots)
- l — Illustrating the Planned Visitor Center / Site Museum (Two-Dimensional Drawings)
- m — Geographical Relationship between the Site & the Planned "New North City"
- n — Letter of Assurance from the *Northern Area Municipality* Regarding Impact of the Planned North City on the Site (with English Translation)
- o — Proposed Management Plan Zoning with Buffer Zone
- p — Flow Chart: Details of Staffing Units Proposed for the Site of Qal'at al Bahrain and the Visitor Center / Site Museum
- q — Flow Chart: Management Plan for the Site of Qal'at al-Bahrain
- r — Recently new project of an artificial island offshore Qal'at al-Bahrain.

4. List of Maps

4.a Map Showing Bahrain with Main Locations

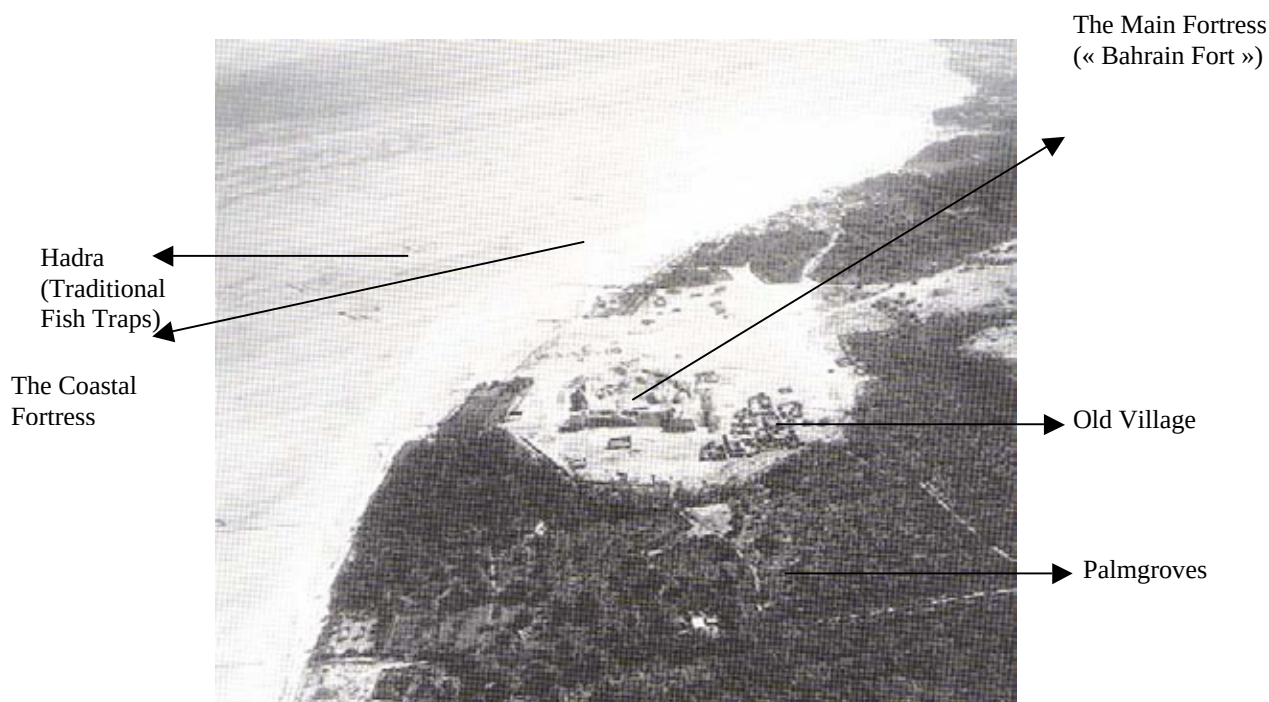


(Source: Institut du Monde Arabe (P. Lombard, éd.), 1999 : 29)

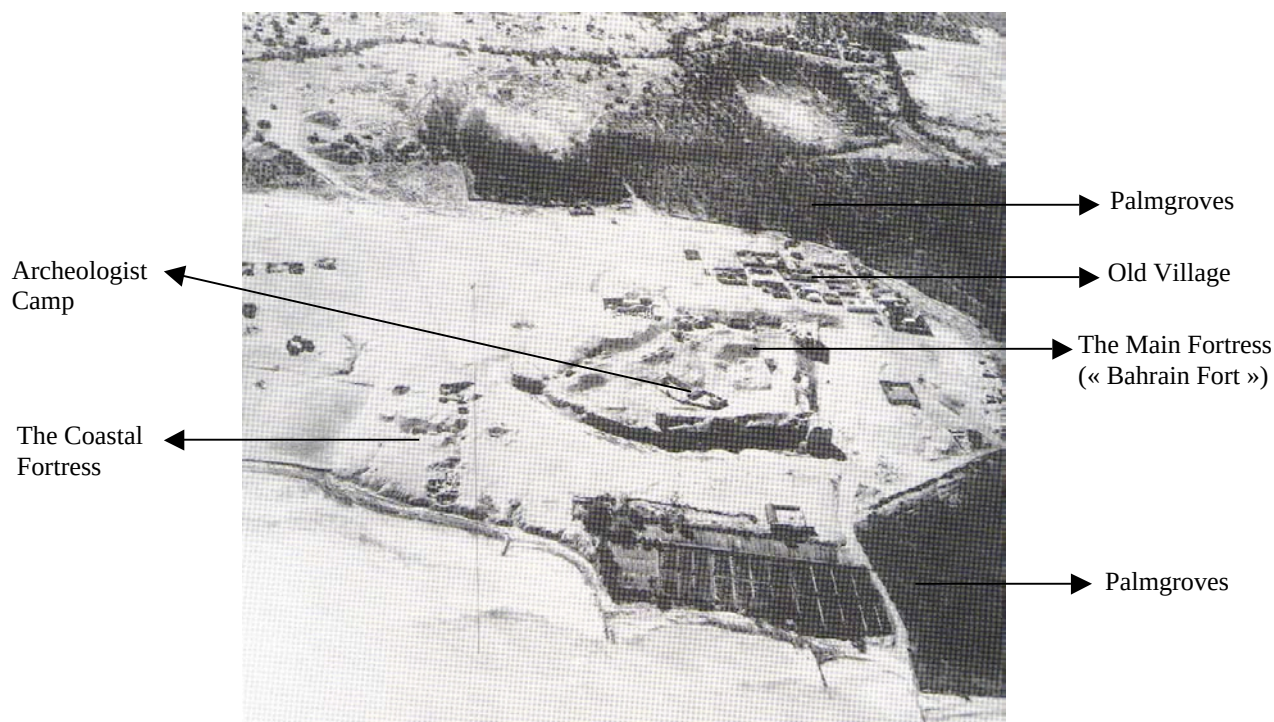


4.b Main Features of Site and Surroundings

4.c Aerial Photographs from the 1960s with Site Features



Aerial photograph of the *tell* of Qal'at al-Bahrain surrounded by Palmgroves agricultural lands, view towards East (RAF photograph 1962)
(Source: Højlund F. & Andersen H., 1994 : 8)



Aerial photograph of the *tell* of Qal'at al-Bahrain surrounded by Palmgroves agricultural lands, view towards South (RAF photograph 1962)
(Source: Højlund F. & Andersen H., 1994 : 8)

4.d Aerial Photographs from the early 1980s with Site Features

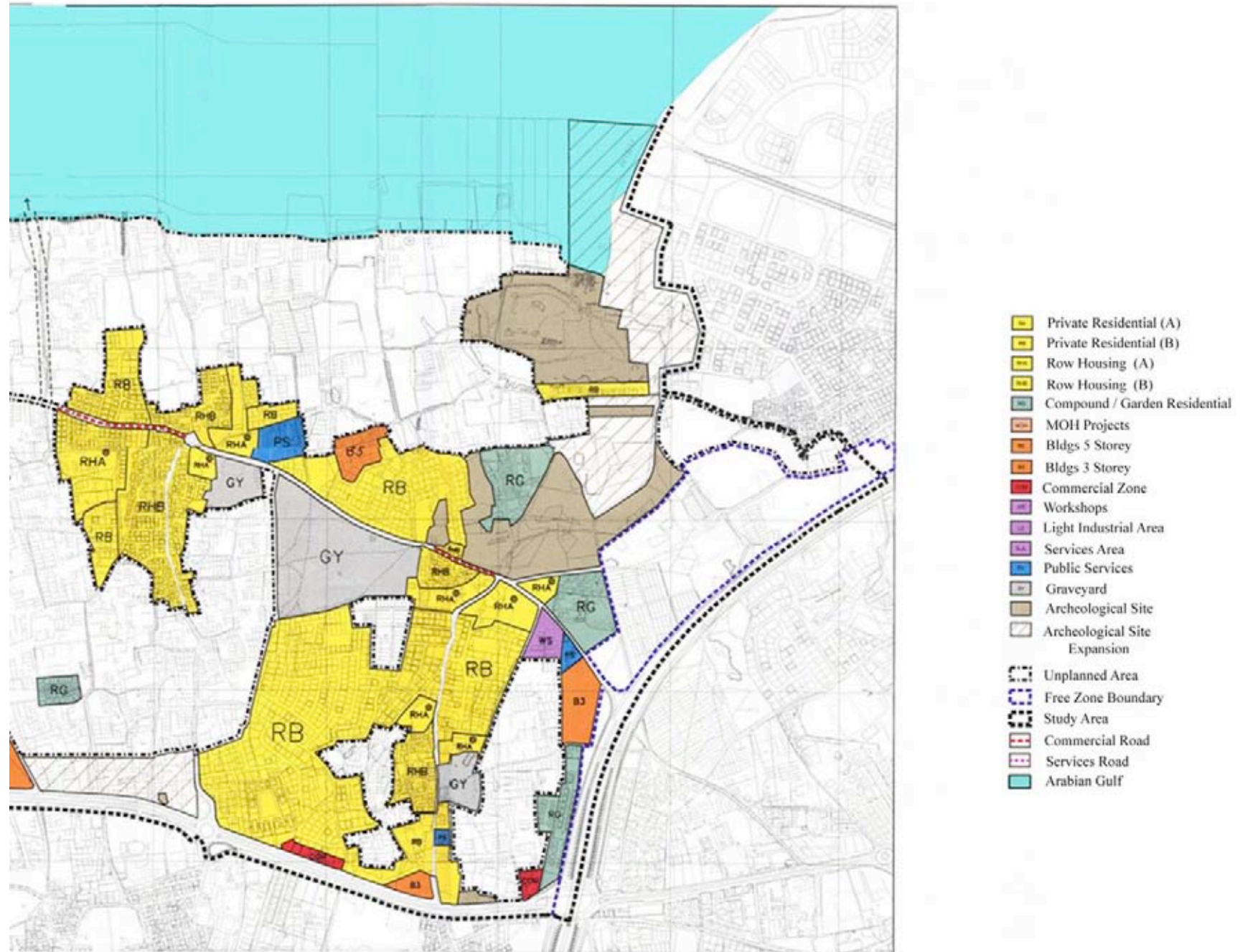


- 1 — The Main Fortress (“Bahrain Fort”)
- 2 — The Central Archaeological Area
- 3 — The Coastal Fortress
- 5 — The Surrounding Palmgroves
- 6 — Temporary Workers Structures
- 7 — Site of Old Village (now removed)
- 8 — New Strip of Houses (“New Village”)

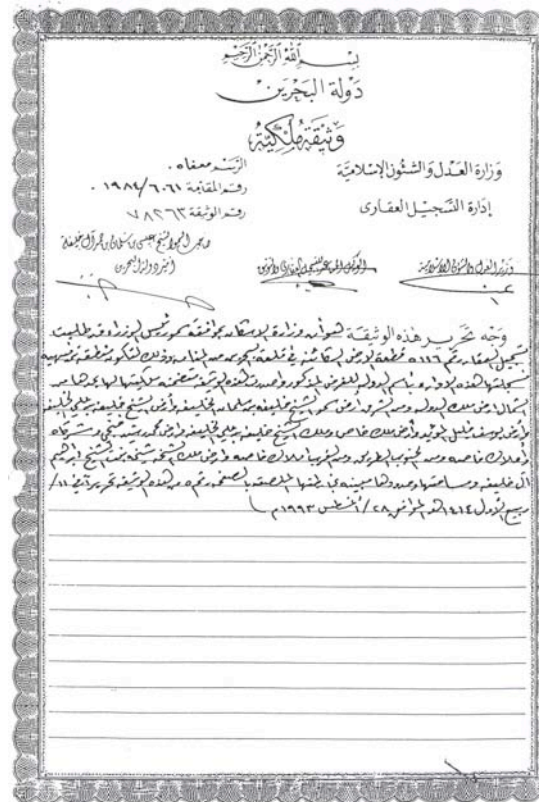
4.e The Qal'at al-Bahrain Tell, surveyed by O. Brande-Lauridsen 1960; contour equidistance 0.5 m above sea level.
The map shows the location of the different "City Wall" excavations



4.f Existing Zoning and Land-Use



4.g Ownership Document of 1993 (with English Translation)



In the name of God, the Most Merciful, the Most Beneficiary

The Kingdom of Bahrain

Ownership Document

Ministry of Justice and Islamic Affairs
Directorate of Real Estate Registration

Fee: no fee
Number of Muqadimah: 6061/1984
Number of Document: 78263

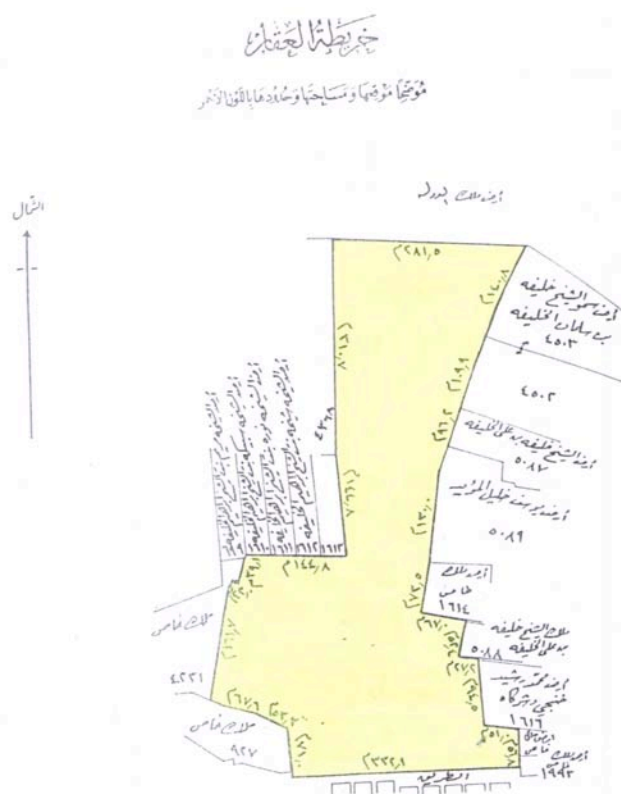
Minister of Justice
and Islamic Affairs

Assistant to Real Estate
Registration &
Documentation

His Royal Highness
Skheikh Isa Bin
Salman bin Hamad
Al Khalifa

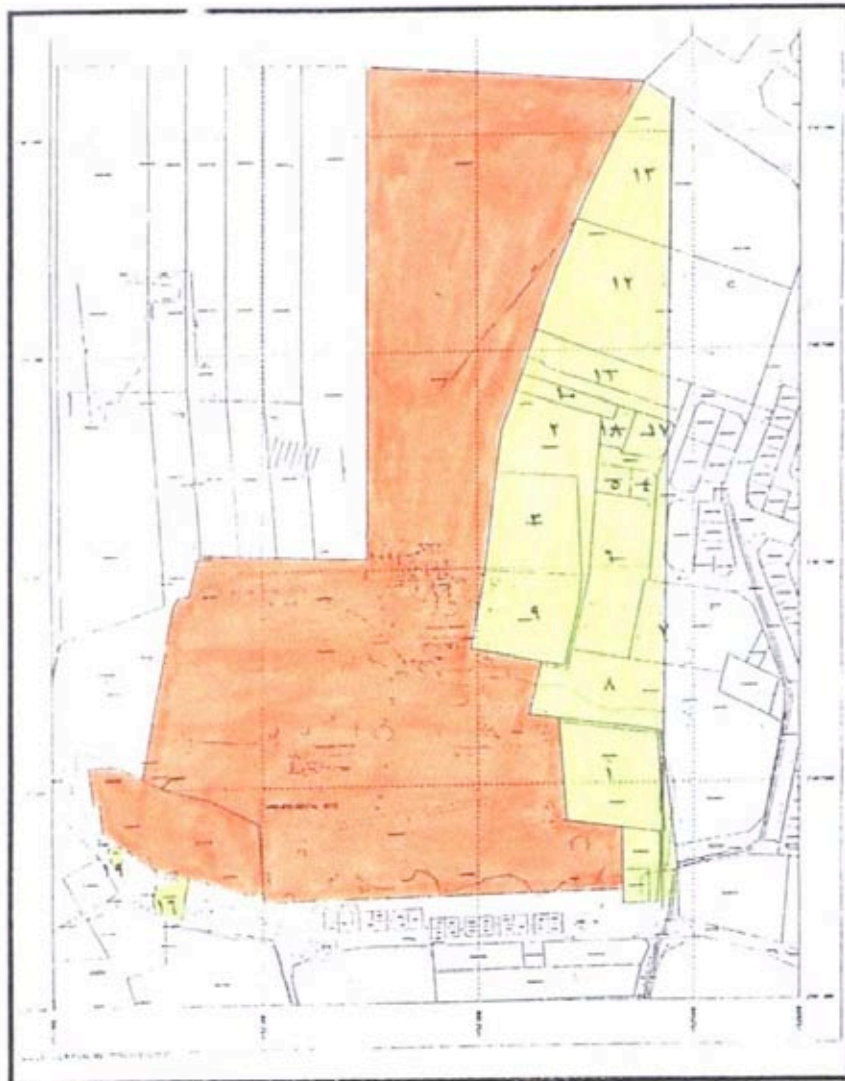
Main topic of this document: is that the Ministry of Housing and Municipal Affairs and after the approval of HH the Minister has requested the registration of the Land number 5116 (land plot located in Site of Qal'at al Bahrain in Manama) so it can be an area of general public good. These documents have registered this Land in the name of the State for the purpose mentioned, and this document was issued to grant ownership as stated. Borders from the north include government land, and from the east a land owned by HH Sheikh Khalifa bin Salman Al Khalifa, and the land of Sheikh Khalifa bin Ali Al Khalifa, and the land of Youseff Khalil al Muayyad, and a private land, and a land owned by Skheikh Khalifah Bin Ali Al Khalifah, and the land Mohammad Rashid Fethi and his partners, and other private land. And from the South, there is the Road, and from the West, there are the ownerships of Al-Sheikha Sheikhha Bint Sheikh Ibrahim Al Khalifa. The area and boundaries of the land is as indicated in the enclosed map number 5 of this document which was issued on the 11th of Rabi'e Awal coinciding with the 28th of August, 1993.

4.h Ownership Map of the Site Owned by the Ministry of Information





4.j Ownership Map Showing Future Land Acquisition Planned by the Ministry of Information



- | | | |
|---|---------------------------------------|--|
| ١- محمد رشيد خلجي | ٨- الشيخة مائيرة بنت راشد آل خليفة | ١٤- إدارة الأوقاف السنية |
| ٢- عائشة بنت أحمد بن إبراهيم المؤيد | ٩- يوسف خليل المؤيد | ١٥- إدارة الأوقاف السنية |
| ٣- عائشة بنت أحمد بن إبراهيم المؤيد | ١٠- الشيخ نواف يوسف آل خليفة | ١٦- إدارة الأوقاف الجعفرية |
| ٤- الشيخ سلمان بن علي آل خليفة | ١١- الشيخة مائيرة بنت راشد آل خليفة | ١٧- الشيخة مريم بنت الشيخ محمد بن إبراهيم آل خليفة |
| ٥- الشيخ أحمد بن علي آل خليفة | ١٢- سمو الشيخ علي بن خليفة آل خليفة | ١٨- الشيخة لؤلؤة بنت الشيخ راشد بن علي آل خليفة |
| ٦- الشيخة مريم بنت محمد بن علي آل خليفة وأولادها | ١٣- سمو الشيخ سلمان بن خليفة آل خليفة | ١٩- عبدالله وأحمد أبني مدن |
| ٧- الشيخ نواف والشيخ راشد أبني يوسف بن علي آل خليفة | | |

أماكن خاصة مطلوبة للاستصلاح



Ownership by Ministry of Information is in Progress

مسؤول باسم المملوكة لصالح الآثار



Property Already Owned by Ministry of Information

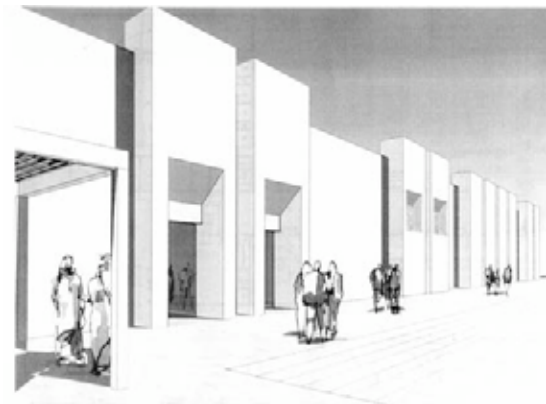
4.k Illustrating the Planned Visitor Center (Site Museum) (Exterior and Interior Shots)



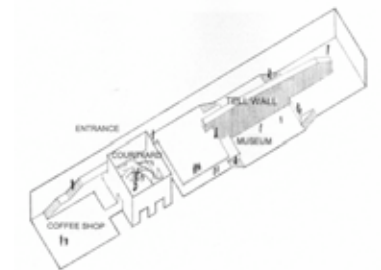
Exterior View of Planned Visitor Center (Site Museum)
(Ministry of Information, Kingdom of Bahrain & Wohlert Arkitekter A/S, 2003)



The Coastal Fortress (view of the sea)
(December 2003)

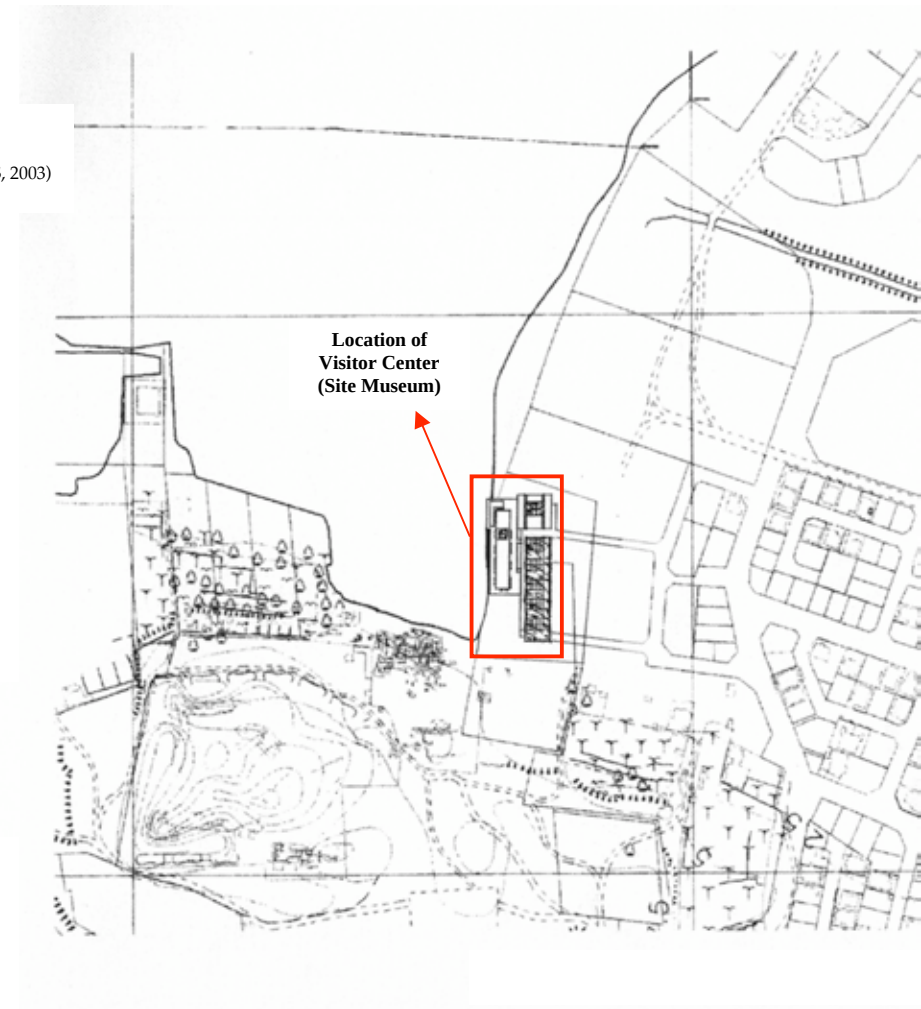
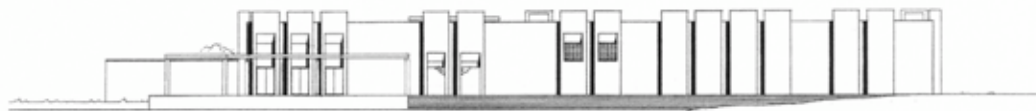
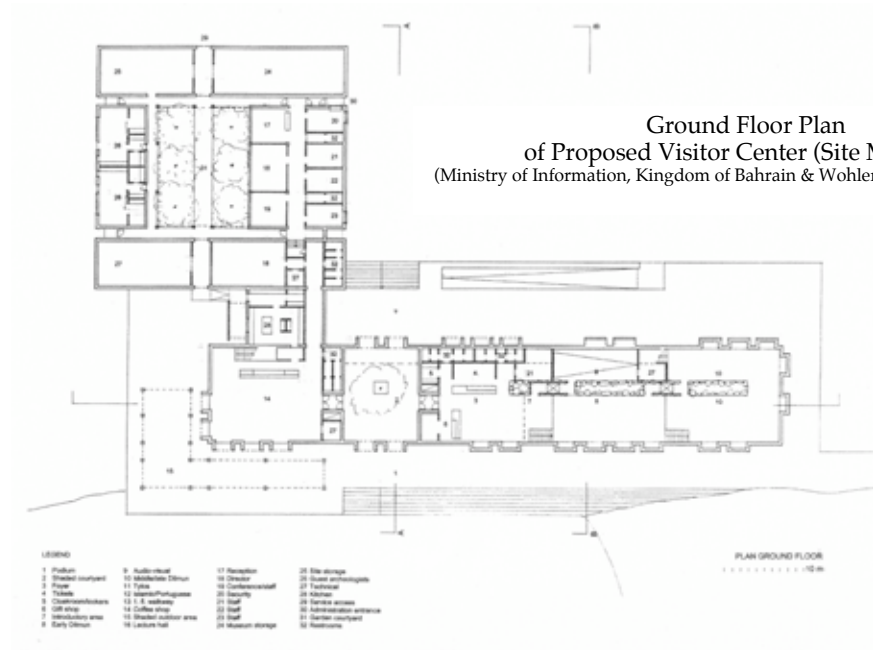


Main Entrance of Planned Visitor Center (Site Museum)
(Ministry of Information, Kingdom of Bahrain & Wohlert Arkitekter A/S, 2003)

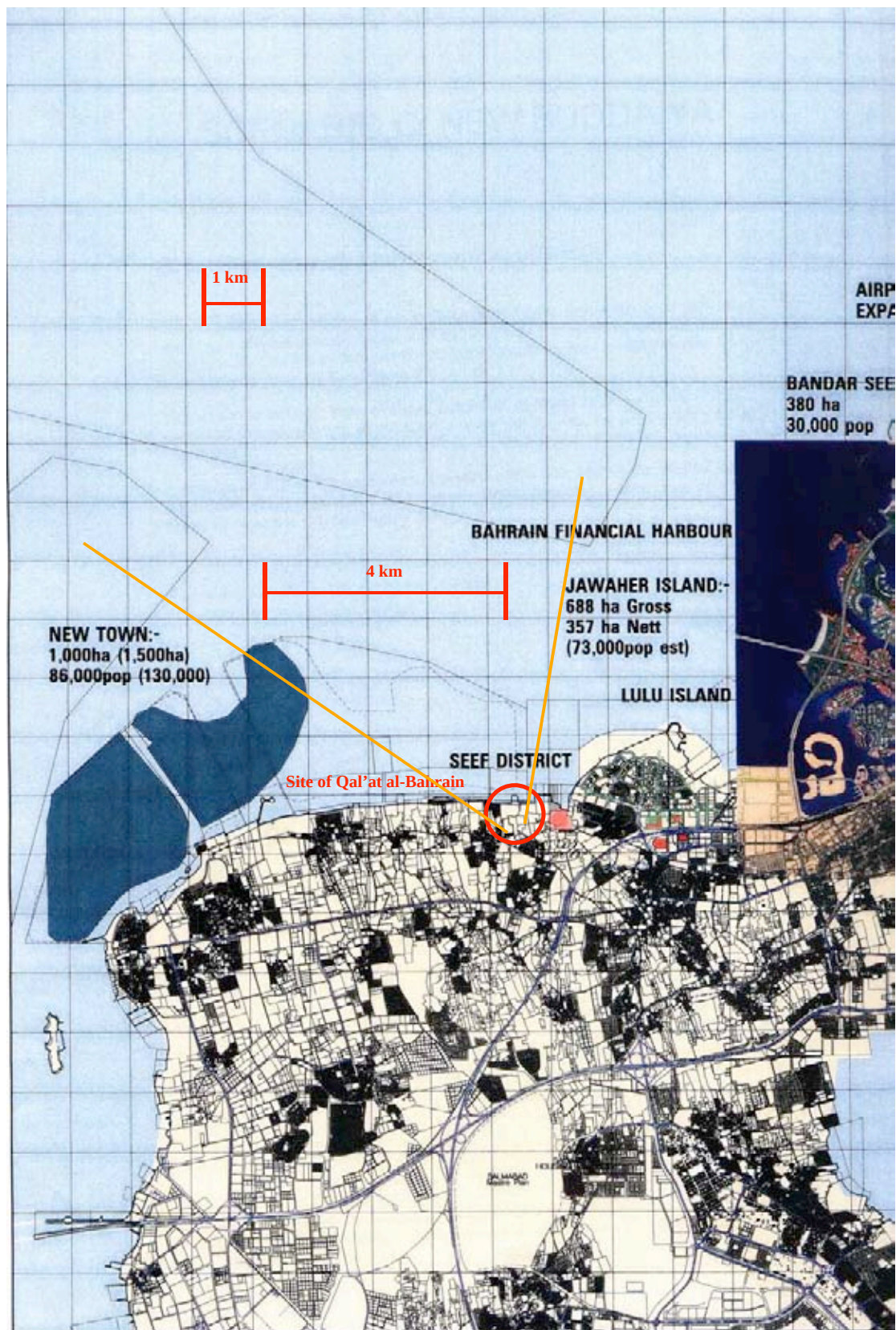


Components of Planned Visitor Center
(Ministry of Information, Kingdom of Bahrain & Wohlert Arkitekter A/S, 2003)

4.L Illustrating the Planned Visitor Center (Site Museum) (Two-Dimensional Drawings)



4.m Geographical Relationships between the Site and the Planned “New North City”



4.n Letter of Assurance from the Northern Area Municipality Regarding Impact of the Planned North City on the Site (with English Translation)



Kingdom of Bahrain
Northern Area Municipality
Municipal Council

Number: m.b.sh. / s.m- 38/2003
Date: 27/10/2003

To: Mr. Khalid Mohammad Al-Sindi
Superintendent of Archaeology and Heritage

According to your document no. 151/2003 dated October 4 2003, we would like to outline the following issues:

The Northern Municipal Council has already made all efforts to protect and conserve all archaeological sites located in the Northern area, of which Qal'at al-Bahrain is one of the most important.

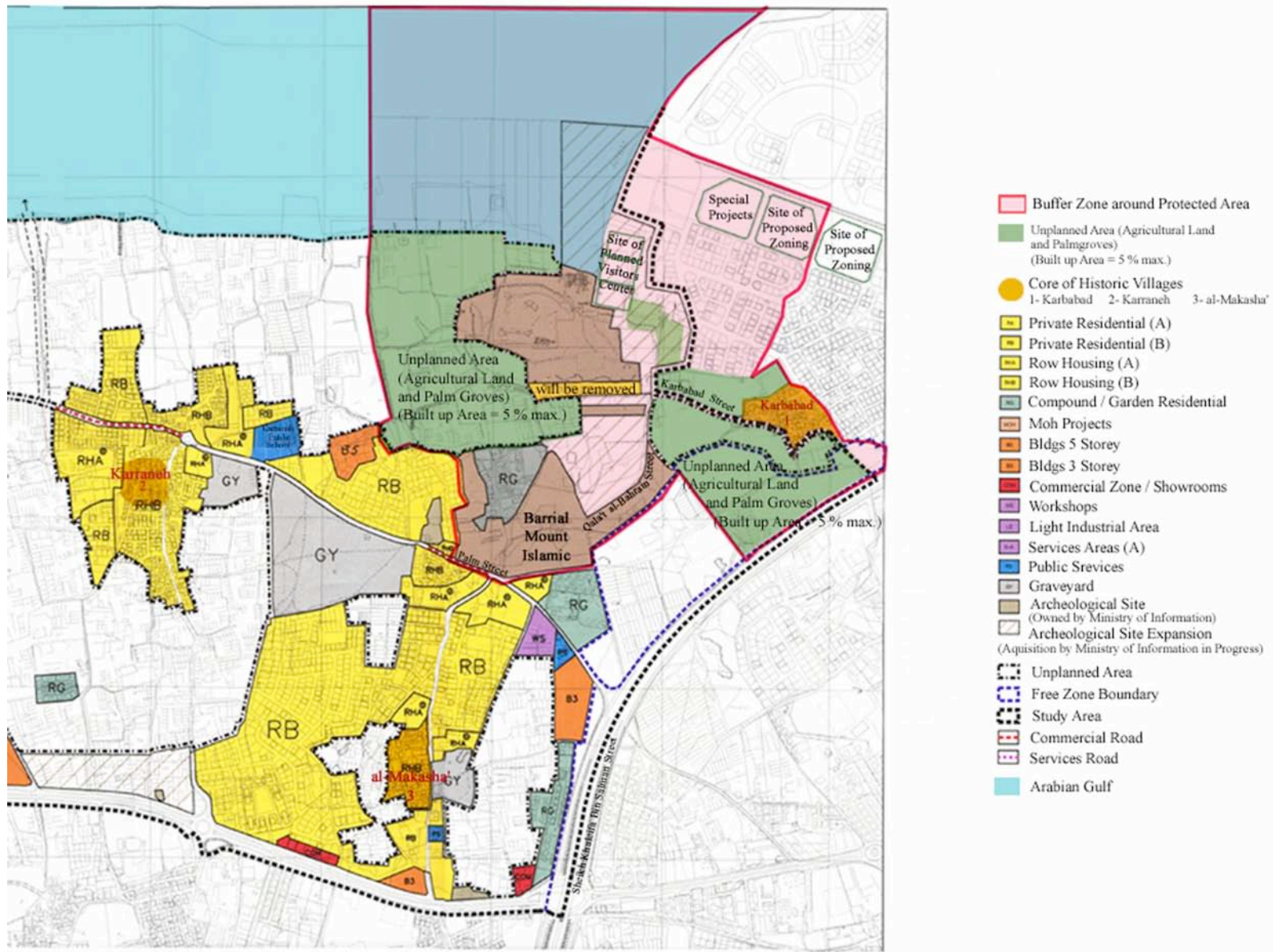
Based on this, the Municipal Council had already adopted a Plan aimed at the conservation of this important archaeological Site. We have come forward with a plan to the Committee of Housing and Development to relocate the residents within the Site to another location nearby so as to be able to protect the Site and prepare it for future investigations and developments. We have also made all efforts to clean up and clear the area around the Site from any wastes that could have had an adverse effect on the Site. In addition, we have worked on a Project that aimed to the protection of coastal lines from private ownerships and kept it within public domain, while keeping it clean and green for the benefit of the Site and the environment.

Regarding new development/construction projects of the Planned North City, the Municipal Council had agreed on the location of such a Project which would extend from the Village of Budaiya until the Village of Barbar. Therefore, the North City would be further to the West of the Site and would not have an impact on the Site, and also, the cone of vision from the Site to the Sea would be maintained without any obtrusive objects.

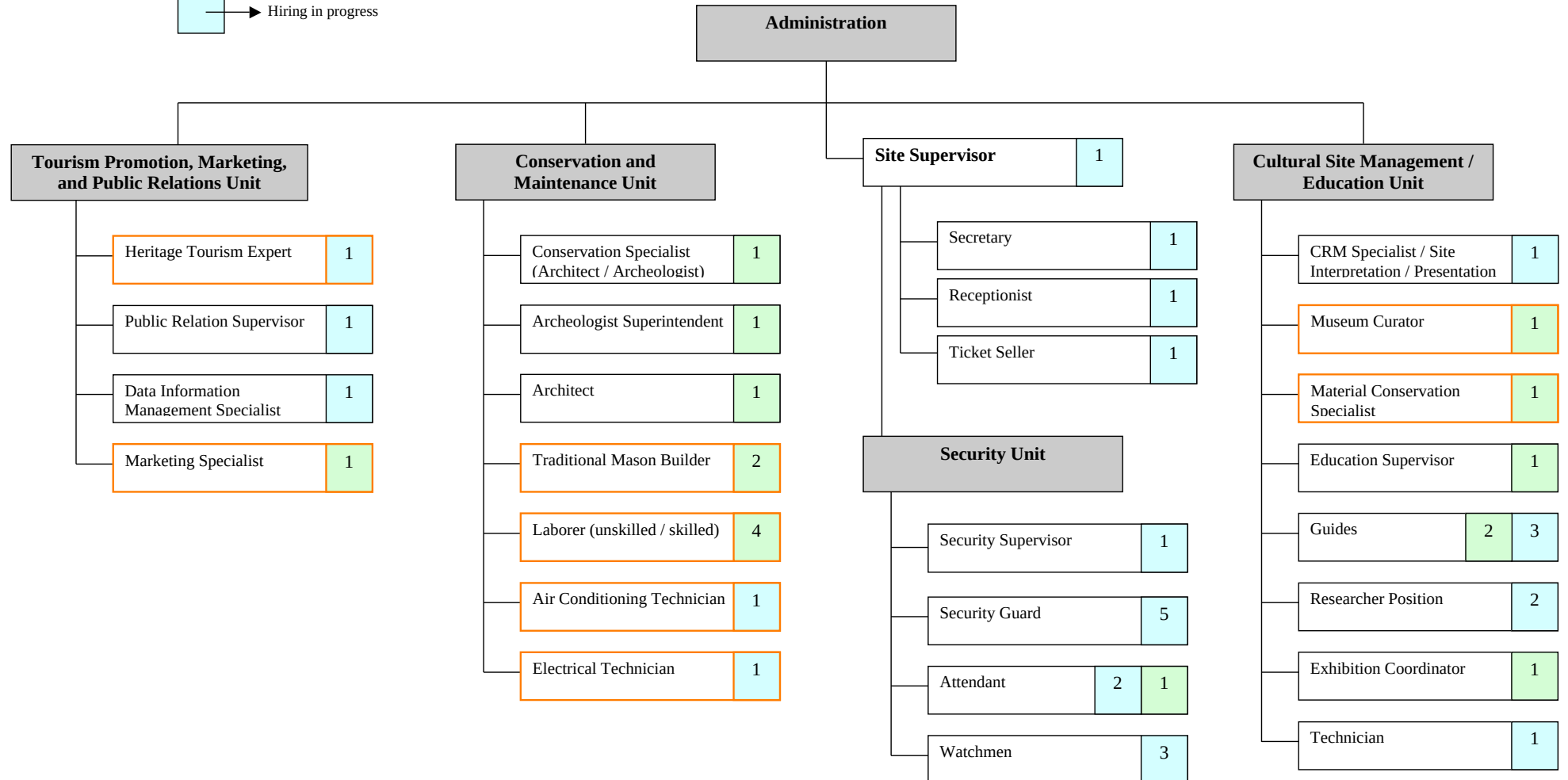
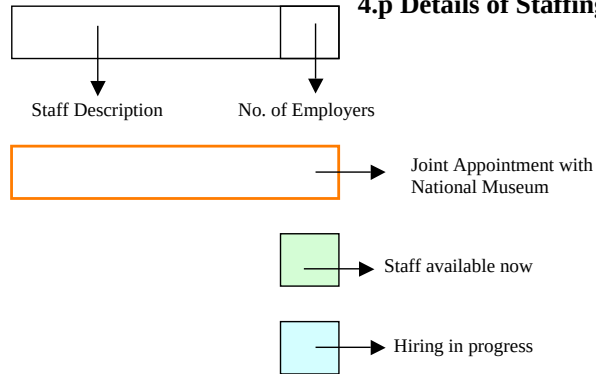
We will keep you informed of any future developments related to the Site and this issue, or related to any other archaeological sites in the northern region.
Best regards.

Majeed Sayyed Ali
The Head of Municipal Council

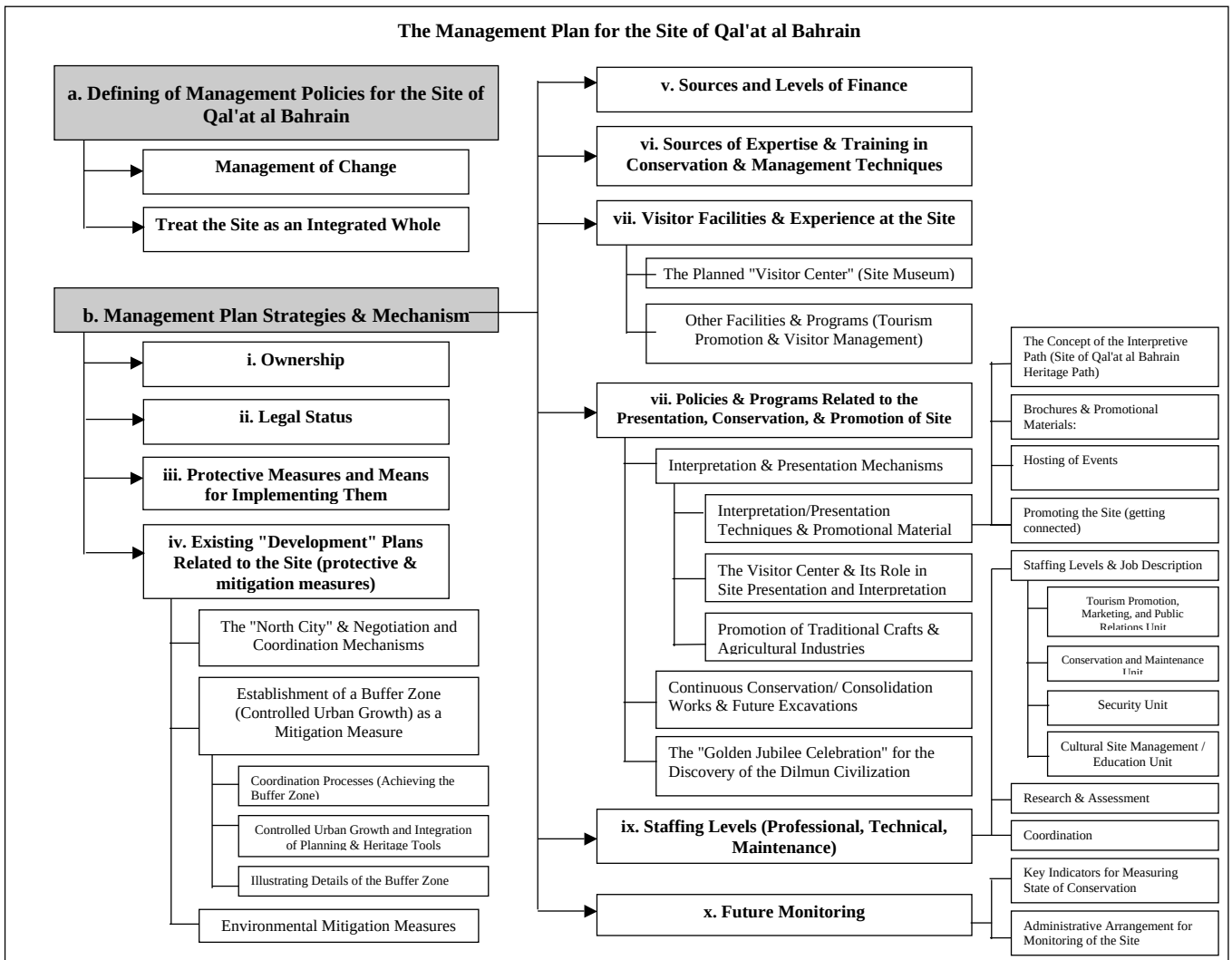
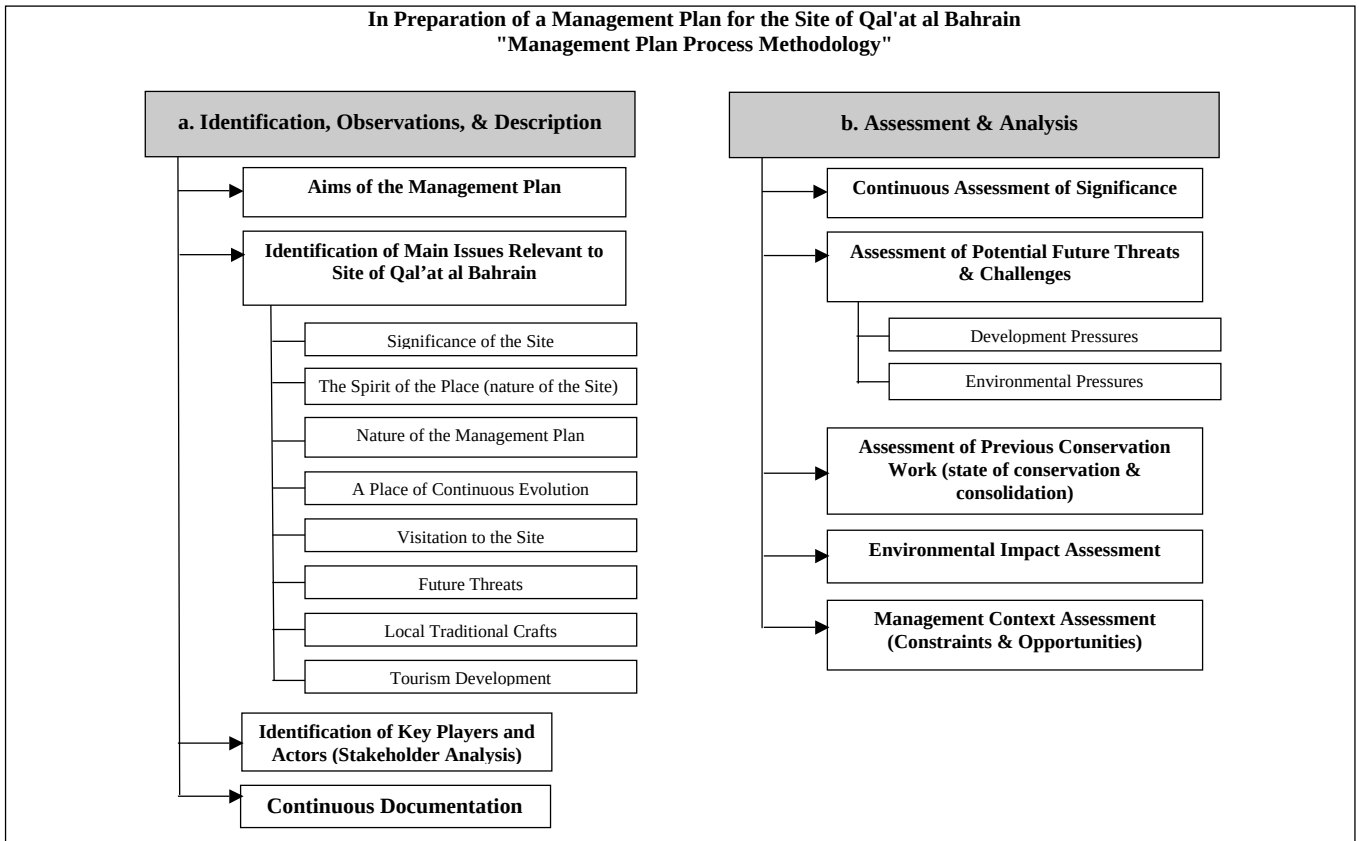
4.o Proposed Management Plan Zoning with Buffer Zone



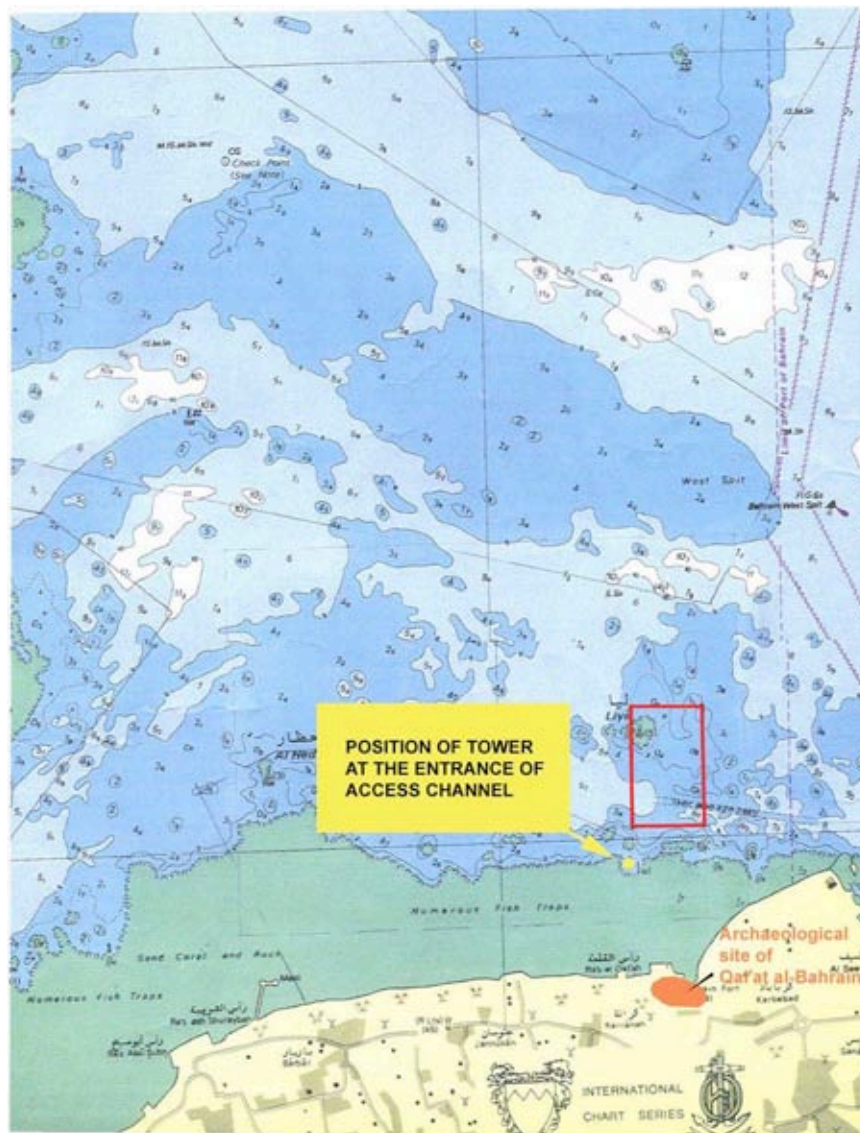
4.p Details of Staffing Units Proposed for the Site of Qal'at al-Bahrain and the Visitor Center (Site Museum)



4.q The Management Plan Process Methodology



4.r Project of an artificial island offshore Qal'at al-Bahrain



Location of the proposed artificial island

Note : A brief description of the project, available a few days before the delivery of the present document, mentions : « In particular, the project will address concerns regarding Qal'at al-Bahrain site (...). Not far from the fully developed Seef District, the project will not infringe on the legal boundaries (« buffer zone ») set for the cultural site of Qal'at al-Bahrain, as it will be more than one kilometer away from it. Buildings will be low-rise structures with an amalgam of traditional Arabic and modern architectural designs ; it will be appointed with carefully greeneries, parks, lagoons and streams. As the « Bahrain Fort » has a higher elevation, visitors to the Fort will have a breathtaking and unobstructed view of the development and of the Arabian Gulf. Residents and visitors to the development on the other hand will have a clear view of the « Bahrain Fort » (...) »

5. List of images and Photographs

- a — Group 1: Panoramic Views of the Overall Site
- b — Group 2: Approach to the Site
- c — Group 3: Main Site Features
- d — Group 4: Near-by Local Community (Strip of Housing)
- e — Group 5: Conservation/Consolidation Work
- f — Group 6: Features from within the Buffer Zone
- g — Group 7: Features from Beyond (outside) the Buffer Zone
- h — Group 8: Traditional Arts & Crafts From Around the Site
- i — Group 9: Tourists Visiting the Site
- j — Curatorial Management of Archaeological Findings at the Material Conservation Lab of Bahrain National Museum.

a. Group 1: Panoramic Views of the Overall Site



General Panoramic View of Site, towards the West
(October 2003)



General Panoramic View of Site, towards the West
(October 2003)



General Panoramic View of Site towards the West – Site of Potential Continuous Excavations in front of the Main Fortress (“Bahrain Fort”) (October 2003)



Panoramic View on the Upper Level of the Main Fortress (“Bahrain Fort”), toward the West (December 2003)

b. Group 2: Approach to the Site



Approach to the Site from the East
(December 2003)



Approach to the Site from the East and View of the Site at Sunset

(December 2003)



Site Sign Approach from Karbabad and Qala'at al Bahrain Street
(December 2003)



Access to the Site from Karranah Street and Qala'at al-Bahrain Street
(December 2003)

b. Group 3: Main Site Features



City Wall Excavation and border between Site and Local Community Houses (October 2003)



Excavations of The Central Archaeological Area (October 2003)



Excavations of The Central Archaeological Area (October 2003)



The Main Fortress ("Bahrain Fort"). South-East Boulevard overlooking the Central Archaeological Area) (October 2003)



The Main Fortress ("Bahrain Fort") (View of Moat) (October 2003)



View of Moat (October 2003)



The Main fortress ("Bahrain Fort"), inside the First Enclosure (October 2003)



The Main Fortress ("Bahrain Fort") – First Enclosure – Water Cistern (October 2003)



TheMain Fortress ("Bahrain Fort") — First Enclosure — Stables (October 2003)



The Main Fortress ("Bahrain Fort") – First Enclosure – *Madbasa* covered for protection (October 2003)



The Main Fortress –"Bahrain Fort" - *Madbasa* - (Interior) (October 2003)



The Main Fortress ("Bahrain Fort"). Original wall layer from second and third stages (December 2003)



The Main Fortress (‘Bahrain Fort’) – First Enclosure Conservation (October 2003)



Reconstructed Arcades near the entrance gate of the Main Fortress (‘Bahrain Fort’) (October 2003)



The Main Fortress (‘Bahrain Fort’) Location with possible excessive conservation (October 2003).



The Main Fortress (‘Bahrain Fort’) Location with possible excessive conservation (October 2003).



The Coastal Fortress (View of Corner Tower)
(October 2003)



The Coastal Fortress – *Madbasa*
(October 2003)



The Coastal Fortress – Central Courtyard with sand covering for protection
(October 2003)



The Coastal Fortress – Central Courtyard
Covered Floor Pattern
(October 2003)



Sea Coral Stone used for conservation/restoration
(October 2003)



Agricultural Land to the West of the Site
(Part of the Buffer Zone) (December 2003)



Agricultural Land to the West of the Site with View of the Site
(Part of the Buffer Zone) (December 2003)



Agricultural Land to the West of the Site
(Part of the Buffer Zone) (December 2003)



Horses Stables (Part of the Palmgroves and of the Buffer Zone) (December 2003)



Hadra (fish trap) in the Sea, offshore the site (Part of the Buffer Zone) (October 2003)



Location of the old Settlement & Houses (with Mosque Remaining)
removed in 1990/91 (October 2003)

d. Group 4: Nearby Local Community (Strip of Housing)



Near by Community (Strip of Housing)
(Scheduled to be relocated in near by Village) (October 2003)



Strip of Local Community
(Scheduled to be relocated in near by Village) (October 2003)



Near by Community (Strip of Housing)
(Scheduled to be relocated in near by Village) (October 2003)



Border Between Qal'at al-Bahrain Site and Local Community Houses (Strip of Housing)
(Scheduled to be relocated in near by village) (October 2003)



Ma'atam/Local Community Council Houses (Strip of Housing)
(Scheduled to be relocated in near by village) (October 2003)



Qal'at al-Bahrain Women *Ma'atam*, and present Mosque
(October 2003)



Problem of Dust from neighbouring Archaeological Site (October 2003)



Problem of Dust from neighbouring Archaeological Site (October 2003)



Problem of Dust from neighbouring Archaeological Site (October 2003)

e. Group 5: Conservation/Consolidation Work



Current Conservation / Consolidation works at the Main Fortress ("Bahrain Fort") (December 2003)



Different Layers/Periods of Occupation and Restoration Works at the Main Fortress ("Bahrain Fort") (December 2003)



The Main Fortress ("Bahrain Fort"). Showing Original Wall (October 2003)



Conservation / Consolidation on the Outer Wall of
the Main Fortress (“Bahrain Fort”)
(December 2003)



The Main Fortress (“Bahrain Fort”)
(Original Wall)
(October 2003)



The Main Fortress (“Bahrain Fort”)
Traditional Roofing System
Used in Conservation
(October 2003)



Traditional Structural Wood (*Danshil*) for Conservation/Restoration
(October 2003)



The Main Fortress ("Bahrain Fort") – Local Men at Work
(October 2003)



Workers Shed near the Main Fortress ("Bahrain Fort")
(October 2003)

f. Group 6: Various Features within the Buffer Zone



Karbabad Street (Part of the Buffer Zone) (December 2003)



Old buildings in Karbabad Street (Part of the Buffer Zone) (December 2003)



The Low Rise Residential Neighborhood East of the Site
(Part of the Buffer Zone) (December 2003)

g. Group 7: Various Features Beyond (outside) the Buffer Zone



Public School of Karranah Village (Nearby Location West of the Site) (December 2003)



Graveyard within the Village of Karranah (December 2003)



Nearby “Luqah” Water Factory Shop (December 2003)



“Luqah” Water Advertisement (December 2003)



Illustration Showing Benefits of “Luqah” Water

h. Group 8: Traditional Arts & Crafts From Around the Site



Traditional Basket Weaving Shops very close to the Site On Karbabad Street (December 2003)



Traditional Basket Weaving Shops very close to the Site On Karbabad Street (December 2003)



Traditional Basket Weaving Shops very close to the Site On Karbabad Street
(December 2003)

i. Group 9: Tourists Visiting the Site



Tourists on Horseback at the Site
(October 2003)



School Buses (visitors) to the Site
(October 2003)

**j. Group 10: Curatorial Management of Archaeological Findings
at the Material Conservation Lab of Bahrain National Museum.**



Classification and Conservation of Pottery & other Archeological Findings
from Different Sites at the National Museum of Bahrain
(December 2003)



Classification and Conservation of Pottery & other Archeological Findings
from Different Sites at the National Museum of Bahrain
(December 2003)



Classification and Conservation of Pottery & other Archeological Findings from Different Sites at the National Museum of Bahrain (December 2003)



Classification and Conservation of Pottery & other Archeological Findings from Different Sites at the National Museum of Bahrain (December 2003)



Classification and Conservation of Pottery & other Archeological Findings from Different Sites at the National Museum of Bahrain (December 2003)



THE ARCHEOLOGISTS CAMP
(SOURCE: GLOB P.V., 1999)



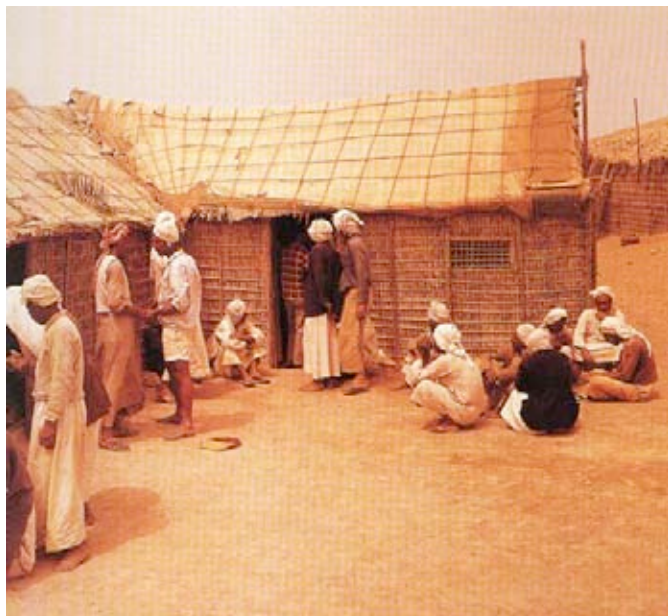
A LOOK INTO THE ARCHEOLOGIST ELSE
ROESDAHL'S CELL, 1965
(SOURCE: GLOB P.V., 1999)



F11- P29- CONSERVATION OF THE TRADITIONAL
BARASTAJ ON THE UPPER LEVEL OF THE MAIN
FORTRESS ("BAHRAIN FORT")
(DECEMBER 2003)



F11- P30- CONSERVATION OF THE TRADITIONAL BARASTAJ
ON THE UPPER LEVEL OF THE MAIN FORTRESS
("BAHRAIN FORT")
(DECEMBER 2003)



WORKERS IN THE YARD FOR THE WEEKLY
PAYMENT OF WAGES
(SOURCE: GLOB P.V., 1999)



F11- P33- CONSERVATION OF THE TRADITIONAL
BARASTAJ ON THE UPPER LEVEL OF THE MAIN
FORTRESS ("BAHRAIN FORT")
(DECEMBER 2003)



F11- P31- CONSERVATION OF THE TRADITIONAL
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