

NOTE ON CONSERVATION PROBLEMS
IN THE COASTAL FORTRESS AND IN THE CENTRAL EXCAVATION AREA :
PLANS AND TIMING FOR IMPLEMENTATION

The Directorate of Archaeology of Bahrain is aware of the necessary conservation plans to be applied both to the Coastal Fortress (« Islamic Fort ») and to the Central Excavation Area.

We also wish to inform both ICOMOS and the World Heritage Center that, since the ICOMOS expert's evaluation visit in November 2004, several actions have already been launched.

1 — Coastal Fortress (« Islamic Fort »)

The conservation work has already started there.

The following information was submitted in January 2005 by Mr. Salem Belhadj' (former *Architecte des monuments historiques* and *chef des services de restauration et de classement, Institut National du Patrimoine, Tunis*), presently in charge of the conservation of the Coastal Fortress (« Islamic Fort »).

Since the end of the digging of this building by the French Archaeological Mission (1985, by Dr. Monik Kervran, CNRS), a slow degradation of the walls has occurred : several have progressively lost their original height (present average height : 0,80m, with the exception of the Northeastern part where the preservation is better), and some of them even disappeared totally. In addition the whole area was partly filled again with eolian sand and material from the outside vertical sections.

The wall construction technique in the fortress is similar to the one generally observed in most of the defensive buildings found in the Arab world. The outside part of the walls consist of a dressing of fine ashlar limestone blocks coming from Jidda Island, at the West of Bahrain ; the inner filling consists of local rubble-stones assembled with mortar.

During Dr. Kervran's visit at the site in November 2003, a preliminary conservation and restoration plan was established with her to urgently save the existing remains :

(a) to clear the whole monument ;

(b) to trace the exact limits of the 1978-1985 excavations ;

(c) to systematically gather the scattered dressed stones in the immediate vicinity of the building for its next restoration.

The conservation operations started in September 2004 in the North and Northwestern sectors of the fortress, with a group of archaeologists from the Directorate of Archaeology of Bahrain, and where progressively extended to the Southwest sector. All the consolidation works were performed using a specific, traditional mortar composed of :

- plaster
- « *noora* » (aerial lime)
- sand
- clay (from Rifa'a, Central Bahrain)

The proportions used in such mortar may vary from one place to another, according to the humidity present inside the walls. This mixture was previously used in Bahrain, twenty years ago, in the conservation of Shaikh Isa bin Ali's house in Muharraq and still present a good state of conservation ; moreover its composition was approved by several visiting experts in the field of conservation/restoration, from various countries.

These works last for about two months (until the end of October 2004), and a programm was submitted to the Directorate of Archaeology to resume them in 2005 and 2006. In any case, as previously stated in the Nomination File, they will be limited to cleaning, consolidation/conservation (re-setting of fallen stones), setting of waterproof coatings in some places, renovation of the outside plastering of the madbasa devices (date-incubators), restoration of the pavement of the central courtyard (re-setting of existing slabs) and, above all, will avoid any *reconstruction*.



A — Situation in December 2003, before conservation/restoration works



B. The building in the process of conservation/restoration (October 2004)



C— Southwestern sector of the building after conservation/restoration (January 2005)



*D— Northwestern sector of the building
in process of conservation/restoration (January 2005)*



E — One of the madbasa (date-incubator), with renovated coating (January 2005)

2 — Central Excavation area

With the exception of the counterscarp wall (wall bordering the outside part of the moat, in contact with the archaeological area), no conservation has been undertaken there to this date.

Most of the exposed constructions (Early, Middle and Late Dilmun periods, Tylos periods) are very massive structures made of ashlar or smaller blocks set with a particularly strong mortar.



The Central Excavation Area. Above, structures excavated in 1954-56 (Danish Expedition) ; below, structures excavated by the French Mission (1991-1992)

With the exception of the tops of the walls where coatings must be applied in order to prevent a too important penetration of water (rain) or humidity, there is no other particular treatment necessary for their preservation. The remarkable conservation of the constructions excavated at the south part of this sector by the Danish Expedition nearly 50 years ago amply demonstrates this situation.

In fact, the conservation problem in the Central Excavation Area concerns two aspects :

(a) The high vertical sections bordering this excavation area, notably the ones oriented to the North, East and South ;

(b) The very bad state of preservation of the immediate sub-surface level, of Islamic period (14th-16th cent. AD).

CENTRAL EXCAVATION AREA, PRESENT SITUATION (JANUARY 2005)



Present limit



Main vertical sections in process of erosion



Islamic sector poorly preserved, in process of erosion

Concerning the first aspect (vertical sections), it is true that there is a slow, but regular process of erosion/destruction, partly due to the gullies generated by the annual rains, but above all by the wind action.



Section at the South of Islamic sector, facing South (approx. height : 4 m)



Southern section of Central excavation area, facing North (approx. height : 5 m)

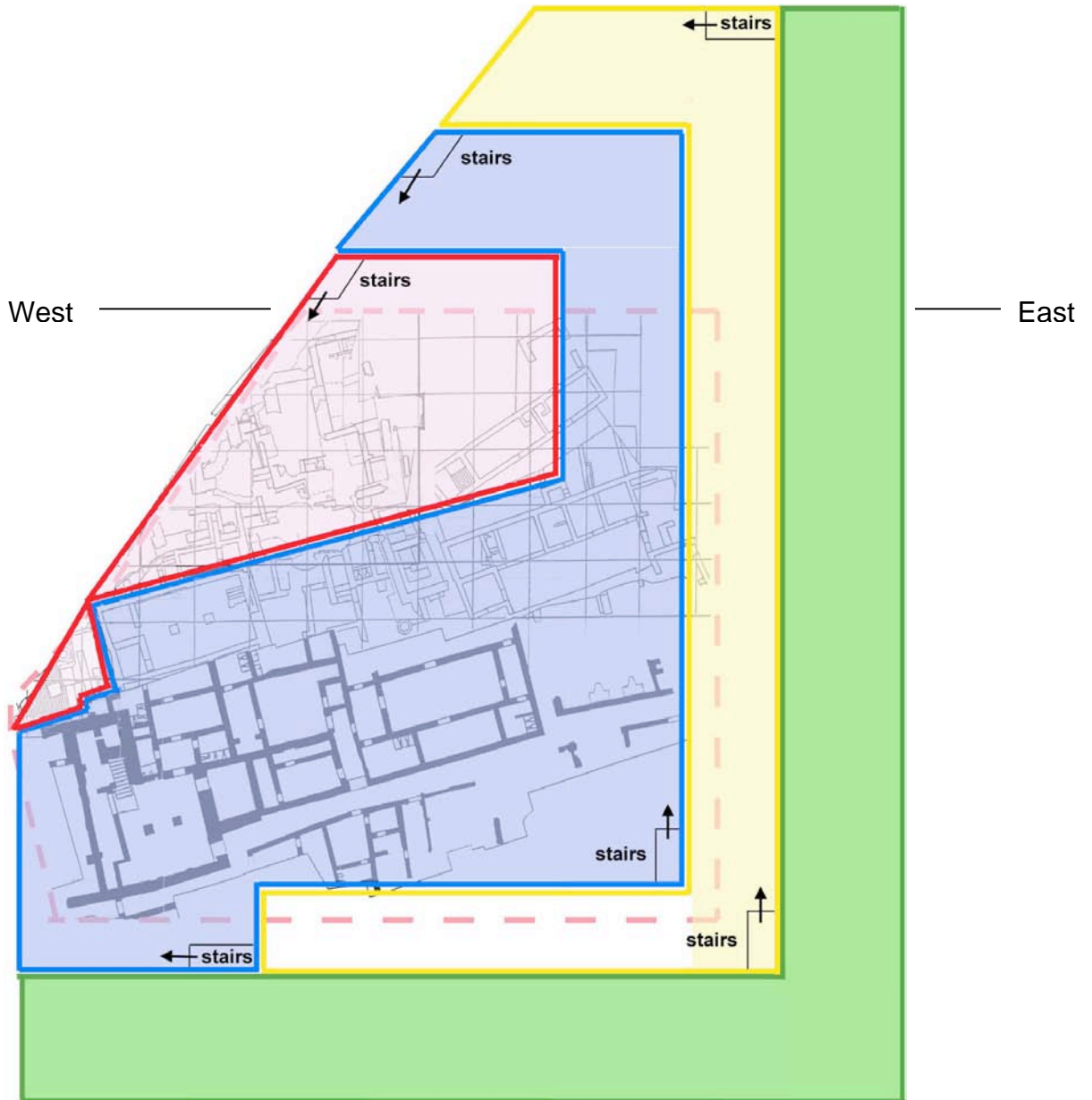
The only solution proposed at the moment by the Directorate of Archaeology is to progressively remove these sections and to create instead a succession of large steps, corresponding to the historical /architectural phases displayed (see *attached sketch-map*), and accessible through successive stairways. Such a project would present several positive points :

- to allow only low sections (not exceeding ca. 1.5 m in height), between each step, for a more easy maintenance ;
- to offer the possibility to expose, in a very pedagogical way, all the architectural phases revealed by the stratigraphy ;
- to provide easy access to the inner part of the Central Excavation Area.





QAL'AT AL-BAHRAIN, CENTRAL EXCAVATION AREA

PROPOSAL FOR FUTURE EXTENSION AND CONSERVATION OF VERTICAL SECTIONS

(Theoretical sketch-plan : the precise extension of each « period step » is not defined)



Theoretical West-East Section

- | | | | |
|---|-------------------------------|---|---|
|  | Islamic structures (14th-16th |  | Late Dilmun structures (1st millennium BC.) |
|  | Tylos (Hellenistic) |  | Early and Middle Dilmun structures (3rd and 2 nd millennium BC.) |

We are conscious that this solution does not totally resolve the problem, as vertical sections will still remain. Nevertheless their reduced height will allow various devices to protect and/or consolidate them. We suppose that this kind of problem has been raised in many other archaeological places (including some registered to the World Heritage), and the Directorate of Archaeology is willing to collaborate with the UNESCO on this precise aspect and is ready to accept any external expertise or advice.

In any case, this means of conservation could only be implemented **after the end of the diggings in this sector** (not planned before several years).

On the other hand, the problem raised by the very bad preservation of the Islamic structures situated at the top of the eastern part of the Central Area, will not be solved before the continuation of the diggings by the French Mission there in 2007-2008. In fact, if for scientific reasons a decision is made to privilege the comprehensive excavation of the underlying Kassite Palace (*see our note on the future archaeological projects*), the present remains will be removed.



*Islamic buildings from the 16th cent. AD. excavated in 1991-92
in the Central Excavation Area*

*The Directorate of Archaeology and Heritage,
Manama, Bahrain, 20th January 2005*

NOTE ON FUTURE EXCAVATION PLANS AT QAL'AT AL-BAHRAIN SITE

Even if Qal'at al-Bahrain site offers a splendid potential for archaeological excavations in terms of superficity and access facility to the sub-surface remains and construction structures, it is definitely not in the intentions of the Directorate of Archeology to carry on indefinitely the diggings at the site.

We are perfectly (conscient) conscious of the problems set by the necessary conservation of newly exposed remains, which must be carried out as soon as possible after the end of the diggings. More generally, we admit that plans for future excavations must be limited to a minimum.

At the same time, a balanced solution must be found, which should take into consideration :

(a) the duty of the Bahrain Kingdom to **rightly preserve the site for the coming generations** ;

(b) the **necessary needs of the worldwide community of professional archaeologists**, for which Qal'at al-Bahrain's unique stratigraphy in this part of the Near East is considered as **an essential reference source of material and chronological informations** ;

(c) **the wish of the Directorate of Archaeology to expose for local citizens and foreign visitors a representative and significative view of the various historical phases of the archaeological tell**. To limit the presentation of Qal'at al-Bahrain site only to the 14th-16th cent. AD main fortress (« Bahrain Fort ») which crowns the site would be an error, or a pity.

The future plans for appropriate new diggings have been discussed with the French Archaeological Mission in Bahrain which, in close collaboration with the Bahraini Directorate of Archaeology, is presently entrusted with a major excavation project at the site (« Central Area »). They consist of four main programs, of different importance and urgency, which are presented below. In addition, the feasibility of a general field survey of the site using non-intrusive geophysical techniques (as suggested during the ICOMOS evaluation visit in November 2004) was also discussed, and will be implemented before any new diggings at a virgin part of the tell (*see below*).

A — Present situation

No more excavation work is planned at Qal'at al-Bahrain site for the next two years, at the minimum. The French Archaeological Mission has expressed to our Directorate its wish to stop the diggings until 2007 (at the earliest) in order to publish the results of the 1989-2003 seasons of works¹. In the near and far future, the main efforts of our directorate will thus focus on the maintenance of the main fortress and on conservation work applied to existing excavation areas.

B — Projects

B1. Geophysical survey of the site.

The general extension of the archaeological remains at the site is broadly known by previous test soundings (carried out by the Danish Expedition from 1954 to 1970) as well as by previous field surveys by the French Archaeological Mission (1978-1988). The topography itself of the archaeological tell clearly reveals the limits of the ancient Qal'at al-Bahrain settlement, with the exception of its Northeastern side, partially affected by erosion, and where a garden prevents visual control. We nevertheless agree that a general geophysical survey of the tell, using adapted techniques, can provide us additional information, at least about the upper levels.

It must be recalled that a tentative electro-magnetic survey, was already tested at Qal'at al-Bahrain site (by Dr. Bruno Frølich, of the Smithsonian Institution, Washington), in the beginning of the eighties : this test did not yield significant results, apparently due to the huge amount of stone structures piled up in the stratigraphy².

Fortunately, such techniques have largely improved since that time. Dr. Pierre Lombard, present head of the French Archaeological Mission, has proposed to launch, probably at the end of 2006, a comprehensive survey of the whole site, using a cesium gradiometer, a much more up-to-date methodology, currently used in his archaeological department at Lyons University. (*cf. his letter annexed to this document*).

B2. New excavation projects

We must obviously wait for the results of this geophysical survey before planning new excavations. Nevertheless, the Directorate of Archaeology of Bahrain

¹ The results of the previous project carried out by the French Mission at the Coastal Fortress (« Islamic Fort » and its surroundings as well as at the Main Fortress (« Bahrain Fort »), will be published in the following months (2005). This monography, edited by Dr. Monik Kervran, former head of the French Mission, is entitled « *From Mercantile Cities to Fortified Outposts : Qal'at al-Bahrain from the Iron Age to the Portuguese Periods* », and is currently under printing in the collection *Indicopleustoi* of the editing company Brepols (Turnhout, Belgium).

² These results have been published as part of a general paper : FROHLICH (B.), LANCASTER (W.J.), 1986, « Electromagnetic surveying in current Middle Eastern archaeology. Application and evaluation », *Geophysics*, 51/7, pp. 1414-1425.

and the French Archaeological Mission have agreed on a minimum of 4 field operations to be carried out in the future at the site.

These 4 programs, planned in the near to far future are proposed as an answer to points (a), (b) and (c) mentioned above. Their exact location is indicated on the *annexed sketch-map of the site*.

According to us, the first two points have a necessary **priority** :

1) Complementary digs (and conservation) in the Central excavation area.

The northern sector of this area has not yet been totally excavated and is regularly threatened by the consequences of the annual rainfall, as it is situated on a particularly eroded slope, at the contact of the moat of the Main Fort. The important stratigraphy there must be studied imperatively in the coming years (*French Mission proposal : from 2007*)

In addition, one must recall that the sector at the eastern part of the area, presently displaying a poorly preserved islamic level, covers the remaining part of the Kassite palace where, between 1995 and 2003, the French Mission, discovered more than 100 cuneiform Akkadian tablets, which constitute part of the archives of this palace. These documents represent the southernmost evidence of the cuneiform writing in the ancient Near East, as well as one of the oldest Kassite archives ever found (dated ca. 1450 BC.). A next excavation of this sector, in order to complete the exploration of this important building and its rich epigraphical content appears as a real scientific necessity (*French Mission proposal : from 2007-2008*).

2) Final excavation and restoration of the keep (Main Fort)

The keep (« Captain Tower ») of the Main Fort is today the only element of this building which has been left unexcavated and unrestored up to now. This construction, which was the main dwelling-place inside the fortress, is preserved up to the second floor but represents a technical challenge for an appropriate digging. Discussions are in progress with the French Mission for a next intervention (*from 2008 ?*) on this structure, with immediate conservation solutions.

There is no present planning for the two last programs which follow. They appear **less urgent**, and should eventually be reconsidered in the light of the geophysical survey of the site :

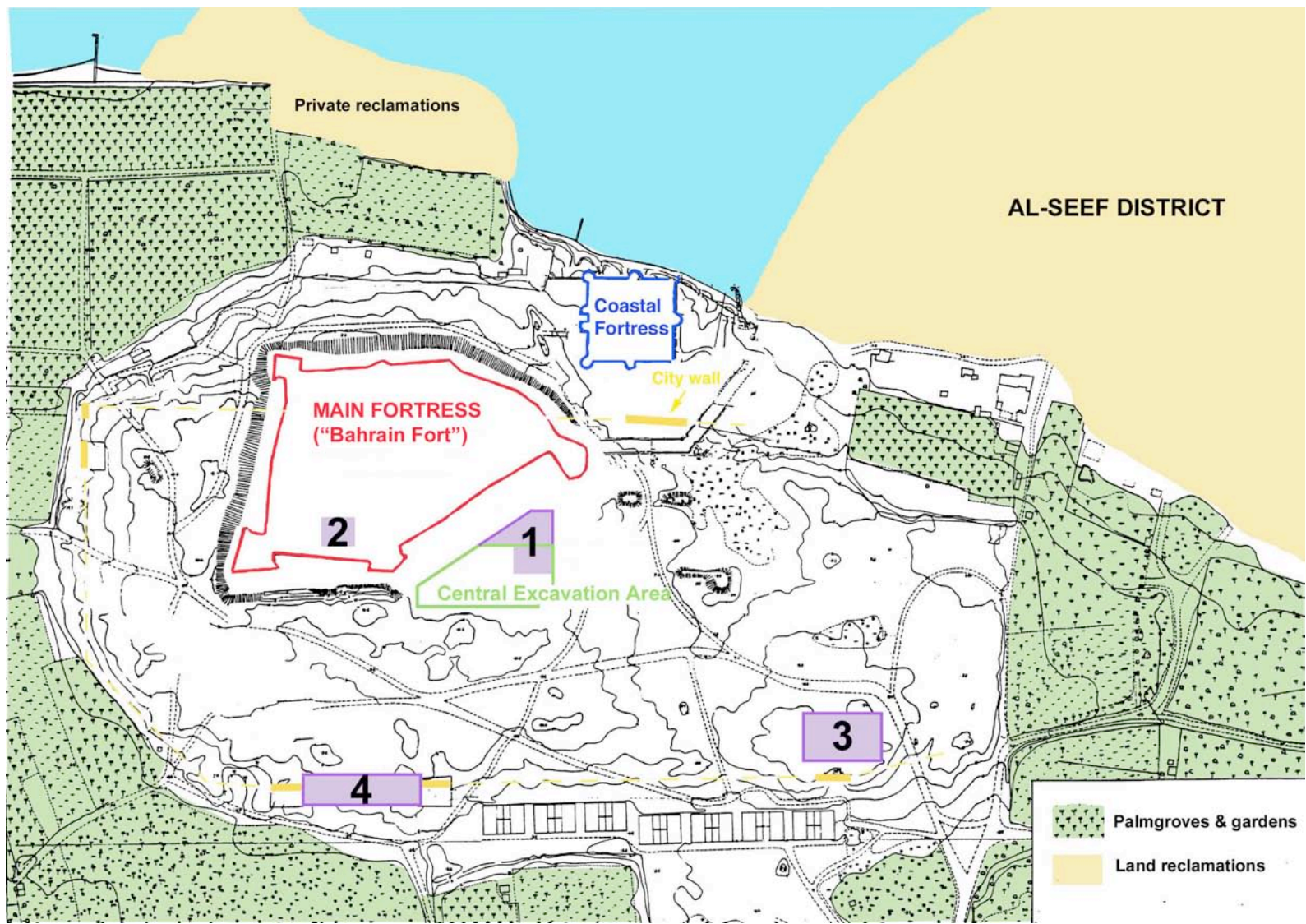
3) Excavation (and conservation) of a representative sector of the Islamic settlement (14th/15th cent. AD)

In this area at the South East of the tell, preliminary reconnaissance and observations revealed the existence of an apparently well preserved sector of the Islamic settlement of Qal'at al-Bahrain. The preservation of the structures there appears much better than in the Central Excavation Area. Due to the possible removal of the upper Islamic layer in the latter spot (*see above*), an excavation project there, limited to the clearing out of the Islamic structures (apparently including a mosque, according to surface observations) and their conservation could represent an opportunity to better display this phase to the visitors.

4) Excavation (and conservation) of a section of the South part of the Dilmun rampart

There is also the possibility, in this sector, to excavate a section of the Dilmun rampart, which, according to the previous Danish soundings there, seems in a rather good state of preservation. Bordering the Southern limit of the archaeological tell, such a major element of Qal'at al-Bahrain site could also be displayed in a very positive and pedagogical way.

*The Directorate of Archaeology & Heritage
Manama, Bahrain, 20th January 2005*



Future excavations in project :

- 1 — Central excavation area (complementary digging) (From 2007-2008)
- 2 — Keep of the Main Fortress (« Captain Tower ») (from 2008 ?)
- 3 — Islamic City (long-term)
- 4 — South Dilmun rampart (City wall) (long-term)

Plans for future archaeological excavations at the site of Qal'at al-Bahrain

FRENCH ARCHAEOLOGICAL MISSION TO BAHRAIN

To : Mr. Khaled AL-SINDI
Acting Director of Archaeology & Heritage
The Ministry of Information
National Museum,
Manama
Kingdom of Bahrain

Lyon, 6th January 2005

Dear Mr. Al-Sindi,

Regarding your recent concern about carrying out a comprehensive geo-physical survey at the Qal'at al-Bahrain site, I would like to express you the following :

- It was already in the projects of our archaeological team to propose such an investigation there. Up to now we have delayed this operation, in search for the most adapted techniques and people to implement them.

- I have the pleasure to announce you that I recently discussed at length this point with the specialist Qal'at al-Bahrain, we suggest to realize a geo-physical covering of the archaeological tell, using the Cesium gradiometer technology at first, eventually followed by the GPR (Ground Penetrating Radar) technique.

We dispose in Lyon of the tools as well as of the specialists for carrying out such a survey.

Due to an already busy planning, this project could be implemented at the end of 2006.

I remain at your disposal for any complementary information.

Yours sincerely,



Dr. Pierre LOMBARD
Director, French Archaeological Mission in Bahrain

NOTE ON MANAGEMENT PLAN AT QAL'AT AL-BAHRAIN SITE

ACHIEVED RESULTS, PLANS AND TIMING FOR IMPLEMENTATION

The proposed Management Plan contained in the Nomination Report submitted to the World Heritage Center in January 2004 is still in active preparation and a complete up-to-date version will be presented before the end of 2005 to the WHC, which will include some changes regarding the location of the main access gate to the site and, probably, the visitor car park, and the Site Museum.

In addition, the Directorate of Archaeology wishes to announce to ICOMOS and the WHC that, since the submission of our previous report, several steps were effectively completed during the period from October 2004 to January 2005. These are detailed below and several illustrations of the main aspects (including a provisional site development plan) are provided at the end of this note.

1 — Human means :

A first technical management team has been appointed to follow up and control the site, the organization of which comprises :

- Site supervisor (1)
- Renovation and Maintenance expert (1)
- Site attendants (2)

A private Security Agency has been entrusted with the security of the site.

2 — Main actions and constructions accomplished so far in 2004-2005 at the Qal'at al-Bahrain archaeological site :

- Improvement of the main access road from Manama, the capital, to the site, from the Northern Highway and the local southern road : edification of a roundabout near the main entrance, new signalisation for the archaeological site. In addition, a meeting with the Northern Governorate Administration, led to the decision to erect a symbolic monument on the Northern Highway, at the entrance of the access road to the site (ca. 1 km), and presently in the process of building.

- Complete fence around the limit of the proposed nominated site to secure it against vandalism. A main gate has been installed on the South-East edge. A secondary access, situated on the South-West, allows access for the private owners of the palmgrove situated between the North-West sector of the site and the sea. With this only exception, no visitors' cars or buses are presently allowed to enter the site and must use the outside parking (*see below*).

- Provisional parking lot (capacity : 150 cars), at the end of the access road and close to the Main Gate.

- Visitor pathway through the site and its main features. Alongside this pathway, guide signs and several information boards have been installed (introductory texts, pictures and explanation plans or maps).

- Other visitors' facilities :

- information office (temporarily located inside the Main Fort),
- edition of several brochures and maps for the visitors (bilingual Arabic & English brochure on the site, a special issue about Qal'at al-Bahrain published by the Bahrain Cultural Journal (Al-Taqafiya), a new book on the Portuguese influence by Dr. Fawziya Al-Jeeb, an Arabic/English CD on the history of the excavations at the site, special 2005 calendars and commemorative stamps, etc.),
- visitors toilets (at the main gate),
- wooden security barriers on the Northern and Western balconies of the Main Fort for visitor safety,
- small podium (built in the same material used for the restoration of the Main Fort) erected nearby the Coastal Fortress in order to enhance visitor viewing
- benches and traditional palm-leaf parasols in the sector close to the sea-side.

- Lighting installation : the site was provided with a good lighting system (Main Fort walls and inner courtyards) for visitors at night time and for cultural activities taking place inside it.

- In addition, a comprehensive cleaning of the site was realized which consisted of :

- Cleaning of the Northern coastal area,
- Removal of all temporary material stores, portable offices and barracks and provisional transfer at the exterior of the site, on the edge of the present car parks,
- Removal of all restoration or excavation detritus (rubble materials, refused sand heaps, etc.).
- Encouraging owners of neighbouring gardens to properly fence their properties.

3 — Additional projects and actions planned for 2005 :

- To develop the general lighting on the remaining sectors of the tell.
- To carry on the preparation of the Site Museum Project.
- To determine a special area for visitor's cafeteria and gift shop.
- To organize the participation of craftsmen from neighbouring villages to practice their professions and sell products to visitors at a special sector of the site.
- To produce additional booklets for visitors :
 - Special educational booklet for local school visitors,
 - 3 booklets, by a local artist, about the Dilmun Period influence on contemporary artists.

- To help the diffusion at the site's gift shop of existing or forthcoming publications by previous Danish, French or British teams on their archaeological work at Qal'at al-Bahrain or elsewhere in Bahrain (Saar Settlement, for example).

- To develop a general policy of translation into Arabic of the available non-Arabic works (generally English or French) about the site :

→ Translation of historical articles on the previous Danish and French archaeological excavations at the site (Danish *Kuml* magazine, Monik Kervran's *Bahrain in the 16th century: an impregnable island* - French/English book about the defensive aspects of Qal'at al-Bahrain, P.V. Glob's *Bahrain* Danish book, etc.).

- To develop coordination with the Ministry of Education and private schools to include information on Qal'at al-Bahrain site in the educational cursus, and to arrange special visits at the site.

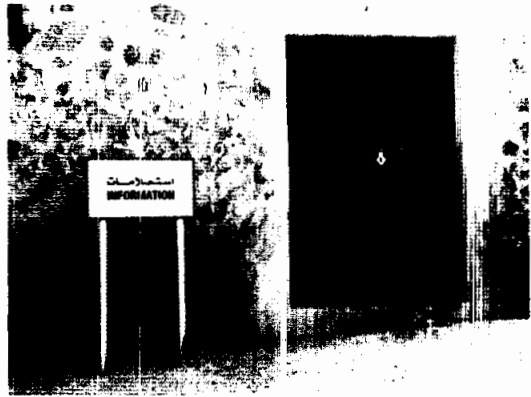
- To celebrate, notably at the Qal'at al-Bahrain site, the Golden Jubilee of the discovery of the Dilmun civilization (official visit and official opening of the restored Main Fort by H.H. Shaikh Hamad al-Khalifa, King of Bahrain, showing of an historical play, « The lands of the Kings ») [*this event was planned in November 2004 and was postponed due to UAE Shaikh Zayed's death and mourning*].

- Holding a temporary exhibition (at Bahrain National Museum) on the 50th anniversary of the Danish Archaeological Expedition, with special emphasis on the discovery of Qal'at al-Bahrain site, center of Bahrain's civilization. [*this exhibition was planned in November 2004 and was postponed due to UAE Shaikh Zayed's death and mourning*]

- Holding a local music concert, derived from the Danish Expedition's ethno-musical research in the fifties in Bahrain

- Preparation of an international symposium at the site.

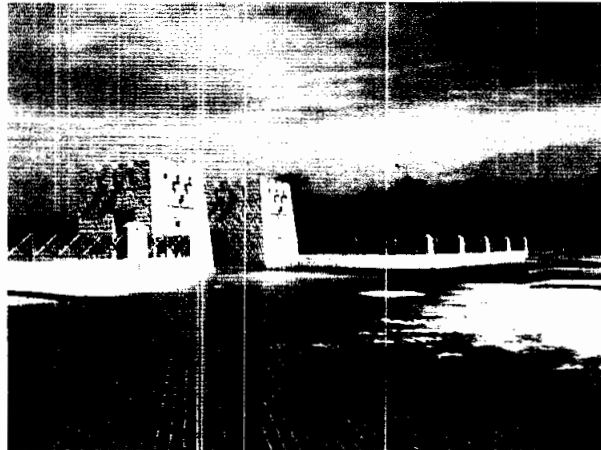
*The Directorate of Archaeology & Heritage,
Manama, The Kingdom of Bahrain,
20th January 2005*



Temporary information office, security attendant, and closed-circuit video surveillance system



Signalisation monument on Northern Highway



Main entrance gate at the South side of the site



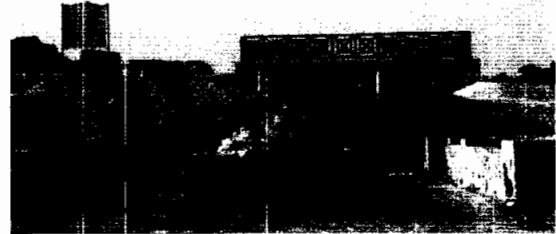
Roundabout in construction in front of the main gate, on the South side of the site



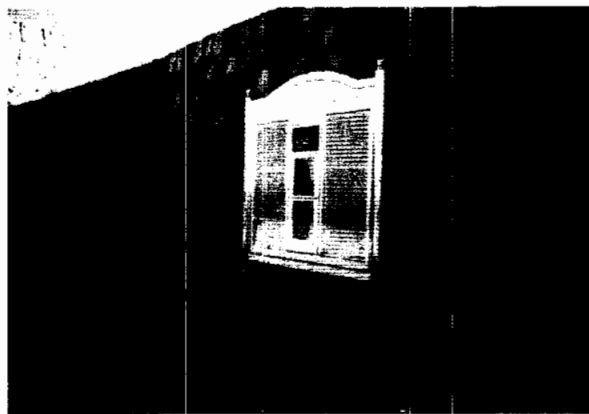
New parking, near the main entrance



Pedestrian pathway alongside the major features of Qal'at al-Bahrain site



Visitor podium overlooking the Coastal Fortress



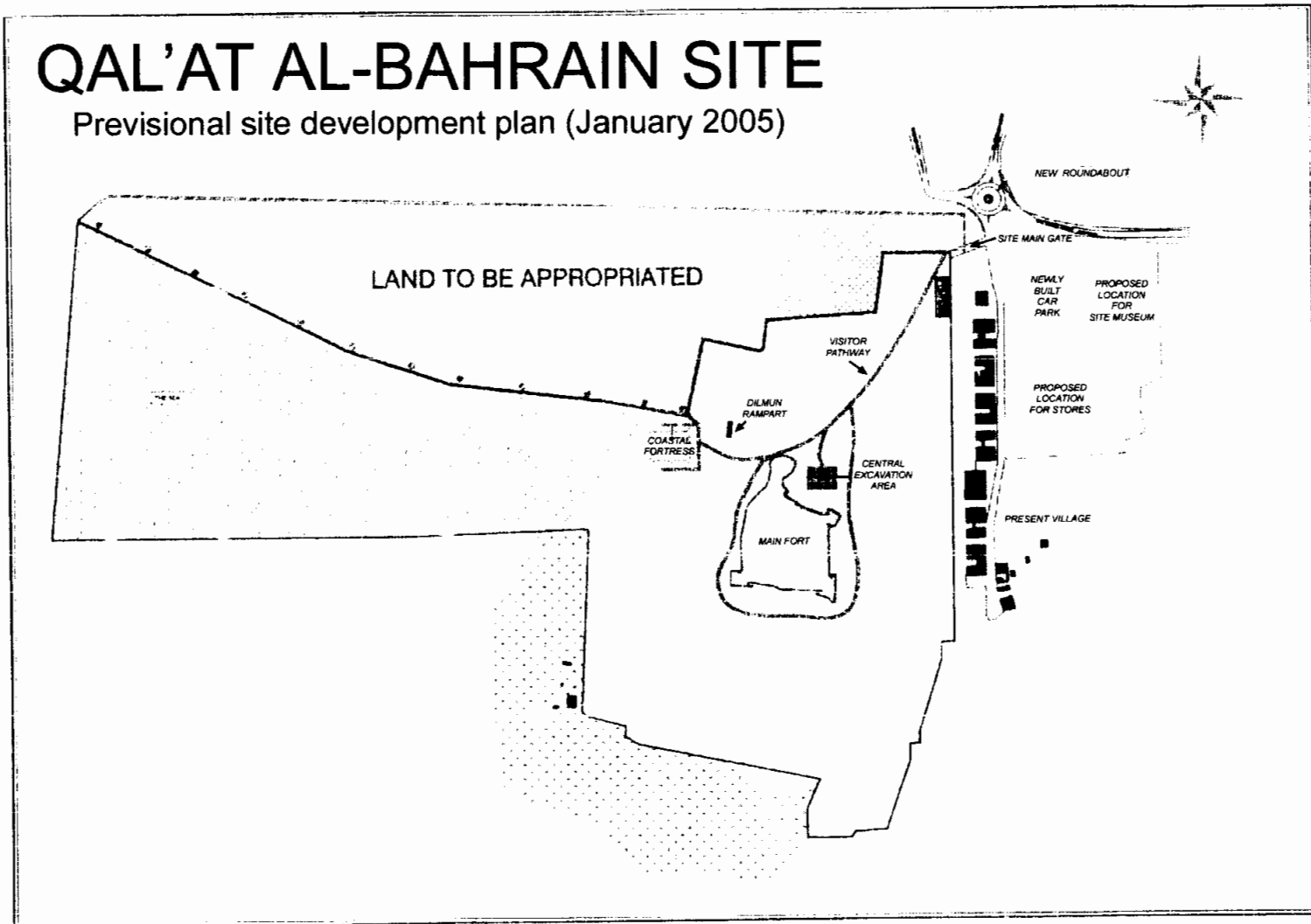
Information board placed alongside the visitor pathway



The Main Fort at Qal'at al-Bahrain illuminated at night

QAL'AT AL-BAHRAIN SITE

Previsional site development plan (January 2005)



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**CONSERVATION AND RESTORATION WORKS CARRIED OUT
 AT THE MAIN FORTRESS OF QAL'AT AL-BAHRAIN
 SINCE DELIVERY OF THE NOMINATION FILE
 TO THE *WORLD HERITAGE CENTRE (UNESCO)*
 (from January 2004 to January 2005 + previsual works for 2005)**

A — OPERATIONS ACHIEVED IN JANUARY 2005 :

These operations have required 30 labourers, as follows :

- 23 workers
- 7 masons

These labourers were divided into 7 groups, which have evolved according to the nature of the work which included the following tasks :

1. Completion of the excavation at the main entrance of the fortress ;
2. Continuation and completion of the last phase of the renovation ;
3. Organizing the main entrance of the fortress ;
4. Electric cable extension into all fort sectors for closed circuit video security system ;
5. Leveling the fort's floor and constructing rain drainage systems ;
6. Reconsidering earlier renovations at some places ;
7. Development of a tourist system for the fort ;
8. Lighting installation in all areas of the fort ;
9. Installation of doors to several rooms in the fort ;
10. Finishing touches

1. Completion of the excavation at the main entrance of the fortress :

- Proceeding with the excavation work at the main entrance at the Southern side, and renovating existing walls.

2. Continuation and completion of the last phase of the renovation

- These conservation works mainly consisted of :
 - . consolidating the existing vaults of the inner casemates of the bastions,
 - . rebuilding the fallen arches in the left access corridor to the courtyard of the fort.
 - . Renovating or partially rebuilding the South-Eastern section of the counterscarp wall (outside wall of the fortress moat).

3. Organising the main entrance of the fortress

- Due to the fact that the unique entrance to the fort exists at the Southern side and opens on a bridge, this bridge was rebuilt to resemble the latest stage of its

construction. This work was done using the comparative study of other existing contemporary fortresses in the Arabian Gulf and elsewhere. A wooden pathway was set up.

At the same time, the artificial access ramp built across the northern side of the fortress moat for the use of heavy equipment (trucks, bulldozers, etc.) was removed. The section of the outside wall that it covered was finely excavated and restored.

4. Electric wiring and closed circuit video surveillance cable extensions

This very technical job, which required special expertise, was carried out by a specialized company, after submitting a study in due course. Surveillance cameras were notably placed inside the bastions casemates, as well as in various strategic locations in the Main Fort.

All cables were imbedded inside the existing masonry, and new coatings were installed or restored.

5. Leveling the fort's floor and constructing rain drainage systems

Drainage systems were notably set up in the upper and lower courtyards of the fort ; following this operation, a general floor levelling was made at its current level ; all floors were covered with small-sized gravel, in order to prevent sand dispersion due to wind action ; it is planned to renew periodically this gravel covering.

6. Reconsidering earlier renovations at some places

Such work mainly consisted of new conservation applied to the sectors primarily restored at the beginning of the project (1988-1990).

7. Development of a tourist system for the fort

It notably consisted of installing wooden barriers alongside the tourist path. Information boards were also installed ; traditional benches will also be installed after a few months.

8. Lighting installation in all areas of the fort

After comprehensive installation of invisible electric cables in all sectors of the fort, a complete lighting system is presently in activity. It includes adapted projectors to illuminate both the outside and inside walls, as well as smaller wooden lanterns in the inner rooms.

9. Installation of doors to several rooms in the fort

Several wooden doors, similar to the ones used in the old traditional Bahraini houses have already been installed in two sectors (Southeast and Northwest bastions). Additional doors will be installed in the future at the entrance of the bastions casemates which will eventually house displays for visitors.

10. Finishing touches

Such a task, which concerns the whole structure, has just started at the end of 2004. In addition, this phase will also include several accurate engineering drawings and new plans of the restored Main Fort at the 1 :50 scale ; this up-to-date documentation is intended both for published documentation and for display in several rooms of the fort.

B — PREVISIONAL OPERATIONS IN 2005

1. Renovating the fort's bastions roofs.

This renovation, carried out, at the beginning of the restoration project about fifteen years ago, has to be redone urgently.

2. Cleaning of all of the fort's walls

Such work which consisted of removing salt as well as aeolian sand has always been systematically carried out, and will have to be programmed regularly.

3. Maintenance of the outer elevation fronts of the fort

This work includes regular interventions on a total of 850 m of walls. Materials will be the same as those used previously in the 1988-2002 renovation phase.

4. Completion of the cleaning of the surrounding moat of the fort, and associated slopes.

5. Additional conservation work to maintain the keep of the fort (« Captain Tower »).

One must recall that this building is the sole structure of the fortress which is not properly excavated at the moment, and which will require a specific expertise (project proposed for 2008, probably in collaboration with the French Archaeological Mission)

6. General maintenance in the inner parts of the Fort

It concerns : floor renovation, installation of additionnal traditionnal wooden doors. Beams made with palm-trees trunks have to be pest-controlled, and other traditionnal ones have to be renovated and painted with plant dye. In addition, electric and electronic security equipments will be regularly checked.

*The Directorate of Archaeology & Heritage,
Manama, The Kingdom of Bahrain,
20th January 2005*

31 JAN. 2005

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KINGDOM OF BAHRAIN
MINISTRY OF MUNICIPALITIES & AGRICULTURE
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مكتب وكيل

Ref: 44/42/05
Date: 30th January 2005

WHC REGISTRATION	
Date	31.01.05
Id N°	1192
Copy	1 Item 18

Mr. Mahmood Yousif Al-Mahmood
Undersecretary for Information,
Ministry of Information,
Kingdom of Bahrain

Your Excellency,

UNESCO WORLD HERITAGE LIST 2005:
NOMINATION OF QAL'AT AL-BAHRAIN

With reference to H.E. the Minister of information letter ref. no 2005/اص /وز /Km/3 dated 8th January 2005 regarding the comments submitted by the International Council on Monuments and Sites (ICOMOS) in December 2004 regarding Qal'at Al-Bahrain.

We would note the following observations and comments in reply:-

- 1) The proposed development of plots to the north of the site is currently being prepared by the private developers and we are in coordination with them. These sites are out with the 500-metre radius shown on the attached plans. We suggest that this Ministry should prepared a coordinated master plan for this entire area that will coordinate all developments and restrictions, including the proposed Museum etc. There is a scheme under review to locate the houses immediately to the south of the fort further away from the site thereby freeing more of the site from development, but this has to be further developed.
- 2) The existing Palm Groves that surround this site are on privately owned lands, in addition there are some reclaimed and we have indicated those which are within the 500-metre radius on the attached plan. From our studies of this site there is approximately 500,000 sq. m. in total. In addition there are also some plots in the sea, approximately 71,000 sq.m.

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and the budget required by the Ministry of Information to acquire all of these plots would be in the region of BD 45 million. We would be obliged if you could inform us if Your Ministry is planning to acquire these plots and we coordinate this matter with the concerned Municipal Council.

We note that ICOMOS refer to a management plan that has been prepared for this site; we would greatly appreciate if a copy can be forwarded for our information and records. We assure Your Excellency of our cooperation to complete this prestigious project and please do not hesitate to contact this office if Your Excellency requires any additional information.

Yours faithfully


Dr. Juma Ahmed Al-Kalbi
Undersecretary for Municipalities Affairs

Encl.

