



مملكة البحرين  
Kingdom of Bahrain

وزارة الثقافة  
Ministry of Culture

مكتب الوزير  
Minister's office

معي بنت محمد آل خليفة  
Mai bint Mohammed Al Khalifa

July 18, 2010  
2010/28/br/14

Mr. Francesco Bandarin  
ADG Culture, Director of the WHC  
UNESCO  
7 Place de Fontenoy  
75352 Paris 07 SP  
France

### Pearling, testimony of an Island Economy

Dear Francesco,

Thank you very much for your kind letter confirming the reception and completeness of the nomination "Pearling, Testimony of an Island Economy". As you state, it is a nomination for a cultural heritage serial site of 15 component sites, proposed for World Heritage inscription according to criteria (iii) and (v). Please note however, that we did not submit the proposal as a cultural landscape. While on the tentative list entry, we initially envisaged to submit the proposal as a cultural landscape, we later felt that the cultural landscape concept, as currently applied in the context of the World Heritage Convention, would not correspond well to the particular attributes and qualities of the site, and we agreed to submit it as a standard cultural nomination without cultural landscape designation. I thought that I should preferably clarify this matter at this early stage, given that also in document WHC10-34com-INF8B.3 the serial site appears as a cultural landscape. Should however the World Heritage Centre and the Advisory Body consider a cultural landscape attribution more appropriate, we would be pleased to reevaluate our previous considerations.

With regard to your request for clarification of the legend of map number 5, please allow me to add the following information. The buffer zone suggested consists of two different levels of protection intensity which are therefore defined as Primary Protection Zone and Secondary Protection Zone. Both zones together constitute the shared buffer zone of the 12 urban properties. Historic buildings within the buffer zone are specially marked to receive special attention in urban rehabilitation processes. Depending on their location in the primary or secondary protection zone, these historic buildings are referred to as Primary Protection Elements (on the map primary elements) and Secondary Protection Elements (on the map secondary elements). These buildings constitute part of the buffer zone. The management mechanism for the buffer zone is further described on pages 60-62 of the management plan.

DR. WHO  
21.07.10  
ARR  
PSC  
(9811)



Should you have any further questions or requests for additional information related to the "Pearling, Testimony of an Island Economy, please do not hesitate to contact me anytime. I am looking forward to meet you again in Brasilia next week. Until then, please accept my very best wishes and regards,

Mai bint Mohamed Al Khalifa  
(Minister of Culture)

## **Pearling, Testimony of an Island Economy**

Response to additional information requested regarding conservation of structures.

07 November 2010

### Introduction

The site administration unit (SAU) has set out preliminary outlines to all conservation works for each nominated property. These are mentioned in *Chapter 3, site analysis and actions plans*, of the management plan, where each site's specific **conservation policy** is described.

The development of the conservation approach for each property was delegated to several conservation consultants and the conservation interventions are today in different phases of advancement. The following report provides specific information on each project, the consultants involved, the materials used and the documentation process. It is structured as follows:

- i. Involved consultants
- ii. Brief on approach and degree of intervention for each property
- iii. Materials
- iv. Documentation and recording

Appendices: related documents per property and involved consultants cvs

## **I. Involved consultants:**

To develop a detailed conservation scheme for each property, the SAUs approach was to include several conservation consultants in order to have a wide range of expertise and to stress on interdisciplinary approach. Based on the conservation strategy's principles and "code of conduct", each consultant's **scope of work** was defined as follows:

### **1. Preliminary studies**

- a. Site history and architecture
- b. Global survey , including precise drawings
- c. Structural survey and material analysis
- d. Mapping of pathologies

### **2. Specification of emergency interventions for risk prevention**

### **3. General guidelines and proposal for intervention**

- a. Proposal for architectural intervention according to international standards and to the property's history and value.
- b. Proposal for structural intervention

### **4. Technical assistance during implementation**

- a. Complete structural intervention project
- b. Complete description of methodology of intervention related with the identified pathologies
- c. Site supervision

### **5. Document the works and compile the implementation brief, or *Final Conservation Report* that will be regarded as a testimony of the work done.**

### **6. On site training**

During all the steps of the conservation process training sessions, as to increase the knowledge of the professionals working on the rehabilitation market in Bahrain, must be provided

The training sessions cover:

- a. - General methodology of conservation applied on site.
- b. - Global survey on site
- c. - Analyzing the pathologies
- d. - Masonry work (injections, cracking, etc)
- e. - Plastering and gypsum elements
- f. - Joinery and ironwork.

The following teams started conservation studies on the nominated properties:

**K+ M Architecture and Partners**, developed a conservation project for the Nukhidha house and emergency consolidation for 'amarat Ali Rashid Fakhro I (included in CD)

Conservation architect, Dr. **Alaa el Habashi and partners**, developed a conservation project for the Siyadi shops (bloc B), and will be responsible for Siyadi Majlis, al Jalahma House and Bu Mahir fort, on which preliminary conservation reports have been made.(included on CD).Within the capacity building initiative, Dr Alaa has started the training of two new recruited architects, in conservation principles and site supervision.

An expert team headed by **Ecole d'Avignon, centre de formation à la rehabilitation du patrimoine architectural**, working on Alawi House, Badr Ghulum House and Fakhro House. The team has made a survey of the three buildings (draft included on CD), the emergency interventions and proposals are in preparation.

Furthermore, the annexed CD includes the reports of the archeological excavations conducted by a team from Oxford-Brookes, headed by **Dr Robert Carter**, on the 'amarat Yousif A. Fakhro, and the Bu Mahir fort.

Architectural consultants involved are AGID consultants, and Basmaji and Bielinska architects.

The CVs and references of the involved consultants are included in annex to this document and on the annexed CD.

## **II. Brief on approach and degree of intervention for each property:**

The following is a site per site brief on interventions, with references to the consultants' reports and proposals.(the properties' numbering follows the one used in the nomination file):

### **4b.Qal'at Bu Mahir**

- Archeological excavation: Oxford Brookes Conservation: based on the archeological survey and historical information, mainly provided by Dr Abdallah Sulaiti's<sup>1</sup> extensive research on the fort site, Dr. Alaa el Fig 1 is a sketch indicating the different areas and types of intervention, as indicated, the discovered archeological remains are to be preserved and exposed, the rebuilt part is to be conserved following Dr Alaa's report, no perennial constructions are to be made on the beach between the two boundaries defining the fort's historical visual corridor, therefore the visitor centre will be built beyond these lines.

### **6.Badr Ghulum and Turabi Houses**

The global survey phase for Badr Ghulum House was completed by the **Ecole d'Avignon** team (*ref annex CD, folder 06.Badr Ghulum House, for the survey report*) Based on the compiled historical information available from the completed research phase, basic intervention schemes for both Badr Ghulum and Turabi Houses are previewed,(see fig 2 -5). These have to be confirmed and detailed by the consultants' reports.

As specified in the conservation policy for the Badr Ghulum House, the courtyard will be cleared from all recent additions (after the 1950's) which hamper its spatial experience; the staircase will be relocated to its former location, and a pond mentioned by the family will be reconstructed. Great attention is also to be given to the trees which have a sentimental value to the family, and will be preserved.

All original fabric indicated in light ochre will be subject to preservation and restoration of its architectural elements. The house's adaptation (addition of services) will also be a matter of great attention for the SAU, to ensure that it will not affect the original fabric in anyway and be of a reversible nature.

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<sup>1</sup> Dr Sulaiti is currently the director of Archeology and National heritage at the Ministry of Culture of the Kingdom of Bahrain, he holds a PHD from the University of Portsmouth.



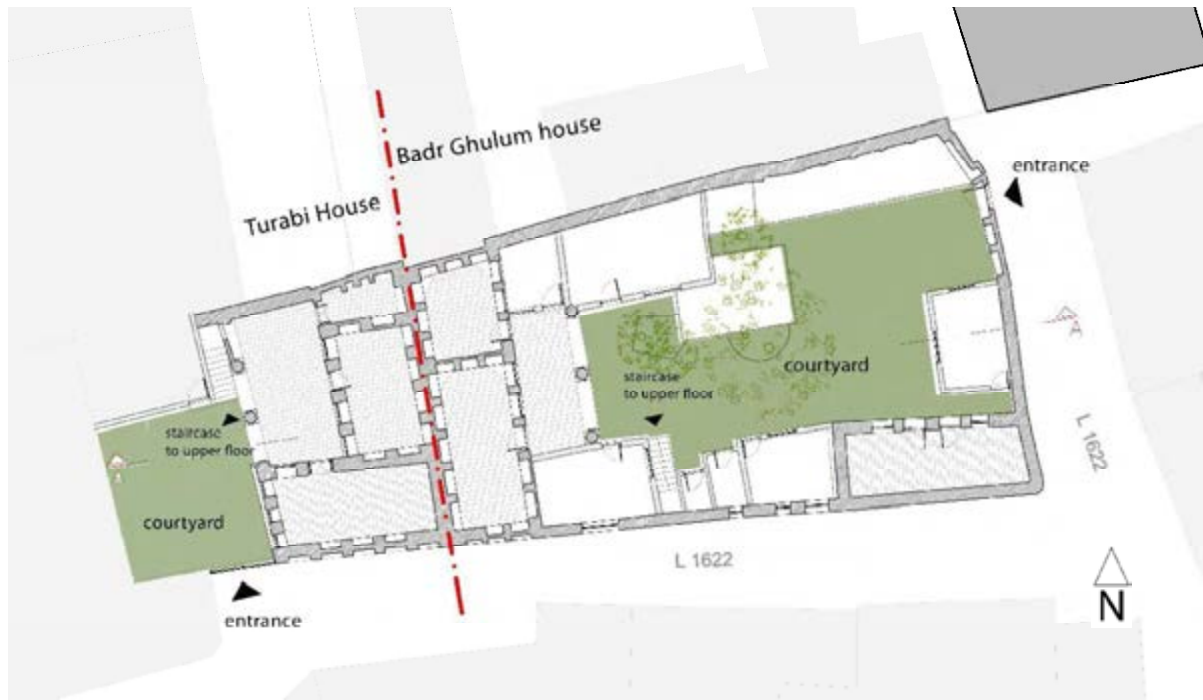


Fig 2 Existing ground floor



Fig 3 Existing first floor

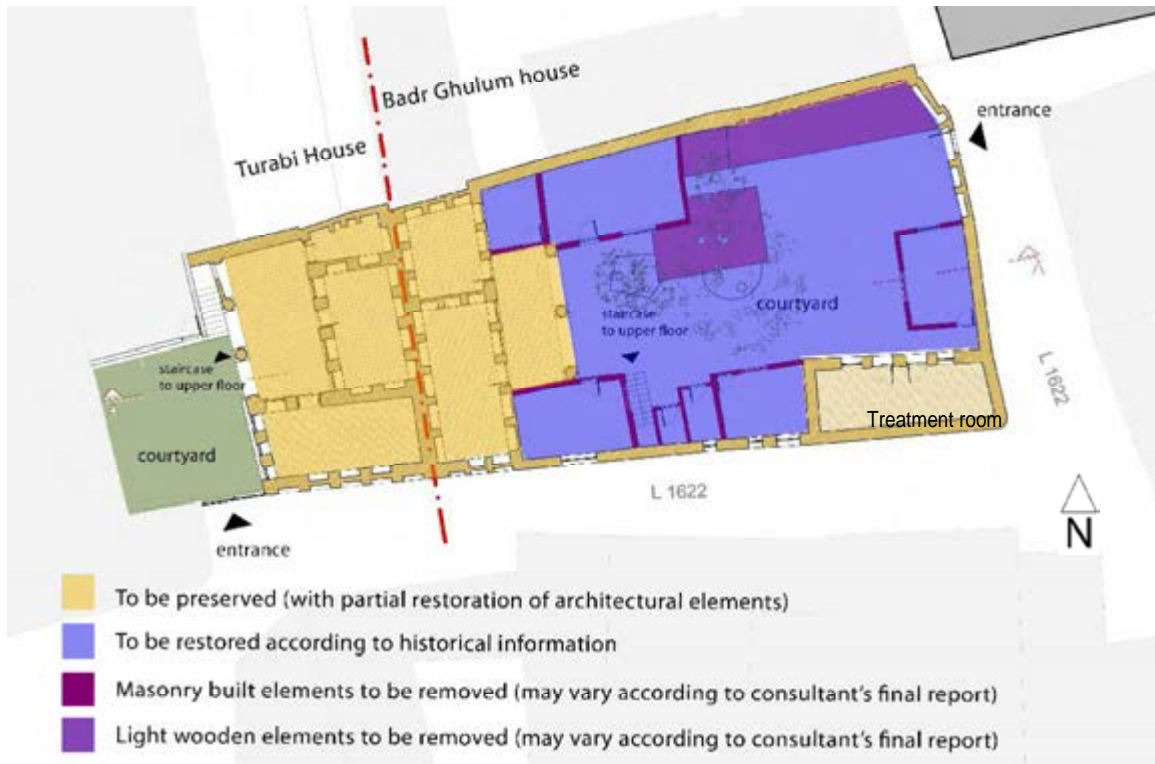
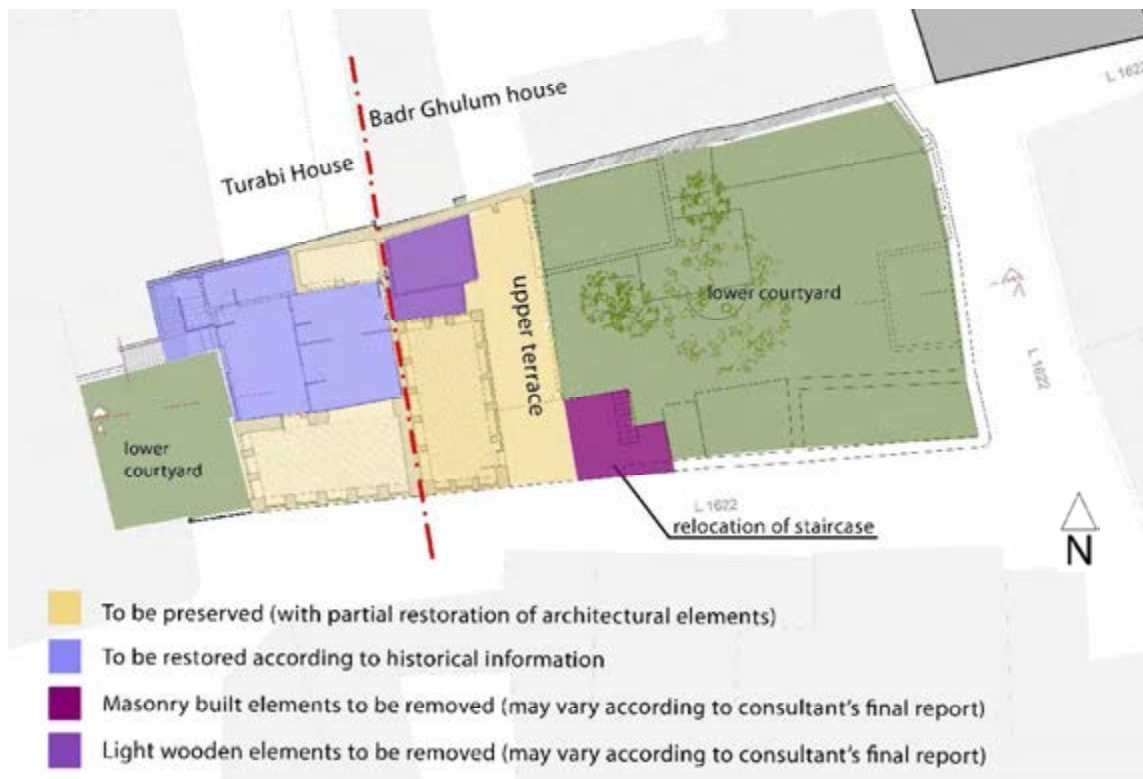


Fig 4 Interventions (ground floor)

Fig 5 interventions (1<sup>st</sup> floor)





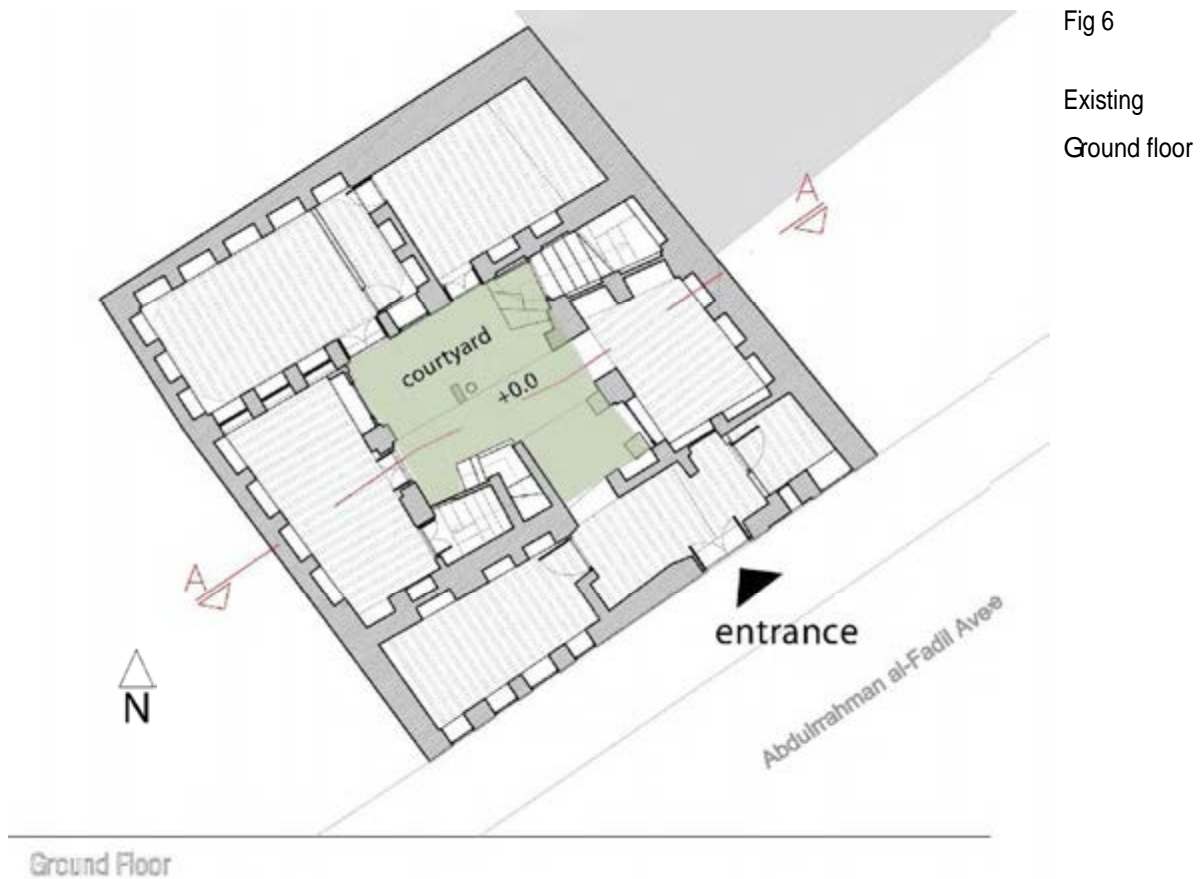
### 7. Al Jalahma House

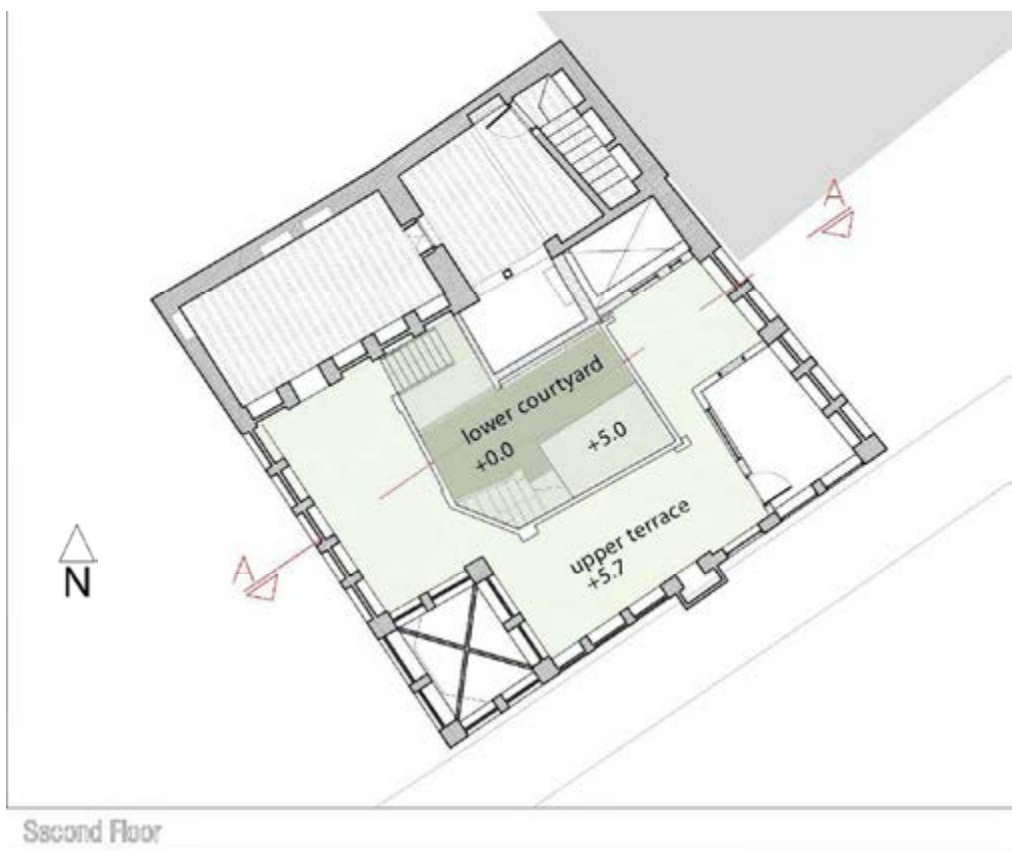
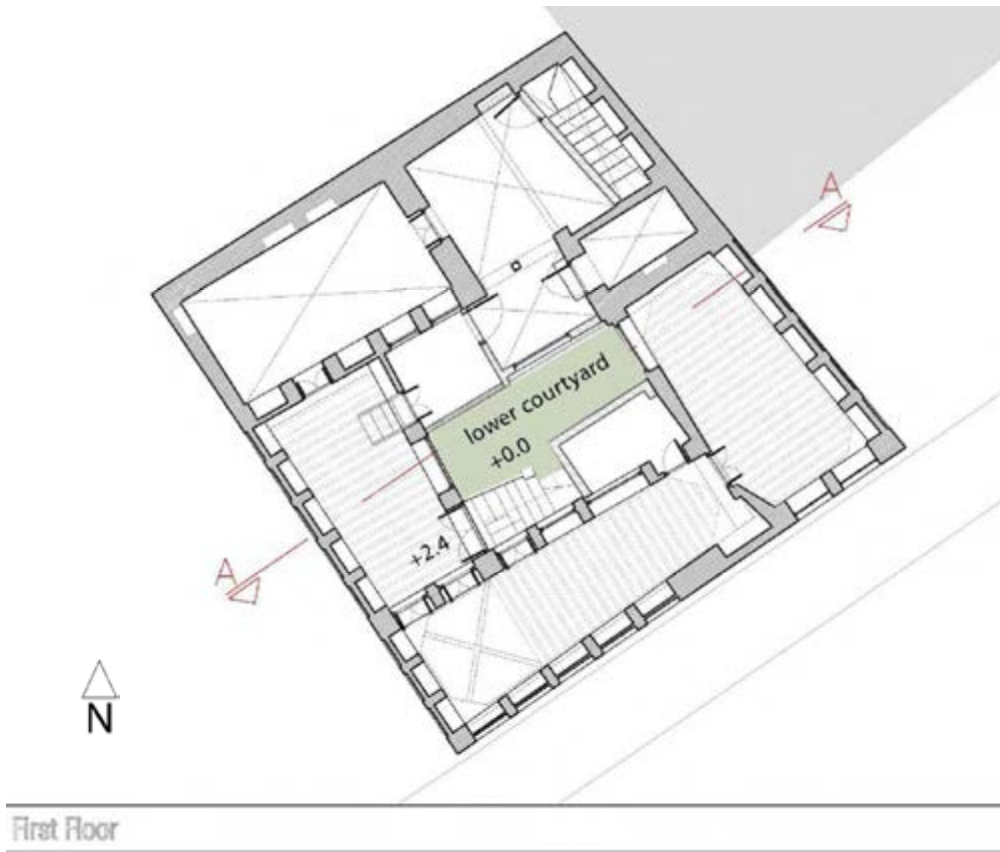
A preliminary conservation report was prepared by Dr Alaa el Habashi (ref annex CD folder 7. Al Jalahma house, which will have to be completed and detailed once a detailed survey and further research are conducted.

### 8. Al Alawi House

The global survey phase for al Alawi House was completed by the **Ecole d'Avignon** team (ref annex CD, folder 08. Alawi House, for the survey report). Based on the compiled historical information available from the completed research phase, a basic approach was established, (see fig 6 -11). It has to be confirmed and detailed by the consultants' reports.

As specified in the management plan, the conservation works on the Alawi House mainly consist on removing the contemporary additions on the courtyard to restore its former space. Other works concern preservation and restoration of the original fabric and its adaptation in later stages.





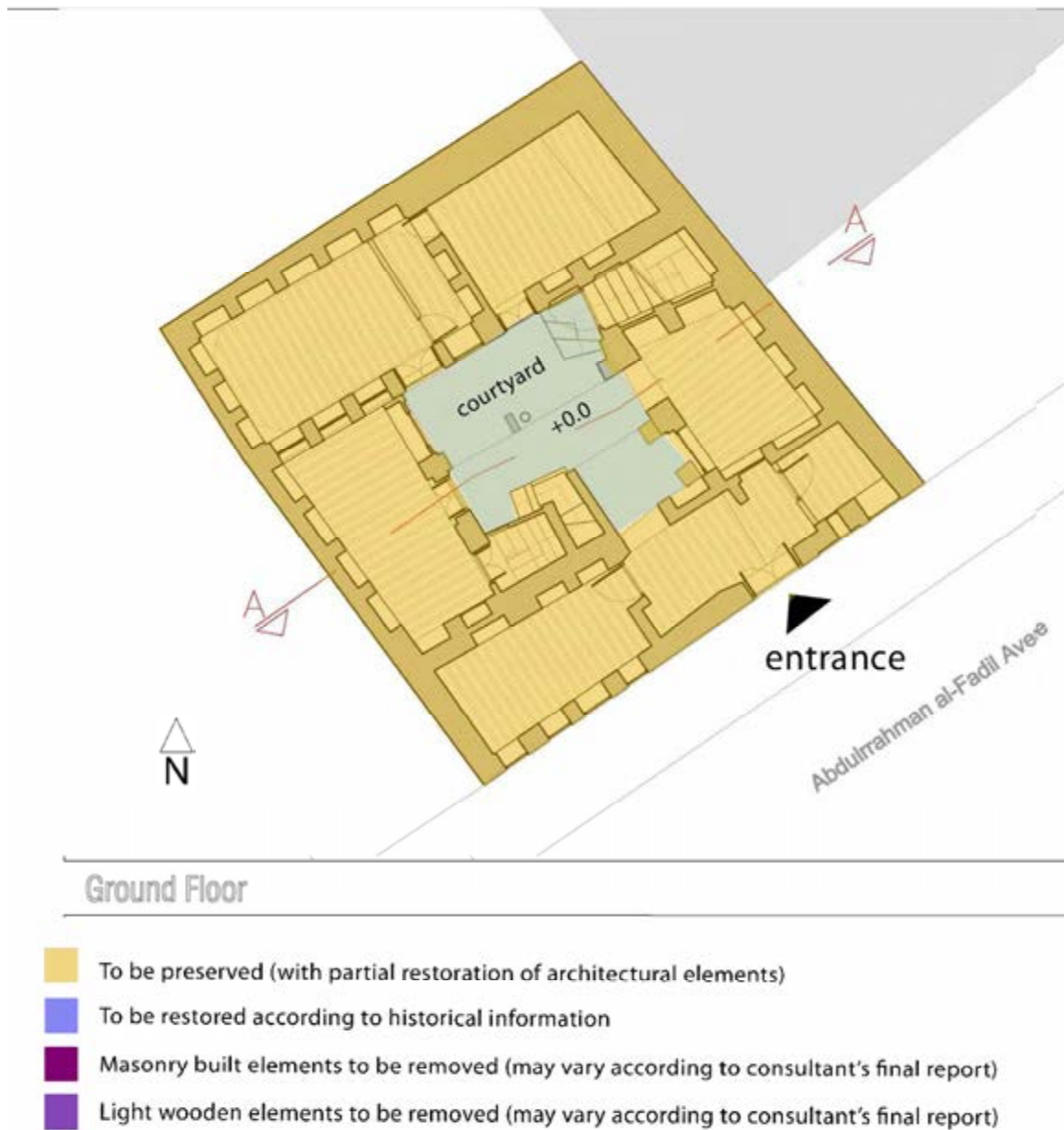


Fig 9 Intervention, Ground floor

Fig 10

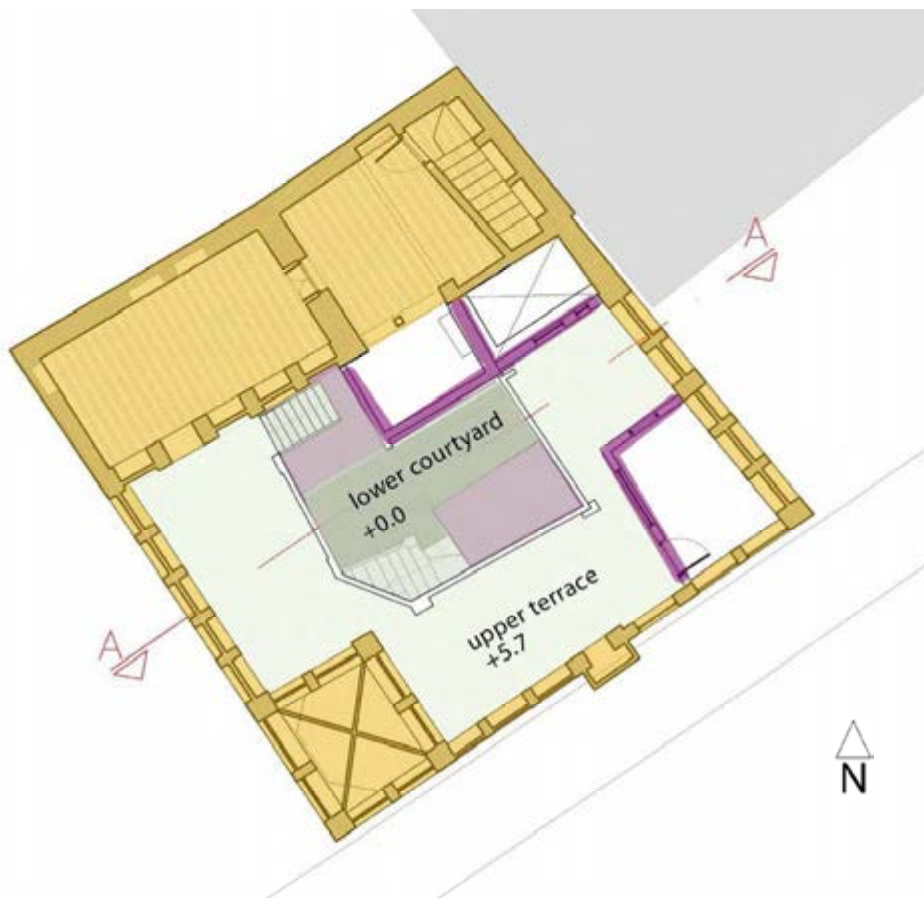
Intervention  
First floor



First Floor

Fig 11

Intervention  
Second floor



Second Floor

## **9.Fakhro House**

The global survey phase for the Fakhro House was completed by the **Ecole d'Avignon** team (*ref annex CD, folder 09.Fakhro House, for the survey report*). Based on negotiations with the owners on the use of the house and the first assessment of the house's state of conservation, a basic approach is defined as follows: (see fig 12)

The Fakhro family fund is planning to create a family majlis and community centre in Parts A and B, no approved proposals exist yet, Part B is currently being excavated by the Ministry of Culture to uncover the remains of the former western wing of the house, some of these remains will be kept for exhibit within the new majlis project. The majlis itself along with its services is previewed to take only 40 to 50 per cent of the site's area, the rest being treated as a landscape. The Fakhro family fund agreed on involving the Ministry of Culture in all decisions regarding the design of the majlis. The SAU is, therefore putting forward the design conditions for this new building, which mainly consist on reinstating the former spatial experience of the western wing based on the archeological finds. This spatial reconstitution will mainly take into account dimensions, heights and proportions of the former building, while restricting the architectural language to a sober, modern expression.

The sea majlis in Part A, to the east is also to be preserved and integrated into the new facility.

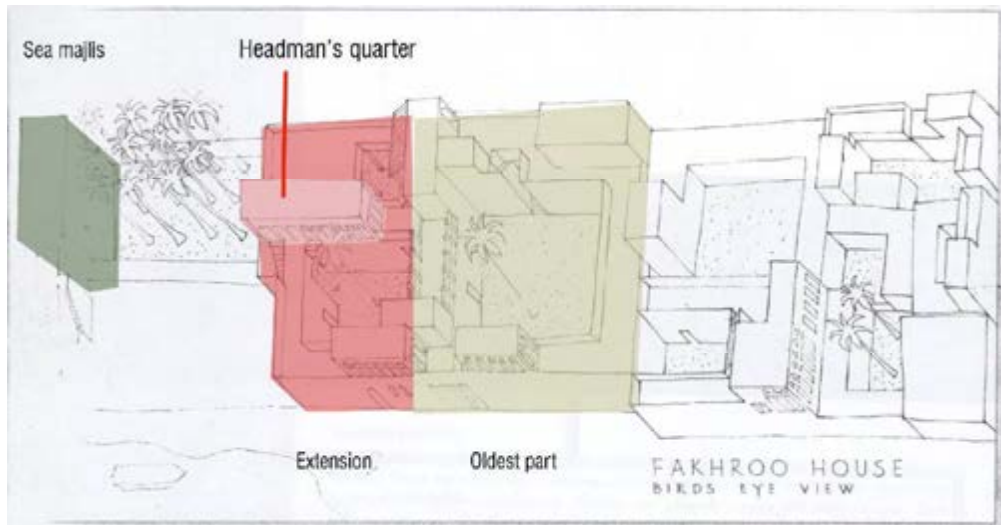
Part C was the subject of Ecole d'Avignon's survey, to be preserved with restoration of its architectural elements, it will host the family's exhibition and an art gallery. No particular proposal or scheme for its adaptation is there yet.

Part D is currently inhabited by a member of the family, and went through some contemporary additions to be adapted to modern living standards; however the traditional fabric still exists and will be subject to a restoration process following historical evidence found. The renovated part of the southern elevation will be part of the current restoration project. However the restoration of the interior fabric is rather a long term project.



Fig 12





### 10. Murad House

In response to the owners' request, a proposal was drafted for the development of Murad House into a guesthouse, prior to any conservation report. The proposal made by a local architectural consultant (AGID) is based on the research made on the house's history and interviews of the elderly family members. (rf annex CD folder 10 Murad House). **The design will have to be adapted to the conservation expert's report**, especially for the adaptation of the western and south wings, which conserved most of their original fabric.

AGID consultants presented a first proposal which was reviewed by the SAU and modified by the consultant accordingly; the latest proposal (included in the CD) mentions these corrections in its last pages. It should be noted that the changes are not deemed completely satisfactory yet, as will be explained below.

The proposal focuses on the restoration of the courtyard space, removing the contemporary additions, and reinstating the original courtyard level and elements that used to exist there (mainly the water pond). The liwan of the eastern wing is preserved as part of the courtyard. However the organization of the water pond and trees is still to be reviewed. An archeological investigation is needed to find the location of the old pond, and the original position of the trees could be preserved.

As mentioned above, preservation and restoration works mainly concern the southern and western wings, the cement block partitions are removed and rooms are reconstituted according to the original divisions. Corrections are made to bring back the original space functions, like closing the access to Mohamad's room from the dehleez which previously affected the role of the dehleez as privacy keeper. A staircase is also reconstructed at its original position. On the upper floor, the south western room is conserved, while another "ghurfa" is added on the south eastern corner, where only a light wooden structure used to exist. This is acceptable as part of the natural process

of evolution of this type of houses, which used to “grow” with room additions on the terraces. However this addition should clearly be differentiated as such in the developed design stage, especially from its external façade.

Of the four house wings, the Northern holds the least original fabric, the intervention aims at rebuilding some of the walls at their original location, and recreating the original secondary entrance. Other added spaces, although not originally existing, complete the form of the building and enhance the spatial feeling of the courtyard. Their contemporary character will be expressed through the use of new materials, although some attributes like the wall thickness and the overall façade organization will be borrowed from the traditional architecture to give the building a feeling of wholeness. In this regard, the proposed elevation seems too “textual” in mimicking the old fabric. It can lead to confusion for the visitor; it also doesn't take much into consideration the original shape of this part of the house, and the resulting courtyard shape. Therefore it was advised that the consultant reviews this part of the design, and an alternative solution is currently being sought for.

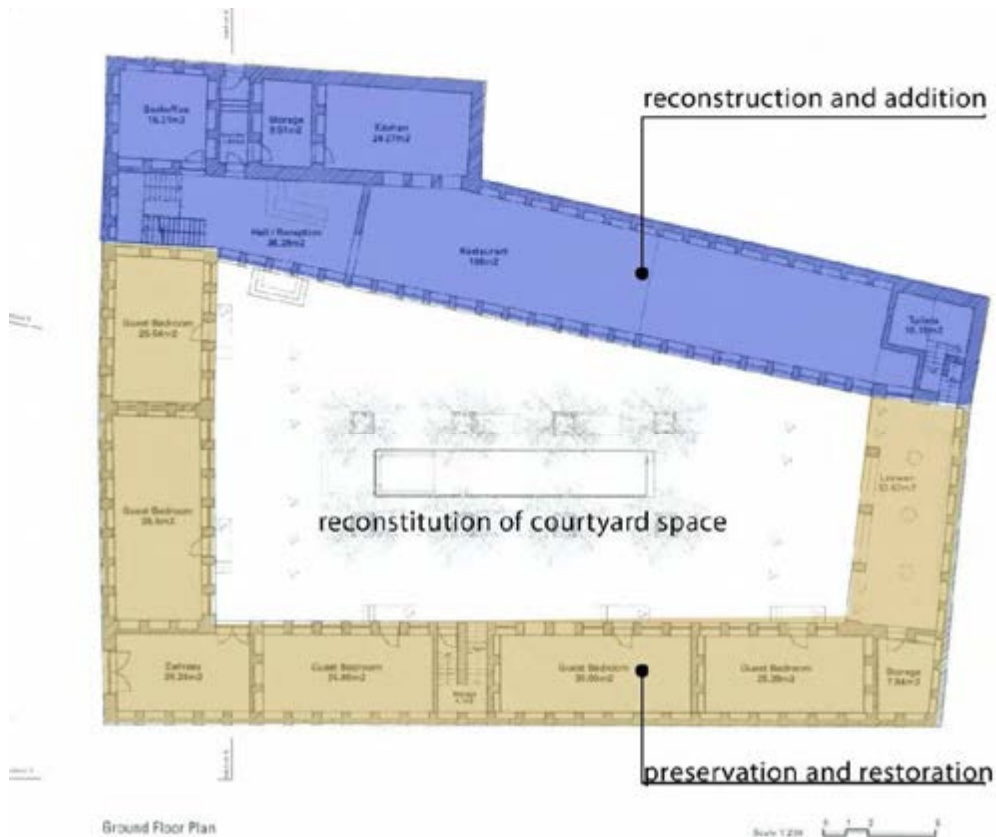


Fig 13

The proposal also included the interior design of one of the rooms, where the focus was on the preservation of the aspect of the walls by regrouping the furniture in the centre of the room, and keeping the use of the spaces as it was (the wash room is in the same location as the original one. This approach was deemed sensible enough.

## **12.Siyadi shops**

The conservation of the Siyadi shops is inscribed within the wider scope of the conservation of Suq al Qaysariya, the oldest suq in Muharraq, (see fig 14). Dr Alaa el Habashi is the conservation consultant in charge of developing a scheme for the whole suq.

The guidelines set out by Dr el Habashi for the project are as follows:

- The Qaysariyya is not just one building, but an ensemble of historic urban fabric and remains of its various types of units. The preservation of al-Qaysariyya shall be developed as a part of a master plan for the development of the historic market area of Muharraq, in which interesting pockets, among which al-Qaysariyya, are identified.
- The conservation of al-Qaysariyya shall respect urban, legal, economic, and built fabric existing parameters, integrating them in a coherent representation.
- The conservation of al-Qaysariyya shall encounter at its fundamental bases the conservation of not only all the existing historic fabric, but also all the existing property lines.
- The 1990's 'amarat that were built in al-Qaysariyya are considered to be part of an important phase of the historic development of the area, and thus, need to be integrated in the preservation scheme.
- The conservation of al-Qaysariyya shall be based on the principles that we are not dealing with one building, but a series of different properties that are assembled around a traditional market street, which developed in a linear shape.
- The 'amarat were arranged in long blocks parallel to the seashore and in a comb-like profile, while, to the eastern side of the main al Tujar avenue, shops were arranged in parallel to the seashore. The al-Qaysariyya suq followed the second type of spaces, which are linear development parallel to the shoreline. The two types were at one point closely related. Historic accounts do not hint on any possibility to have gates to control the accessibility into al-Qaysariyya.
- The preservation of al-Qaysariyya shall conform to the international conservation charters, which stress that "additions can be allowed if they do not detract from the interesting parts of the building, its traditional setting, the balance of its composition and its relation with its surroundings."(Venice Charter, 1964)
- It is important to conduct focused archaeology to confirm the existence of the historic city wall. If remains of such wall are discovered, they could be revealed if their conditions permit it, and incorporated in an urban design scheme of the market.

The restoration of the eastern complex of the Siyadi shops is the first phase of this scheme, and is today in an advanced stage of design.

The approach for the six shops which constitute the Siyadi shops' eastern wing was to preserve their use and develop the southern open area shops to integrate a small coffee shop and sitting area. These functions were included based on the need for contemporary shoppers (who mainly consist of local families) to have a place to rest within the suq.

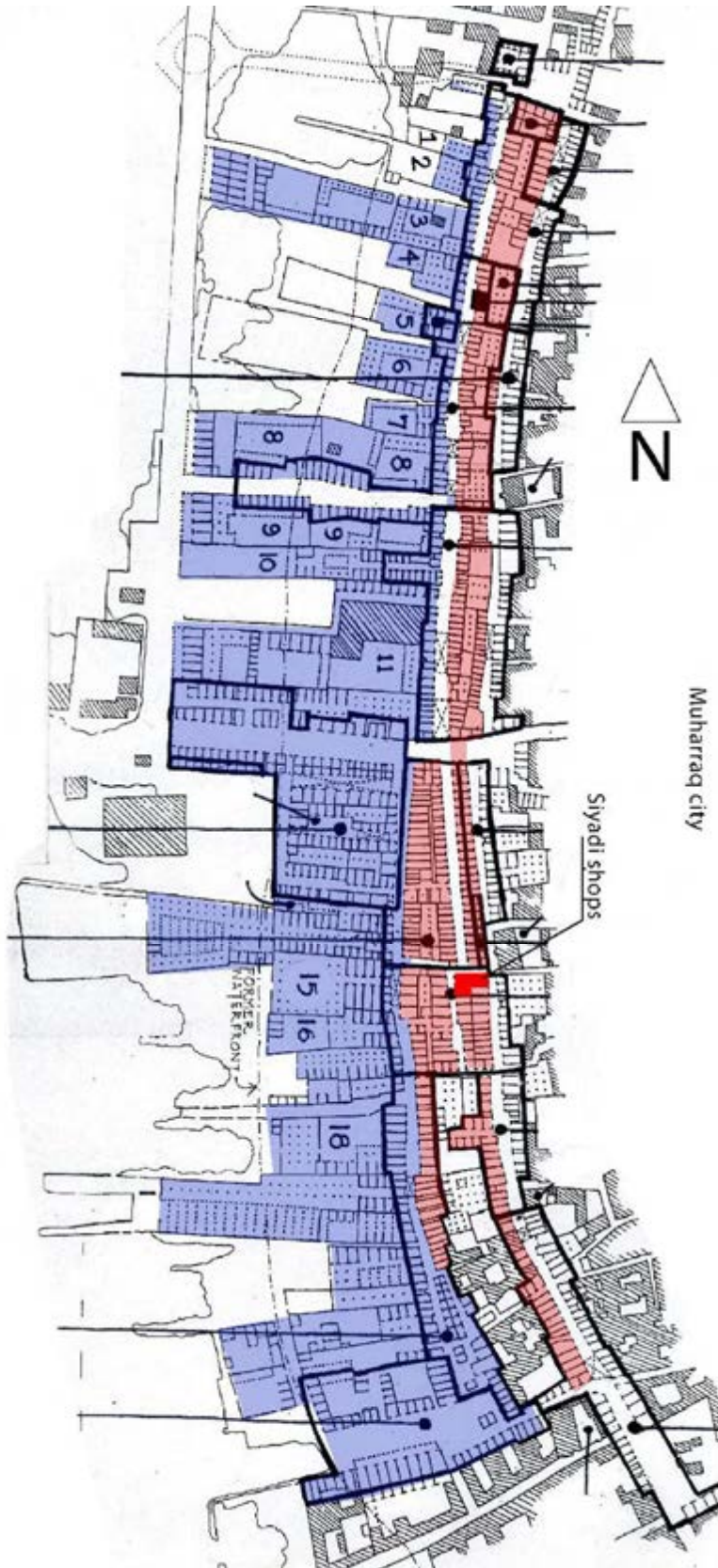
The full detailed drawings of the conservation project are included on the CD (**rf folder 12.Siyadi Shops**)



Fig 14

The Muharraq suq,  
with indication of  
the two types of  
urban fabric

Original sketch by  
John Yarwood





In general, mainly preservation work is to be made on the shops themselves, only the south western shop which is currently in a ruinous state is adapted and extended to host the coffee shop. The intervention on the existing elevations is minimal besides the closing of the western access of the north western shop which was deemed to be made during a relatively recent transformation. The ceiling of the western shop is also partly removed and elevated to integrate a/c ducts as shown in the detailed sections, the beams are preserved to attest of the original height and composition of the ceiling. Glass is introduced above the original walls, affecting them in a minimal way, and creating a clear contemporary contrast, between the extension and the original part. Introduction of air conditioning into the preserved shops is not planned; it's left to the shop owners to decide on that, for that purpose provisional inlets are encountered on the top of the back wall of each shop, that can be connected to an eventual compressor that would be installed on the roof of the new constructed part.

The new extension occupies, in mass, the location of formerly existing shops along Bu Maher Avenue, two of which have been excavated during a recent archeological investigation. Some of the uncovered parts are exposed in the coffee shop with glass flooring. The new elevation reconstitutes the feel of the street by following the property lines and recreating the same rhythm and proportions, this was based on photographic evidence from the 1970's.



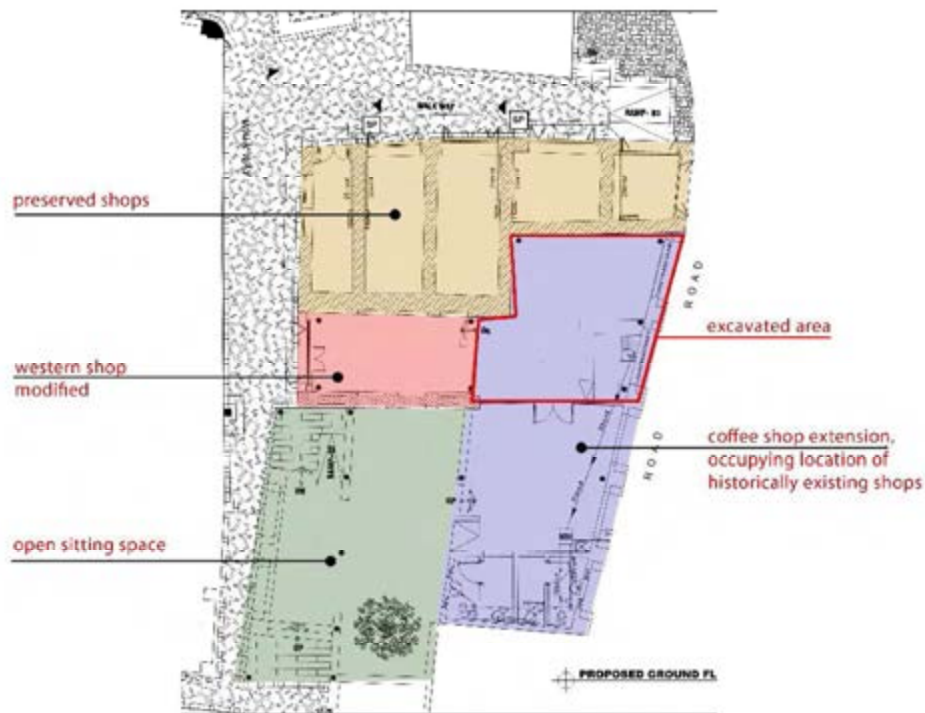
The open sitting space is bordered by a separating structure on its western side, to "close" the space from the street side. This is needed to comply with the urban design principles, where streets have to be delimited by solid walls to preserve the spatial experience of the historical streets. This is also confirmed by old aerial views and the maps of the property title deeds.

Early 1970's photo showing the north eastern corner of the shops

The new additions are differentiated as contemporary through their materials and detailing (window shapes and arrangement) while complying with the basic shapes and proportions in terms of massing.

The western complex of the Siyadi shops being in a relatively good state of conservation and maintaining its original function hasn't been subject to a conservation project yet.

Fig 15

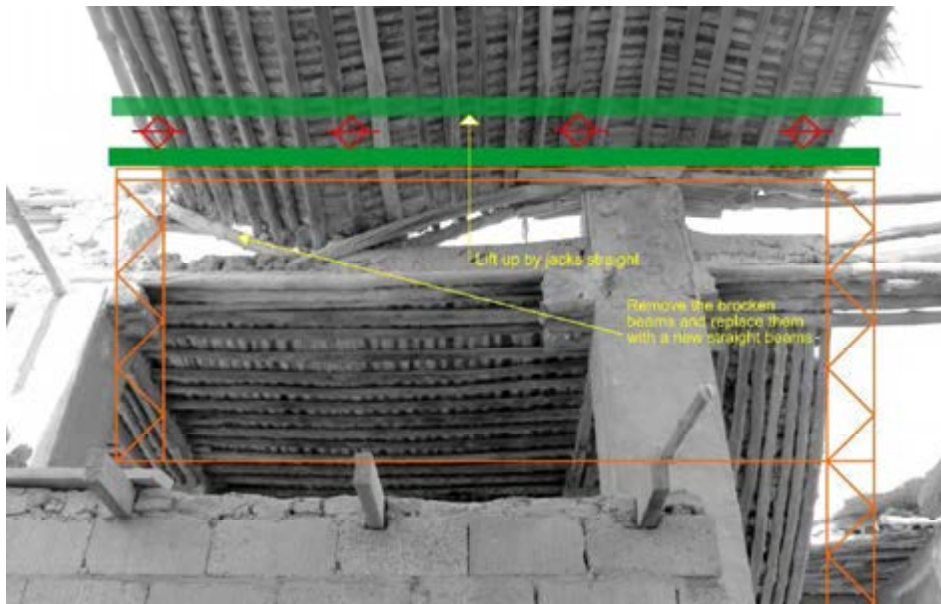


### 13a. 'Amarat Yousif Abdurrahman Fakhro

- Archeology: the full archeological report prepared by a team from Oxford-Brookes, is included in the CD (rf folder 13a 'amarat Yousif A. Fakhro).
- Conservation: Dr Marwan Basmaji and Dr Kamila Bielinska are the architects in charge of developing the visitor centre as described in the site's specific policy in Chapter 3 of the management plan. A developed proposal is currently being prepared. It will greatly take into consideration the extent of the archeological finds.

### 13b. 'Amarat Ali Rashid Fakhro I

Due to the decaying state of some parts of this structure, K+M have proposed emergency measures to consolidate some parts of it (see below photo), and material samples have been tested to identify the proper mortar for these measures. (rf annex CD, folder 13b.Amarat Ali Rashid Fakhro)



On the other hand, the basic conservation approach can be defined as follows: (see fig 16)

The use of the 'amarah shops is to be preserved and the middle passage space cleared from contemporary additions to reinstate its spatial quality, the coffee shop shall be therefore relocated, but its use and type of clientele (mainly Bahraini locals) preserved. The exact location of the coffee shop is a matter of an architect's design but should bring as little alteration to the existing 'amarat's fabric as possible. Partial reconstruction based on historical accounts could occur, which will mainly consist of rebuilding the ceiling of the middle passage and the pillars that were replaced by the coffee shops. Since no commercial activity will take place in the middle passage itself, the plan is to keep it open and to concentrate adaptation works on the shops, which can have alternative accesses from the passage side. The 'amarah street elevations will be restored to its former appearance based on historical photographs.

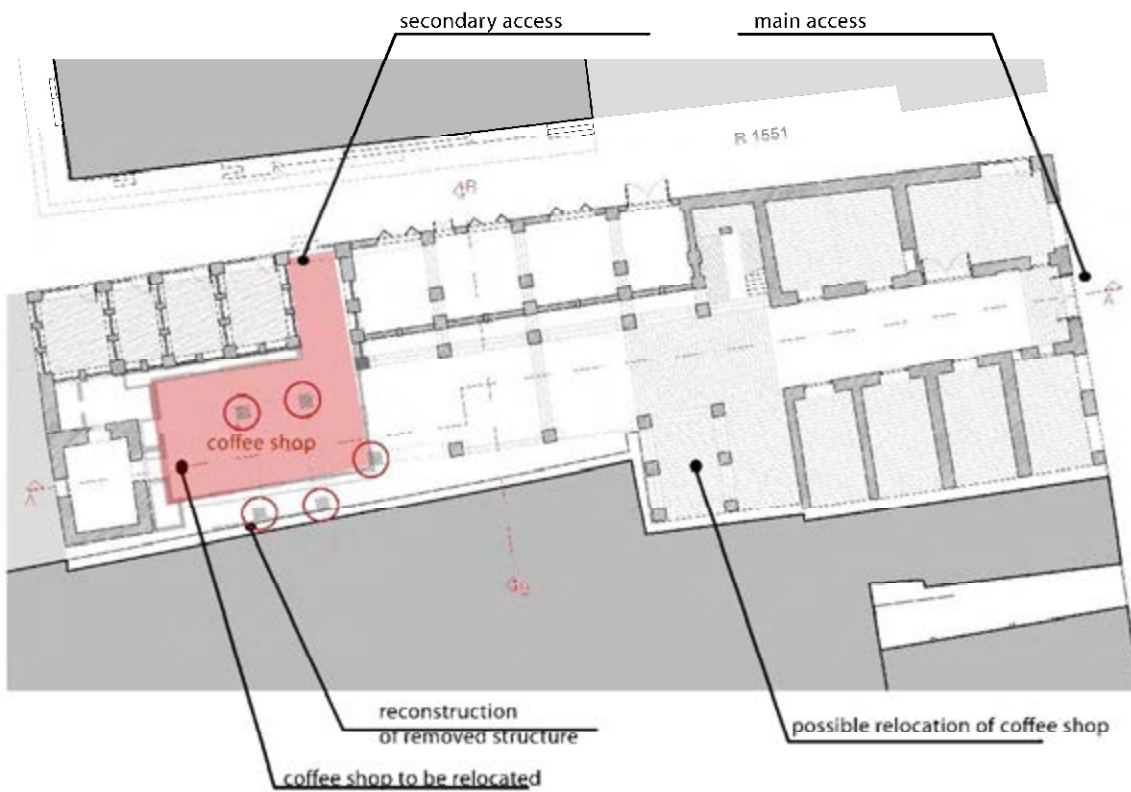


Fig 16

#### 14. Nukhidha House

K+ M architecture and partners presented a conservation report for the Nukhidha House (if annex CD folder 14. Nukhidha House).

The intervention focuses on removal of contemporary additions and preservation of the original fabric. An adaptation into an exhibition space is also proposed as a preliminary concept.

### **15b Siyadi Majlis**

Dr Alaa el Habashi presented a conservation report for the Siyadi Majlis in 2007 which was recently updated (rf annex CD, folder 15b Siyadi Majlis), a task schedule, room by room survey and photographic survey are also included in the folder.

Recently, the adaptation of the majlis into a pearl museum is no longer considered; the majlis will only be subject to a restoration. The pearl museum will be located on a nearby plot indicated on the below figure:



Fig 14



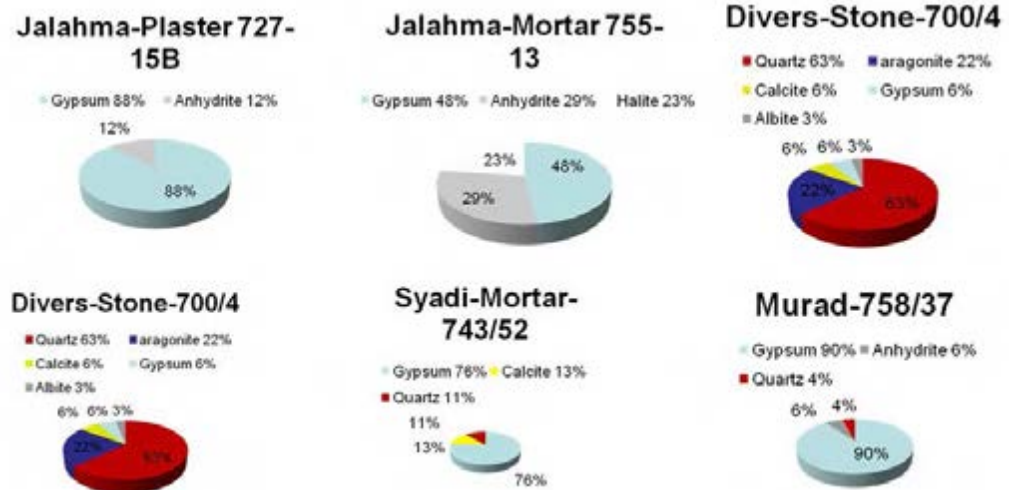
### III. Materials

The conservation department of the Ministry of Culture, mainly specialized in the restoration of archeological sites, initiated a series of tests to identify the composition of the different layers of materials used on the properties.

99 samples of mortar, plaster and coral stone are analyzed using X Ray Diffraction and petrography. They were selected from all nominated properties. The final results will help to create the compatible type of materials and mixes for the different restorations.

One important finding is the consistent existence of Gypsum along with lime in traditional mortar mixes, both in plastering and construction.

Further analysis on types of wood and proposals on techniques and details to be used are awaited from the conservation consultants.



### IV. Documentation and recording

Documentation is considered as an important procedure that shall be integrated in all the phases of the conservation projects. The SAU of the Ministry of Culture conducts its own documentation of the existing condition as an initial step to write project proposals and the scope of work for potential consultants. The Ministry has acquired basic measuring tools, and cameras that would allow it to conduct such tasks.

The documentation process is part of the requirements set to the conservation consultant and detailed on a case by case basis, in order to assure that the buildings, their details and contexts are regularly and periodically covered during the interventions. The level of accuracy and the frequency needed for the documentation are agreed upon for every project, between the Ministry of Culture and the appointed consultants. The Ministry's conservation team shall revise the produced documentation and endorse it prior to its approval and to its uploading in the Ministry's database.

In general, the documentation process sought for in the Pearling Testimony includes the following three categories:

1) Architectural survey of the building includes the plans of various levels, sections to relate all the levels together, internal and external elevations, and details of assemblage structural elements and decorative features. The architectural survey shall indicate the property line of the building in subject and those of the surrounding properties. If available, existing infrastructure in the vicinity of the building shall be recorded. The architectural documentation is an essential tool to indicate the locations of the interventions. After the completion of the conservation project, a final set of drawings shall be produced to detail all the as-executed works. This set of drawings would then be the basis for further documentation during the operational phase of the building. The Ministry of Culture role continues to check and revise periodically the documentation process.

2) Photographic documentation includes the coverage of the historic building with all its details in order to document texture and colors and the correlation between the elements, aspects that are difficult to be recorded accurately in drawings. In some cases where motions of intervention are of interest, e.g. dismantling and rebuilding, filming are sought as means for documentation. A focus shall always be driven to the sections and details of the buildings which would be subject for alteration during planned interventions. Periodical photographs are also indicated to document the processes of intervention guaranteeing that all information related to our prospective interventions are saved and handed to future generations.

3) In addition to the architectural and photographic documentation, periodical written reports are specified to document the aspects that visual materials are difficult to cover, e.g. ratio of mixes, names of personnel involved, sequence and phasing, the rationales of approaches and others, the criticism and merits and others. The reports shall also explain the architectural and photographic

documentations. Those reports are revised and endorsed by the Ministry of Culture before they are processed to publications, if they are final reports, recorded in the Ministry's database.