

**REPORT ON THE JOINT WORLD HERITAGE CENTRE / ICOMOS / ICCROM
REACTIVE MONITORING MISSION**

TO

BAHLA FORT (OMAN)

6th – 10th March 2017



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We would also like to thank the team that contributed to the production of the “Report and Clarifications on WH Committee Decision: 40 COM 7B.26”, as well as its presentation at the meeting on the 7th of March 2017. The document has been annexed to this Mission Report, as Annex 7.7.

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The mission team recognizes and values the efforts accomplished for the significance and conservation of Bahla Fort in Oman.

EXECUTIVE SUMMARY AND LIST OF RECOMMENDATIONS

The mission team acknowledges efforts made by the State Party to address the World Heritage Committee Decision (40 COM 7B.26) regarding the finalisation of the Management Plan, and the development of proposals for a minor boundary modification to the buffer zone, and the documentation of conservation and management actions; and also notes progress with studies for the protection of Bahla Fort; the Bahla market (*souq*) restoration; the Sabah Salem Gate intervention; and the intervention in the Mausoleum of Shaikh Bin Baraka and the Alkhair mosque.

Nevertheless, following the 2010 retrospective Statement of Outstanding Universal Value (OUV) of the property, recommended interventions and issues have not yet been accomplished. The desired state of conservation for Bahla Fort property has not been achieved. The rapid growth of new construction with modern materials in the World Heritage property is of major concern. If it continues, the property risks losing its attributes of Outstanding Universal Value.

The State Party has also made efforts to improve the management and legal status of the property in recent years. The State Party has been requested to submit the final updated Management Plan, which was in progress at the time of the mission, to the World Heritage Centre. The State Party has also indicated that they are improving the legal framework and will deposit the updated legal process and protection measures of the site within the context of the newly updated Management Plan. The mission experts did not have access to the Management Plan at the time of the mission, but were informed by the State Party representatives that the Management Plan from 2010 had been updated. In March 2017, at the time of the mission, the Management Plan was going through internal administrative procedures for evaluation of its concordance with existing policy and laws and for eventual endorsement by the national parliament.

The State Party has been dealing with strong development and construction issues throughout the past decades, and is well aware of the potential threats to the site. The property faces threats due to the encroachment of concrete construction spreading throughout the property and from the abandonment of vernacular buildings in traditional settlements (the *harats*). From the three *harats* that surround the fortress, two have lost their integrity and authenticity with traditional buildings being replaced by concrete and metal structures including shops and supermarkets; the only *harat* that has still partially kept its integrity (in spite of existing threats) is the *Harat al-Aqr* settlement but its authenticity is highly endangered, due to construction pressure. The settlement is currently abandoned apart from a few occupied houses located amongst hundreds of empty houses in various states of decay.

Throughout the entire property, while there is some earthen fabric left, in various locations it has almost completely disappeared. The Falaj system also appears to be abandoned. Regarding the surrounding ancient oasis wall, although most of it has survived, some parts are in decay, some parts are impacted by adjacent concrete buildings, and in a few locations some parts of the wall have been destroyed.

The conservation of the property thus faces severe challenges that are impacting on its authenticity and integrity - especially overall abandonment of the settlement of *Harat al-Aqr* within the surrounding ancient oasis wall. Although during recent years, projects have been undertaken on the Bahla market (*souq*), the mosque, the mausoleum, the gate, and the property's fortress, large areas of the property remain highly vulnerable to irreversible changes.

The challenges faced by local authorities in balancing the modern needs of a settlement in transition from rural/agricultural to urban are considerable. Although the preparation of the Management Plan and its pending approval by the State Party at the time of the mission is a step forward, the structures and the tools necessary for its implementation are not yet all in place. These structures could be set in place with the enforcement of formal procedures, adequate human resources employed for monitoring and awareness-raising on the strictures, policies and recommendations that the Management Plan would be expected to include.

In the short term, the State Party should seek to implement a more consistent and dynamic approach to protecting and preserving the property from encroachment of outwardly visible concrete buildings, in order to stop threats to the authenticity and integrity of the property. The focus on the preservation of the property also needs to be broadened to preserve and protect the entirety of the many various components of which the property is comprised, such as the fortress, the Falaj system, the oasis, the ancient settlements, the natural and built environment inside the property, the surrounding ancient oasis perimeter wall, the Bahla market (Souq), and the old souq, as well as all dynamic living structures of the community that contribute to its authenticity and integrity. To date, an appropriate state of conservation for Bahla Fort property has not been achieved.

The mission team recommends the following list of relevant key-recommendations:

1) INTRUSION AND DEVELOPMENT CONTROL IN THE PROPERTY

It was observed that more compulsory construction rules, as well as on-site inspectors, are required within the oasis to adequately control development. These measures should be implemented by the local authorities and the Ministry of Culture and Heritage. This issue needs to be addressed urgently in order to control earthen architecture demolitions (and reconstruction with other materials), as well as invasive encroachment of new construction in the property. Local authorities should enforce such regulations in order to control illegal construction. At this point, new construction is replacing ancient earthen fabric in a rapid fashion.

The finalized Management Plan should take into account these factors, as there is a need for greater clarity regarding the boundaries of the property and of the buffer zone. The local authorities should enforce the regulations, in order to control illegal construction.

Recommendation 1

The control of new construction in the property should be more strictly monitored. More inspection mechanisms should be developed and the law should be enforced.

2) ACCURATE DEFINITION OF BOUNDARIES IN MAPS AND ON SIGN POSTS

Regarding the boundaries, there is a lack of definition about concerning the definition of the property boundaries and the buffer zone boundaries. Accurate maps specifying the coordinates of the boundaries of the property and of the buffer zone are still missing. Signs with the exact property and buffer coordinates are also missing on-site. This is important, as it will help clarify on-site exactly where the property boundaries are located, which will avoid continuity and rising of illegal construction.

Recommendation 2

To provide the World Heritage Centre with maps indicating clearly the defined boundaries of the property (C1, C2, C3, etc.) with the proposed buffer zone boundaries (B1, B2, B3, B4, etc.). To put in place on-site sign posts with the property and buffer zone boundaries.

3) DOCUMENTATION

At present, there is a lack of available data and general documented information about the property. Some of the published material is not disseminated enough and access is very limited.

Recommendation 3

In line with the request of the World Heritage Committee (40 COM 7B.26), documentation of the state of conservation of the overall property needs to be provided showing: (1) the original fabric; (2) interventions with the different earthen building techniques and reference to the intervention dates; (3) interventions with other traditional materials (stone, timber, lime) with reference to intervention dates; (4) new concrete construction (considering the amount of new construction already negatively affecting the property).

4) LEGAL PROTECTION

Great progress has been achieved with regard to the legal provisions aimed at the protection for the site through the newly devised law, subject to parliamentary approval. Nevertheless, the mission team has not received any copy of this law to comment on its relevance to the recommendations prepared in the former monitoring mission report and to the management requirements at the site.

Recommendation 4

The State Party should submit the newly devised heritage law to the World Heritage Secretariat once it is officially adopted via the State Party's jurisdiction procedures, as this is crucial to ensure further requirements and guidelines for the effective management of the Site.

5) MANAGEMENT PLAN

The State Party has been requested to submit the final updated Management Plan to the World Heritage Centre, which has not yet been done to-date. The State Party should also submit the new legal framework, and document the updated legal process and protection measures of the site within the context of the newly updated Management Plan.

As noted in recommendation 1 above, the core issue faced by the State Party in relation to managing the property – its authenticity and integrity into the future - is control of new construction within the property. This can be addressed in a variety of ways, a range of administrative procedures and structures for control and monitoring, as deemed appropriate by the State Party within its specific legal context. However, the logical starting point to retain the integrity, authenticity and OUV of the property is to

create mechanisms that enable adequate monitoring and enforcement of building permits, and to control appropriate and inappropriate additions and construction throughout the property.

Recommendation 5

The State Party should submit to the World Heritage Centre as soon as possible, the updated Management Plan and the newly approved legal framework. The implementation of the Management Plan should be considered within a broader approach, also including on-site administrative structures.

6) LOCAL MANAGEMENT OFFICE AT BAHLA FORT

The Wali raised concerns that there is a lack of communication between the Heritage Institute, and the community. An office in Bahla Fort would help to resolve this issue, as well as issues of local management. It could also reinforce relevant measures to control both urban pressure and the accelerated degradation of earthen architecture.

Recommendation 6

A local management office with a site director and a technical management team should be set up, as soon as possible. It would have a key-role in decentralising the management process of the property, and could contribute effectively to furthering actions regarding conservation and protection measures.

7) CONSERVATION PLAN AND GUIDELINES

The Committee has requested the adoption of a conservation policy supported by precise scientific documentation since 1997.

It was observed that conservation interventions at various sites within the property appear to be ad-hoc, without following an overall conservation strategy. This seems especially to be the case regarding materials and techniques, as well as proposed interventions for including conservation, maintenance, etc.

Recommendation 7

The State Party should develop a conservation plan/strategy for the short, medium and long term, defining procedures for conservation and maintenance of the property. Only when needed should timely restoration interventions be considered.

The plan/strategy should also include specific conservation guidelines for each and all of the components of the property, including the 12km-perimeter oasis wall, the fort, the Falaj system, the *Souq*, the gates, the mausoleum, the mosque, and the oasis. This will help guide stakeholders and inhabitants to address conservation requirements.

In particular, the conservation plan/strategy should address clearly the issue of reconstruction.

The conservation plan/strategy should be separate from the Management Plan but linked to it.

8) ARCHITECTURAL RECORDING

The World Heritage Committee has acknowledged since 1997, the need for exhaustive scientific, historical and architectural documentation. There have been some publications addressing this issue, but not enough, and these have not been sufficiently disseminated locally, nationally and internationally. Also, they are not available for consultation.

There is still a need for further site surveys with detailed drawings regarding the actual fabric and buildings within the property including the *Harats*, the surrounding ancient oasis perimeter fortification wall, and the general built heritage remaining within the property. Some architectural records have already been developed; as is the case of the Bahla market, and the old *Souq*, but more architectural records need to be prepared as a base-line for future interventions and monitoring. These architectural drawings also need to be complemented by scientific and historical analysis to show how the property has evolved over time.

Recommendation 8

It is essential that the current architectural record be enhanced, and complemented by appropriate scientific analysis and historical research, so that each element of the property is adequately recorded and defined. This is the basis for future projects such as structural stabilisation, maintenance plans for each component, and monitoring.

9) REVISION OF THE PROPERTY'S NAME

The State Party may consider revising the name of the Property to "Bahla Fort and its Oasis", as the property includes the whole oasis settlement, as indicated by the retrospective Statement of OUV approved in 2010. The property integrates several components, such as the fortress itself, the surrounding perimeter ancient wall (*Sur*) with its gates and towers, the *harats*, the market (*Souq*), the mausoleum, the mosque, the Falaj system, etc.

Recommendation 9

The revision of the property's name could bring more consistency to formal documentation, as in some documents it is mentioned as 'Bahla Fort' while in other documents it is referred to as 'Bahla Fort and its Oasis'. It may also help to deepen an understanding of the OUV of the property and the national and local heritage values of the settlement. It will also help to reinforce the notion that a broader approach to the management of the property is necessary.

10) HARAT AL-AQR SETTLEMENT, THE FALAJ SYSTEM AND THE PERIMETER ANCIENT WALL NEED URGENT PROTECTION AND CONSOLIDATION

There is a great concentration of ancient vernacular heritage remains on the settlement of *harat al-Aqr*, components of which are losing their unity due to abandonment. The traditional *Falaj* irrigation system is also barely active. This requires urgent protection and consolidation measures. The perimeter ancient earthen wall that surrounds Bahla Fort has not been protected in any extensive part along its 12km length. In all of these three components, there has been no regular maintenance, which has contributed to the fast degradation of materials and the risk of losing this architectural exceptional heritage.

Recommendation 10

Intervention should be addressed to consolidate the ancient *harat al-Aqr* settlement, the ancient Falaj irrigation system and the historical perimeter earthen wall, as they are part of the key-attributes of the property. The protection of the three components is imperative, due to their strong contribution to the OUV of the property. Consolidation should be reversible, with minimum intervention and should be addressed through traditional materials. Earthen traditional techniques and materials should be carefully addressed on the perimeter ancient wall and on the *harat al-Aqr* settlement. Consolidation intervention will contribute to the stabilisation of the degraded areas, assuring to strengthen the deteriorated materials, as well as their structural integrity. The three components are in need of urgent protection and consolidation.

1. BACKGROUND TO THE MISSION

1.1. Inscription history

Bahla Fort was inscribed on the World Heritage List in 1987 under Criterion (iv) (CONF 005) at its 11th Session, held at UNESCO Headquarters 7-11 December.

Two requests for assistance have been submitted since inscription, both awarded in 1988 (for a total amount of 57,000 USD) to address concerns over the degradation of the earthen fabric of the fort and of the oasis of Bahla.

In 1988, at its 12th Session, and at the request of the Omani authorities, the WH Committee inscribed the property on the List of World Heritage in Danger (CONF 001 XIV.D).

Concerns have been raised in multiple decisions of the Committee since 1987, regarding the state of conservation of the property, management planning processes, the legal framework, and the condition of the fort and the oasis (see section 1.3 below).

In 2004, at its 28th Session (**28 COM 15C.3**), the Committee decided to remove the property from the World Heritage List in Danger, noting improvement towards management planning processes, and financial and administrative procedures to enhance conservation of the property.

In 2010, at its 34th Session the Committee adopted the Retrospective Statement of Outstanding Universal Value as presented.

1.2. Criteria and Outstanding Universal Value

1.2.1. Statement of Outstanding Universal Value as adopted in 2010

Brief Synthesis

The immense, ruined Bahla Fort, with its walls and towers of adobe on stone foundations, and the adjacent Friday Mosque with its decoratively sculpted prayer niche (mihrab) dominate the surrounding adobe settlement and palm grove. The fort and settlement, an adobe-walled oasis in the Omani desert, owed its prosperity to the Banu Nebhan tribe (Nabahina), who dominated the central Omani region and made Bahla their capital from the 12th to the end of the 15th century. From there they established relationships with other tribal groups of the interior. Bahla was the centre of Ibadism (a branch of Islam), on which the ancient Omani Imamates were based and whose influence can be traced across Arabia, Africa and beyond.

The extensive wall (sur) with sentry walk and watchtowers enclosing the labyrinth of adobe dwellings and cultivatable land has several gateways. The oasis is watered by the Falaj system of wells and underground channels bringing groundwater from distant springs, and by management of the seasonal flow of water.

Bahla is an outstanding example of a fortified oasis settlement of the medieval Islamic period, exhibiting the water engineering skill of the early inhabitants for agricultural and domestic purposes. The pre-gunpowder style fort with rounded towers and castellated parapets, together with the perimeter sur of stone and adobe technology demonstrates the status and influence of the ruling elite.

The remaining adobe family compounds of traditional vernacular houses (*harats*) including al-Aqr, al-Ghuzeili, al-Hawulya and the associated mosques, audience halls (*sablas*), bath houses, together with the dwellings of the fort guards (*askari*) demonstrate a distinctive settlement pattern related to the location of the Falaj. The importance of the settlement is enhanced by the Friday mosque with its highly ornate mihrab and the remains of the old, semi-covered market (*souq*), comprising a complex of single-storey shops fronting onto narrow lanes, the whole enclosed by an outer wall. The location of the souq placed it within easy surveillance from the fort on its rocky outcrop nearby. Remains of carved and decoratively incised timber doors, shelves and window screens testify to a rich, thriving craft tradition.

Criterion (iv): The Bahla Fort and oasis settlement with its perimeter fortification are an outstanding example of a type of defensive architectural ensemble that enabled dominant tribes to achieve prosperity in Oman and the Arabian Peninsula during the late medieval period.

Statement of Integrity

“At the time of inscription, it was noted that the Bahla Fort and adjacent Friday Mosque were inseparable from the small oasis town surrounding it and its boundary, therefore follows the line of the wall (*sur*) enclosing the whole oasis settlement. A road cuts across the property.

The principal constituents of Bahla's architectural ensemble have survived and together they form an integral and largely complete historic walled oasis settlement and major defensive complex. Comprising mostly earthen structures; however, they are vulnerable to decay and inadequate site drainage and, in the case of the souq, are vulnerable to reconstruction in modern materials.

The Falaj system and watercourse, on which the settlement depends, together with the historic routes linking the settlement to other towns in the interior, extend far beyond its boundary. Despite some urban development in the late 20th century and early 21st century, Bahla remains prominent in the desert landscape. Its continued prominence within the landscape and the visual approaches are vulnerable to community development and tourism requirements. Maintaining the surveillance role of the fort in relation to the souq, the surrounding settlement and the gateways will similarly depend on careful management of development within the property.”

Statement of Authenticity

“At the time of inscription, the fort was dilapidated and decaying rapidly after each rainy season. It was put on the List of World Heritage in Danger in 1988. Consolidation works to some sections of the fort including Bayt al-Jabal, the entrance hall (*sabah*), and north-west and south-west walls using inappropriate materials were carried out in the early 1990s, and an audience hall (*sabla*) in the courtyard was demolished in 1992. From 1995, following training and advice on earthen structures, conservation using only earthen-based materials has included courtyard drainage, new roofs and consolidation of collapsing walls and towers including to the citadel (*qasaba*), courtyard mosque, Bayt al-Jabal, Bayt al-Hadith and horse stalls, and capping of tops of ruined walls to impede further collapse. The *sabla* was reconstructed in 1999 in the courtyard of the fort. Accurate records have been kept of the work and full documentation of the fort has since been carried out including a photogrammetric survey.

The form, design and materials that convey the Outstanding Universal Value can be said to have largely retained their authenticity. The property was taken off the List of World Heritage in Danger in 2004.

Bahla remains a thriving settlement. However, the authenticity is vulnerable to the abandonment of traditional vernacular houses within the *harats*. The souq is also vulnerable to lack of conservation and maintenance and changes in materials and methods of construction.”

Protection and management requirements

“The property of Bahla Fort and its Oasis is protected administratively and legally by the Omani Law for National Heritage Protection (1980). The Fort and its environs are controlled by the Ministry of Heritage and Culture in Muscat, which has a regional office in the Dakhliyah region and a site office at Bahla.

The site has a Management Plan dating from March 2005, focused on the long-term care, conservation and use of the site's historic buildings, structures and spatial form. The plan also recognises the importance of maintaining the site as an integral whole and the need to manage modern uses and development in order to preserve the integrity of the architectural assemblage and its prominence within its setting.

Several of the actions set out in the Management Plan have been taken forward and implemented, including conservation of the Friday mosque, the qasaba, the sur and gateways, development of guidelines for rehabilitation of the *harats*, diversion of through traffic, electrification of the fort and installation of a site museum in Bayt al-Hadith within the fort.

The Management Plan is currently undergoing review and will be updated in 2009/2010 in order to be officially adopted. The reviewed and updated Management Plan will form the basis for the long-term management of the property.”

1.3. Examination of the State of Conservation by the World Heritage Committee

In accordance with the wishes of the Omani authorities, the Committee decided to inscribe Bahla Fort on the List of World Heritage in Danger in 1988. There were concerns over the state of conservation of the fort, surrounding walls, the *souq* and the *harats*, which were either in a state of abandonment or being replaced with modern structures and fabric.

Two requests for assistance were awarded in 1988 and restoration and conservation interventions were undertaken. **At its 17th and 18th Sessions, 1993 and 1994**, the Committee recalled that intensive restoration works were being undertaken at this property and that it appeared probable that the nature of the material used for the restoration work, the rapidity with which the work was being carried out and the methods used could raise a certain number of questions with regard to the authenticity of the monument.

At its **19th Session in 1995**, the Committee was informed that, since its eighteenth session, two expert missions had visited the property. The observations and recommendations of the first mission confirmed that the work being carried out was of the "renovation" type, compromising the authenticity of this historic monument. The second mission, carried out from 27 May to 11 June 1995, with the financial support of Oman, by a specialist in adobe architecture, provided valuable advice on the methods and choice of material to be used.

In September 1996, an expert mission visited the property and the Committee was informed of its recommendations at its **21st Session, in 1997**. The report made several recommendations, which were accepted by the Omani authorities, regarding conservation techniques and project management, among others including;

- The adoption of a restoration policy supported by precise scientific documentation and avoiding all reconstruction;
- The establishment of a site commission, the competence of which should also include the environment;
- The implementation of emergency safeguarding and consolidation work, especially at the citadel, at Bait el Hadith and in the two outer mosques, as well as the establishment of a preventive conservation team;
- The compilation of exhaustive scientific, historical and architectural documentation, indispensable for the site's restoration in accordance with international standards.

Following previous expert missions, a third mission took place in September 1998 to assess the quality of the restoration works in terms of authenticity and use of materials, and advise on future works, particularly on the preparation of a Management Plan for an extended area, including the Fort and the oasis, as well as on the hydro-graphic survey that should be urgently undertaken. The mission reported that photogrammetric works were due to begin, facilitating therefore the restoration of the Fort. It recommended, among other things, that the conservation plan be completed including planning of archaeological works.

At its **24th Session in 2000**, the Secretariat informed the Committee that following the recommendations of the twenty-fourth ordinary session of the Bureau, two consultants prepared "Guidelines for the establishment of a Management Plan for Bahla Fort and Oasis, a World Heritage Site". Following the presentation of the state of conservation of the site and reports on the regular missions of specialists and the World Heritage Centre, a discussion took place concerning the techniques used for the restoration of the Fort. The Bureau commended the Omani authorities for the work undertaken and encouraged them to elaborate a **Management Plan** of the Fort and the Bahla Oasis and to provide it to the World Heritage Centre for submission to the Bureau at its twenty-fifth session.

At its **25th session in 2001**, the Committee examined the report on the state of conservation of Bahla Fort and noted the significant progress made since the last Committee's session, especially concerning the conservation works being carried out within the Fort and on the two nearby Mosques. The Committee also noted that the preparation of a Management Plan was finally undertaken in close collaboration with the Centre. The Committee invited the State Party to pursue its efforts towards the completion and full implementation of the Management Plan.

At the **26th and 27th Sessions of the Committee in 2002 and 2003**, the achievements in the advancement of conservation works at the Fort, and process of preparation of the Management Plan were recognized, and decisions recommended that the State Party ensure the necessary technical supervision of the conservation works being implemented at the site, and that a comprehensive survey and analysis of cultural and natural values of the Bahla Oasis and its surroundings be included in the scope of work of the consultant firm. The Committee expressed at the 26th Session its concern with regards to the proposed construction of a new market within the site and suggested that an Environmental Impact Assessment be made regarding the effects of this new construction on the values of the site. At the 27th Session, the Committee noted the importance of ensuring that the project for the new market be developed in close consultation with the World Heritage Centre and Management Plan Team, and take into account the character of the local vernacular architecture, including its traditional materials and construction techniques.

At its **28th Session in 2004**, the Committee was informed of the suspension of the proposed construction of the market, as well as the progress made towards conservation of the site, and decided to remove the property from the List of World Heritage in Danger.

At the **29th and 30th Sessions in 2005 and 2006**, the World Heritage Committee requested the State Party to report on the completion and adoption of the Management Plan, including:

- a) A comprehensive report on the restoration works carried out at Bahla Fort, including graphic documentation and pictures;
- b) The final adopted version of the Management Plan;
- c) The legal framework being established for the implementation of the Management Plan;
- d) The administrative structure established for the execution of the Management Plan;
- e) A summary of the seminars, which took place concerning the Management Plan and their outcomes;
- f) A progress report on the work already undertaken for Souq Bahla.

At its **31st Session**, the decision of World Heritage Committee again noted concerns over the conservation standards at the site and the need to finalize the Management Plan, to establish the legal framework, and to set up the administrative structure for its implementation.

Again, at the 33rd Session in 2009, the Committee was informed that the State Party had not yet finalised and adopted the Management Plan and had not established the necessary legal and administrative frameworks for its implementation. The Committee was informed that Oman had provided a revised detailed project proposal for the restoration of the Souq. The Committee requested the State Party to invite a joint World Heritage Centre/ICOMOS/ ICCROM Reactive Monitoring mission to the property to assess the overall state of conservation of the property, in particular the activities in the Qasaba area and the Souq, and their effects on the Outstanding Universal Value of the property.

At its **34th Session in 2010**, the World Heritage Committee requested that a revised proposal for the restoration of the souq be shared with the World Heritage Centre, for review by the Advisory Bodies and the World Heritage Centre. The State Party was also requested to implement the set of recommendations outlined in the World Heritage Centre/ICOMOS/ICCROM Reactive Monitoring mission report of December 2009 - notably, to continue with research on the adobes with the aim of producing guidelines for improving their quality as a building material, to consider enlarging the buffer zone to ensure the necessary protection of the property, and to take steps to begin the conservation of the Falaj system - for examination by the World Heritage Committee at its 36th session in 2012.

At its **36th Session in 2012**, the World Heritage Committee noted the revised project scheme for the souq rehabilitation and the submission of the revised Management Plan, and requested the State Party, as indicated in the Management Plan, to define an enlarged buffer zone and submit the buffer zone boundaries according to the procedure for minor boundary modification, outlined in paragraphs 163-164 of the Operational Guidelines.

At its **38th Session in 2014**, the World Heritage Committee was informed of the launch of the project "Rehabilitating and Refurbishing the Old Souq at Bahla: From Study to Reinstatement", and again reiterated that neither the finalized version of the Management Plan nor a request for a minor boundary modification to enlarge the buffer zone had been submitted, further urging the State Party to do so.

At its **40th Session in 2016**, the World Heritage Committee decision expressed regret that neither the finalized version of the Management Plan nor a request for a minor boundary modification to enlarge the buffer zone had yet been submitted. Furthermore, the State Party was requested to submit to the World Heritage Centre, based on Paragraph 172 of

the *Operational Guidelines*, a document summarizing the conservation and management actions already undertaken and planned at the property, showing the articulation between them. The State Party was also requested to invite a joint World Heritage Centre/ICOMOS/ICCROM Reactive Monitoring mission to visit the property as soon as possible and to submit the finalized version of the Management Plan, including an update on the legal framework that would support its implementation, as well as a request for a minor boundary modification in view of enlarging the buffer zone.

1.4. Justification of the mission

At its 40th session (Istanbul, 2016), due to the fact that State Party did not respond to the previous World Heritage Committee decisions, it was requested for the State Party of the Sultanate of Oman to invite a Reactive Monitoring mission (RMM) to Bahla Fort World Heritage property, to be jointly carried out by the World Heritage Centre, ICOMOS and ICCROM (Decision **40 COM 7B.26**). The mission was arranged in consultation and upon invitation of the State Party and carried out with their full cooperation, forming the basis for this present report.

2. NATIONAL POLICY FOR THE PRESERVATION AND MANAGEMENT OF THE WORLD HERITAGE PROPERTY

2.1. Protected Area Legislation

The legal protection has for years been based on the Law related to the protection of national heritage (1980) while the functions of the Ministry are set up in the Decree of the Sultan N.º 2077 dated 1977. As this law could not be sustained and was in many respects in contrast with the municipal law (granting building permits under municipal regulations), the property will soon be protected under updated Omani legislation.

In fact, a final version of the site's Management Plan completed in 2010 was converted into a legal format guiding the property's management. Hence, it was reviewed before it was submitted to the Ministry of Legal Affairs together with the new law. The new law is awaiting official issuance by the Parliament this year. As this legal tool undergoes the scrutiny of various bureaucratic procedures, the process was at its final stages at the time of the mission. So, according to the State Party, it will be sent to the World Heritage Centre as soon as it is officially adopted.

According to the Omani authorities, the newly updated and revised national legislation (which was not made available to the Reactive Monitoring team of experts at the time of the mission) includes special sections on the protection of all World Heritage Sites in Oman. In connection, the protected area of the World Heritage Site will be governed by the new law. This area is comprised of Bahla Fort and Oasis located at UTM (WG5 84 Zone 40 N), 2539635 N, 53396350 E, 23°03' N, 57°27' E and covers a surface of 347.4 ha. Within the framework of the Retrospective Inventory, the State Party provided a set of maps for the property, which are still to be completed. Therefore, as amended in 2010, the World Heritage area consists of Bahla Fort, the mosques and the immediate area around the Fort, including the *Souq*, as well as the Oasis including the Falaj system, and other farms within the walls. Collectively, these areas and features are fundamental attributes to the architectural and historical values of the property. In addition, while the property limits correspond to the surrounding wall (*Sur*), a buffer zone has been drafted by the authorities all around the *Sur*, but this has raised several questions that will be discussed in this report below.

2.2. Institutional Framework

The governmental body responsible for the protection of cultural heritage in the Sultanate is the Ministry of Heritage and Culture, and more specifically, the General Directorate of Archaeology and Museums. The World Heritage property is therefore under the direct jurisdiction and supervision of this Directorate, which coordinates the work with other governmental institutions aimed at the protection of the property. While some of its parts are also currently supervised through the Department of Forts and Castles of the Ministry and a regional office in Nizwah (for Dakhilyeh region) covering various sites in the same region, the new legal instruments and the Management Plan envisage the creation of a Department of World Heritage Sites in Oman at the Ministry of Heritage and Culture. There are also plans to establish a local office in Bahla; however, these structures have not yet been formalised. To-date, the Municipality has a role in granting building permits through the Wilayah, in close coordination with the Regional Office in Nizwa.

2.3 Management Structure

As mentioned above, the property comprising the Fort and its surroundings is currently managed by the Ministry of Heritage and Culture in Muscat, which has a regional office in Nizwa, Dakhilyeh region. The latter covers all properties in the region including Bahla Fort and its Oasis. The municipality of the Wilayah is responsible for issuing building permits in coordination with the Ministry. There are plans to establish a Department of World Heritage Sites in the Ministry, and an Office for Bahla but these have not yet been implemented, awaiting the issuance of the new national legislation and the relevant Management Plan.

The site has a Management Plan dating from March 2005. It was completed in 2010, focusing on the long-term care, conservation and use of the property's historic buildings, structures and spatial form. The plan also recognised the importance of maintaining the property as an integral whole and the need to manage modern uses and development in order to preserve the integrity of the architectural assemblage and its prominence within its setting. Several of the actions set out in the Management Plan were taken forward and implemented, including restoration or reconstruction of the Friday mosque, the *Qasaba*, the *Sur* and gateways, development of guidelines for rehabilitation of the *harats*, diversion of through traffic, electrification of the fort and installation of a site museum in *Bayt al-Hadith* within the fort.

Nevertheless, upon the request of the World Heritage Committee based on the previous Reactive Monitoring missions to the property, the Management Plan has undergone a review to convert its content to a legal format aimed at addressing a long-term vision through legal provisions, relevant to the newly devised national law. The mission did not have access to this revised plan and the plan has not been submitted to ICOMOS for review. Again, it is to be underlined that the new national law intends to allow for new structures for World Heritage properties, but will address gaps inherent in other legal provisions such as the municipal law. Nevertheless, all building permits are currently made in coordination with the Ministry's regional office in Nizwah, where all historical sites in the region are managed, including Bahla Fort.

2.4. Response to the recognition of values under international treaties and programmes

According to the Omani authorities, in addition to all considerations and actions made to protect the property under the World Heritage Convention, the property has been subject to implementing actions relevant to the Intangible Heritage Convention of 2003. These included folklore activities, arts and crafts, and involving the local community. In addition, also according to the State Party, as part of the A-Falaj Systems, the Ministry of Water and Environment has been engaged in several activities, relevant to the conservation of water sources in the region.

3. IDENTIFICATION AND ASSESSMENT OF ISSUES

3.1. Management

The mission expert team observed some of the management challenges faced by the central and local authorities in dealing with the aspirations of the community and integrating their requests into a management system that responds to specific aims and to the retention of the authenticity and integrity of the property within the World Heritage management system.

In a meeting at his office, on 8th March, the Wali of Bahla articulated the concerns of local stakeholders in their desire to modernize the *Souq* of Bahla and the displeasure of some that the restoration of the historic *Souq* had not accommodated their wishes for enlarged spaces, but that it had followed too closely the more traditional ground plan of the original souq.

To improve management of the property, the Wali also recommended that a department of the Ministry of Heritage and Culture responsible for the management of the World Heritage property and able to inform, explain and discuss the conservation concerns, management and future plans for the property, be established on-site in the Bahla Oasis. At present, there is no site-office at Bahla Fort Oasis. The nearest office is based at the city of Nizwa, 45 minutes away, leading to the perception that the existing management system does not necessarily incorporate local concerns or is responsive to those concerns.

The mission experts consider that a site office and addressing direct site management would help mitigate this perception and lead to more direct management and dialogue within the property. Furthermore, site managers within the Oasis would be able to communicate directly with the office of the Wali of Bahla, address daily issues and challenges and advise on determinations, in regard to the World Heritage Convention and the Operational Guidelines upon which the office of the Wali is expected to decide and interpret regularly.

Observations of incursions at the property of modern buildings throughout the oasis at odds with the vernacular and monumental designs of the historic architecture were noted. Some of these incursions existed before the nomination in 1987, but equally, the replacement of vernacular domestic housing with modern designs and fabric has been an ongoing process for decades, and appears now to be accelerating.

Regulations and procedures to control new constructions need to be designed, implemented and enforced within the management system, in consultation and consensus with local stakeholders and the community at large. There is scope within a well-designed and monitored management system to accommodate both modern needs and concerns with the retention of authenticity and integrity of the property. The abandonment of domestic housing and the replacement of vernacular architecture and public buildings with modern architectural designs clearly put the overall integrity of the Oasis at risk.

Maintenance of the surrounding perimeter oasis wall (*sur*) is another ongoing management issue. Several parts of the wall and gates have been conserved and or restored. The mission expert's team was informed of plans to extend this process further. Many parts of the perimeter wall lie within privately owned land and agricultural gardens. Some parts of the wall have even disappeared. However, the wall still remains almost complete surrounding the entire oasis – though in need of conservation and vulnerable considering most of its total volume - and effective planning will ensure its retention and contribution to the Outstanding Universal Value of the property.

There is an observed and urgent need to for the State Party to envisage and control development of the Oasis over the next 5-10 years; urban pressures are clearly and steadily eroding the traditional fabric of the agricultural setting, the oasis in general, specific monuments and the surrounding perimeter oasis wall, which impacts negatively on OUV.

The local authorities also complain of blockages and the slow pace of approvals for construction and extension of vernacular houses within the Oasis and expressed a wish to institute a system of compensation within the overall management of the site.

While such compensation has been instigated at many World Heritage properties, and has been effective in some cases, there appears to be pressure on the State to purchase land and traditional structures (most notably domestic housing in vernacular style) in order to mitigate the desire for total replacement of the original fabric with modern materials, designed by the owners.

Such a regulation will mitigate the ongoing loss of original design and materials within the remaining *harats* typified by dilapidated vernacular architecture, but, in itself, it would be likely to quicken the pace of decline and deterioration of structures within the overall property and lead to further abandonment of large parts of the *harats*. Adaptive re-use will account for occupation of a percentage of these *harats*, but it will be a challenge to account effectively for the total number of buildings that fall within this typology. If the Oasis is to continue to thrive, as a World Heritage property, the community must be encouraged to re-occupy and utilize the structures and housing within the existing, traditional *harats*.

While the State Party could consider a system of compensation within their management system as an additional incentive to the local community, it should also consider providing clear designs and intervention principles for allowable modification to existing structures that incorporate modern needs within traditional and appropriate facades and streetscapes.

Within the management system of the property, there is also a clear need to deepen awareness, understanding and dialogue with local stakeholders and the community concerning the principles of World Heritage nomination and management, the opportunities that this nomination provides, as well the regulation of modern construction that it implies.

The State Party representatives raised the issue of pending approval and legal measures and procedures on track concerning the finalization of the Management Plan. This Management Plan – and the scope to update it regularly – needs to be considered thoroughly to incorporate the changing needs of the community and the aspirations to use their resources long into the future, while retaining the authenticity and integrity of the property

Challenges remain for the State Party in regard to addressing the overall state of conservation, tackling and mitigating urban pressure that erodes the original fabric and town planning, regulation of new construction and architectural intervention and design, quantifying and delimiting the amount of original fabric remaining and the amount of new construction and concrete that has encroached into significant portions of the site.

3.2. Factors affecting the property

3.2.1 Construction urban pressure

For many stakeholders, there is a strong pressure to build new spaces using new materials, which symbolizes ‘modernity’. Construction pressure is enormous. The new buildings that exist

in the property (see fig. 116, 117, 118, 119) reveal the construction pressure that is steadily rising throughout the entire property.

From the three *harats* that surround the fortress, two have lost their integrity and authenticity; the only *harat* that retains its integrity (in spite of existing threats) is the *Harat al-Aqr* settlement, but its authenticity is highly endangered, due to construction and redevelopment pressure. This area should figure greatly in management considerations of the State Party and remains a significant challenge in terms of the relevant management issues highlighted above, such as adaptive re-use, possible compensation and/or incentives to reoccupy the houses and public buildings (a functioning mosque exists within this area) which have largely been abandoned.

3.2.2 Lack of protection

A Buffer Zone is ‘a well-defined zone outside the protected area whose role is to shield the cultural values of the protected zone from the impact of activities in its surroundings. This impact can be physical, visual or social’ (ICOMOS, 2011). In this case, a physical negative impact has been produced through systematic encroachment of the property and buffer zone. As a result, when visiting the site, the difference in construction between the buffer zone and the property is not clearly distinguishable. It is imperative that the site has strict property boundaries, as well as a buffer zone to protect the site from pressures and threats. It is also important to reinforce the protective regulations and laws, as well as regular site inspection, to prevent new building in the property and buffer zones. The general lack of protection of the property is perceived by the invasive concrete building encroachment. The problem also arises from the fact that property boundaries are unclear, as there is no site signage or circulation of plans and maps among the population or even specific documentation for tourists. Mechanisms of protection should be considered through monitoring and systematic inspection.

Also, the building of new construction located too close (1m to 5m) from the surrounding ancient wall (the property boundary) has a negative impact on the property (see fig.16). It is then imperative to monitor the indicators of development, with clear mechanisms of control. Up until now, it is clear that the State Party has faced a significant challenge in controlling or reducing the factors affecting the property’s pressure and urban development.

3.2.3. Planning of highway

Various representatives of the State Party on-site reported the possibility of a new highway, passing and replacing the current road that divides the Fort from the Souq. The Reactive Monitoring mission (RMM) team was informed that the Ministry of Transport has studied this as a “possibility”, but stated that no decision has been taken yet, to their knowledge. Concerning the authenticity and integrity of the site, it is of the utmost importance for the property that such plans to widen and extend the existing road in this exact location between the Fort and the Souq be reconsidered.

3.2.4. Lack of a base office at the site

The perception of a lack of direct management and engagement of the relevant authorities in the daily management of the site is a factor affecting the property. Whether real or perceived, it does lead to tensions between local stakeholders and local and central government in regard to administration of the site. The flow of information and participation in the decision-making process of local stakeholders is more likely to lead to a stronger adherence to existing regulations within the site and more appropriate modifications as necessary that are in tune with both local stakeholders’ aspirations and the retention of authenticity and integrity.

3.2.5 Delay on the Finalization and Implementation of the Management Plan

In relation to the finalization, adoption and implementation of the Management Plan, the extended delays are also a factor with impacts on the limited protection of the site. Provisional rules should be considered while the prolonged legal process continues, before more of the site is encroached upon.

4. ASSESSMENT OF THE STATE OF CONSERVATION OF THE SITE

4.1. Current state of conservation of the property

4.1.1 Change in the OUV significance of authenticity and integrity, throughout the years

All the attributes that convey OUV should be thoroughly assessed. This is the case for the current state of conservation of the following components: the fortress; the Falaj system; the ancient settlements (harats); the surrounding perimeter wall; the Bahla market (souq); the old souq; and the overall natural and built environment balance that constitute the oasis in its entirety.

At the time of the Reactive Monitoring mission, a brief assessment of the attributes of OUV was considered as follows: the fortress retains its significance; the Falaj system appears to be abandoned; of the traditional settlements (the *harats*) only the *Harat al-Aqr* settlement appears to retain its authenticity, in spite of rising urban pressure; the surrounding 12km wall (sur) remains mostly untouched, retaining its authenticity and integrity; the Bahla Fort Market is being reconstructed; and the same is also planned for the old souq which is presently in concrete. On the whole, the oasis is threatened by increasing urban pressure and although some earthen fabric remains, in various locations of the site it has almost completely disappeared.

4.1.2 Surrounding ancient oasis wall (sur):

The ancient earthen wall has a perimeter of 12 km, surrounding the entire oasis (figs. 9 to 28, 33 to 48). Its perimeter is also the limit of the World Heritage property. There has been little intervention regarding the wall, except the gates (see figs. 17 to 20, 27, 40 & 41), which were restored to allow the passage of people and cars. In most cases, the wall is in accelerated decay. The State Party confirms the wall's current condition in its last report (see p.6 from the annexe 7.7).

Some parts of the wall have already disappeared (figs. 43 to 48) due to natural causes or to human factors. For instance, piles of earth collected from the wall, most likely to be used for construction, were observed (see fig. 47). Also, around some parts of the wall, debris from construction has been abandoned near the ancient wall (figs. 45 to 47), contributing to the accelerated wall decay.

More preventive conservation actions need to be addressed to protect the surrounding wall, such as:

- Walls need to be cleaned and roots removed;
- Rising humidity through capillarity needs to be avoided;
- New construction should not be allowed too close to the ancient wall (see figs. 16 & 29);
- There should be more awareness among inhabitants to protect the wall and not to contribute to its decay.

In several parts where the wall is in decay, there is a clear quality of earthen fabric with its merlons and battlements that can still be well-observed (see fig. 10, 11, 12 & 16). Also, the singularity of the historical adobe **constructive culture** (see fig. 25, 37 & 38) can also be well-perceived on the surrounding ancient wall, as the earthen fabric did not suffer any intervention. The builders' architectural constructive concern is also observed through the ancient use of a thin stone masonry layer, separating building periods or architectural typologies (see fig. 14). In the past, some **maintenance measures** were undertaken through earthen mortars or stone facing some of the exterior foundation walls (see fig. 11).

The fortress surrounding-wall is also the **boundary** and the property limit. Notwithstanding, in some of its parts, there are new concrete buildings that were constructed just next to the historical wall, not respecting the property limit (see fig. 16).

4.1.3. Harat al-Aqr settlement

Around the fortress are located three different *harats*. From the three settlements, Harat al-Aqr is the only one that has kept its authenticity, by maintaining the original earthen fabric. The quality of its architecture is still unique in terms of the relevance of its traditional building culture (see fig. 83, 88, 107), but also due to the inherited urban value (see figs. 73, 81, 83, 87), and the *harat* spatial quality (see fig. 84, 85, 86).

However, *Harat al-Aqr* is starting to be threatened, as there are some buildings that have been totally reconstructed in new materials (see figs. 75 to 78, 89 to 92, 98 to 100). In some cases, such as the mosque of the settlement, the front façade is left in adobe and the remaining building is constructed in concrete (see figs. 99 and 100). In other cases, new concrete buildings with the same spatial typology gradually replace the ancient buildings made of adobe [see the cover of the *Harat al-Aqr* publication (in annexe 7.8), with at least 5 concrete buildings in the front and an immense number of new construction in the background]. This is also well-perceived on the recent interventions that took place at the settlement, near the fortress. Even the tourist office (see fig. 113) is in concrete. Its location is presented on the last plan of Harat al-Aqr publication.

When intervention is addressed, concrete blocks or stone masonry replace, in general, the adobe ancient construction. This type of reconstruction does not comply with international charters, even if both adobe and stone construction are traditional. Also, several buildings are falling down for lack of action addressing their maintenance (see figs. 74, 80, 96, 97 & 104). If nothing is done to consolidate the settlement, the ancient earthen fabric of *Harat al-Aqr* settlement, which gave the site its unique authenticity and integrity, will disappear in the coming years.

4.1.4. Other Harats

In what concerns the other *harats* in Bahla, the mission visit revealed that much of the vernacular architecture has been replaced: concrete buildings (see figs. 120, 121 & 122) and new large stores for car shops and supermarkets (see fig. 123) replaced the ancient buildings. This brings to a higher significance the remaining vernacular architecture from *Harat al-Aqr*, implying that its protection is paramount.

4.2. Recent and proposed interventions for their potential impact on authenticity:

4.2.1. Proposal for Rehabilitating and Refurbishing the Old Souq at Bahla

Regarding archaeological evidence, the documented information that was revealed with reference to this concern was: (1) Two posters at Nizwa Cultural Centre exhibition; (2) Evidence presented in the 2017 March report (see annexe 7.7, p.26 & 27); (3) The publication on Omani archaeological heritage (UNESCO, 2015). Evidence was also presented in the 2014 and 2016 state of conservation reports. No specific signs state that archaeological remains were found at the site. The architect in charge of the project mentioned that when the archaeological survey was addressed, stone foundations were found, and he witnessed that the process was well-documented.

4.2.2. Proposal for the Restoration of the Wall of Bahla (Sur)

Regarding the documentation of the ancient surrounding wall, the State Party presented indicative documents in the 'Report and Clarifications on WH Committee Decision' (see p.5 to 7, in annexe 7.7). An introduction to the documented survey, regarding the actual state of the wall and its diagnosis, was also presented in the 2016 state of conservation report. This is insufficient and a physical assessment of the current state of the overall perimeter ancient wall needs to be addressed, as the standing wall is archaeological evidence.

Furthermore, as mentioned in the report (annexe 7.7), additional documentation should be gathered before intervention. A comprehensive drawing survey, regarding the current state of the entire ancient wall, as well as its deterioration diagnosis, should be undertaken so that the wall consolidation project to stabilise decay and deterioration can be subsequently developed, followed by the publication of its conservation procedures.

A specific project intervention should be presented so that the wall can be consolidated before it becomes a ruin beyond the recognition of its potential unity. During the mission meetings, the site team in charge demonstrated some confusion concerning terminology and concepts when addressing which degree of intervention should be considered for the ancient wall. On the report from annexe 7.7, it is mentioned that restoration will be undertaken. The same is mentioned in the 2016 state of conservation report. During the different meetings, it was clarified that the intentions of the State Party were to consolidate the 12 km wall and rather than restoring it as such. However, during the meetings at the Ministry in Muscat, the State Party also proposed to restore 500 to 700m of wall (still standing) of the 12 km still extant. Representatives of the State Party suggested that this was important in order to demonstrate to the population of the Bahla Oasis a renewed image of the wall and thus enhance management efforts.

Until now, there have been brief works of consolidation on the entire wall (e.g. the Sabah Salem Gate). All the projects and works have been towards interventions of reconstruction and restoration. Therefore, it is of the utmost importance not to change or adversely affect the authenticity of the remaining wall through its full reconstruction and/or restoration. Reconstruction should be addressed only when the wall is no longer there (see figs. 43, 44, 45 & 47), and restoration should be addressed only if there is irremediable damage to the wall (as in fig.27).

4.2.3. Pilot Restoration Project for the Bahla Market (Souq)

Phase 1 of the project developed for Bahla Market (Souq) has almost been completed. It respects the ancient interior typology of each shop, in spite of complaints from the owners of

the shops about the need for more space inside each unit. There was a concern expressed by the Souq project team that they were trying to retain spatial authenticity.



Figs. 56 & 50 – Before and after intervention (photos taken on March 8th, 2017)

Regarding the material authenticity, it looks like traditional construction practices with stone masonry have been followed (fig.59), except for the use of white cement (fig.64), also confirmed by the local building team. White cement changes the colour of the mortar, but still has the same properties as grey cement. Regarding the original souq, many concrete and metal additions to the original adobe walls were observed (see fig. 56). However, the little that remained of original adobe construction from the ancient souq (e.g. fig. 57) should still be protected and not replaced. The new project brings a renovated contemporary image, following a traditional construction approach with stone masonry (fig.60), earthen plaster and wooden elements. Only a limited use of adobe construction was observed, though it could have been an excellent opportunity to contribute to the original construction culture and raise awareness.

4.2.4. Reconstruction of the Sabah Salem Gate

The intervention that took place at the Sabah Salem Gate was the reconstruction of a gate that fell 60 years ago. The State Party in its report dated from March 2017 (see annexe 7.7, p.8) mentions “restoration and consolidation works”. The mission team did not identify any existing documentation regarding the wall record, before the intervention. The only available information was one poster presented at the exhibition in Nizwa Cultural Centre (see figs. 148, 149, 150 - see Annexe 7.6). The poster outlines the process of the gate’s reconstruction. With limited access to information, it is impossible to assess whether rigorous methods of reconstruction based on historical and scientific evidence were followed.



Figs. 17, 18, 19 – Current state of Sabah Salem gate reconstruction (photos taken on March 8th, 2017)

It is relevant to note a lack of material connection between the adobe and stone masonry gate and the side road concrete blocks, covered with earth plaster. This discloses a lack of concern over materials and a lack of local traditional practices that are quickly disappearing, but in particular gives a negative image to local populations that have the same attitude. This is of high concern, as it reveals the possibility for similar practices throughout the property.



Figs. 22, 23, 24 – Adobe workshop no longer in use at Sabah Salem gate (photos taken on March 8th, 2017)

Located at Sabah Salem Gate is the workshop that provided the adobes that were used during this Gate's reconstruction. The adobes were produced for specific interventions along the surrounding wall [also mentioned in the *2016 State of Conservation Report (C433)*, additional information provided on 1 March 2016].

According to the assistant team, adobes stopped being locally manufactured 3 years ago. This can be observed by the decay of the remaining adobes at the site (see figs. 21 & 22). The photos provided by the State Party following the mission were from 2013, which also confirms the assistant team's statement. Presently, only at Bahla Market (souq), which is under intervention, was the use of some adobe masonry witnessed. In all remaining work sites, the use of stone masonry or concrete blocks was observed.

4.2.5. Restoration of the Mausoleum of Shaikh Bin Baraka and the mosque of Alkhair

The restoration of the Shaikh Bin Baraka_Mausoleum and of the Alkhair Mosque has been concluded. According to the site visit, the restoration plan presented below, and the report in Annexe 7.7. (p.8), intervention was addressed using stone masonry. The original building was partially in earthen and partially in stone (Annexe 7.7., p.11 and 204 report).

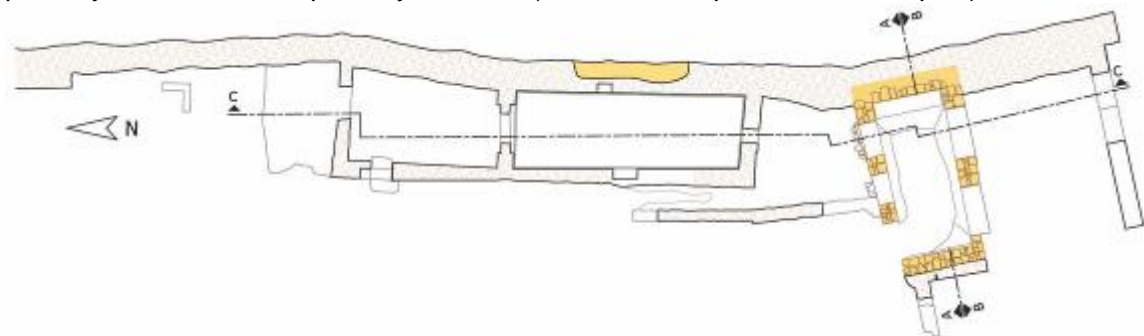


Fig. A – Intervention proposal (image provided by the State Party, on March 12th, 2017)

Considering the report in annexe 7.7, a restoration intervention took place at the mosque with "a detailed documentation" of the entire process. However, no documentation concerning the state of conservation before intervention was presented to the mission experts (just a brief description was presented within the 2016 state of conservation report with a longer description in the 2014 state of conservation report). When visiting the Nizwa exhibition, the expert mission members identified a poster with a general intervention plan (see fig.145). Therefore, it was impossible to specifically determine the recent intervention's potential impact on authenticity. However, when comparing previous photos with the current state, the form of the mausoleum has definitely changed (see 2016 Report, p.21).



Figs. 145 & 32 – Intervention proposal poster presented at Nizwa Cultural Centre exhibition; and image of the mosque interior (photos taken on March 8th, 2017)



Figs. 31 & 30 – Entrance of Shaikh Bin Baraka_Mausoleum (photos taken on March 8th, 2017)

4.3. Monitoring mechanism for aging of different brick types

According to the 2014 state of conservation report, “The process of monitoring the aging characteristics of the various brick types is ongoing, as are training activities to develop local masonry and brick production expertise, which is being advanced additionally by the continuing production of bricks and their use in repair works in the Souq and perimeter wall” (2014 Report, p.47). The workshop has not been in use for the last 3 years. As mentioned in the March 2017 report, “the production of adobe bricks has been paused until the restoration works are resumed at the Souq” (annex 7.7, p.12). Stopping the production of adobes on the property had an impact on the decrease in awareness of the site team in charge, the builders, the local authorities and the population. Slowly, adobe construction started to be replaced by stone construction, which is also a traditional way of building locally.

4.4. Development of a Conservation Management Plan

At present, in what concerns the development of a conservation Management Plan, the State Party only presented principles of intention, gathering conservation efforts, as mentioned in ‘Report and Clarifications on WH Committee Decision’ (annexe 7.7, p.4). There is no specific information about further development in this concern.

The conservation Management Plan needs to have procedures on how to conserve and how to manage decay in different building realities, as well as including established priority management on what to conserve and not to conserve. After addressing the overall physical recording of the earthen fabric of the site and the conservation proposal through plans, sections

and details, the local conservation team will be able to follow specific conservation procedures to stabilise decay and deterioration. This will contribute to the earthen fabric stabilisation, and its structural consolidation.

4.5. Finalisation of the Management Plan and its legal framework to support its implementation

The Management Plan should be finalised when the legal instruments are approved. It is understood that the Management Plan includes an action plan, as well as a management structure and procedures on how to manage the protection and conservation of the various components of the property. It should also consider all development work and new construction as described in this report. The Management Plan should be supported by an effective structure of coordination with the Wilayah, the municipality, as well as being led by a site management office that can monitor all actions required at the site.

4.6. Minor boundary modification to enlarge the buffer zone

As mentioned in the 2014 report, the Ministry of Heritage and the Ministry of Housing have collaborated to collect maps and site coordinates: “The Ministry has commissioned an Omani firm of consultants to work on an elevation of Bahla’s historic wall and record the coordinates in regional maps, clarifying the boundaries of the 12 km² site” (2014 report, point 5, p.46). During the mission, the State Party disclosed that the buffer zone boundary proposal and the Management Plan were under approval by the Housing Ministry, following which they would be presented for approval by the national parliament.

Furthermore, the buffer zone boundaries presented in “Bahla Fort and Oasis Management Plan. Buffer zone” (Project RE6326 – scale 1/20.000, item #47a) that were previously submitted to the World Heritage Centre are wider than the map boundaries presented during the site-mission, under official approval.

4.7. Relevant conservation issues that have a negative impact on the OUV of the property

It is important to recall the terminological confusion between ‘conservation’ and ‘reconstruction’, when addressing degrees of intervention. There is a tendency to rebuild earthen fabric, sometimes even in other materials, such as stone masonry. The partial reconstruction of earthen heritage does not meet recommendations from the *Operational Guidelines for the Implementation of the World Heritage Convention*. In this case, conservation should be directed towards the preservation of the integrity and the authenticity of the property’s Outstanding Universal Value. Unfortunately, reconstruction is usually too heavily focused on reinterpretations of how it is believed it was, or on how it “should have been.” Reconstruction can only be accepted in exceptional cases, following war, or natural disasters, and only if it is based on rigorous documentation, and on consistent intervention criteria that meets the ethical principles of authenticity and integrity.

5. CONCLUSIONS AND RECOMMENDATIONS

5.1. Overall conclusions

Construction pressure is enormous. The property faces threats due to the encroachment of concrete construction spreading throughout the property and from the abandonment of vernacular buildings in traditional settlements (the *harats*). From the three *harats* that surround the fortress, two have lost their integrity and authenticity with traditional buildings being replaced by concrete and metal structures, including shops and supermarkets; the only *harat* that has still partially kept its integrity (in spite of existing threats) is the *Harat al-Aqr* settlement, but its authenticity is highly endangered, if not already partially lost, due to construction pressure. Although there is some earthen fabric left, it has almost completely disappeared in various locations of the property. The Falaj system appears to be abandoned, and, although most of the surrounding wall survives, some parts are in decay, some parts have been impacted by concrete buildings and in a few locations the wall has disappeared.

The conservation of the property thus faces severe challenges that impact its authenticity and integrity. Although, during recent years, projects have been undertaken at the Bahla market (souq), the mosque, the mausoleum, the gate, and the property's fortress, large areas of the property are highly vulnerable to irreversible changes.

The challenges faced by local authorities in balancing the modern needs of a settlement in transition from rural/agricultural to urban are considerable and at the moment they do not have all the tools they need for this role. Although the preparation of the Management Plan and its state approval is a step forward, the structures necessary for its implementation are not yet all in place.

In the short term, the State Party should seek to implement a more consistent and dynamic approach to protecting and preserving the property from the encroachment of outwardly visible concrete structures, in order to stop threats to the authenticity and integrity of the property. The focus on the preservation of the property also needs to be broadened to preserve and protect the entirety of the many various components of which the property is comprised, such as the fortress, the Falaj system, the oasis, the ancient settlements, the natural and built environment inside the property, the surrounding perimeter wall, the Bahla market (Souq), and the old souq, as well as all dynamic living structures of the community that contribute to its authenticity and integrity. To date, an appropriate state of conservation for Bahla Fort property has not been achieved.

The mission team recommends the following list of relevant key-recommendations:

1) INTRUSION AND DEVELOPMENT CONTROL IN THE PROPERTY

It was observed that more compulsory construction rules, as well as on-site inspectors, are required within the oasis to adequately control development. These measures should be implemented by the local authorities and the Ministry of Culture and Heritage. This issue needs to be addressed urgently in order to control earthen architecture demolitions (and reconstruction with other materials), as well as invasive encroachment of new construction in the property. Local authorities should enforce such regulations in order to control illegal construction. At this point, new construction is replacing ancient earthen fabric in a rapid fashion.

The finalized Management Plan should take into account these factors, as there is a need for greater clarity regarding the boundaries of the property and of the buffer zone. The local authorities should enforce the regulations, in order to control illegal construction.

Recommendation 1

The control of new construction in the property should be more strictly monitored. More inspection mechanisms should be developed and the law should be enforced.

3) ACCURATE DEFINITION OF BOUNDARIES IN MAPS AND ON SIGN POSTS

Regarding the boundaries, there is a lack of definition about concerning the definition of the property boundaries and the buffer zone boundaries. Accurate maps specifying the coordinates of the boundaries of the property and of the buffer zone are still missing. Signs with the exact property and buffer coordinates are also missing on-site. This is important, as it will help clarify on-site exactly where the property boundaries are located, which will avoid continuity and rising of illegal construction.

Recommendation 2

To provide the World Heritage Centre with maps indicating clearly the defined boundaries of the property (C1, C2, C3, etc.) with the proposed buffer zone boundaries (B1, B2, B3, B4, etc.). To put in place on-site sign posts with the property and buffer zone boundaries.

3) DOCUMENTATION

At present, there is a lack of available data and general documented information about the property. Some of the published material is not disseminated enough and access is very limited.

Recommendation 3

In line with the request of the World Heritage Committee (40 COM 7B.26), documentation of the state of conservation of the overall property needs to be provided showing: (1) the original fabric; (2) interventions with the different earthen building techniques and reference to the intervention dates; (3) interventions with other traditional materials (stone, timber, lime) with reference to intervention dates; (4) new concrete construction (considering the amount of new construction already negatively affecting the property).

4) LEGAL PROTECTION

Great progress has been achieved with regard to the legal provisions aimed at the protection for the site through the newly devised law, subject to parliamentary approval. Nevertheless, the mission team has not received any copy of this law to comment on its relevance to the recommendations prepared in the former monitoring mission report and to the management requirements at the site.

Recommendation 4

The State Party should submit the newly devised heritage law to the World Heritage Secretariat once it is officially adopted via the State Party's jurisdiction procedures, as this is crucial to ensure further requirements and guidelines for the effective management of the Site.

5) MANAGEMENT PLAN

The State Party has been requested to submit the final updated Management Plan to the World Heritage Centre, which has not yet been done to-date. The State Party should also submit the new legal framework, and document the updated legal process and protection measures of the site within the context of the newly updated Management Plan.

As noted in recommendation 1 above, the core issue faced by the State Party in relation to managing the property – its authenticity and integrity into the future - is control of new construction within the property. This can be addressed in a variety of ways, a range of administrative procedures and structures for control and monitoring, as deemed appropriate by the State Party within its specific legal context. However, the logical starting point to retain the integrity, authenticity and OUV of the property is to create mechanisms that enable adequate monitoring and enforcement of building permits, and to control appropriate and inappropriate additions and construction throughout the property.

Recommendation 5

The State Party should submit to the World Heritage Centre as soon as possible, the updated Management Plan and the newly approved legal framework. The implementation of the Management Plan should be considered within a broader approach, also including on-site administrative structures.

6) LOCAL MANAGEMENT OFFICE AT BAHLA FORT

The Wali raised concerns that there is a lack of communication between the Heritage Institute, and the community. An office in Bahla Fort would help to resolve this issue, as well as issues of local management. It could also reinforce relevant measures to control both urban pressure and the accelerated degradation of earthen architecture.

Recommendation 6

A local management office with a site director and a technical management team should be set up, as soon as possible. It would have a key-role in decentralising the management process of the property, and could contribute effectively to furthering actions regarding conservation and protection measures.

7) CONSERVATION PLAN AND GUIDELINES

The Committee has requested the adoption of a conservation policy supported by precise scientific documentation since 1997.

It was observed that conservation interventions at various sites within the property appear to be ad-hoc, without following an overall conservation strategy. This seems especially to be the case regarding materials and techniques, as well as proposed interventions for including conservation, maintenance, etc.

Recommendation 7

The State Party should develop a conservation plan/strategy for the short, medium and long term, defining procedures for conservation and maintenance of the property. Only when needed should timely restoration interventions be considered.

The plan/strategy should also include specific conservation guidelines for each and all of the components of the property, including the 12km-perimeter oasis wall, the fort, the falaj system, the *Souq*, the gates, the mausoleum, the mosque, and the oasis. This will help guide stakeholders and inhabitants to address conservation requirements.

In particular, the conservation plan/strategy should address clearly the issue of reconstruction.

The conservation plan/strategy should be separate from the Management Plan but linked to it.

8) ARCHITECTURAL RECORDING

The World Heritage Committee has acknowledged since 1997, the need for exhaustive scientific, historical and architectural documentation. There have been some publications addressing this issue, but not enough, and these have not been sufficiently disseminated locally, nationally and internationally. Also, they are not available for consultation.

There is still a need for further site surveys with detailed drawings regarding the actual fabric and buildings within the property including the *Harats*, the surrounding ancient oasis perimeter fortification wall, and the general built heritage remaining within the property. Some architectural records have already been developed; as is the case of the Bahla market, and the old *Souq*, but more architectural records need to be prepared as a base-line for future interventions and monitoring. These architectural drawings also need to be complemented by scientific and historical analysis to show how the property has evolved over time.

Recommendation 8

It is essential that the current architectural record be enhanced, and complemented by appropriate scientific analysis and historical research, so that each element of the property is adequately recorded and defined. This is the basis for future projects such as structural stabilisation, maintenance plans for each component, and monitoring.

9) REVISION OF THE PROPERTY'S NAME

The State Party may consider revising the name of the Property to "Bahla Fort and its Oasis", as the property includes the whole oasis settlement, as indicated by the retrospective Statement of OUV approved in 2010. The property integrates several components, such as the fortress itself, the surrounding perimeter ancient wall (*Sur*) with its gates and towers, the *harats*, the market (*Souq*), the mausoleum, the mosque, the falaj system, etc.

Recommendation 9

The revision of the property's name could bring more consistency to formal documentation, as in some documents it is mentioned as 'Bahla Fort' while in other documents it is referred to as 'Bahla Fort and its Oasis'. It may also help to deepen an understanding of the OUV of the property and the national and local heritage values of the settlement. It will also help to reinforce the notion that a broader approach to the management of the property is necessary.

10) HARAT AL-AQR SETTLEMENT, THE FALAJ SYSTEM AND THE PERIMETER ANCIENT WALL NEED URGENT PROTECTION AND CONSOLIDATION

There is a great concentration of ancient vernacular heritage remains on the settlement of *harat al-Aqr*, components of which are losing their unity due to abandonment. The traditional *Falaj* irrigation system is also barely active. This requires urgent protection and consolidation measures. The perimeter ancient earthen wall that surrounds Bahla Fort has not been protected in any extensive part along its 12km length. In all of these three components, there has been no regular maintenance, which has contributed to the fast degradation of materials and the risk of losing this architectural exceptional heritage.

Recommendation 10

Intervention should be addressed to consolidate the ancient *harat al-Aqr* settlement, the ancient *falaj* irrigation system and the historical perimeter earthen wall, as they are part of the key-attributes of the property. The protection of the three components is imperative, due to their strong contribution to the OUV of the property. Consolidation should be reversible, with minimum intervention and should be addressed through traditional materials. Earthen traditional techniques and materials should be carefully addressed on the perimeter ancient wall and on the *harat al-Aqr* settlement. Consolidation intervention will contribute to the stabilisation of the degraded areas, assuring to strengthen the deteriorated materials, as well as their structural integrity. The three components are in need of urgent protection and consolidation.

5.2. Recommendations for additional actions to be taken by the State Party

Capacity development needs to be addressed

There is an important need to address capacity development for state and local professionals. The mission team was informed that only around 20 people in the Oasis still retained knowledge of adobe construction. However, the mission team did not encounter, observe or interview one adobe builder during the mission. As there is no compulsory use of local building culture by the state, the local population does not feel obliged to build with adobe.

Furthermore, systematic training and increased awareness on the use and principles of the traditional adobe building culture, both for the residents of the Oasis and for government officials will lead to professionals with more skilled experience with earthen architecture and its conservation and better able to articulate to the broader population.

Following efforts made by the State Party, such as the organization of the 'Regional Seminar on the Conservation of earthen structures in the Arab States', from 15-17 December 2003, and the publication of its Proceedings (CRAterre-ENSAG & UNESCO-WHC, 2006), it is recommended that similar seminars be organized regularly to help ensure that its recommendations can be reinforced and systematically put into practice. Moreover, it is recommended that state professionals attend international training on conservation management and earthen architecture conservation, and that specific and systematic training for local professionals is undertaken in the Bahla Oasis, to enhance management and maintenance of this World Heritage property.

6. BIBLIOGRAPHIC REFERENCES

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7. ANNEXES

7.1. TERMS OF REFERENCE

**Terms of Reference (ToR)
Joint WHC/ICOMOS/ICCROM Reactive Monitoring Mission
to Bahla Fort (Sultanate of Oman)
6-10 March 2017**

At its 40th session (Istanbul, 2016), the World Heritage Committee requested the State Party of the Sultanate of Oman to invite a Reactive Monitoring Mission (RMM) to Bahla Fort World Heritage Site, to be jointly carried out by the World Heritage Centre, ICOMOS and ICCROM (Decision **40 COM 7B.26**, attached to the present ToR in Annex 1).

A. The objectives of the RMM are to:

3. Assess the current state of conservation of the property, with a focus on the attributes which convey its Outstanding Universal Value (OUV);
4. Assess recent and proposed interventions at the property, for their potential impact on authenticity, including:
 - The proposal for Rehabilitating and Refurbishing the Old Souq at Bahla: From Study to Reinstatement and its link to the archaeological study of the Bahla Market (Souq) ;
 - The proposal for the restoration of the Wall of Bahla (Sur) and issues raised by its diagnosis, and the timetable for submitting this to the World Heritage Centre for review;
 - The pilot restoration project for the Bahla Market (Souq), which has been partly implemented with several components already accomplished (including major interventions on roofs, paving, etc.), and particularly questions of authenticity;
 - The restoration of the Sabah Salem Gate and how choices were made in terms of restoration principles;
 - The restoration of the Mausoleum of Shaikh Bin Baraka and the Alkhair mosque, and the proposed reconstruction of the walls and dome of the mausoleum;
5. Gather information on the monitoring mechanism for aging of different brick types and how results are analysed;
6. Explore the rationale for the development of a Conservation Management Plan and how this will relate to the Management Plan;
7. Examine progress with the finalisation of the Management Plan and of the development of the legal framework which is expected to support its implementation;
8. Discuss with the responsible authorities the follow-up to the request of the World Heritage Committee for the State Party to submit a request for a minor boundary modification to enlarge the buffer zone;
9. In line with paragraph 173 of the *Operational Guidelines*, assess any other relevant conservation issue that may have a negative impact on the OUV of the property.

- B. The mission will:
- Participate in the meetings foreseen by the State Party to exchange with the concerned stakeholders in Muscat and Bahla on the objectives of the RMM and, after the visit(s) to the property, on the latter's outcomes;
 - Visit the property according to the programme prepared by the State Party, in consultation with the members of the RMM;
- C. The State Party should facilitate necessary field visits to key locations at the property.
- D. Based on the results of the above-mentioned assessments and discussions with the different stakeholders, the mission will develop recommendations for the State Party with the objective of providing guidance to the responsible authorities to allow them responding to the requests of the World Heritage Committee, set in its decision 40 COM 7B.26, as well as other previous decisions if need be. The recommendations will be made available in a written report rather than during the mission.
- E. The mission will prepare a concise report on the findings and recommendations within six weeks following the site visit, using the World Heritage Centre RMM report format.

Annex 1

Decision: 40 COM 7B.26

Bahla Fort (Oman) (C 433)

The World Heritage Committee,

1. Having examined Document WHC/16/40.COM/7B,
2. Recalling Decision **38 COM 7B.4**, adopted at its 38th session (Doha, 2014),
3. Commends the State Party for the important actions undertaken to ensure the sustainable management and conservation of the property;
4. Regrets that neither the finalized version of the Management Plan nor a request for a minor boundary modification to enlarge the buffer zone have been submitted;
5. Urges the State Party to submit the finalized version of the Management Plan, including the legal framework that will support its implementation, to the World Heritage Centre as soon as possible;
6. Requests the State Party to submit to the World Heritage Centre, as soon as possible and based on Paragraph 172 of the *Operational Guidelines*, a document summarizing the conservation and management actions already undertaken and planned at the property, and showing the articulation between them and with the finalized version of the Management Plan;
7. Also requests the State Party to invite a joint World Heritage Centre/ICOMOS/ICCROM Reactive Monitoring mission to visit the property as soon as possible;
8. Further requests the State Party to submit, by **1 February 2017**, a request for a minor boundary modification in view of enlarging the buffer zone, for examination by the World Heritage Committee at its 41st session in 2017;
9. Requests furthermore the State Party to submit to the World Heritage Centre, by **1 December 2017**, an updated report on the state of conservation of the property and the implementation of the above, for examination by the World Heritage Committee at its 42nd session in 2018.

7.2. ITINERARY AND PROGRAMME OF THE MISSION

(On the following page, the 7th March proposal of the state party's programme, slightly changed, following the request of the mission experts)

6th March 2017, Monday (arrivals):

- Arrival to Muscat of Brendan Cassar (WHC) and Mariana Correia (ICOMOS)

7th March, Tuesday (Muscat and travel to Nizwa):

Morning:

- Arrival to Muscat of Zaki Aslan (ICCROM)
- Meeting with Mr. Hassan Mohammed Al-Lawati, Advisor to the HH Minister of Heritage and Culture, at the Ministry of Culture Headquarters, in Muscat (11.00 am – 13.00 pm)
- Visit of the National Museum.

Afternoon:

- Departure to Nizwa.

8th March 2017, Wednesday (Visit Bahla Fort and Nizwa, and travel back to Muscat)

Morning:

- Travel from Nizwa to Bahla Fort town.
- Meeting the H.E. Wali of Bahla.
- Stopping at the entrance of the town to visit an old part of the surrounding wall.
- Stopping at a high-site for over-view of the property.
- Visiting the Bahla Market (souq).
- Visiting Harat al-'Aqr.
- Travel from Bahla Fort to Nizwa.
- Lunch in Nizwa, with the Director of A 'Dakhiliya Governorate.

Afternoon:

- Visit the Bahla Fort Exhibition at Nizwa Cultural Center.
- Travel back from Nizwa to Bahla Fort.
- Visiting the Sabah Salem Gate.
- Visiting the Shaikh Bin Baraka Mausoleum and the Alkhair Mosque.
- Visiting the surrounding wall, limit of the core zone and part of the boundaries of the buffer zone.
- Visiting the core zone, its oasis and part of the agricultural falaj.
- Visiting the actual state of the Old Souq.
- Visiting Bahla Fort fortress.
- Travel back at night to Muscat.

9th March 2017, Thursday (Muscat and departures)

Morning:

- Meeting with Mr. Hassan Mohammed Al-Lawati, Advisor to the HH the Minister of Heritage and Culture, at the Ministry of Culture Headquarters, in Muscat (10.00 am – 14.00 pm)

Afternoon:

- Departure of Brennan Cassar (WHC)
- Departure of Zaki Aslan (ICCROM)
- Visit of restored fortresses in and around Muscat.

10th March 2017, Friday (Departure)

- Departure of Mariana Correia (ICOMOS)

Visit Program for the World Heritage Experts

Duration of visit		6 days(6-10March 2017)	
The Team:			
- Dr. Brendan James- Representative of World Heritage Center (arrival: 5/3/2017 at 10:25A.M – departure: 10/3/2017 at 11:25 A.M)			
- Dr. Mariana Ritta - Representative of ICOMOS. (arrival: 6/3/2017 at 5:55P.M– departure: 10/3/2017 at 10:50)			
- Dr. Zaki Aslan- Representative of ICCROM. (arrival: 7/3/2017 at 9:45A.M – departure: 9/3/2017 at 7:10 P.M)			
Place		Time	Dates +Days
Ramada Hotel	Dr. Brendan James arrival to Muscat	10:25 A.M	Sunday 5/3/2017
H.E Office	Dr. Brendan Meeting with H.E Hassan bin Mohammed bin Ali Al-Lawati The Advisor to the Minister for Heritage Affairs	12:00 P.M	Monday 6/3/2017
	Dr. Mariana arrival to Muscat	5:55 P.M	
	Dr. Zaki arrival to Muscat	9:45 A.M	Tuesday 7/3/2017
Meeting room	Meeting with H.E Hassan bin Mohammed bin Ali Al-Lawati The Advisor to the Minister for Heritage Affairs	11 A.M	
	Visiting the National Museum	1 P.M	
	Lunch at Ramada Hotel	2:30 P.M	
Falaj Daris Hotel- Nizwa	Departure to Nizwa tell Overnight at the Falaj Daris Hotel	4 P.M	
Office MHC A'Dakhiliya Governorate	Meeting with the director of the Department of Heritage and Culture Of A'Dakhiliya Governorate	9 A.M	Wednesday 8/3/2017
	Visiting the Cultural Center in Nizwa	9:30 A.M	
	Meeting with H.E. Wali of Bahla	10:30 A.M	

	Visiting Bahla Fort and meeting with the Director of the Department of Tourism in A'Dakhiliya Governorate	11 A.M	
	Field tour in the site (Bahala Suq-of Ibin Barkah-AL-khair SHRINE Mosque The Gate OF Sabah Salim)	12 P.M	
	Visiting Jabreen Castle	1 P.M	
Golden Tulip Hotel-Nizwa	Lunch	2 P.M	
Ramada Hotel	Return to Muscat	4 P.M	
	Visiting Al-Hazam Fort	9 A.M	Thursday 9/3/2017
Meeting room	Meeting at the Ministry with his H.E Hassan bin Mohammed bin Ali Al-Lawti The Advisor to the Minister for Heritage Affairs	12 P.M	
Angham Restaurant	Lunch	1:30P.M	
	Visiting Mutrah Souq and a free tour		
	Departure of Dr.Zaki Aslan	7:10 P.M	
	Departure of DR. Mariana Ritta	10:55 A.M	Friday 10/3/2017
	Departure of DR. Brendan	11:25 A.M	

7.3. COMPOSITION OF THE MISSION TEAM

- Brendan Cassar, World Heritage Centre representative, UNESCO cultural programme specialist
- Mariana Correia, ICOMOS International, WH Consultant
- Zaki Aslan, ICCROM-Sharjah, Director

7.4. MAPS

The following page shows the Google view map of Bahla Fort property. The map indicates: the location of the Bahla Market (Souq); the fortress; the ancient earthen settlement of Harat al-Aqr; the Shaikh Bin Baraka Mausoleum; the Alkhair Mosque; and the Sabah Salem Gate.



7.5. DETAILED LIST OF PEOPLE MET DURING THE MISSION

- Mr. Hassan Mohammed Al-Lawati, Advisor to the HH the Minister of Heritage and Culture
- Mr. Sultan Saif Al-Bakri, Assistant Director of Archaeology
- Mr. Ahmed Mohammed Al-Tamin, Director of Heritage and Culture in Nizwa
- Mr. Ali Said Al-Adwie, Head of Heritage, Department of Nizwa
- Mr. Sultan Ali Al-Maqbali, Assistant Director General Office
- Dr. Khaled Karoui, expert at MHC in Restoration and Conservation
- Ms. Hiba Al-Kadri, Architect Specialist in Restoration and Rehabilitation of Historical Sites and Buildings
- H.E. Wali of Bahla

7.6. PHOTOGRAPHS

Cover page: Photo of Bahla Fort Fortress and part of Harat al-'Aqr, 8th of March 2017.
Selected mission photos: See following pages, credited to Mariana Correia.

WHC/ ICOMOS/ ICCROM Reactive Monitoring Mission to Bahla Fort, OMAN, 6th-10th March 2017

Photo credits: Mariana Correia



1_Muscat_Exhibition_National Museum_7March2017.jpg



2_Bahla Fort_Visit to the wadi_8March2017.jpg



3_Bahla Fort_Visit to the wadi_8March2017.jpg



4_Bahla Fort_Visit of Harat al Aqr_8March2017.jpg



5_Bahla Fort_Exhibition visit_8March2017.jpg



6_Bahla Fort_Final meeting at the Ministry.jpg



7_Bahla Fort_Final meeting at the Ministry.jpg



8_Bahla Fort_Final meeting at the Ministry.jpg

WHC/ ICOMOS/ ICCROM Reactive Monitoring Mission to Bahla Fort, OMAN, 6th-10th March 2017

Photo credits: Mariana Correia



9_Surrounding original wall and new concrete wall.jpg



10_Surrounding original wall_In decay.jpg



11_Surrounding original wall_In decay_Remains of past consolidation efforts.jpg



12_Surrounding original wall_In decay.jpg



13_Surrounding original wall_Singular constructive typologies.jpg



14_Surrounding original wall_In decay.jpg



15_Surrounding original wall_In decay.jpg



16_Surrounding original wall_Construction too close to the core zone boundary.jpg

WHC/ ICOMOS/ ICCROM Reactive Monitoring Mission to Bahla Fort, OMAN, 6th-10th March 2017

Photo credits: Mariana Correia



17_Surrounding wall_Sabah Salem gate_reconstruction.jpg



18_Surrounding wall_Sabah Salem gate_reconstruction.jpg



19_Surrounding wall_Sabah Salem gate_reconstruction.jpg



20_Surrounding wall_Sabah Salem gate_reconstruction.jpg



21_Surrounding wall_Sabah Salem gate_reconstruction.jpg



22_Surrounding wall_Sabah Salem gate_materials.jpg



23_Surrounding wall_Sabah Salem gate_materials.jpg



24_Surrounding wall_Sabah Salem gate_materials.jpg

WHC/ ICOMOS/ ICCROM Reactive Monitoring Mission to Bahla Fort, OMAN, 6th-10th March 2017

Photo credits: Mariana Correia



25_Surrounding original wall_some foundation with past consolidation.jpg



26_Surrounding original wall_some foundation with past consolidation.jpg



27_Surrounding original wall.jpg



28_Surrounding original wall_near the Mausoleum and Mosque.jpg



29_Municipal building_too close to the wall near Mausoleum and Mosque.jpg



30_Mausoleum of Shaikh Bin Baraka and Mosque of Alkhair.jpg



31_Mausoleum of Shaikh Bin Baraka.jpg



32_Mausoleum of Shaikh Bin Baraka and Mosque of Alkhair.jpg

WHC/ ICOMOS/ ICCROM Reactive Monitoring Mission to Bahla Fort, OMAN, 6th-10th March 2017

Photo credits: Mariana Correia



33_Surrounding original wall_In decay.jpg



34_Surrounding original wall_In decay.jpg



35_Surrounding original wall_In decay.jpg



36_Surrounding original wall_In decay.jpg



37_Surrounding original wall_In decay.jpg



38_Surrounding original wall_In decay.jpg



39_Surrounding original wall_In decay.jpg



40_Surrounding original wall_In decay.jpg

WHC/ ICOMOS/ ICCROM Reactive Monitoring Mission to Bahla Fort, OMAN, 6th-10th March 2017

Photo credits: Mariana Correia



41_Restored gate in the East side.jpg



42_Original tower_In decay.jpg



43_Surrounding original wall_In decay.jpg



44_Surrounding original wall_In decay.jpg



45_Surrounding original wall_In decay and with debris.jpg



46_Debris near surrounding wall.jpg



47_Material from the surrounding wall used for construction.jpg



48_Surrounding original wall_In decay.jpg

WHC/ ICOMOS/ ICCROM Reactive Monitoring Mission to Bahla Fort, OMAN, 6th-10th March 2017

Photo credits: Mariana Correia



49_Market_After intervention.jpg



50_Market_After intervention.jpg



51_Market_After intervention.jpg



52_Market_After intervention.jpg



53_Market_After intervention.jpg



54_Market_After intervention.jpg



55_Market_Area before intervention.jpg



56_Market_Area before intervention.jpg

WHC/ ICOMOS/ ICCROM Reactive Monitoring Mission to Bahla Fort, OMAN, 6th-10th March 2017

Photo credits: Mariana Correia



57_Market_Before intervention_Original adobe wall.jpg



58_Market_Before intervention_Original adobe construction.jpg



59_Market_During intervention_Stone construction replacing concrete blocks.jpg



60_Market_During intervention_Stone construction replacing adobe masonry.jpg



61_Market_Before intervention_Concrete additions.jpg



62_Market_Used materials_Soil for earthen mortars.jpg



63_Market_Used materials_Adobes and concrete blocks.jpg



64_Market_Used materials_White cement.jpg

WHC/ ICOMOS/ ICCROM Reactive Monitoring Mission to Bahla Fort, OMAN, 6th-10th March 2017

Photo credits: Mariana Correia



65_Bahla Fort_Fortress.jpg



66_Bahla Fort_Fortress.jpg



67_Bahla Fort_Fortress.jpg



68_Bahla Fort_Fortress.jpg



69_Bahla Fort_Fortress.jpg



70_Bahla Fort_Fortress.jpg



71_Bahla Fort_Mosque at the Fortress_original walls.jpg



72_Mosque at the Fortress_original wall with some consolidation.jpg

WHC/ ICOMOS/ ICCROM Reactive Monitoring Mission to Bahla Fort, OMAN, 6th-10th March 2017

Photo credits: Mariana Correia



73_Harat al-Aqr_Earthen fabric.jpg



74_Harat al-Aqr_Concrete buildings in the background.jpg



75_Harat al-Aqr_Left-building in concrete blocks.jpg



76_Harat al-Aqr_Concrete buildings in the background.jpg



77_Harat al-Aqr_New building in concrete blocks.jpg



78_Harat al-Aqr_New buildings in concrete blocks.jpg



79_Harat al-Aqr_Restoration in stone masonry.jpg



80_Harat al-Aqr_Advance of decay.jpg

WHC/ ICOMOS/ ICCROM Reactive Monitoring Mission to Bahla Fort, OMAN, 6th-10th March 2017

Photo credits: Mariana Correia



81_Harat al-Aqr_General view.jpg



82_Harat al-Aqr_New materials and Concrete house in the background.jpg



83_Harat al-Aqr_Quality of architecture and building culture.jpg



84_Harat al-Aqr_Interior of a house.jpg



85_Harat al-Aqr_Interior of a house.jpg



86_Harat al-Aqr_Ceiling quality in the interior of a house.jpg



87_Harat al-Aqr_Architectural urban quality.jpg



88_Harat al-Aqr_Architectural urban quality.jpg

WHC/ ICOMOS/ ICCROM Reactive Monitoring Mission to Bahla Fort, OMAN, 6th-10th March 2017

Photo credits: Mariana Correia



89_Harat al-Aqr_New concrete house.jpg



90_Harat al-Aqr_Contrast between old and new.jpg



91_Harat al-Aqr_New concrete house.jpg



92_Harat al-Aqr_Two new concrete houses.jpg



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94_Harat al-Aqr_Restored house being used.jpg



95_Harat al-Aqr_Restored house being used.jpg



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97_Harat al-Aqr_Quality arches in a house in accelerated decay.jpg

WHC/ ICOMOS/ ICCROM Reactive Monitoring Mission to Bahla Fort, OMAN, 6th-10th March 2017

Photo credits: Mariana Correia



98_Harat al-Aqr_Division walls in concrete blocks.jpg



99_Harat al-Aqr_Mosque in concrete_Façade in adobe.jpg



100_Harat al-Aqr_Mosque in concrete_Façade in adobe.jpg



101_Harat al-Aqr_Well entrance.jpg



102_Harat al-Aqr_Passage between buildings.jpg



103_Harat al-Aqr_Passage between buildings.jpg



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105_Harat al-Aqr_Well.jpg



106_Harat al-Aqr_Cement plaster at the top of the building.jpg



107_Harat al-Aqr_Architectural quality.jpg

WHC/ ICOMOS/ ICCROM Reactive Monitoring Mission to Bahla Fort, OMAN, 6th-10th March 2017

Photo credits: Mariana Correia



108_Harat al-Aqr_quality of the earthen fabric_In decay.jpg



109_Harat al-Aqr_destruction of ancient buildings.jpg



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111_Harat al-Aqr_Concrete construction behind earthen façades.jpg



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WHC/ ICOMOS/ ICCROM Reactive Monitoring Mission to Bahla Fort, OMAN, 6th-10th March 2017

Photo credits: Mariana Correia



116_New houses in the core zone.jpg



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120_Souq at Bahla Fort.jpg



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122_Souq at Bahla Fort.jpg



123_Souq at Bahla Fort.jpg

WHC/ ICOMOS/ ICCROM Reactive Monitoring Mission to Bahla Fort, OMAN, 6th-10th March 2017

Photo credits: Mariana Correia



124_Well_water for the Falaj.jpg



125_Irrigation through Falaj.jpg



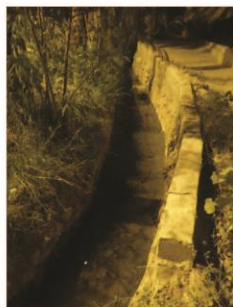
126_Irrigation through Falaj.jpg



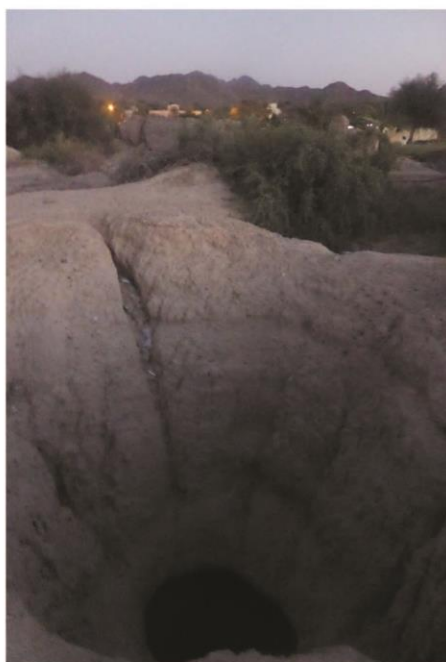
127_Irrigation through Falaj.jpg



128_Irrigation through Falaj.jpg



129_Irrigation through Falaj.jpg



130_Old well_water for the Falaj.jpg

WHC/ ICOMOS/ ICCROM Reactive Monitoring Mission to Bahla Fort, OMAN, 6th-10th March 2017

Photo credits: Mariana Correia



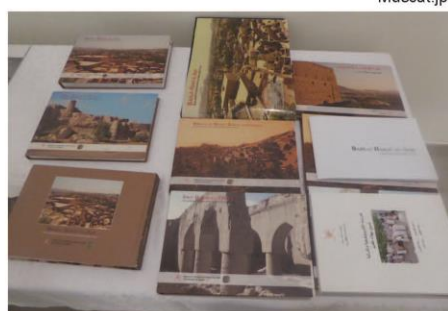
131_Bahla Fort Exhibition_Model at the National Museum in Muscat.jpg



132_Bahla Fort Exhibition_Model at the National Museum in Muscat.jpg



133_Exhibition in Nizwa Cultural Center_Presentation.jpg



134_Exhibition in Nizwa Cultural Center_Publications.jpg



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136_Exhibition in Nizwa Cultural Center_Publications.jpg



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138_Exhibition in Nizwa Cultural Center_Market.jpg

WHC/ ICOMOS/ ICCROM Reactive Monitoring Mission to Bahla Fort, OMAN, 6th-10th March 2017

Photo credits: Mariana Correia



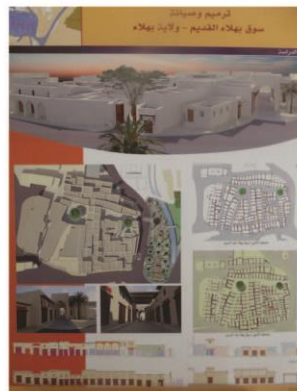
139_Exhibition in Nizwa Cultural Center_Archaeology.jpg



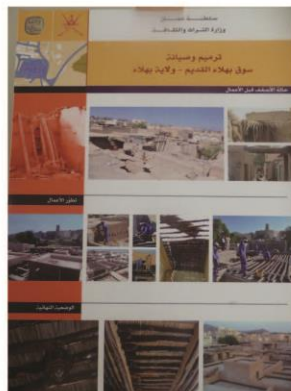
140_Exhibition in Nizwa Cultural Center_Archaeology.jpg



141_Exhibition in Nizwa Cultural Center_Market.jpg



142_Exhibition in Nizwa Cultural Center_Market.jpg



143_Exhibition in Nizwa Cultural Center_Market.jpg



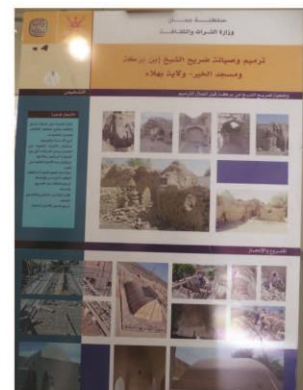
144_Exhibition in Nizwa Cultural Center_Market.jpg



145_Exhibition in Nizwa Cultural Center_Mausoleum of Shaikh Bin Baraka & Mosque of Alkhair.jpg



146_Exhibition in Nizwa Cultural Center_Mausoleum of Shaikh Bin Baraka & Mosque of Alkhair.jpg



147_Exhibition in Nizwa Cultural Center_Mosque of Alkhair.jpg

WHC/ ICOMOS/ ICCROM Reactive Monitoring Mission to Bahla Fort, OMAN, 6th-10th March 2017

Photo credits: Mariana Correia



148_Exhibition in Nizwa Cultural Center_Sabah Salem Gate_Reconstruction process.jpg



149_Exhibition in Nizwa Cultural Center_Sabah Salem Gate_Before reconstruction.jpg



150_Exhibition in Nizwa Cultural Center_Sabah Salem Gate_After reconstruction.jpg



151_Exhibition in Nizwa Cultural Center_Wall intervention.jpg



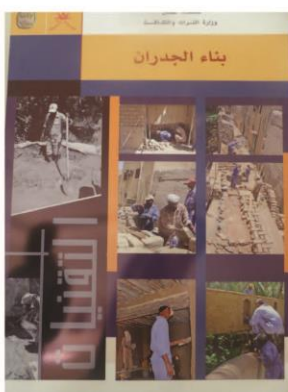
152_Exhibition in Nizwa Cultural Center_Wall intervention.jpg



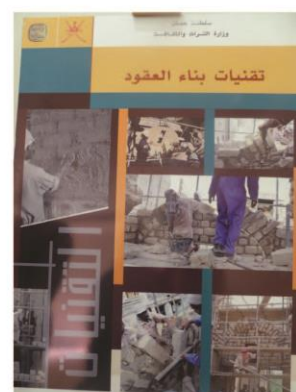
153_Exhibition in Nizwa Cultural Center_Wall intervention.jpg



154_Exhibition in Nizwa Cultural Center_Wall intervention.jpg



155_Exhibition in Nizwa Cultural Center_Wall intervention.jpg



156_Exhibition in Nizwa Cultural Center_Wall intervention.jpg

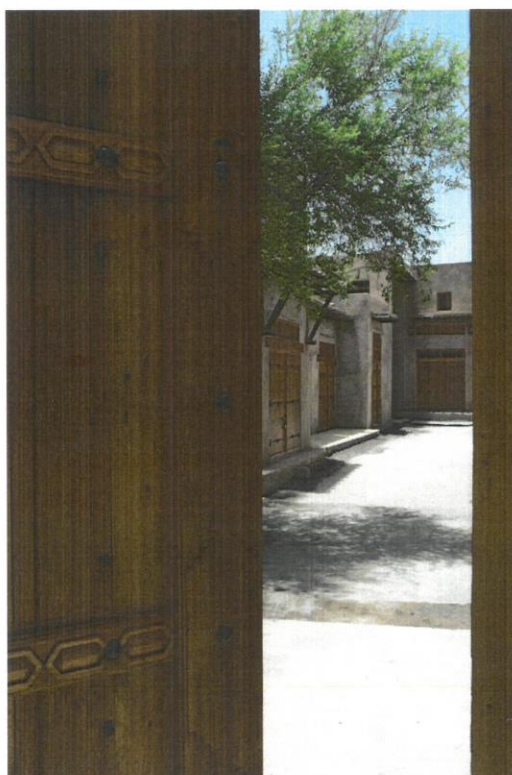
7.7. REPORT AND CLARIFICATIONS ON WH COMMITTEE DECISION BY THE STATE PARTY

A 27 page report entitled “Report and clarifications on World Heritage Committee decision by the State Party”, provided by the State Party on March 7th, during the first meeting at the Ministry of Heritage and Culture.

Bahla Fort World Heritage Site

Presentation to WH Experts

7th March 2017



Report and Clarifications on
WH Committee Decision: 40 COM 7B.26

Index:

1. The Management Plan.
2. The Development Master Plan.
3. The overall conservation plan for the site of Bahla fort.
4. Development of Al-Aqar, Al-Hawulya and Al-Ghuselli quarters (Hara) and its integration into the Al-Aqar Management Plan.
5. Study for the restoration of Bahla ancient walls.
6. Restoration works of the Sabah Salem Gate.
7. Methodology of the restoration of the Sheik Ibn Baraka Mausoleum's Dome.
8. The study for the aging characteristics of different types of brick.
9. The rehabilitation and renovation of Souk Bahla.
 - 9.1. The authenticity of the Souk and its urban fabric.
 - 9.2. Anthropological and patrimonial study of the Souk Bahla
 - 9.3. The relationship between the archaeological study and the rehabilitation and renovation project of the old souk of Bahla.

Introduction

Following the Decision number 40 COM 7B.26 (Listed below), made by the World Heritage Committee on the report dated 28 January 2016 provided by the Ministry of Heritage and Culture, concerning the State of Conservation of the Site,

Decision: 40COM7B.26

The World Heritage Committee,

1. Having examined Document WHC/16/40.COM/7B,
2. Recalling Decision **38 COM 7B.4**, adopted at its 38th session (Doha, 2014),
3. Commends the State Party for the important actions undertaken to ensure the sustainable management and conservation of the property;
4. Regrets that neither the finalized version of the Management Plan nor a request for a minor boundary modification to enlarge the buffer zone have been submitted;
5. Urges the State Party to submit the finalized version of the Management Plan, including the legal framework that will support its implementation, to the World Heritage Centre as soon as possible;
6. Requests the State Party to submit to the World Heritage Centre, as soon as possible and based on Paragraph 172 of the *Operational Guidelines*, a document summarizing the conservation and management actions already undertaken and planned at the property, and showing the articulation between them and with the finalized version of the Management Plan;
7. Also requests the State Party to invite a joint World Heritage Centre/ICOMOS/ICCROM Reactive Monitoring mission to visit the property as soon as possible;
8. Further requests the State Party to submit, by **1 February 2017**, a request for a minor boundary modification in view of enlarging the buffer zone, for examination by the World Heritage Committee at its 41st session in 2017;
9. Requests furthermore the State Party to submit to the World Heritage Centre, by **1 December 2017**, an updated report on the state of conservation of the property and the implementation of the above, for examination by the World Heritage Committee at its 42nd session in 2018

The MHC has prepared this short report to address the issues of the finalized version of the Management Plan, the minor modifications to the buffer zone boundary, studies for the protection of the Bahla Preserve, and all the conservation works taking place on site.

Firstly, we affirm that all conservation works on the site for the restoration of the old souk, Sabah Salem Gate and the Mausoleum of Sheikh Ibn Baraka with the small mosque are definitely part of efforts to preserve the different elements of the site.

1. The Management Plan

The final version of the Management Plan was completed in 2010, upon the request and decision of the WH Committee, the Ministry requested the consultant to convert the contents of the management plan into a legal format. Hence, it was reviewed carefully within the Ministry and then it was passed to the Ministry of Legal Affairs.

Nevertheless such legal tool usually needs certain procedures which require considerable time that cannot be anticipated, at least the process has started.

2. The Development Master Plan

As mentioned in the previous report to the committee, *Turathuna*, a Government-owned company, took the initiative to help the Ministry in preparing a comprehensive Master Plan to create a long-term vision and action plan to develop different elements of the Bahla Fort Site. Unfortunately, this project was put to pause as company changed their priorities

3. The overall Conservation plan for the site of Bahla Fort

The overall conservation efforts of the site of Bahla Fort were defined by the orientations dictated from the Management Plan of the site of Bahla Fort, its philosophy and adopted methodology to undertake restoration works depended mainly and generally on the following principles:

- Protection of authenticity and morphological identity relate to the urban structure, building, roads and height of buildings.
- Reuse and conversion have to respect and protect the authenticity of the site and monuments.
- In-depth study of the traditional architecture elements and social values before the start of any restoration works.
- Use of traditional materials in restoration and reconstruction operations.
- Preserve as much as possible the original land-use within the site.
- Classification of buildings according to whether it is being a part of urban fabric and its disappearance will lead to deficiencies and deformations of the fabric, or a separate structure endowed with historical, social or architectural research value, or a structure with a possibility to reuse whether back to its original function or with a new function.

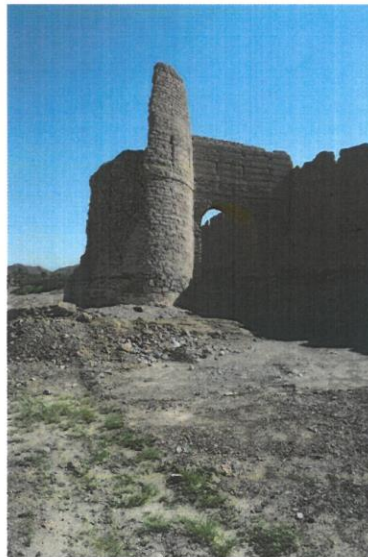
4. Development of Al-Aqar, Al-Hawulya and Al-Ghuselli quarters (Hara) and its integration into Al-Aqar Management Plan

These quarters have been of particular interest since they constitute the immediate environment of the Fort and form an essential part of its Architectural Fabric, which required early documentation actions to maintain their current situation.

5. Study for the restoration of Bahla Wall

The study for the restoration and development of Bahla ancient wall is an important and complex mission which requires a great deal of care and accurate in its various stages, since it is an important and characteristic monument of the Site.

The wall extends on a length up to 12 km and bypass the city by setting the boundaries of the site. It is very present in the landscape of the city and constitutes the symbolic icon of the site.



Part of Bahla wall and remain of one of the defensive towers

The walls cross many valleys and surrounds many important quarters, its height varies from side to side according to the natural terrain, it measures near mountains and hills around 3 meters, and in valleys around 5 to 6 meters. The

rampart thickness also varies between the base and the top. The base is approximately 2 to 3 meters and descends at the top to reach at the highest point around 1.5 meters. The rampart is traversed by several gates, the large ones allow the passage of vehicles and trucks, meanwhile the smaller ones are used by pedestrians. The most significant gates are the following:

- Sili Gate situated at the north of the oasis.
- Kharzaban Gate also at the north.
- Badi Gate at the west of the oasis.
- Sharjiat Gate also at the north.
- Sabah Salem Gate at the south.
- Al Bataha or the mausoleum of Ibn Baraka.

Also many towers can be found at the boundaries of the rampart, as much as 36 towers count on its limits.

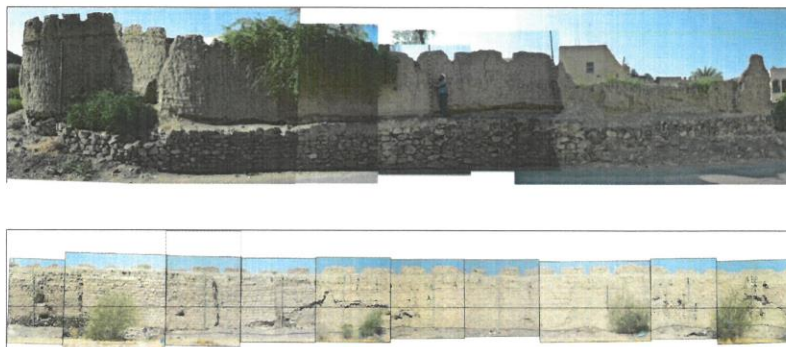
The study that the Ministry is undertaking aims in the first place to make a full diagnosis of the actual physical state, and to examine the current problems and defining the endangered parts. Once the required resources for the restoration works are allocated, works can commence in a timely manner.

The study is currently concerned with providing a reliable survey of the entire walls, combining this with a summary diagnosis which will be detailed at a later stage once the entire survey of the monument is finalized.

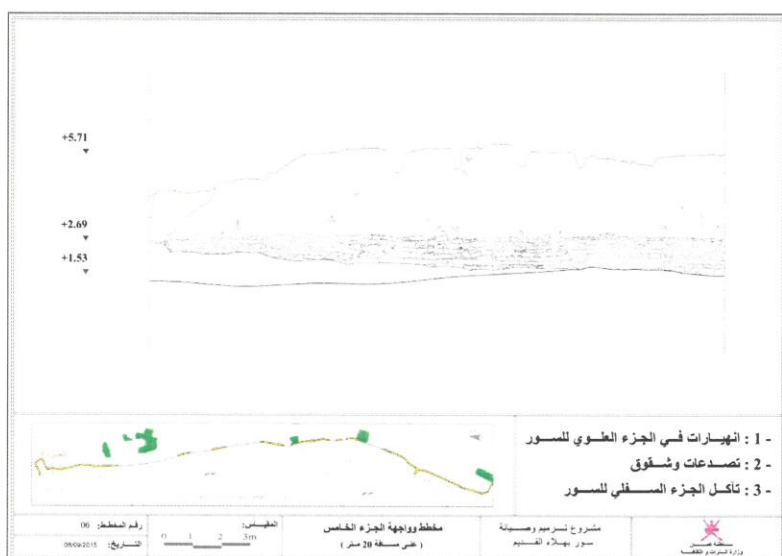
The initial diagnosis identified number of critical issues, some can be listed as follows:

- Major and important deterioration in certain parts.
- Cracking in the adobe walls.
- Destruction in some of the top parts.
- Completely demolished parts.
- Corrosion of mud plastering.
- Demolition of some of the Masonry bricks.
- Destruction and loss of some of the adobe bricks.

Upon this diagnosis, a restoration scheme undergone which will decide the parts that need urgent intervention.



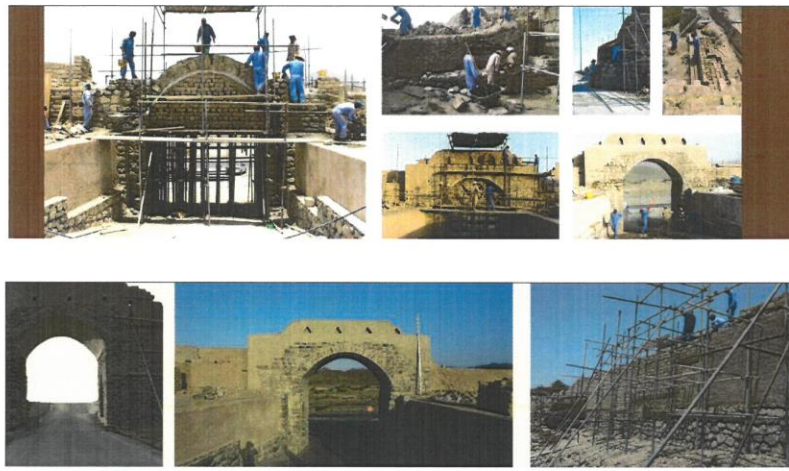
Panoramic photos for part of Bahla wall



Diagnosis drawing for part of Bahla wall

6. Restoration works of the Sabah Salem Gate

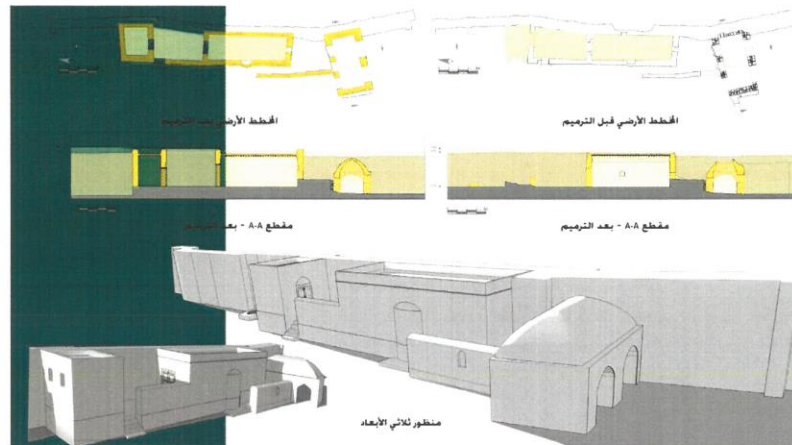
Sabah Salem Gate is located at one of the most vital entrances to the Oasis of Bahla and is used on daily basis by the inhabitants, and since parts of the gate were damaged by rain, it became a priority for the Ministry to initiate the restoration and consolidation works, to enable the inhabitants pass through the gate.



Photos during and after restoration works at the Sabah Salem Gate

7. Methodology of the restoration of the Sheik Ibn Baraka Mausoleum's Dome

It is important to mention that prior to the reconstruction of the dome of the mausoleum of Sheikh Ibn Baraka, a detailed documentation of the monument was conducted to recognize and identify its original shape and actual condition. Moreover, to take account of all the details and clues that facilitate primarily its graphic restitution, in order to subsequently decide on orientations for the reconstruction of the missing parts.



Drawings and plans for the restoration works at the mausoleum

Additionally, in order to affirm that the graphic restitution is a significant step towards the reconstruction of a monument. It must necessarily be based on three parts helping its definition:

- The acknowledged part, which corresponds to what remained of the monument.
- The reconstructed part that was established by the study of the scattered blocks.
- The completed part, the indispensable part to be added to the previous two according to the hypotheses to arrive at a comprehensive and credible representation of the monument. And, of course, the last one raises the serious problems that require a great effort of reading and interpretation.

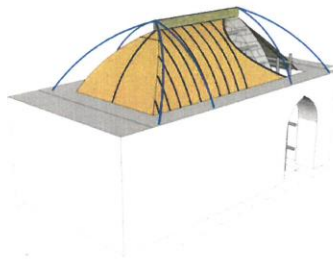
To commence the reconstruction of the dome of the mausoleum, we observed carefully the clues, yet in place, these physical elements and traces that are related to coexistence with the monument and have persisted. These traces are valuable and indicate clearly and with certainty the orientation to be adopted towards the direction of the load lines of the mausoleum's dome.

The mausoleum had kept at the time of restoration small parts of the dome. These parts are located at the corners except for the northeast corner. It had lost much of its foundations made of small stones. The remaining part of the dome was the only scarce evidence of its shape and certainly the start of its construction structure. These traces were considered the only significant evidence helping to formulate the hypothetical proposals for its graphic restitution.



3D drawing for the actual state of the dome

Therefore, the traces indicating the presence of vaulted cover are the only evidence and determinants of any demonstration of the restitution process.

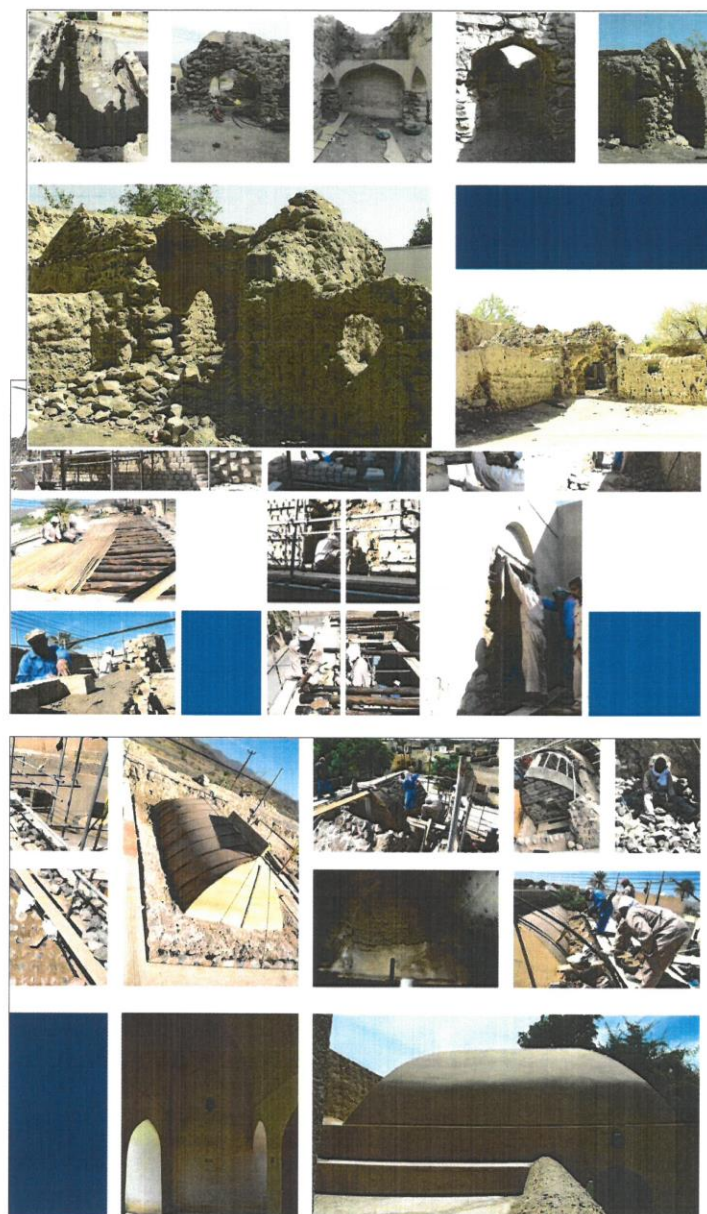


3D drawings for the restitution of the Dome

Considering the geometrical calculations relating to the definition of the shape of the part to be reconstructed, we were able to construct three hypotheses tracing the probable shape. The discussion on the definition of a choice justifying and coinciding with the reality and the state of conservation of the monument rests on the geometrical construction of the dome by extending the lines of force of the extrados of the dome.

All this is well readable by reviewing the documents and by visiting nearby parallel examples attesting to the presence of the shape of the bishop's cap in the repertoire of traditional Omani architecture.

In conclusion, this brief demonstration is a reliable and probable approach to definitively come to a decision regarding the shape and the general form of the dome of the Sheikh Ibn-Baraka mausoleum.



Photos of the mausoleum before, during and after restoration works

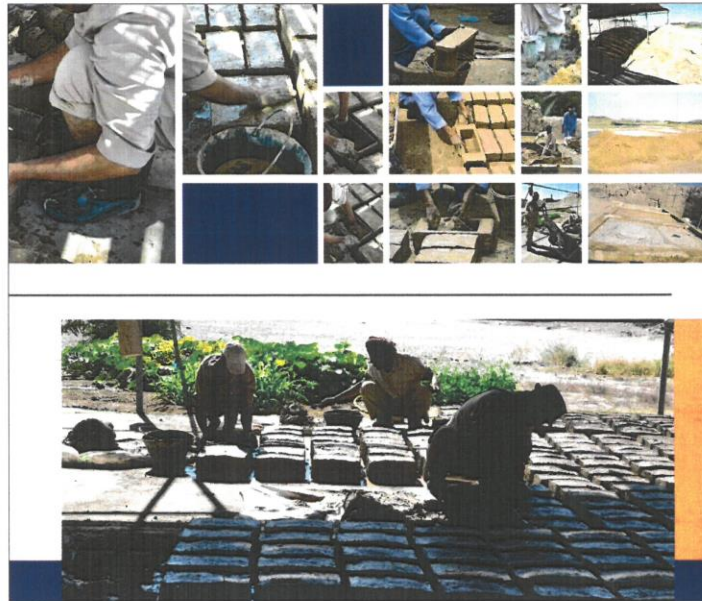
8. The study for the aging characteristics of different types of brick

Due to the completion of the pilot project at the Souk, the production of Adobe bricks has been paused until the restoration works are resumed at the Souk. The research and adoption of other monitoring techniques and enhancement methods will also be recommenced once the restoration works for the second phase start.

The following information were listed in the previous report;

Adobe bricks (Fabrication) The fabrication method was inspired from the skilled and practiced craftsmen and artisans who inherited these techniques from their ancestors ages ago, and they have excelled the methods and stages of producing them. Through the guiding of these experts we were able to draw and document the fabrication stages as in the original:

- 1- Choosing the right soil by its source, where it was found out that the soil from oasis and nearby sites have an important percentage of water and remains of weed that helps the mixing of adobe, while areas with salinity soil should be avoided, as this salinity appears in white layers in the fermentation stage.
- 2- Soil fermentation, which is a long process over a month or more, in this process the soil is watered and left to ferment until the soil develops characteristics that allow its using and mixing at a later stage.
- 3- After fermentation, the soil is relocated to near the drying site, the soil quantity should be enough to mix with hay and water to reach a point of viscosity, the percentage should be accurate at this stage whereas to each trolley of soil is mixed with a bucket constantly until it's completely and equally incorporated.
- 4- After preparing the mix, the molding starts in specific sizes according to the demands such as (15X15X35) cm and (15X15X40) cm, where the mix is placed in molds and compacted manually to remove all air which creates cracks.
- 5- At a later stage the bricks are removed from the molds to be air dried, and flipped from side to side to reassure the drying of all sides, the drying period varies depending on the season and other factors, as it takes approximately a week to dry in the summer and more than two weeks in winter. Cracking in the bricks may occur if mixing the soil and hay is not enough where air bubbles form in the mix, and if the hay amount is not enough, that is why the mixing and compacting are very important in the fabrication process.



Fabrication of Adobe bricks at the workshop

It is highly important to mention that the adobe bricks prepared by the workshop and constructed in the pilot project area have not shown any deterioration or degradation since their installation, even when exposed to natural effects impact.

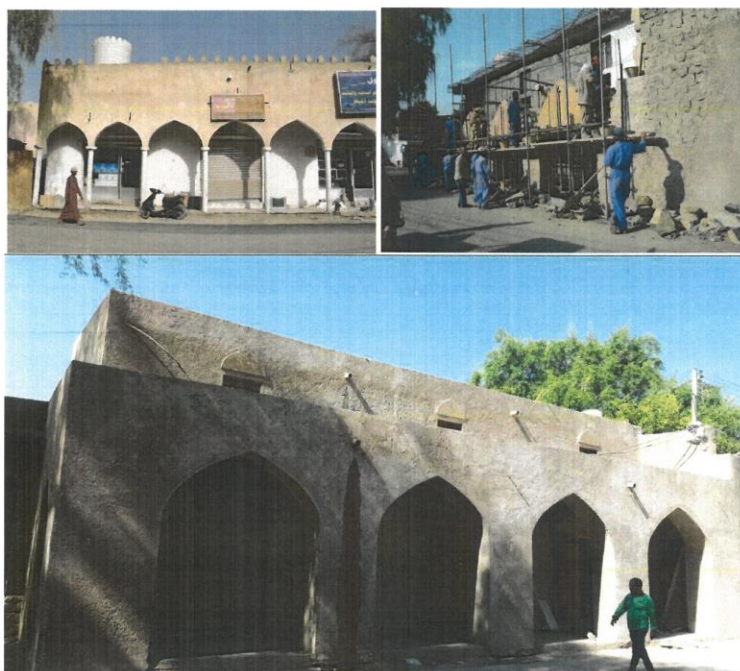
It is also essential to mention that the team is studying other experiences in the field of earthen architecture to benefit from the different results, such as the consolidation studies published by the Getty adobe research project, and other technical tests will be performed at a later stage to enrich and improve the adobe brick workshop. Any important achieved results will be shared with UNESCO accordingly.

9. The rehabilitation and renovation of Souk Bahla



General plan of the Souk

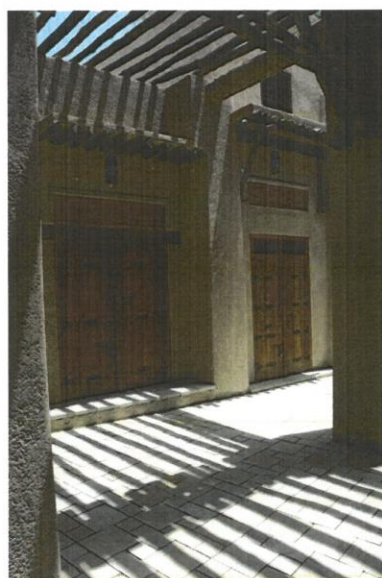
Although the restoration methodology in the pilot project have been extensively explained in many previous reports sent to the Committee, we find it necessary to confirm that any accomplished work have definitely depended on the restoration guide lines in the Management Plan, and to all decisions by the Committee made on the subject. In addition to the fact that the pilot project was initially focused on the most demolished and deteriorated part of the Souk, where emergency measures had to take place to save the structures in this part where possible, many of the structures were already destructed and had to be rebuilt using the same traditional materials and techniques, while other structures had to undergo restoration and consolidation works also using traditional materials and techniques, Unquestionably, all finishing works were made according to the same traditional materials and techniques such as wooden doors and final coating layers.



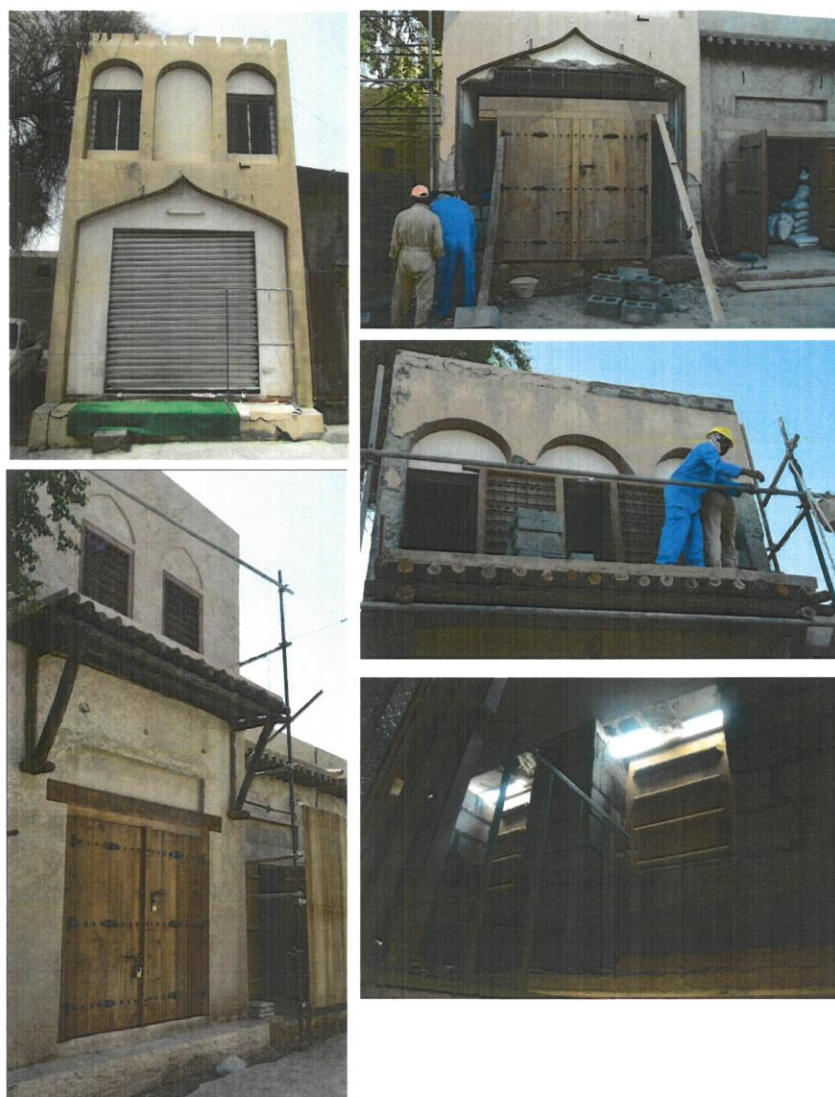
Photos of the souk before and after restoration works



Details at the pilot project area



Photos of the Souk before and after completion of the restoration works



Photos of the Souk before and after completion of the restoration works

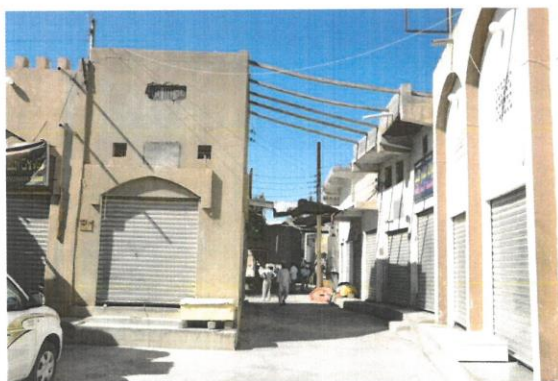
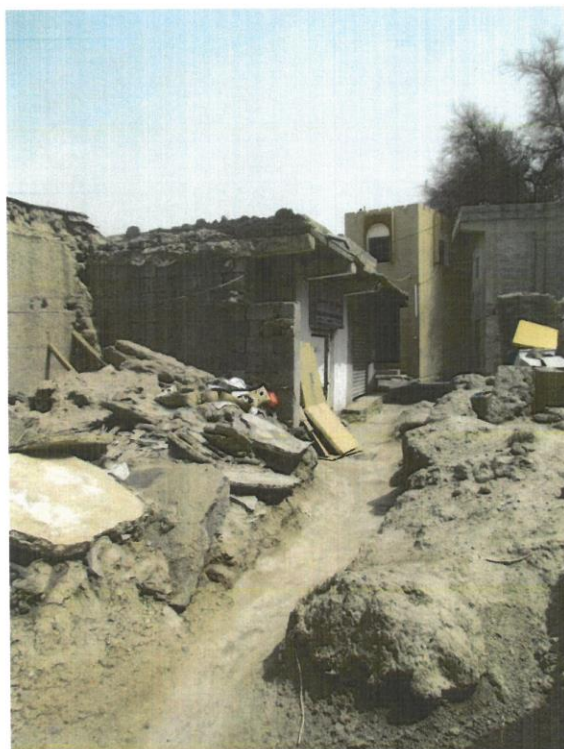
As regards to Souk Bahla, the management plan in particular focused on the following concepts:

- The preservation of the urban fabric of the souk Bahla and its morphology, and respecting the general organization of the souk in all its components, its identity, the heights and the appearance of its architecture.
- Reuse existing structures of the souk as much as possible by considering its original function and keeping the traditional trades that have been active at the souk.
- In-depth study of the original remaining structures of the souk, to allow a deep understanding of the original architecture elements, the materials in use and construction techniques, in order to ensure the reconstruction of the collapsed parts on scientific and historical bases.
- The use as much as possible of traditional building materials and techniques and also the traditional coating techniques.
- Maintain as much as possible the general order and original organization of the Souk, its distribution, access and any situation that attests to an old structure.
- In order to ensure the continuation of the functioning of the Souk and the protection of its architectural order, its historical and social value, restoration studies must be conceived according to a profound understanding of the functions of the souk and its development and the possibility of its integration into its environment.

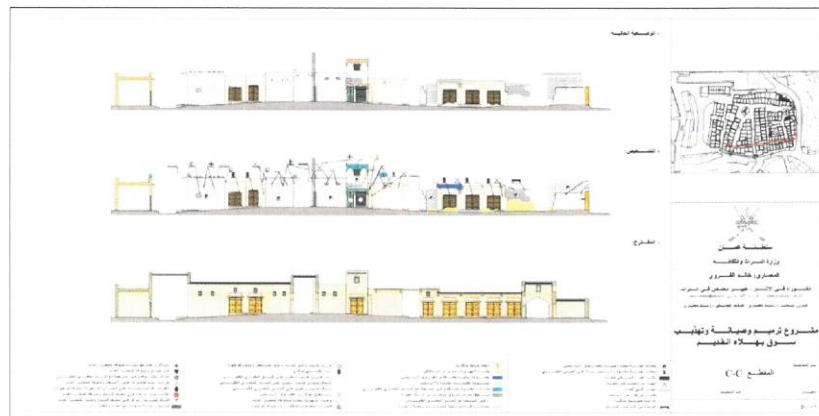
9.1. The Authenticity of the Souk and its Urban Fabric

Passing on cultural heritage to future generations is a complex and delicate task, conservators are constantly confronted with a dilemma: to guarantee the material conservation of the object subject to intervention without affecting its integrity or erasing the marks of the past.

At the intersection of the history of art and technology, the science of materials and techniques of know-how to, conservation and restoration work must above all be cautious in respecting the preservation of authenticity and reversibility, but also to accept that some situations of a patrimonial nature are condemned to disappear irreversibly



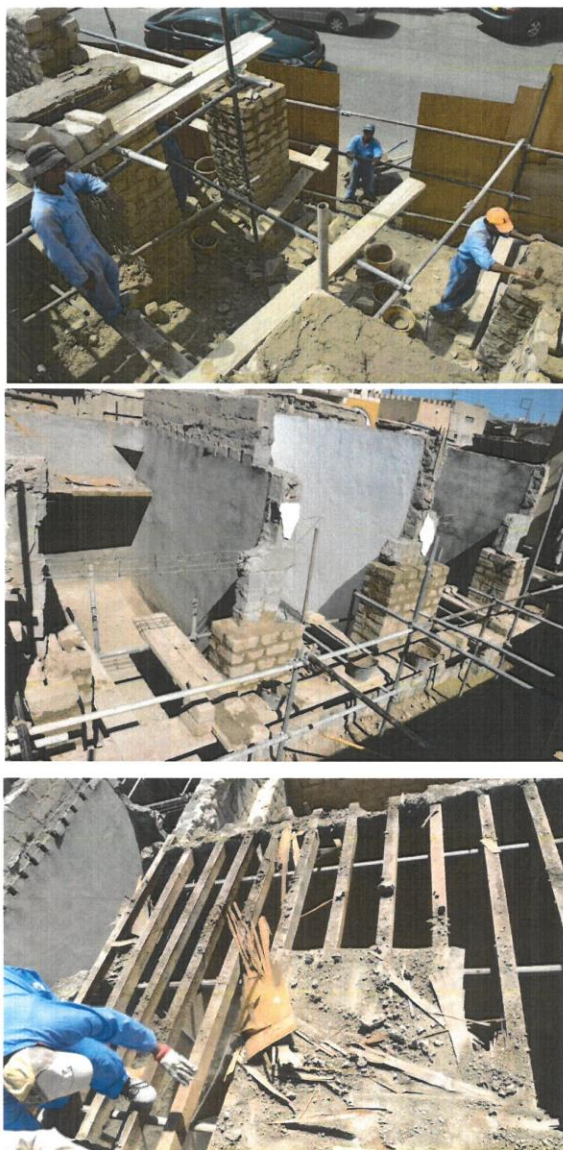
Photos for the actual state of the souk before restoration



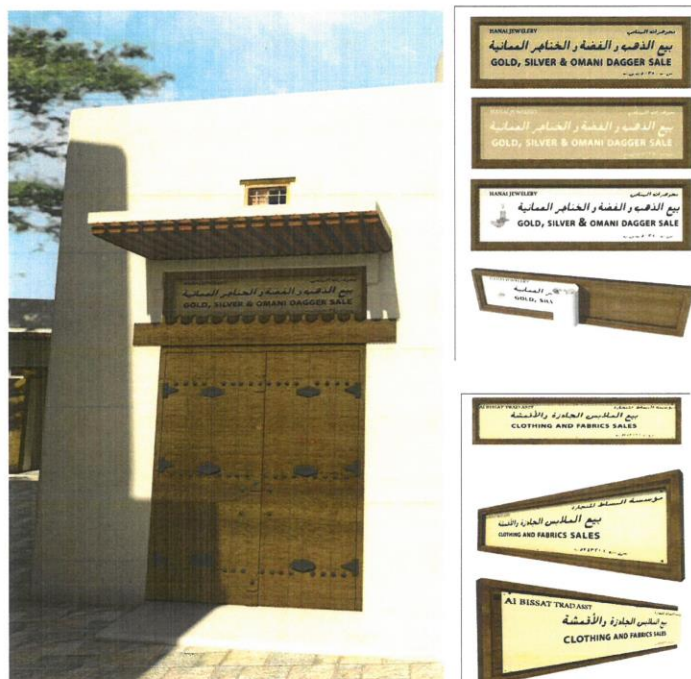
Few drawings for the restoration of the Souk



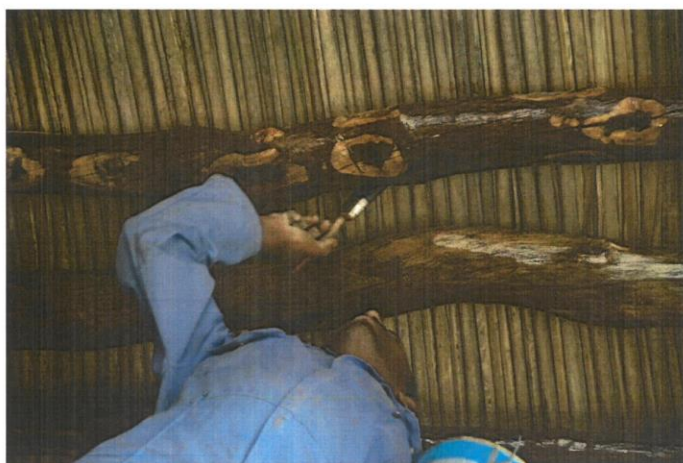
Legend for the physical state of the Souk



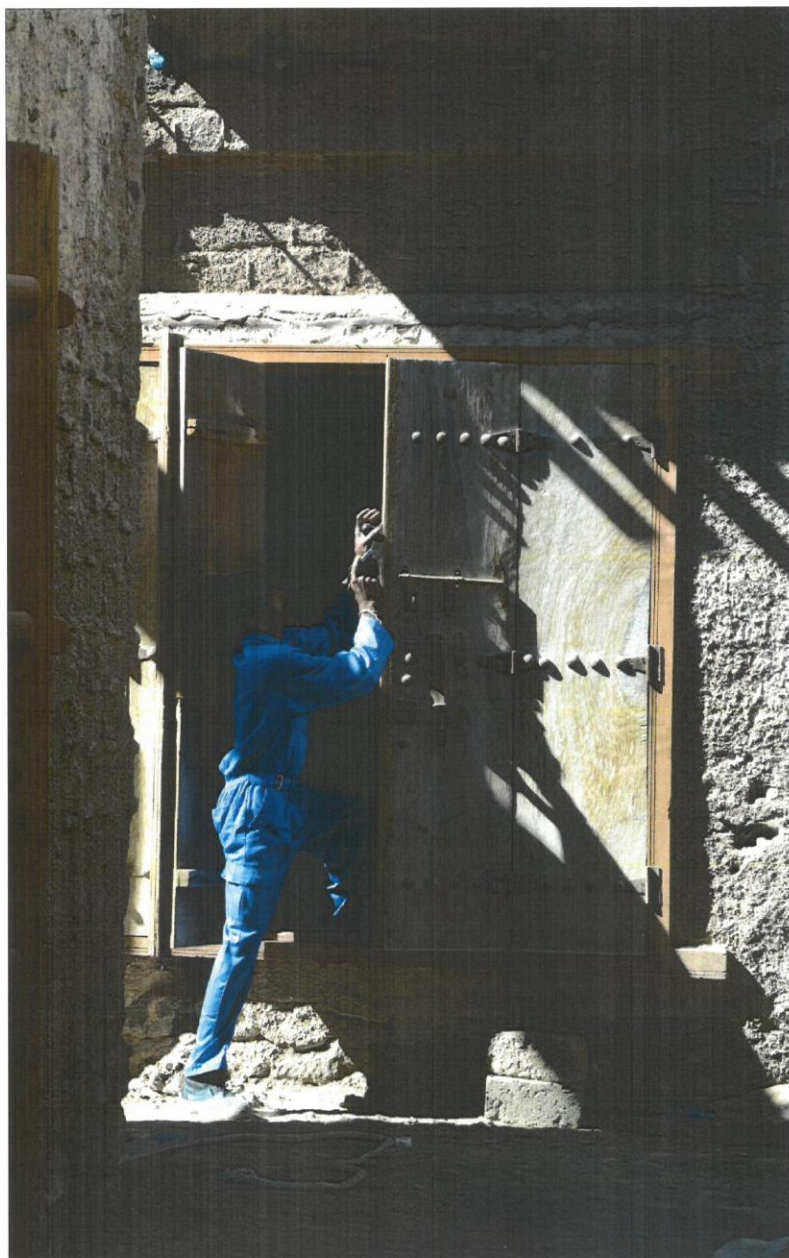
Photos during restoration works



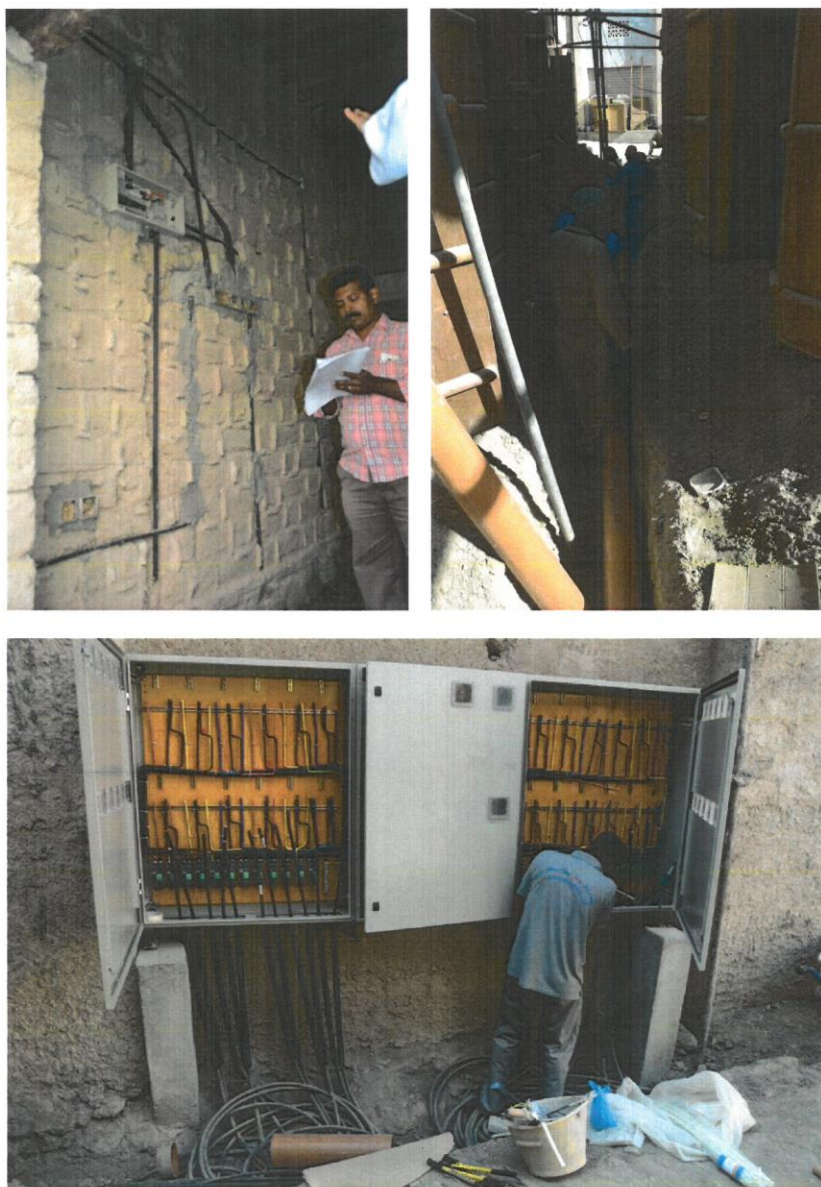
Drawings for shops signs



Finishing works at the pilot project area



Installation of traditional doors

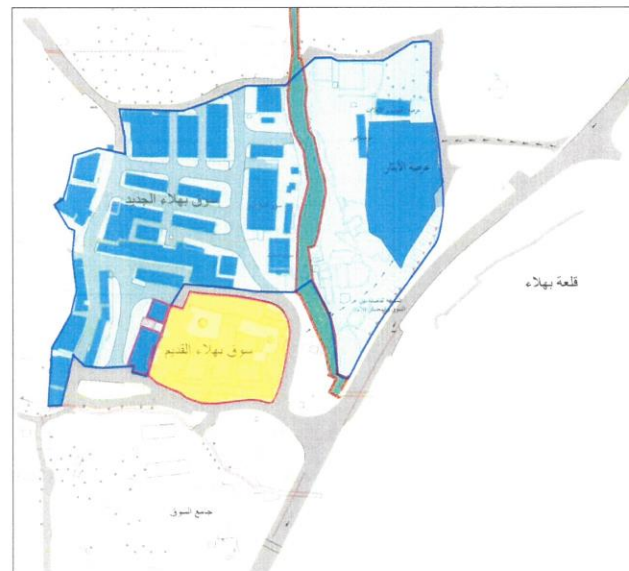


Installation of electrical wiring

9.2. Anthropological and patrimonial study of Souk Bahla

As a part of implementing the management plan (management plan Page 49- Further studies and projects policies section, B2) the Ministry decided to assign a team of experts to prepare an anthropological study into customs, crafts and traditions, the study was carried out for the purpose of acknowledging and understanding how the souk has functioned since its early beginnings, as well as its current functionality. It has also focused on documenting the traditional crafts, vocations and industries that were and still active at the Souk.

The study has helped to make a comprehensive diagnosis to understand the failure of the operation of the souk to the point that a large number of shops have been converted into deposits, which generated a malfunction that could reach a level of alarm to the authentic functionality of the souk, since an important part of the souk remains closed and the commercial activities and traditional crafts are completely frozen.



The old souk and new souk at Bahla

The results of this study have demonstrated that the major commercial activities of the Souk have moved to the shops located around the exterior vicinity of the old Souk, as well as an important number of shops inside the old Souk have been modified to warehouses. The study also provided a detailed documentation of the original crafts and vocations, in addition to an inventory for the current occupation of shops and their owners.



Discussion with the citizens about the rehabilitation and reuse

9.3. Relationship between the archaeological study and the rehabilitation and renovation project of the old souk of Bahla

As recommended by the WH Committee in previous decision to carry out an archaeological study of the old souk of Bahla. The Ministry of Heritage and Culture had commissioned a team of specialized archaeologists for the realization of the study and to achieve four accurately distributed archaeological surveys located within the boundaries of the pilot operation.

As it has been well detailed in the report provided by the responsible team for the archaeological study, this study was possible to date precisely the old souk Bahla by proposing a dating attested by the stratigraphy and all the archaeological material of pieces, coins and ceramic discovered in the surveys

Apart from the results related to dating, archaeological research had led to the reveal old abandoned structures that would relate to an old organization of an important square in the souk. Due to this discovery it will be possible to reconstruct this part by its restitution and by attempting to adapt to the new souk

operating program. These archaeological surveys also permitted to learn about the conservation status of foundations and construction technique, it had also shown an infrastructure unable to continue to support the loads from the superstructure allocated in some areas, so consolidation works for foundations is urgently needed and sometimes reconstruction in case of total absence had been systematically engaged in order to overcome and correct this delicate deficiency.



Photos for the surveys and part of the findings

7.8. HARAT AL-‘AQR SETTLEMENT PUBLICATION

The Ministry of Heritage & Culture published a square booklet of 44 pages on Harat al-‘Aqr settlement (see annexe 7.8.). The publication addresses a general introduction to the World Heritage property, an approach to the ancient settlement itself, and a brief introduction to the Heritage Management & Development Master Plan. The booklet presents the survey plans and cross-sections of the current state of a case study building in the ancient settlement. This publication is part of a collection published by the Sultanate of Oman dedicated to Cultural Heritage in Oman. The mentioned collection has relevant numbers on unique earthen heritage witnessed at Harat al-‘Aqr in Bahla Fort; Harat Fanja in Bidbid; Harat al Yemen in Izki; Harat as-Sulaif in Ibri; and stone and earthen heritage at Harat as-Saybani in Birkat al-Mawz.

Bahla

Harat al-'Aqr

Ministry of Heritage & Culture
Sultanate of Oman

