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Applied its mandate to conserve the tangible heritage of Abu Dhabi Emirate, ADACH is concentrating efforts on the historic buildings of Al Ain. Among important constration projects are al Jahili Fort, Hamad bin Hadi all hamaki House, and the emergency conservation programme. Many more activities are programmed by the historic Conservation, in collaboration with the trategic Planning Office, Department of Historic Environment, and other departments of ADACH.

the Department of Conservation at ADACH is responsible for research, policy development programming, as well as implementation of conservation activities within the trained of Abu Dhabi. Its conservation activities encompass the tangible cultural heritage of Abu Dhabi Emirate including buildings, sites and collections. It works

closely with other departments of ADACH to accomplish its tasks. Within the scope of this mandate, current efforts are concentrated on the city of Al Ain, where implementation is underway for a number of important conservation projects, focusing largely on historic building sites with a variety of conservation issues.

First among these is al Jahili Fort, located next to Jahili Public Gardens, near Al Ain Oasis in the city centre. The Fort consists of a largely intact structure where a full-scale restoration project is being designed and conducted with equal concern to all layers of the building's history. The Strategic Planning Office, in collaboration with the Department of Conservation and the Department of the Historic Environment, is leading the project with the aim to create within Jahili a visitor information centre and a permanent exhibition hall.





# Conservation Department ADACH Focuses on Historic Building Conservation Activities in Al Ain

Conservation work on southeast corner of Wing A, in Jahili Fort.

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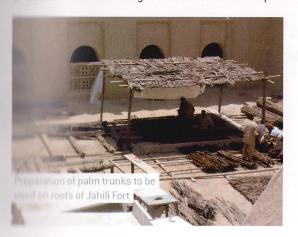
method travels of the renowned Mubarak Bin London (Wilfield Theology). The project is due to finish before the end

A period major conservation project is currently under implementation at the Hamad bin Hadi Al Darmaki Hama, in Hilli Oasis. The house is a largely abandoned thin with many phases of occupation. The project aims to an additional the building and conserve the historic without radically changing the archaeological appearance of the structure. Conservation works are currently led by earthen conservation expert Mr. Ali Malokabbasi working closely under the supervision of the Department of Conservation and the Department of Historic Environment.

As another important area of activity, the Department of Conservation has lately launched an intensive pro-

gramme for Emergency Conservation, with the purpose of directing conservation at a series of historic structures in need of urgent intervention. The implementation of such a programme will ensure safety to these buildings and prevent further decay. Following site condition surveys and consultation with a specialist structural engineer, methodologies have been developed, interventions have been scheduled, and work has started on fencing, cleaning and preliminary consolidation of structures.

The examples given above are only highlights of the historic building conservation works that ADACH is conducting in Al Ain. Many more activities are programmed with the aim of safeguarding the tangible heritage of Abu Dhabi Emirate.







### Architecture Students from UAE University visited historic sites in Al Ain

ADACH is cooperating with the UAE University in Al Ain in an exciting new initiative for "Digitization and Information Packaging of Architectural Heritage in Abu Dhabi Emirate". Architecture students have already begun studying various historic sites in Al Ain for the project, which is expected to continue for several months.

As part of the Digitization and Information Packaging Project, a group of 42 female students and their lecturers from the Faculty of Architectural Engineering visited the historic sites Al Muwaiji Fort, Bin Hadi House and Al Qattarah Fort in Al Ain on March 15, to conduct architectural studies on the buildings. As another activity within the same context, faculty students have begun working on the modeling of Al Jahili Fort in February 2009, in order to prepare a 3D model of the site and present it to ADACH.

The Project for Digitization and Information Packaging of Architectural Heritage in Abu Dhabi Emirate aims to investigate the possibility of establishing an online information delivery patterns for architectural heritage projects in the UAE, and would adopt a selection of case studies in Abu Dhabi Emirate.

The Project is supported by ADACH as it complements the authority's goals regarding the conservation and promotion of cultural heritage, considering the increasing importance of presentation of heritage sites using digital information forms.

ADACH also aims to spread awareness of Abu Dhabi's cultural heritage among local students, and to invest in the training of future heritage management professionals.



## Harvard University graduates visit Abu Dhabi for research initiative on Al Qattara Oasis in Al Ain





Harvard Design School Faculty and Students visit Abu Dhabi, as part of a research initiative exploring design strategies for the restructuring of Al Qattara Oasis in Al Ain.

This undertaking, sponsored by the Abu Dhabi Authority for Culture and Heritage (ADACH), results from Abu Dhabi's interest in establishing in this exceptional location an important cultural, educational and research institution devoted to the study, production and advancement of the Arts, Crafts and Design traditions of the Emirates and beyond. It is also aligned with the ADACH Strategic Plan target to prepare management plans for Al Ain's oasis areas.

This campus project would serve to open up the discussion about new design strategies that can begin to reorganize the residual spaces around the Oasis, in order to accommodate a wide variety of programs that can provide a new lease on life to Al Qattara, and incorporate a new urban framework for its edges.

The team of 25 Harvard design students, lead by Architects:

Jorge Silvetti, Professor of Architecture, and Felipe Correa, Assistant Professor of Urban Design, is currently visiting Abu Dhabi and Al Ain as part of an official site visit. The purpose of the trip is to gather additional information on the Oases, and the city, and have a first hand experience of Al Qattara. The research team is made up of advanced standing students from three distinct disciplines, Architecture, Landscape Architecture and Urban Design. Throughout the Spring semester, the students will conceive a number of well tempered strategies that envision the introduction of the aforementioned campus. In doing so, we aim at unfolding a broader constellation of projects, that in summation provide manifold alternative visions for a site that is quite unique from a cultural and an ecological perspective.

During this visit, faculty and students presented preliminary research to ADACH officials, and held a series of information sessions in order to establish a clear dialogue amongst all agents involved.



#### Conserved buildings in Al Ain withstood hailstorm well





An unusually strong rainstorm took Al Ain by surprise last March, inflicting much damage around the city, but historic buildings conserved by ADACH withstood the storm without serious damages, thus standing their first major test quite well.

The rainstorm, which swept through the UAE between March 23rd-26th, 2009, started in Al Ain around midnight, March 23rd, and caused damages in many parts, especially in the north part of the city including Al Foah and Hili. The highest amount of rain was recorded in Al Foah and the wind strength reached as much as 80 km/h. In the early morning of March 23rd, hail started; the inhabitants claimed they had not seen anything similar throughout the past 20 years. The storm damaged trees and concrete oasis pathway walls in Hili Oasis; trees on the streets; and roofs, tents and shades in buildings.

There are several historic buildings in Hili Oasis that have been the object of undergoing conservation works

by ADACH. At Bin Hadi House, where a comprehensive conservation project is under way, only some small parts were damaged by the storm mainly due to water collecting in areas within the building courtyard. However, all sections of the site withstood the storm with no significant damage. On the site of Bin Hadheibah House and Bin Hadheibah Fort, which were recently treated under the Emergency Conservation Program, both buildings were in good condition, although the concrete wall of the garden surrounding them collapsed completely.

Monitoring of the buildings and analyses of the issues after the rain and hail storm show that the conservation works were effective even in the worst climatic situation. The use of materials, examination of pathology and conservation methods employed to address the issues in each building, were based on scientific standards of conservation; we are pleased to see the success resulting from adopting these standards.

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This Month

July 2010

#### Emergency Conservation of the Bin Shehail House, Al Ain

There is a large number of historic earthen structures which form part of the special built heritage of Abu Dhabi Emirate, and which need urgent protection due to their fragile nature and often deteriorated state of repair. ADACH set up the Emergency Conservation Program in 2008 to address the urgent conservation needs of these structures, assessing the damages and taking immediate measures to help them survive until more comprehensive conservation measures are taken.

It may seem that the best way to conserve a heritage building is by adding new architectural elements such as a roof, doors or windows in order to complete it and make it aesthetically appealing. However, the conservation of the historical and heritage values of a building should not go beyond halting its deterioration, so that history is not falsified and the authenticity of the heritage is preserved. ADACH follows international norms and conventions in its endeavors to preserve the values and authenticity of the heritage of Abu Dhabi Emirate for the enjoyment and appreciation of future generations.

Bin Shehail Al Mottawa Al Dhahiri house is one of the historic buildings being conserved by ADACH under the Emergency Conservation Program. Work on the building began in mid-February and was completed on May 5th, 2010.

The house is located at the western edge of Al Ain Oasis, along a public pathway near Sheikh Zayed Palace Museum. It is typical of historic earthen buildings in Al Ain and was built from mud bricks and mortar. Bin Shehail House is significant as it reflects the traditional oasis architecture of the region, and also as one of the handful of such buildings in Al Ain Oasis, which has fewer buildings than other oases in Al Ain such as Qattara and Jimi. Due to its long period of abandonment, the building suffered from serious structural problems and had become a safety hazard for local traffic and the farmers around it.

A series of site visits were conducted by conservators from ADACH in consultation with a structural engineering specialist, to prepare an action plan for necessary interventions. In addition, measured drawings, photogrammetric documentation, and partial archaeological cleaning were completed by architects and archaeologists, in order to document the building's condition before, during and after interventions and to inform conservation decisions through better understanding of the building's history.

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The first action on site was to support the free standing and cracked walls with temporary wooden shoring. This created a safe working environment and insured the atability of the walls against potential further damage. Parallel to this, fencing was put around the building along the pathway to create a safe buffer zone for traffic through the oasis. Following that, archaeological cleaning and documentation were carried out at the bases of the walls to assess the extent of deterioration in this area.

This information aided the consolidation of the lower walls of the building, which were restored using matching mud bricks and mortar. The corner of the building was rebuilt as a permanent support for the free standing wall on the west side. The cracks were filled and injected with earthen grout to ensure better connections and stop any possible expansions in future. After these stabilization measures, a monitoring mechanism was set up to track possible movements in the wall that may require further interventions. As a result of these interventions, Bin Shehail House is now stabilized and can be safely enjoyed by visitors interested in historic earthen architecture.



[15/1/2010, The state of the building before the emergency conservation intervention]



[5/5/2010, The building after completing the emergency conservation intervention]

#### Art Relocation in ADACH

Since March 2010, nearly eight hundred artworks from ADACH's modern and contemporary collections were relocated by the Conservation Department to a secure and climate controlled temporary storage facility. These collections encompass a wide range of media such as paintings, works of art on paper, black and white as well as color photographs, embroidery, wood carving, and ephemeral pieces such as ink drawings on Arabic bread. The preparation of the ADACH art move included careful planning in the following steps: separating the works of art from commercially mass-produced reproduction prints and student artworks, categorizing works by medium and size, removing broken glass from framed artworks, providing temporary numbers for artworks without barcodes, and building special housings for large, unframed artworks

Preventive conservation is vitally important to mitigating risks to the ADACH artworks by providing proper handling, packing, and transport for each piece of art. In order to minimize handling, each individual artwork was packed and then placed with pieces of similar size in a reinforced box, after which, only the boxes were moved by the specialized art handlers. For the transport, the artworks were moved using a climate controlled truck equipped with air-ride suspension to lessen the physical and chemical stress on artworks caused by vibration and any



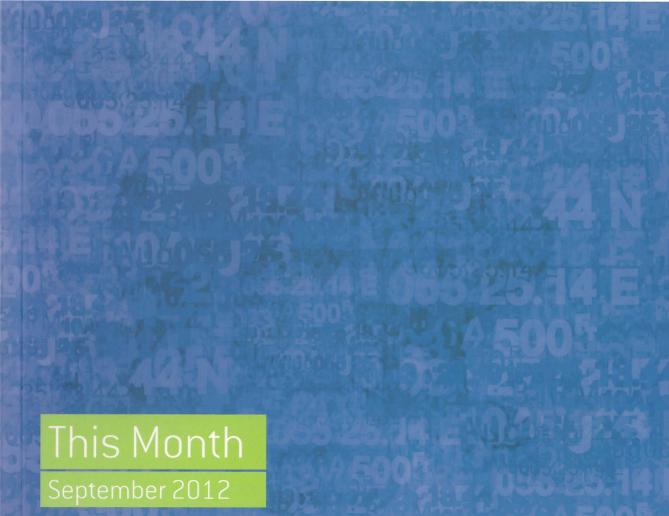
Loading paintings in a climate controlled truck

sudden environmental changes. In collaboration with the Logistics Department and Arts and Culture Departments, the object inventory list has been updated to a more user-friendly state.

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Portrait by A. Mohseni Karmanshi



#### Conserving the Iron Age Village of Hili 2

One of the 17 sites that comprise the serial World Heritage Property of Al Ain is the Iron Age village of Hili 2. Thirteen mud brick houses dating to ca. 1000 BCE were excavated along with artifacts such as stone bowls, pottery and copper tools, which are currently exhibited at the Al Ain National Museum. The houses are arranged in a tightly clustered formation that indicates a true village.

Since its excavation in the 1970s-1980s, Hili 2 has been exposed to the effects of wind and water. During rain, water pools in depressions and has erased the fragile mud brick foundations, while rain and wind have eroded the upper walls of many of the houses. Past efforts to protect the site by the former Department of Antiquities, such as capping walls with new mud brick and building a high wall around the perimeter of the site, were key in preserving the site until now; but these interventions are also now deteriorated. Given the high significance of the site and its inclusion in the World Heritage Sites of Al Ain, it is important to ensure its conservation and plan for its long-term care and management.

Abu Dhabi Tourism & Culture Authority (TCA Abu Dhabi) began addressing emergency conservation issues at Hili 2 this year. Documentation was carried out including a topographical survey of the entire site to understand drainage patterns in critical areas near houses. Total station and digital photography were used for the first time to gather field data related to topographical survey and rectified elevations of houses. Elevations of damaged walls were generated using rectified photography, a process where high resolution photography is used in conjunction with total station survey to develop images without distortion. These elevations can be used to take measurements or map conditions such as erosion, cracking, leaning walls, etc. Condition maps are carried out before beginning the repairs to record the state of the wall both before and after conservation. So far, conservation has focused of stabilizing walls in danger of collapse due to leaning or undercutting. Emergency conservation treatments include supporting leaning walls, using new mud brick to repair eroded wall bases or to stitch cracks, and repairing areas of loss with mud brick and clay plaster. New methods of wall-capping using earthen materials are being tested as an option for protecting the top of walls from further erosion. The next phase of work will address water drainage and develop strategies to divert water away from the foundations of the houses. In parallel to Emergency Conservation measures, a conservation management plan (CMP) will be prepared for the site. The CMP will assess the site's values and the impact of operating the site and opening it up for visitation. The CMP will help guide decisions regarding presentation of the site such as signage, visitor access, maintenance, and protective measures including partial reburial or the construction of a shelter. These measures will ensure the long-term stability of the site and protect this important component of Abu Dhabi's World Heritage listed sites.

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IIII 2 post-excavation (Source: DAA2)



Londition map of a damaged wall at Hili 2 (all @ TCA Abu Dhabi, 2012).



hapairs with new mud brick to a wall damaged by coving (Photo: B. Marcus III A Abu Dhabi, 2012).



Panoramic view of Hili 2 (Photo: S. Ali @ TCA Abu Dhabi, 2012).



Topographic survey showing the elevation of points throughout the site, and presenting them as contour lines on a plot which indicate depressions or bulges.





#### Qattara Souk Re-opening Soon

Concurrent with the national celebrations for the forty-first UAE national day, the Abu Dhabi Tourism & Culture Authority will re-open Qattara Souk in Al Ain in December. The souk dates from the middle of the twentieth century and was founded by the late Sheikh Shakhbut Bin Sultan Al Nahyan, ruler of Abu Dhabi at that time, on the road between Qattara and Jimi oases. The souk is typical of the traditional markets found at the heart of every city in the Arab world. Besides being a commercial center, it was an important meeting point for the local community who visited it to buy food and catch up with local news at the same time.

The opening program of the souk comprises a range of cultural and heritage activities, including displays of handicrafts, Ayala folk shows and Oud concerts, as well as live displays of traditional ways of building and Arish construction with the possibility for hands-on participation by the public of all ages. There will be lectures on Emirates heritage subjects, an art exhibition of drawings and photographs, a heritage photographic studio, and a number of other activities for children and families. Special visits to the souk will be arranged for school and university students, and as a further attraction Hamdoon, the much-loved cartoon personality, will be present on the opening day.

Qattara Souk originally consisted of 15 shops, with four more being added by Sheikh Tahnoon Bin Mohammed Al Nahyan in the 1970s. All the shops were granted rent-free to the traders. These shops sold the main foodstuffs, such as rice, flour, sugar, dates, as well as different types of spices, soap and some household goods that were brought from Abu Dhabi and Dubai. In addition there were local products, along with a bakery, tailors' shops and different crafts such as gold- and silver-making. The souk originally used to open only from the afternoon until sunset, but after around ten years there were two shifts, in the morning and the evening. The expansion of the city and the opening of Al Ain Souk in 1960 affected Qattara Souk and thereafter it gradually declined until the last traders left about 15 years ago and the souk was abandoned. Qattara Souk is characterized by its distinct location between the two oases and by its setting within a group of important historic buildings that includes the Bin 'Ati Al Darmaki house, which in 2011 was restored and reopened as Al Qattara Arts Center.

The souk is now being re-opened after the completion of a careful program of conservation and restoration. The project aims to reuse the historic souk building in order to showcase traditional handicrafts and arts. It also aims to highlight the amenities of Al Qattara Arts Center and emphasize its historic and visual links with the souk through a range of complementary cultural programs and arts activities.

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