2019 On Site Review Report

by Seif El Rashidi 4567.BAH

Revitalisation of Muharraq

Muharraq, Bahrain

Architect
Bahrain Authority for Culture & Antiquities

Client
Bahrain Authority for Culture & Antiquities

Design
2010 - ongoing

Completed
2013 - ongoing

Revitalisation of Muharraq
Muharraq, Bahrain

I. Introduction

This project involves the rehabilitation of the area of Muharraq, Bahrain, formerly the centre of the global pearling trade, and the economic cornerstone of the Bahraini nation until the 1940s. The project has led to the inscription of Muharraq as a UNESCO World Heritage Site. Developing organically from an initial intervention in the early 2000s, it has evolved into an exemplary integrated urban conservation and revitalisation scheme for the Muharraq Pearl Route, starting with three protected oyster beds off the coast of Muharraq Island, and moving inland to encompass a historic fort, a large number of historic buildings linked to the pearl industry and trade, and a wide range of contemporary interventions to ameliorate the public space, create a network of community public spaces, and introduce sensitive architectural interventions to enable the neighbourhood to serve its local community and to thrive as a cultural hub. The project combines restoration, urban upgrading and contemporary architectural design. It involves significant partnerships, and effective systems of urban governance and management.

II. Contextual Information

A. Brief historical background

Muharraq thrived in the 19th century as the capital of Bahrain, then one of the global centres of the pearl industry. This highly specialised industry was of worldwide relevance, given the international market for pearls, and gave Bahrain strategic importance as a trade centre. The series of tiny islands sustained themselves through trade, not just of pearls but thanks to their strategic location across several trade routes, connecting the Indian Ocean with the Arabian Peninsula, the Middle East, West Asia and, indirectly, Europe. The thriving pearl economy consisted of a number of specialisms including pearl diving, pearl sorting, boat manufacture and international trade. Bahrain's importance thus far exceeded its small size.

The dearth of natural resources meant that many materials were imported, and thus even the indigenous architecture relies on imported raw materials such as wood. That said, imported materials do not seem to have been in short supply.

The pearling industry thrived until the 1930s when the development of cultured (rather than natural) pearls destroyed Bahrain's commercial importance, leading to the economic decline of Muharraq. The rise of the oil industry later transformed Manama into a small but bustling capital city, while Muharraq faded into relative obscurity. As an impoverished area, it has become the home of large numbers of migrant workers from India and Pakistan. Most of these are "bachelors" who live in shared houses to economise on rent. The increase in the number of bachelors has driven some local families out, as they feel the area could be inappropriate for family life. The project is trying to encourage an influx of Bahrainis back into Muharraq, even if they no longer reside there.

B. Local architectural character, including prevalent forms and materials

The traditional houses of Muharraq are coral structures ranging between one and three storeys. The houses are generally modular in plan, with a number of rooms surrounding a large courtyard, often accessed

through a bent entrance. Many houses have one or more “rooftop” rooms, a bit like belvederes, exposed to the wind on four sides. Systems to maximise wind capture include wind towers (although many of these were destroyed in the late 20th century) and series of discrete vents to allow air into the residential spaces, as well as allowing the movement of warm air out. Interior spaces are decorated with incised stucco decorative panels, and upper-storey spaces have coloured glass windows. Some spaces are preceded by a portico. In the case of residential buildings on commercial streets, many of them have long, façade-length shuttered balconies, traversing the entire façades of the buildings. Houses that were once on the sea front have expansive wide balconies, which are not often shuttered.

Commercial buildings (amarat) consist of long plots. Their architecture is also of coral, with recesses used on the upper sections of the walls to minimise the load. Wooden branches are used as tie beams. Many such structures have date presses at ground level, a large number of which still survive. These were used for the manufacture of date molasses.

The roofs of all of the buildings consist of reed mats (barasi) placed on tree branches. In some of the grander spaces, the wooden roof construction is hidden behind wooden panelling, but this is rare.

The post-1940s architecture shows an interesting evolution of the traditional Muharraq house. While the architectural typology remains more or less the same, new construction materials, including concrete, led to the introduction of some new elements such as pilotis. Houses from this period also feature claustra made of cast cement and other materials, Crittall metal windows and terrazzo floors. Steel I-beams are occasionally used as well. Proportions change slightly due to the fact that many of these items are mass-produced. In some houses from this period, the traditional interior stucco-work panels are still to be found, however.

Many building materials were imported due to the remarkably small size of the country, and its strategic location and mercantile culture. Even glass panes were imported, for example.

C. Climatic conditions

The climate is extremely hot and humid during the summer (the humidity due to the island nature of the country). Climate in spring and summer is temperate. Bahrain can be very windy, making it easy to understand how and why a number of wind-related features developed in its architecture.

D. Immediate surroundings of the site, including architectural character, access, landscaping, etc.

The architecture of Muharraq generally consists of two- to four-storey-high buildings, most of which are painted white, and most of which are simple from the exterior. The landscape is flat. To the west is the island of Manama, with a noticeably more modern (and higher) skyline of glass tower blocks on the sea front.

The traditional historic core of Muharraq has lost its immediate connection to the sea due to land reclamation to expand the size of the island. This area includes a large road on the western edge of the newly reclaimed area. One redeeming factor about the reclamation is that it enabled the introduction of the modern road network without compromising the integrity of the historic fabric.

Traditional vegetation includes palm trees and various shrubs and bushes. (The traditional plant life is very well represented in the Archaeologies of Green Pavilion which focuses on local food-producing plants and trees.)

E Topography of the project site

Generally flat.

One significant element of natural landscape is Muharraq's last remaining beach, with its fort and newly constructed welcome centre – demonstrating through a series of models the extent of the Pearl Route and the main components of the trail. Visitor access from Manama and other places is normally by boat, except when weather conditions make access by land necessary.

III. Programme

A. History of the inception of the project; how the project was initiated

This remarkable project germinated from an initial intervention by Sheikha Mai Al Khalifa to reinstate a cultural majlis (salon) which had been initiated by her grandfather (Sheikh Ebrahim Al Khalifa) in his home in al-Muharraq, formerly the capital city of Bahrain. Although almost all of the original house had been lost, the idea was to revive the cultural life of an area that had declined significantly since the demise of the pearl industry in the 1940s. Since the inauguration of the new majlis (the Sheikh Ebrahim Al Khalifa Centre for Culture and Research) in 2002, Sheikha Mai has led an ever-expanding programme of cultural revitalisation, leveraging support from a wide range of institutions including banks and local businesses, as well as creating private–public partnerships with descendants of the former pearling families who still own property in the area, much of which was terribly dilapidated. The initiatives led by Sheikha Mai were founded on the belief that the reintroduction of cultural life into a neglected area, combined with an integrated programme of restoration and rehabilitation, could reverse its decline. This vision was coupled with the idea to recognise the outstanding universal value of Muharraq as the heart of the global pearl industry, leading to the inscription of the site by UNESCO, and the reawakening of the memory of al-Muharraq and its legacy among the people of Bahrain. Because of her successes (and tenacity) Sheikha Mai was appointed Minister of Culture in 2010. Today she is the Head of the Bahraini Authority for Culture and Antiquities.

Today the project can be summarised as follows: The restoration and rehabilitation of 16 historical buildings, many of which had links to the pearl trade, ranging in scale from the smaller coastal divers' homes, to the expansive courtyard houses of some of Bahrain's richest families, to amarat (commercial structures and warehouses, once on the sea front but now inland due to land reclamation); the development and delivery of an integrated public space upgrading scheme, including the conversion of the sites of demolished houses into a series of interconnected neighbourhood squares serving the local community; and a 'route' (in its broadest sense), from the last remaining beach in Muharraq all the way through the neighbourhood, with the public realm upgraded through a dual lighting and way-finding network of tall light fixtures – creating a subtle yet visible discrete intervention that guides visitors, while illuminating the otherwise dark streets for the residents. The 15-year-long initiative has included a significant number of new cultural spaces (including auditoria, some of which are used for the performance of traditional Muharraq music including the songs sung by pearlers at sea). Fantastic new architecture has also been introduced into the neighbourhood very skilfully – examples include the Archaeologies of Green Pavilion (2015), the House of Architectural Heritage (2018) the Pearling Path Visitor and Experience Centre (2018), and the Dar Al Jinaa Centre for Traditional Music (2017).

The project has also instituted a comprehensive urban management system to ensure that urban change and development is fully in keeping with the project's overarching objectives. The Pearl Route team review all

planning applications and have the authority to control building development, therefore effectively managing urban change. Detailed surveys of physical and social conditions underpin the programme, and the fact that the project offices are located in the area has proven to be a beneficial way of truly understanding the neighbourhood.

B. How were the architects and specialists chosen?

The architects and specialists were chosen through competitive tender processes and, in recent years especially, many of these tenders have attracted international architects.

C. General programme objectives

The original programme objective – to revive the cultural majlis of the late Sheikh Ebrahim Al Khalifa – quickly evolved into a much larger vision to revitalise al-Muharraq and to reverse its decline. It can be said that the objectives of this programme have been twofold: to preserve, upgrade, restore and revitalise a valuable yet under-appreciated historic settlement, and to raise awareness about the heritage of Bahrain among local residents and visitors alike, using urban upgrading and heritage as a catalyst to stimulate a declining area, and to make al-Muharraq the heartland of cultural life in Bahrain.

The programme involves developing and delivering a wide range of architecture, urban design and urban conservation projects as well as managing change in the historic environment.

D. Functional requirements (i.e. architect's brief)

For the public spaces: a robust design that would convert informal parking areas and vacant plots into a series of neighbourhood spaces that could foster the sense of community, and improve amenities available to local families. The intervention needed to be durable enough to last. In aesthetic terms, a simple way-finding system that would encourage movement through the Muharraq neighbourhood was required. For the paving, a cost-effective paving system that would enable infrastructure management was needed.

For the conservation work, initially what was required was an approach to conservation that preserved al-Muharraq's existing historic buildings within an urban context. This led to a remarkably thorough exploration of typologies, and an understanding of their history, construction techniques and materials – and the development of a strategy for restoring them. The directive from Sheikha Mai was that she wanted things to be done well. A thorough management plan and urban conservation plan were produced as part of this project.

For the architectural projects, these have take place over the course of almost two decades, and the approach has evolved as the project has matured. The first architectural commissions focused on creating modern facilities to revive al-Muharraq, while staying in keeping with the built forms and massing of the historical fabric. Over the past five years, the briefs for newly commissioned buildings have been far bolder: seeking architecture that is fully appropriate without disappearing into the historical urban fabric. The use of exposed concrete in several examples, and chain mail in another, is a reflection of the project's openness to unashamedly modern architecture. In many of the recent projects, a stipulation that new buildings should retain some traces of the structures that previously occupied the site has been put in place, as a way of ensuring that the memory of the city is not obliterated through modern design.

Overall, the approach has been one in which buildings, interventions and projects reflect the past somehow, be it through forms, massing, patterns and relationships or through historical fabric. With a project as wide-

ranging and long-lasting as this one, there has been scope for differing interpretations – meaning that the interventions themselves are as organic as the historic city itself.

IV. Description

A. Building data: volumetry, massing, number of units, surface in square metres, etc.

The area covered by the Pearl Route is 330,000 square metres, encompassing thousands of buildings, and 18 public spaces, converted from derelict sites as mentioned above. The number of actual physical interventions apart from urban space is around 20 discrete projects, but this is a scheme without end, and the project team is always looking ahead and commissioning new work.

B. Evolution of design concepts, including:

1. Response to physical constraints – siting, climate, plot ratios, etc.

Urban scale: The physical constraints include the harsh climate, and substantial research has gone into selecting shade-giving trees that are appropriate to the climate, including several indigenous species. The plots are determined by existing spaces within the city; most have been converted into small public squares, but the largest of these are earmarked for development as multi-storey car parks.

Contemporary architecture: Contemporary interventions have respected the form and scale of the historic environment, and also its urbanity. New interventions have respected the historical street line – which has always been important given the scarcity of land.

Planning regulations: This project is also in charge of reviewing and approving all planning applications submitted by members of the public. One main planning approach is to encourage as many applicants for demolition as possible to consider restoring their houses rather than demolishing them. One intelligent policy has been a stipulation that any development scheme must retain at least one space from the original building on the site – so that the past is not totally obliterated. New development schemes must also respect the original street line and massing, and the original dimensions of plots.

2. Response to user requirements; spatial organisation

Many Bahrainis complain that one problem in Muharraq is the difficulty of vehicular access and parking. Over the past few decades, the sites of demolished houses have become informal car parks. These spaces have now been reclaimed by the project and converted into the small neighbourhood squares previously mentioned. However, the project has also earmarked four large plots for the construction of multi-storey car parks in strategic locations across Muharraq in order to ameliorate parking and access. These multi-storey car parks will provide over a thousand parking spaces and have been designed as high-quality contemporary architecture, in keeping with the project's approach of encouraging modern interventions to look contemporary rather than masking them as historic buildings.

A number of community-focused initiatives have been implemented, specifically to address shortcomings in the provision of community services which have made al-Muharraq a somewhat challenging environment for modern Bahrainis. For example, community facilities for children were previously lacking and the project has provided these in the form of library/play spaces. The newly created neighbourhood squares

have been designed specifically to accommodate families and children playing and spending leisure time.

At the level of buildings, new architecture responds to the programme required for each facility. One of the challenges has been to convert previously domestic spaces into public facilities. The project has done this successfully, creating auditoria in the heart of the historic city where the public can interact with a wide range of events and activities that would have otherwise been unthinkable.

3. *Purely formal aspects – massing, articulation of façades, decorative features, use of traditional motifs, etc.*

Contemporary architectural interventions have generally respected the exterior simplicity of Muharraq's architecture, and are generally devoid of decorative elements, but rely on the interplay of mass and void. Some of the new buildings have used this quite playfully, especially the new Visitor Centre, with its skylights of different shapes, recalling the forms of the slabs of coral used in traditional building. Its towers, too, recall an architectural feature that once would have dominated the skyline in Muharraq. Most of the other contemporary structures are less monumental – for example, the horizontal Archaeologies of Green Pavilion, and the House of Architectural Heritage.

4. *Landscaping*

Much of the landscaping consists of urban landscaping, including a preponderance of terrazzo surfaces, which are durable and can also be shaped easily. The way-finding system consists of cast grey terrazzo columns with flecks of oyster shell, surmounted by a white globe. Very practical, yet also full of symbolism for those who find comfort in symbolic design. Simple yet playful shapes are created with the benches in the series of neighbourhood squares, some of which have an irregular pattern of slabs and water features – the asymmetry is very effective.

C. Structure, materials, technology

The range of technologies used here is vast, depending on the type of sub-project.

For the conservation aspects of this project, a meticulous study of traditional building materials has been undertaken, including material analysis (especially of renders). Conservation work tries to be as true as possible to the original construction materials and pigments.

With respect to new architectural interventions, buildings constructed in the earlier part of this project's life tend to be whitewashed, recalling the render of the traditional Muharraq buildings. Newer construction has tended to use rough-cast concrete – not out of place in an area where much of the architecture has been utilitarian for several decades. Inventive use of chain mail to create a covering over the Dar Al Jinaa music centre has created a fascinating building, allowing sound to resonate through the neighbourhood and securing good views out of it, while screening the harsh glare and presumably ensuring a constant breeze.

1. *Structural systems; in restoration projects, structural interventions*

For modern architectural projects, most construction is reinforced concrete. For conservation work, interventions respect traditional building techniques. Where coral blocks are needed, these are reclaimed from the rubble of demolished buildings. Structural interventions in conservation work (for example, replacing damaged ceilings etc.) is undertaken using the traditional construction techniques, except in some cases where pre-rusted iron columns were used for support of existing roofs or to support new interventions – such as a modern extension for a traditional space used as a café.

2. *Materials*

Structural members
Reinforced concrete for most modern constructions. Wooden beams for the oldest houses, sometimes augmented with I-beams in 20th-century structures.

Infill materials
For localised repair, traditional building materials are used whenever possible. Pre-rusted steel columns have been used for additional support when necessary. At streetscape level, infill materials include interlocking cement blocks, and terrazzo benches, surfaces and lighting fixtures.
For larger-scale interventions reinforced concrete is used frequently.

Renderings and finishes
For conservation work, painstaking research has been undertaken to analyse the components of historical finishes, and to recreate these. Also in conservation work, original paint has been stabilised and cleaned, rather than repainted. (This has a significant bearing on the visual aspects of historic buildings, which have not lost the sense of historical integrity.)

3. *Construction technology*

New buildings: reinforced concrete for the most part. Traditional buildings: coral blocks with wooden ceilings, although mid-20th-century constructions also make use of reinforced-concrete skeletons.

4. *Building services, site utilities*

An extensive system of street lighting has been put in place, and other infrastructure has been afforded a very high level of care and attention to ensure that it does not let down the architectural interventions. A new public bin system has also been introduced, to ensure the effective management of solid waste. In public squares where planting has been extensive, an underground structure to prevent tree roots from spreading too far and damaging the foundations of historic buildings has been put in place.

D. Origin of:

1. *Technology*

The conservation technology related to the historical buildings is informed by the buildings themselves, including those from the “transitional phase” from the 1940s onwards. The project continues to make use of traditional building construction technology – the result of extensive technical research.

Much of the contemporary architecture employs reinforced concrete, which has been used in Bahrain for the past 80 years at least. Some buildings are much less conventional, for example the Dar Al Jinaa music centre, which is a concrete structure cloaked in a metal chain-link covering (a bit like a curtain). While this is non-traditional, it is very effective. This building also has a wooden middle envelope (consisting of doors that open to create a translucent structure). In fact, it is a cloaked multi-layered structure.

2. *Materials*

Many building materials are imported. This has always been the case in Bahrain, which has always had limited raw materials due to its tiny size, but its connectivity and history of trade have meant that its

architects have always had access to a vast range of building materials (including wood and glass from the east). One local material is coral stone, which was widespread historically.

3. *Labour force*

The labour force is local.

4. *Professionals*

The professionals involved in this project come from diverse backgrounds. Architectural competitions held related to the commissioning of major new projects have attracted talented professionals from around the world.

V. Construction schedule and costs

A. History of project design and implementation, with dates

Commission:	2010
Design:	2010 – 2013
Completion of first phase:	2013

B. Total costs and main sources of financing

Total:	92,000,000 USD
Cost of land:	26,000,000 USD

40,000,000 USD came from a loan from an Islamic bank

C. Comparative costs (if relevant)

Not applicable.

D. Qualitative analysis of costs (per square metre, per unit, etc.)

280 USD per metre.

E. Maintenance costs (heating, cooling, etc.)

Hard to quantify cost of maintenance with a project as diverse as this one.

F. Ongoing costs and "life performance" of building, in terms of materials, maintenance, etc.

Again – impossible to quantify given the project range.

VI. Technical assessment

A. Functional assessment (use)

A multitude of uses, ranging from everyday community use (for the public space upgrading) to commercial use (for the buildings in the souq – many of which serve their original purpose) to cultural activities and uses (for many of the restored houses) to tourism (for the route itself, including the visitor centres).

The various project components function very well, improving the quality of life for a wide range of people, most notably for residents of Muharraq who benefit from a significant improvement to the public realm. Local residents now have access to a range of community facilities (such as libraries which provide families with welcome facilities), as well as a range of cultural activities, including traditional music venues. The investment in upgrading the area has also stimulated local tourism, and rekindled the interest of Muharraq families who had moved out of the area, as well as that of Bahrainis in general. It serves the entire nation.

B. Climatic performance, lighting, natural and/or mechanical ventilation, sun control, insect control, acoustics, orientation, etc.; description of systems developed and utilised

In the case of new construction, traditional elements such as wind-catchers have been incorporated into the design (for example, in the new Pearling Path Visitor and Experience Centre, which uses them for a range of infrastructure purposes). The creation of breezy shaded areas has been successfully incorporated, not just in new buildings, such as the visitor centre and the Pavilion, but in the public spaces as well.

With the restored historical buildings, all missing traditional features have been reinstated, including ventilation systems which have always been integral to the architecture.

C. Response to treatment of water and rainfall; discharge of water, and retention and release system(s), if any

Not applicable.

D. Environmental response; adaptation to the natural environment; adaptation to native flora and fauna

Protecting the natural environment has been carefully thought about in this project – from preserving the remaining oyster beds, to the remaining stretch of beach, to the trees that still grow in the heart of many of the neighbourhood's houses. In parallel, The Archaeologies of Green Pavilion, by cultivating indigenous species, reminds Bahrainis of their traditional flora. This is especially pertinent to young Bahrainis who will not remember a time when indigenous fruit-bearing trees and shrubs were extremely important and had a significant bearing on diet.

E. Choice of materials, level of technology

For street paving: durable materials such as interlocking bricks and terrazzo for street furniture and way-finding lighting fixtures.

For new construction: exposed reinforced concrete, in some cases tinted to give it a warmer tone.

For historic preservation: materials replicating the original ones – with great care taken to do this very accurately.

F. Response to, and planning for, emergency situations, i.e. natural disasters, floods, winds, fires, earthquakes, etc.

The architecture responds to winds, which are a prevalent feature in this island environment. Provision for fire prevention is made by using modern alarm systems.

G. Ageing and maintenance problems

None were observed during the site visit.

H. Design features: massing and volume, articulation of spaces, integration into the site (topography and neighbouring buildings)

There is a sensitivity towards the urban context, seen in the enforcement of planning policy to make sure that new construction respects the scale and massing of the historic environment, and reflects its urban nature and the scarcity of land, by ensuring that new construction is not set back from the street.

Modern buildings in general are in keeping with the urban scale and form. Perhaps only the Pearling Path Visitor and Experience Centre is larger and higher than many of the traditional buildings, but this is located on a modern street in the area of land that had been reclaimed from the sea, and so is different in feeling from the traditional urban environment behind it.

New architectural interventions are excellent in terms of the way they fit into their context. They are clearly contemporary yet blend in by respecting scale, proportions, fenestration rhythms etc.

I. Impact of the project on the site, in terms of increased circulation or vehicular movement, changes required for infrastructure (particularly for projects in high-density areas), etc.

Although no traffic pressure is immediately evident to an outsider, local residents who had moved out of Muharraq noted that one of the area's problems was a lack of parking space – a problem that would have increased slightly with the conversion of vacant plots used informally for parking into neighbourhood squares. The project has already thought ahead, and acquired large vacant plots in the neighbourhood for the construction of municipal multi-storey car parks to complement a privately owned one that was built a few years ago.

J. Durability and long-term viability of the project

This is a project that has taken off, acquiring an energy of its own, and providing Bahrain with a new cultural dimension, using heritage and the historic city of Muharraq as a driver. The cultural institutions established in the city, the urban space improvements, and the investment in the area as an alternative to the more commercial projects of other parts of the city, have meant that it has filled in a gap in Bahraini life. What is most encouraging is that the systems of urban management required to sustain such a project have been effectively tackled (like the fact that building applications are dealt with by the project team at the Authority for Culture), which means that there is control and an integrated approach to the urban management of the area. The inscription of Muharraq as a UNESCO World Heritage Site was a very intelligent move to give the project legitimacy, and help raise local awareness. It also means that even when Sheikha Mai is no longer in control, there will be checks and balances in place to ensure the project's survival.

Positive indicators of success include the fact that the commercial enterprises that are set up in Muharraq, such as local cafés and private architectural studios as well as a firm of conservation contractors, appear to be thriving, and this means that market forces are working.

One encouraging thing is that the prices in the new cafés are not more expensive than any other place in the city and are therefore affordable to people from many walks of life.

A very telling statistic is that the number of applications for demolition in Muharraq is decreasing, indicating that perspectives are changing thanks to the project.

Statistics of Permits in BACA:

	Total no. of received applications	Total no. of demolition applications	Percentage of demolition applications	Percentage of pending cases
In 2016	247	75	30.63 %	25.1 %
In 2017	345	98	28.4 %	15.65 %
In 2018	359	47	13.1 %	8.07 %
In 2019 – from January to the end of March	105	8	7.6 %	–

Notes:
- In 2017: The number of applications increased due to the widening of the permit control area to include areas like Old Manama.
- From 2016 to 2019: The percentage of demolition applications decreased from 30.63% to 7.6%.

K. Ease and appropriateness of furnishings; interior design and furnishing

What is relevant to note is the street furniture, which is simple but yet playful and also durable – the terrazzo benches being a good example.

Interior furnishings of the houses are also very well chosen, consisting mainly of a natural palette and materials, including many that are typical of the region. Natural and tan-coloured linens and natural wood give many of the interiors a contemporary feel.

VII. Users

A. Description of those who use or benefit from the project (e.g. income level, socio-cultural profile, etc.)

A very wide range. Many of the inhabitants of Muharraq are “bachelors” – single men working in Bahrain in shared accommodation. These are often migrant workers who do not have huge incomes and who economise to save money to send back home. There are also traditional Muharraq families who still live there, although many of the wealthier families have moved away. Some of these still retain a sense of pride and great

interest in Muharraq, and have been attracted back by this project – and encouraged to invest their own resources in reviving their family homes. The cultural venues initiated by this project cater primarily to a local audience, but not exclusively so, as the visual and performing arts components appeal to all.

The infrastructure improvements ameliorate the quality of life for local residents and visitors to the area, as do the community facilities. Many beneficiaries are not exceptionally wealthy: unlike its neighbours, Bahrain is not an exceptionally rich country and Bahrainis from all walks of life exist: from taxi drivers, who are by law Bahraini, to elite members of society.

B. Response to the project by clients, users, community, etc.

1. What do architectural professionals and the cultural "intelligentsia" think about the project?

In general the project is very well respected and liked by the cultural intelligentsia, from Shadia Touqan the UNESCO representative, to well-educated Bahrainis, to the key actors in the historic city, including landowners.

The project has attracted interest from the international architectural community as well.

The following description by critic David Huber about one of Muharraq's new buildings is a good reflection of the sort of attention the project has attracted. This is just one comment, out of many: "In its subtle effects and judicious execution, the Dar Al Muharraq is a mirror image of most high-profile buildings in the Gulf region. In Doha, a quick 45-minute flight away, the procurement of new educational and cultural buildings by I.M. Pei, Jean Nouvel, Rem Koolhaas, Arata Isozaki, and others has about as much imagination as one of those perennially marked-down doorstops by cool hunter Philip Jodidio. Perhaps because Bahrain lacks the deep pockets of its neighbour to the south it must shrewdly develop less-established talent rather than license brand names (the total cost of the dar, including the renovation of an existing private dar next door, was $850,000). But I observe a sense of obligation to the discipline, and curiosity. As the head of architectural affairs for the culture authority, Noura Al Sayeh, explains, 'you don't know what the next step of their practice will be.' This twofold approach to patronage – commissioning projects that are both new for an architect's body of work and for the place where they are built – is effective in part by how it mediates desired aesthetic outcomes and material circumstances."

2. What is the popular reaction to the project?

Bahrainis with links to the history of Muharraq are very excited by the project, and by the fact that it is revalorising an area of great significance to them, which had fallen into decline. They foresee that younger generations will be attracted back to Muharraq, and that the current project will reap long-term benefits. They are also appreciative that practical concerns like parking provision have been taken into account. In many ways, this project seems to have awoken the phoenix of Muharraq – the area is rising from its own ashes, and reviving local consciousness and memory in a half-forgotten neighbourhood.

3. What do neighbours and those in the immediate vicinity think about the project?

Many local neighbours who were originally puzzled, sometimes sceptical, and in some cases initially hostile to the project and its intentions have become its supporters, especially as the physical improvements to the area have become apparent. Today, little explanation is needed to demonstrate the project's merits, not just to people in Muharraq, but to those in Bahrain in general. According to the project team, showing sceptics

(and people contemplating demolishing their houses) what has been achieved is now usually enough to convince them that there is merit in the urban conservation approach.

VIII. Persons involved

A. Identification of project personnel and their roles in the project (e.g. client, architect, planner, consultant, craftsmen, etc.)

Muharraq Urban Rehabilitation Project

Sheikh Ebrahim Al Khalifa Centre for Culture and Research

- President and founder: Sheikha Mai bint Mohammed Al Khalifa.
- Board of Trustees: Aisha Mattar, Sheikha Latifa Al Khalifa, Hassan Kamal.
- Project team: Ezmeralda Qabbani, Melissa Enders-Bhatia.
- Architects
- Nuzul Guest House and Kurar House for Traditional Embroidery: architects Gulf House Engineering, interior design Habib Associates, contractor EWAN Al Bahrain
- Memory of the Place – Bin Matar House: architects Habib Associates, contractor EWAN Al Bahrain.
- Research Library: architects Atelier Bow-Wow, contractor GCT.
- House for Architectural Heritage: architects Noura Al Sayeh and Leopold Banchini, contractor EWAN Al Bahrain.
- Street paving and public spaces: architect Studio Anne Holtrop, contractor GCT.

Pearling Path, Testimony of an Island Economy

- Client and initiator of the project: Sheikha Mai Al Khalifa, President of the Bahrain Authority for Culture & Antiquities.
- Director of the project: Noura Al Sayeh.
- Head of urban conservation: Ghassan Chemali.
- Head of urban conservation strategies: Alaa Al Habashi.
- Coordinator of the nomination dossier to the UNESCO World Heritage List: Britta Rudolff.
- Project team: Shatha Abu El Fath, Ahmad Abd El Nabi, Mario Affaki, Alaa Al Habashi, Fatema Al Hayki, Ahmad Al Jishi, Amal Al Saffar, Batool Al Sheikh, Lulwa Al Malood, Mustafa Al Zurki, Ronan Dayot, Wissam Fadlalah, Lucia Gomez, Yehya Hassan, Ali Marzooq, Marwa Nabeel, Tamer Nassar, Faisal Soudaga, Shadi Taha.
- Building project teams:
- Pearling Path Visitor's Centre – architect Valerio Olgiati in collaboration with Emaar Engineering, contractor AlMoayyed Contracting group;
- Pearling Path Squares – Bureau Bas Smets and OFFICE Kersten Geers David Van Severen in collaboration with Gulf House Engineering, contractor Aradous Contracting;
- Archaeologies of Green Pavilion – architect Studio Anne Holtrop, landscape architect Anouk Vogel, structural engineering Mario Monotti and Gilbert Van der Lee, contractor Restaura Srl and GCT Bahrain;
- Dar Al Jinaa – architects OFFICE Kersten Geers David Van Severen in collaboration with Emaar Engineering, contractor Almoayyed Contracting Group;
- Visitor Centre at Bu Maher Fort – architect PAD architects, contractor GCT;
- Suq Al Qaysariyyah rehabilitation, and conservation and rehabilitation of Siyadi and Murad clusters and Sheikh Isa bin Ali House – architect Studio Anne Holtrop, structural engineer Mario Monotti, conservation architect Gaetano Arricobene, landscape design Madison Cox, contractor Almoayyed Contracting Group.

Muharraq Conservation Plan: Jean-Bernard Cremnitzer

Muharraq Mobility Study: Systematica

In the pipeline:

- Conservation and rehabilitation of Fakhro, Al Jalahma, Turabi and Badr Ghuloum Houses – architect Studio Gionata Rizzi in collaboration with Franco Pianon, Marco Motisi and Samira Konampour;
- Multi-storey car parks – architect Christian Kerez in collaboration with Arsenals Engineering;
- Pearling Path Pedestrian Bridge – architects OFFICE Kersten Geers David Van Severen in collaboration with Ismail Khonji Associates, contractor Al Ghanem Contracting.

IX. Bibliography

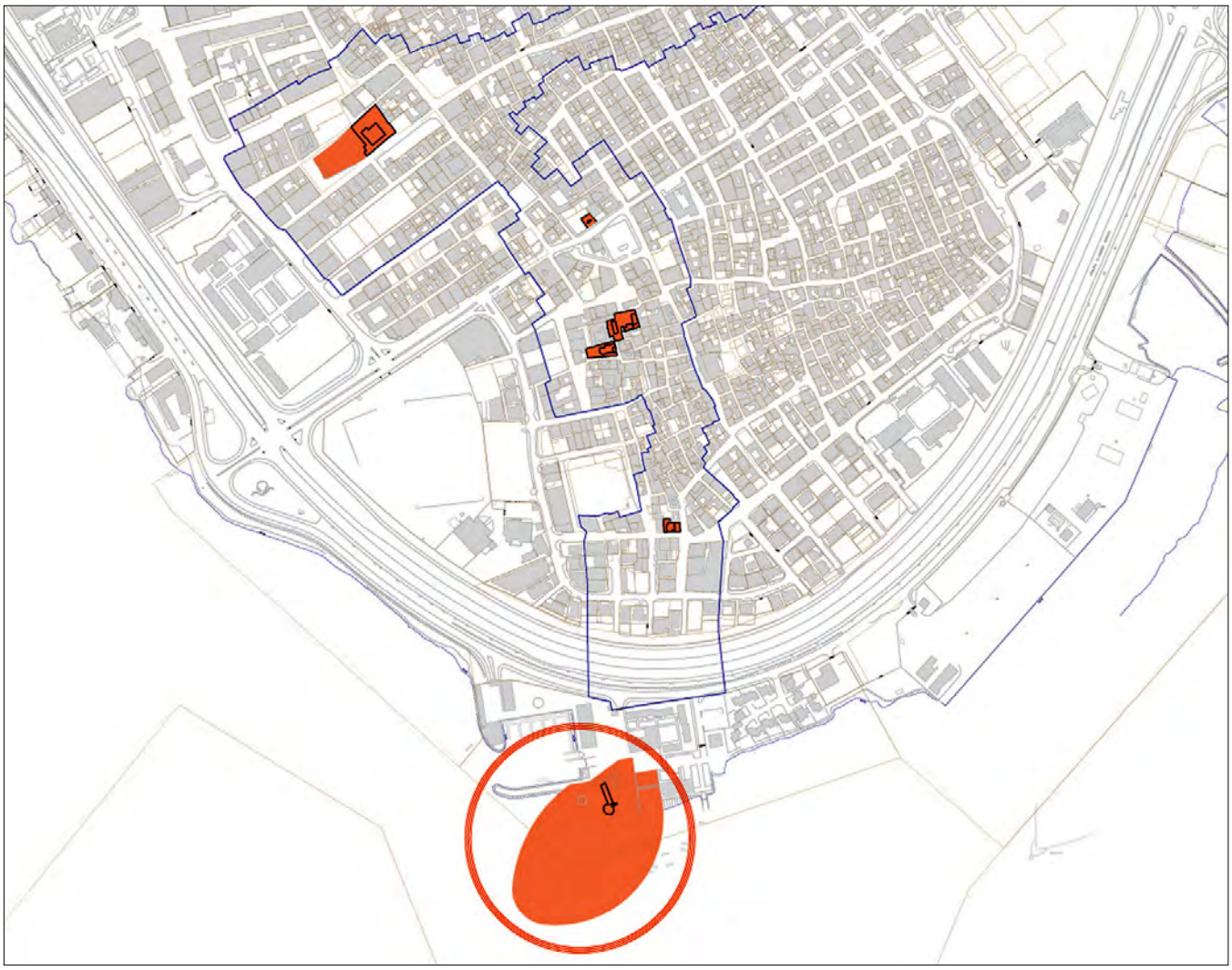
A. List of publications

There are a huge number, including:

- Investing in Culture
- Pearling Path: Testimony of an Island Economy
- Archaeologies of Green: Bahrain's National Pavilion at the Expo Milan 2015.
- https://www.aramcoworld.com/pt-BR/Articles/September-2017/Bahrain-s-Pearling-Path
- https://www.architecturalrecord.com/articles/13926-pearling-path-visitors-center-by-valerio-olgiati-architect
- https://www.aramcoworld.com/pt-BR/Articles/September-2017/Bahrain-s-Pearling-Path
- https://www.dezeen.com/2019/02/03/bahrain-gallery-leopold-banchini-house-architectural-heritage-muharraq/
- https://www.dezeen.com/2019/04/20/valerio-olgiati-canopy-pearling-path-concrete-architecture/
- https://www.dezeen.com/2015/05/12/bahrain-pavilion-milan-expo-2015-anne-holtrop-interview/
- https://escapinglife.com/streets-muharraq-bahrain/
- https://www.researchgate.net/publication/322330738_The_Rehabilitation_of_the_Muharraq_Historical_Center_-_Bahrain_A_Critical_Narrative
- http://davidhuber.info/office-kgdvs-dar-al-muharraq-bahrain/

Seif El Rashidi
May 2019


Saudi
Arabia
Muharraq
Manama
N
B A H R A I N
PERSIAN GULF



The last remaining beach in Muharraq, with Manama in the background. This is where the Pearl Route begins.

A series of models showing completed “hubs” in Muharraq.

Traditional Muharraq architecture. Many houses have a belvedere type room with windows on all four sides.

Traditional buildings on commercial streets tend to have long shuttered balconies.

Traditional roofing materials of Muharraq architecture. The beams are usually from mangrove trees.

Work in progress. Restoration of a historic house as well as the upgrading of the public realm, two of the components of the Muharraq Project.

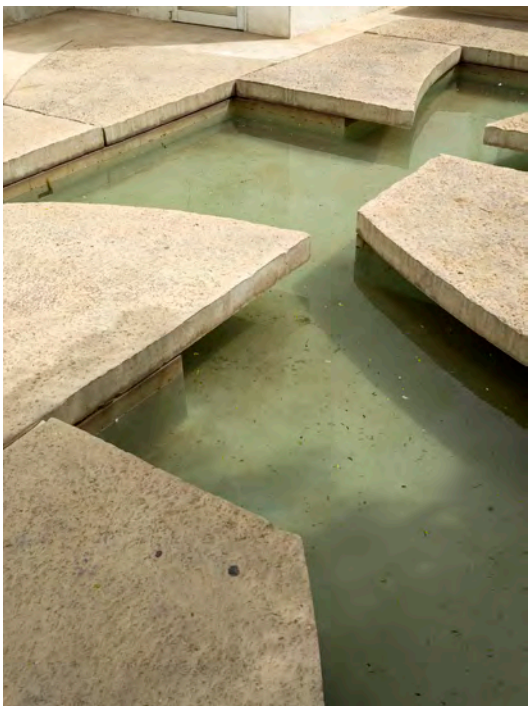
Restored house of a wealthy merchant.

A newly restored house, soon to be used for community purposes.

Traditional Muharraq woodwork.

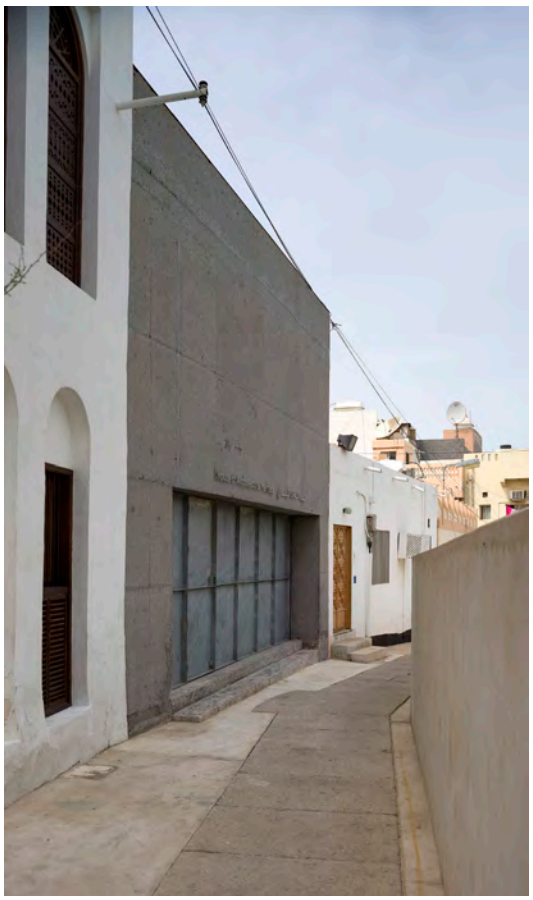
The project has reinstated many lost windcatchers, often demolished by municipal authorities in the past.

One of Muharraq's completed neighbourhood squares. The light posts are the scheme's wayfinders - visible, distinctive, durable, and appropriately pearlshaped.

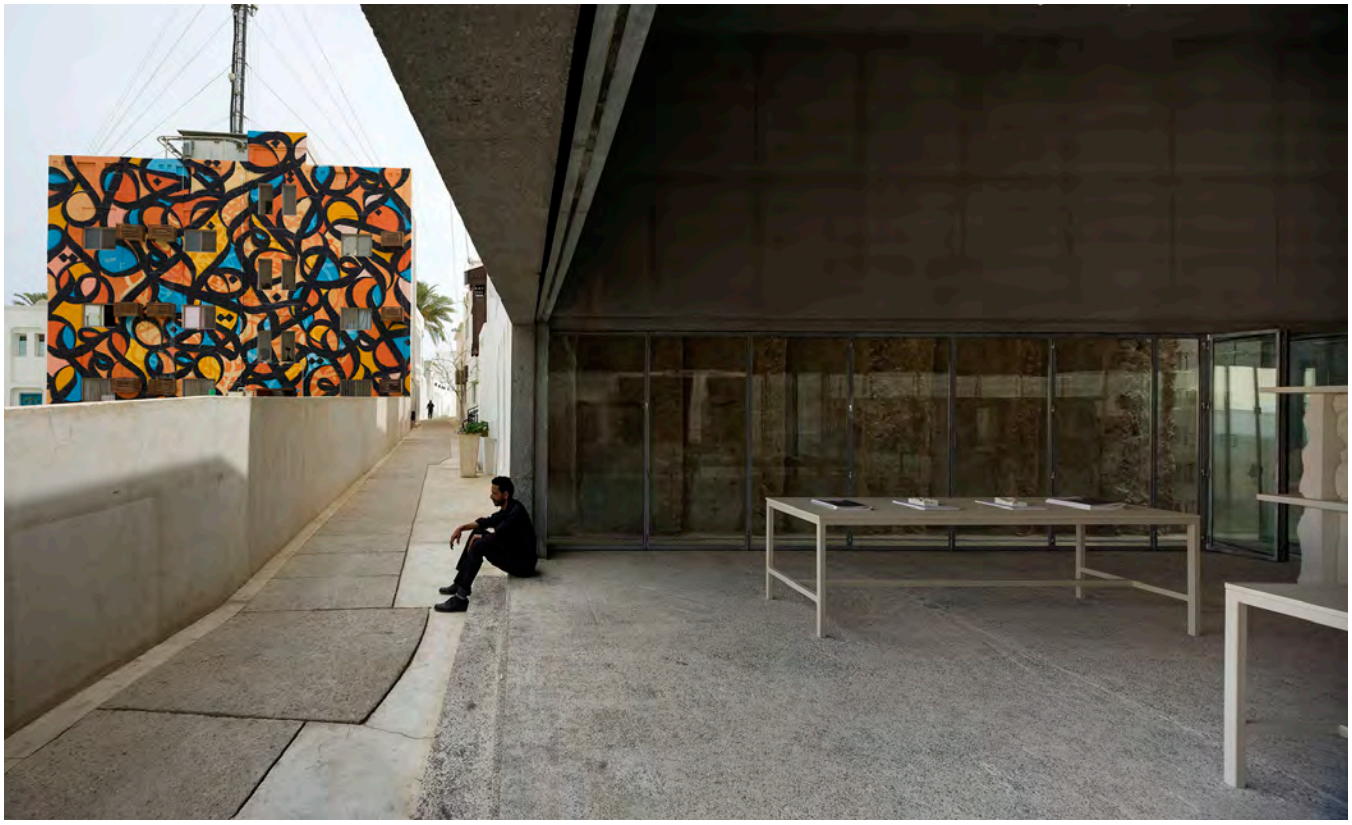


Another of Muharraq's completed neighbourhood squares with similar language. This one is very popular with children.

General view of the Pearling Visitor Centre, a bold new building offering plenty of shaded public space.



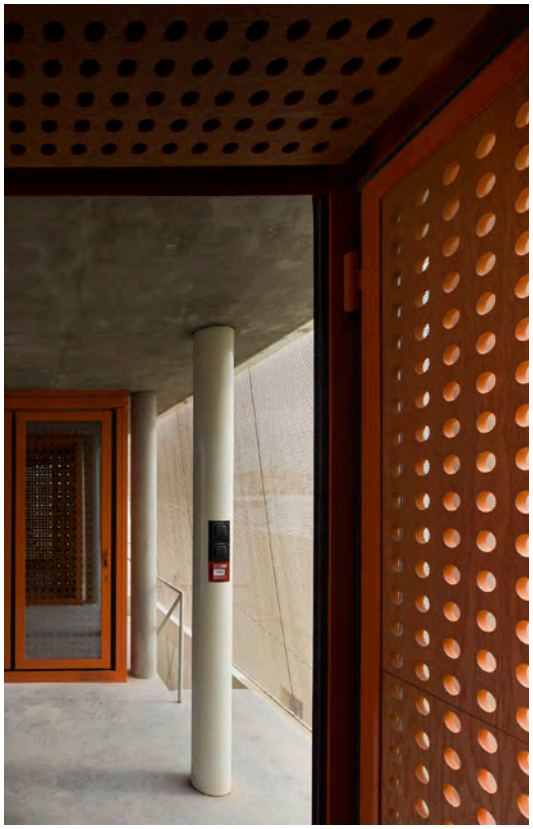
“House for Architetural Heritage”by El Sayeh and Banchini in its historic urban context.



The “House for Architectural Heritage” and in the background a colourful work by El-Cid.

The Brutalist “House for Architectural Heritage” by El Sayeh and Banchini. The willingness to embrace the contemporary is very unusual in an urban conservation project and very refreshing.

“The Archaeologies of Green Pavilion” is conceived as a continious landscape of fruit gardens. The pavilion is acclaimed as one of Bahrain’s best buildings.



Dar Jinna music hall that can open up to form a multiple level “neighboorhood square.” The chain mail screen creates a remarkable translucent building.