

## When the Past Meets the Future: Archaeology And Contemporary Architecture In AIUla

Dr. Annalisa Pavan

Independent Researcher/pavanannalisa1@gmail.com

(Received: 23/4/ 1444 H; Accepted for publication: 14/ 11/1444 H)

**Abstract:** The ongoing transformation of AIUla, the ancient Kingdom of Lihyan, into a global tourism destination is a cornerstone of the strategy adopted in Saudi Vision 2030. Saudi Arabia intends turning AIUla into the Kingdom's cultural capital. This study explores the link between past and future in the AIUla area:

- 1- AIUla's illustrious origins will be recalled.
- 2- The decision of the Royal Commission (RCU) for AIUla to adopt identity for AIUla as a tourist destination.
- 3- The establishment of the RCU has made the AIUla governorate the most important archaeological site in the world in 2022
- 4- The blending between contemporary architecture and the surrounding landscape to reflect and enhance AIUla's beauty and inviting visitors to value the tangible and intangible cultural heritage.
- 5- The challenge to transform AIUla into a world-class destination for cultural and regenerative tourism, rather than mass tourism.

**Keywords:** AIUla, Archaeology, Contemporary Architecture.

## الملخص

عندما يلتقي الماضي بالمستقبل: علم الآثار والعمارة المعاصرة في العلا

د. آناليزا پافان

pavanannalisa1@gmail.com

تُعدُّ الأعمال والجهود المبذولة حاليًا في تحويل العلا (حيان قديماً) إلى وجهة سياحية عالمية حجر الأساس في استراتيجية رؤية المملكة العربية السعودية ٢٠٣٠، وتعتزم السعودية تحويل العلا إلى عاصمة المملكة الثقافية. تكشف هذه الدراسة العلاقة بين ماضي العلا وحاضرها ومستقبلها، على النحو الآتي:

- ١- تناول (الإشارة) إلى أصول العلا العريقة.
  - ٢- قرار الهيئة الملكية لمحافظة العلا تبني هوية العلا كوجهة سياحية.
  - ٣- إنشاء الهيئة الملكية لمحافظة العلا جعل منها أهم موقع أثري في العالم عام ٢٠٢٢.
  - ٤- المزج بين الهندسة المعمارية المعاصرة والمناظر الطبيعية المحيطة بها عكست جمال العلا وعززت دعوة الزوار إلى تقدير التراث الثقافي المادي وغير المادي لمدينة العلا.
  - ٥- التحدي المتمثل في تحويل العلا إلى وجهة عالمية للسياحة الثقافية والتجديدية، بدلاً من السياحة الجماعية.
- الكلمات المفتاحية: العلا، علم الآثار، العمارة المعاصرة.

## **Introduction**

The ongoing transformation of AlUla, the ancient Kingdom of Liḥyan, into a global tourism destination is a cornerstone of the strategy adopted in Saudi Vision 2030 for making the tourism sector the number two industry behind hydrocarbons: “We will prepare and develop our historical and heritage sites” (p.44).

“Saudi Arabia’s gift to the world”, “an untold story”, “a wonder of Arabia”, AlUla has become *the* Saudi destination since September 2019, when the Kingdom started issuing tourist e-visas for 49 countries. ~~And~~ in addition to its tourism ambitions, Saudi Arabia intends to turn Al-Ula into the cultural capital of the kingdom.

This study explores the link between past and future in the AlUla. First, AlUla’s illustrious origins will be recalled (Heading 1), as they justify the decision of the Royal Commission for AlUla (RCU) to adopt sustainability as the guiding principle creating a global identity for AlUla as a tourist destination (Heading 2). Following the visits of the first Western explorers to the area, AlUla has witnessed the arrival of several archaeological missions since the 1960s, regularly involving Saudi and international scholars, and the establishment of the RCU has made the AlUla governorate the most important archaeological site in the world in 2022 (Heading 3). While the glorious past is being unearthed with the aid of the most sophisticated tools now used for preventative surveys, the future has already arrived in AlUla. Contemporary architecture of sensitive and eco-friendly design blends with the surrounding landscape — first and foremost Maraya, but also AlUla’s Design Gallery and the International Airport, with the Sharaan resort and the Kingdoms Institute to follow —, reflecting and

enhancing its beauty and inviting visitors to value the tangible and intangible cultural heritage (Heading 4). Also, if the most intriguing discoveries about its mysterious past are perhaps yet to be made, it can be expected that while AIUla is flourishing at the crossroads between the past and the future, the challenge will be to transform it into a world-class destination for cultural and regenerative tourism, rather than mass tourism (Heading 5).

### **1. The Illustrious Origins**

Located in the Medina region, 300 km north of Medina and 1,100 km from Riyadh, AIUla is a living museum covering an area of 22,561 km<sup>2</sup> that includes the 52-hectare ancient city of Hegra (Hijr) — also known today as Mada'in Saleh, lying 22 km north of AIUla and 500 km south of Petra, Hegra is Saudi Arabia's first UNESCO World Heritage Site, listed in 2008, best known for its well-preserved tombs hewn from the rocks — the main city in the southern part of the Nabataean Kingdom; also Dadan (DDN), the ancient capital of the Kingdoms of Dadan and Lihyan; thousands of ancient rock art sites and inscriptions in Jabal Ikmah, an “open-air library”, unofficially known as “the whispering canyons”; and AIUla Old Town, a settlement of hundreds of mud brick and stone houses overlooked by a fort and surrounded by a lush oasis. The Old Town was built around the 13<sup>th</sup> century, reusing the stones of the Dadanite and Lihyanite ruins. Outside of the heritage sites, the desert is dotted with sand-drifted canyons and unique rock formations, of which the latest to be documented, in Summer 2022, is the Fish Rock (Arab News Japan, August 4, 2022).

Pre-eminent Saudi archaeologists having notable expertise in the field of North Western Arabia — and the AIUla region in particular — have been associated with the King Saud University (KSU) in Riyadh, the oldest

university in Saudi Arabia and the Arabian Peninsula (1957), and studied abroad under government scholarships.

This study draws on the works — where an English translation is available — of three Saudi scholars, and a few others including non-Saudis. The Saudis are: Al Ansary, a faculty member at KSU from 1966 to 1999, considered the pioneering Saudi academic who established the study of archaeology in the country, first by creating an archaeology concentration in the KSU Department of History, and later (1978) setting up a Department of Archaeology and Museology in the same university, which was the first in the Kingdom; Nasif, who authored a pivotal research, published in 1988 by KSU, on the qanats (irrigation systems) in AIUla; and Al Theeb, accomplished interpreter of ancient Nabataean and Aramaic inscriptions in North Western Arabia.

Saudi and international scholars believe that much remains unknown about the past of the pre-Islamic Kingdoms of Dadan and Lihyan. The ancient Dadan is mentioned in the Bible as an oasis kingdom whose inhabitants, the Dadanites, traded in saddle blankets. Dadan was built on the site of a Minaean settlement situated on a vital artery of trade at the northern end of the Incense Road, on the main trading route connecting the south of the Arabian Peninsula with Mediterranean countries. A cultural melting pot, Dadan was a place where traders and travellers could replenish their supplies of food and water.

It is probable, though questions remain, that the Sheikdom of Dadan developed into the Kingdom of Banu Lihyan between the fifth and the fourth century BC.

Nasif (1981) explains that AIUla, under the biblical name of Dadan, was one of the most important centres in Northern Arabia until the first century BC, when the Nabataeans conquered Hegra and occupied Dadan, which was the Lihyanite capital. Under the Nabataeans, the trade route was shifted 15 km east of Dadan, which subsequently declined and fell, with Hegra, 18 km north of Dadan, becoming the main centre of the area (Al Theeb, 2014). When the Romans overthrew the Nabataeans in 106 AD and the trade route was moved from land to sea, Hegra declined. Although the Romans annexed Nabatea, they never reached Dadan; consequently, Hegra was the southernmost outpost of the Roman Empire.

Nasif notes that, according to the classical Arabian writers, the main city in the Dadan area during the jahiliyya and the medieval Islamic period was Qurh, also known as Wadi Al Qura, one night's journey south of Hegra. During the 13<sup>th</sup> century, with the fall of the Abbasid dynasty and the spread of unrest throughout the Peninsula, Qurh declined and with time its name was forgotten. AIUla, situated 3 km south-west of the ruins of Dadan, became the chief town in the area, and remains so. The valley is no longer known as Wadi-Al Qura, but Wadi-AIUla (p.iii).

Nasif also mentions a seldom reported anecdote: in his capacity as governor of Riyadh (1963-2011), when asked where he would like to live other than in his ancestral hometown, Riyadh, King Salman would answer "AIUla".

Al Ansary explains that the name DDN, as Dadan occurs in many inscriptions and excavations, was derived from the name of the Minaean deity Wud, which means love: "For caravan travellers this love was associated with the moon, their friend and even their deity, and so AIUla

became the town of that love”. He adds that in giving the Sheikdom of DDN this name, scholars followed the wording that appears in just one single text, “Mata El Kabeer DDN” (Al Ansary, 1999, 191). Based on excavations and inscriptions, we know that Lihyanite contributions to the development of commerce, writing, arts and architecture were prodigious, to the point that during the centuries when the Kingdom of Lihyan was at its most flourishing, the Gulf of Aqaba was called the Gulf of Lihyan (Al Ansary, 1999, 195).

Al Theeb (1989) points out that in the 19<sup>th</sup> century several European explorers focused their attention on North Western Arabia — the first European ever to visit Hegra was Charles Doughty in 1876 — and more followed after the construction of the Hijaz railway. The first and most detailed study of the AIUla area was made by the French Dominican fathers Jausen and Savignac, who visited the area three times between 1907 and 1910 — in the course of which they had to face many difficulties (see: Salles, 1996, 570-571) — and left a meticulous documentation of the tombs and inscriptions of Hegra. In the following decades, Musil and Philby also explored North Western Arabia and left written records of their travels.

Following the expeditions of Jausen and Savignac however, there was no systematic scholarly activity in AIUla until the 1960s. The mission undertaken in 1962 by Winnet and Reed of the University of Toronto, who uncovered an abundance of epigraphic material, was the first of several missions conducted by Saudi and international archaeologists (p.5).

Moreover, Al Theeb relates that under the umbrella of a comprehensive program of archaeological research launched in 1975 by the Department of Antiquities and Museums of the Saudi Ministry of Education,

missions were sent to North Western Arabia — and to the AIUla area in particular — during the 1970s and 1980s, with Saudi scholars and archaeologists publishing the results of their research (p.6).

By the late 1990s, it was felt that there was much yet to be done, the outlines of the history of Hijaz were still far from clear, and future missions to the area would hold immense promise (Bowersock, 1996).

## **2. The Royal Commission For AIUla For A Sustainable Development**

Saudi Arabia's approach in its plan for the transformation of AIUla into a global tourist destination seems to be much in keeping with a typically Saudi Arabian attitude — documented since the foundation of the modern Kingdom (1932) but dating back centuries — of strong resilience coupled with a propensity for action stemming from a balanced combination of “capacity to aspire” (looking ahead) and “capacity to remember” (looking back), which reflects the UNESCO perspective on the cultural futures of all nations (Pavan, 2014, 37-46).

In 2020 Saudi Arabia appointed a female Saudi royal, Princess Haifa Al Mogrin as the Permanent representative of the Kingdom to UNESCO. A UNESCO co-founder and a member of the Organization since 4 November 1946, Saudi Arabia presently hosts six UNESCO World Heritage Sites: Mada'in Salih (2008), At-Turaif (2010), Historic Jeddah (2014), Rock Art in the Hail Region (2015), Al-Ahsa Oasis (2018) and the Hima Cultural Area (2021). The Kingdom also has ten sites currently on a tentative list of properties that the government intends to consider for nomination, indicative of a strong commitment to the protection of its heritage.

The development of the leisure tourism industry from scratch in Saudi Arabia plays a central role in the comprehensive strategy for economic



diversification envisaged under Saudi Vision 2030, launched in April 2016 by Crown Prince Mohammed b. Salman. The Vision states that tourism and leisure are among the promising sectors due to become new pillars of the Saudi economy: “We will create attractions that are of the highest international standards, improve visa issuance procedures for visitors, and prepare and develop our historical and heritage sites” (p.44). The Saudi leadership is working hard to make the tourism sector the number two industry behind hydrocarbons by 2030.

The transformation of AIUla, and similarly the ongoing giga-projects (Red Sea Project, Ad Diriyah, Qiddiya, Neom), are being pursued with the overarching goal of sustainability (A Sustainable Saudi Vision) as the guiding principle for the human, social and economic progress of Saudi Arabia.

The Royal Commission for AIUla (RCU), set up by royal decree in July 2017 and chaired by the Crown Prince, with a board of directors including the Ministers of Culture and Education and a body of Saudi and international experts, was created with the stated goal of protecting and safeguarding AIUla’s tangible and intangible heritage, and implementing a “sensitive and sustainable transformation of the region”.

The priority given to sustainability permeates the communication strategy of the Royal Commission for AIUla, which is based on ensuring responsible development of “the world’s largest cultural oasis and living museum”. The AIUla Masterplan, an “ambitious roadmap to protect, preserve and sustainably rejuvenate AIUla, and form the backbone of the world’s largest and oldest cultural landscape” (RCU, Journey Through Time Masterplan), is committed to achieving a harmonious coexistence between

nature and humankind, preserving the cultural legacy of AIUla for the world, creating employment opportunities for the local population and delivering sustainable economic growth. The Masterplan aspires to become a global model for responsible development: “Designed by time and shaped by history, fostering cultural dialogue and understanding. Rediscovering perfect harmony with nature. Creating a new legacy for the world” (Alkoutli, 2022).

“Robust” and “resiliency-oriented” policies — zero-carbon strategy coupled with circular economy principles, improved water management, vegetation planting, sustainable agricultural production and off-road policies — are governed by twelve development principles, which include developing light touch tourism, enabling the local community, incorporating imaginative infrastructure, integrating invisible security and embedding resilience, among others.

The Comprehensive development value of the Masterplan, on full completion in 2035, is estimated at over USD 15 billion. AIUla will be able to welcome 2 million visitors a year by 2035, potentially creating 38,000 new jobs for the local population.

### **3. The Past: Archaeological Missions**

As already mentioned, French, British and North American missions have been active in the AIUla area since the second half of the last century, whilst the Saudi school of archaeology, based at the King Saud University, has been conducting well-regarded research and excavations since the inception of the university system in the Kingdom in the 1960s.

Between 2001 and 2005, a team of twenty Saudi and French experts and archaeologists, in collaboration with the Saudi Commission for Tourism

and Antiquities (SCTA), conducted the first comprehensive survey of Hegra (Nehmé, 2004, 631-682), thus reviving a cultural partnership that can be seen as having begun with Jaussen and Savignac. Methodical exploration of Hegra has continued ever since.

The Saudi-French partnership received the endorsement of the Crown Prince in April 2018, when he and Emmanuel Macron signed an agreement of cooperation in Paris; this consisted essentially of multiple agreements between the two ministries of culture, academic institutions, management consultants and heritage organizations. Saudi Arabia pledged to pursue a sustainable development of AIUla, preserving its cultural and natural heritage, and ensuring that the growth of tourism would not affect the preservation of archaeological sites (French and Arabic versions available online at <https://www.afalula.com/en/media-gallery/#publications>).

AfAlula, the French Agency for AIUla development, was created in July 2018, in the wake of the agreement between the Crown Prince and President Macron. Saudi Arabia and France share a vision to implement a new economic and touristic development model, focused on the absolute preservation of the environment, respectful of history, and inclusive of local populations.

According to its website (<https://www.afalula.com/en/>), AfAlula is committed to mobilizing the full breadth of French expertise to support the RCU's transformation project for AIUla in the key fields of cultural engineering, archaeology, architecture and urban planning, agriculture and botany, tourism, education, security, water, and sustainable environmental management.

A bilateral meeting in Paris in February 2022 hailed the success of the current French archaeological mission, involving nearly 120 researchers and archaeologists and making the AIUla governorate currently the most important archaeological site in the world (French Ministry of Culture, January 31, 2022). As of 2022 there are, in all, 13 archaeological and conservation project teams from all over the world collaborating with Saudi experts in AIUla (PR Newswire, January 10, 2022).

Under the RCU sponsorship, archaeological missions have expanded steadily and on an unprecedented scale during the last few years.

### ***The AAKSAU And AAKSAK Projects***

In 2018, the RCU commissioned the AAKSAU project (Aerial Archaeology in the Kingdom of Saudi Arabia – AIUla) as part of the Identification and Documentation of the Immovable Heritage Assets of AIUla programme (IDIHA). The AAKSAK project (Aerial Archaeology in the Kingdom of Saudi Arabia – Khaybar) was commissioned in 2019, after the RCU incorporated certain areas of Khaybar into its remit. Since 2018, consequently, an international team of over 60 experts from the University of Western Australia, King Saud University and Oxford University have been working in a core area of the AIUla Valley and Khaybar Oasis. Initially, the operation took place in an area of 2,800 km<sup>2</sup> (Oxford Archaeology, June 7, 2018), including prehistoric burial remains, early settlements and extensive rock art, but with the use of satellite imagery, helicopter-based aerial photography, ground surveys and excavations, it would spread subsequently to cover an expanse of at least 160,000 km<sup>2</sup>.

For four years, the team have taken a multiscale approach (Dalton et al., 2022, 183-199), deploying the most sophisticated tools now used for

preventative surveys: satellite remote sensing, drones, low altitude aerial photography (cameras suspended from light aircraft), cutting-edge aerial orthophotography, ground surveys, excavation and radiometric dating. Aerial archaeology can ensure that no future building work will encroach on archaeological sites, while subsequent excavations are limited to specific locations.

Providing an adjusted image every two to three seconds, the thousands of pictures measure true distances, then specialist software combines the pictures into a high-resolution, detailed model of the landscape. The light aircraft cameras are set at a 45-degree angle, and in addition, drones are used with cameras set at the same angle; this allows archaeologists to view not only the horizontal plane, but also the vertical to some extent.

In the final stage of the survey, specialist team members go out into the field on foot (Smith, October 3, 2019).

Preliminary findings of the AAKSAU/AAKSAK project have been published in a few academic articles, but unfortunately only two of them afford open access to all scholars. Highlights from the two accessible articles will be presented following the chronological order of their publication.

Thomas et al. (2021) describe their archaeological research on mustatils (from the Arabic word for rectangle), which are among the earliest stone monuments in the Arabian Peninsula. First recorded by surveys in the 1970s, these structures are approximately rectangular in shape (hence the name mustatils, assigned by the RCU), comprising two parallel short walls/platforms linked by two parallel long walls, perpendicularly disposed. Ranging from 20 to 620 metres in length, at present more than 1,000 mustatils are known across an area of 200,000 km<sup>2</sup> in the AlUla and Khaybar

governorates. Ground-surveyed mustatils reveal key features not visible formerly via satellite remote sensing analysis.

Excavations suggest that mustatils functioned as monumental ritual structures, probably dating back to the late sixth millennium BC, thus predating the first Egyptian pyramids and Stonehenge and making North Western Arabia one of the world's largest monumental ritual landscapes. Aerial and ground surveys have shown that mustatils present significant variations in size, form and complexity, allowing a distinction between simple and complex mustatils. Whatever the dimensions and configuration, they are usually oriented according to local topography.

In situ faunal remains (horns and cranial elements, identified as cattle, sheep, goats and gazelle) can be interpreted as ritual offerings and provide the first evidence for the possible existence of a cattle cult in North Western Arabia during the Neolithic period (6000 to 4500 BC). It is perhaps no coincidence that scenes of cattle herding and hunting frequently appear in the rock art of the region.

Although mustatils are one of the most architecturally homogeneous building traditions identified in the Arabian Peninsula so far, their concentration, scale and form in the ALULA area have no equivalent elsewhere, signifying that North Western Arabia may host the world's oldest ritual landscape (The University of Western Australia, January 14, 2022).

Dalton et al. (2022) discuss the results of the ongoing project with a focus on the funerary avenues, and present several interpretations and hypotheses. Drawing on systematic satellite imagery analysis, hundreds of hours of helicopter-based aerial reconnaissance and photography, radiometric dating and subsequent extensive ground survey and selective

excavations, the team have identified three types of funerary monuments: ringed and un-ringed cairns, small circular towers and, most numerous, tailed pendant structures. The article focuses primarily on these same structures, referred to simply as ‘pendants’, which are identifiable with a wide variety of seemingly funerary or memorial monuments across the Arabian Peninsula and Levant, having a distinctive head and one or more associated tails.

After the Holocene Humid Period (HHP) in the Arabian Peninsula (8000-4000 BC), arid conditions began to be established, followed by a period of increased rainfall during the early to mid-third millennium BC. Some pendants yield human remains dating to the mid-third millennium BC.

In the RCU’s 56.5 km<sup>2</sup> Khaybar Oasis Core Zone alone, 9,500 drystone funerary structures were recorded, including 2,800 pendants; a density of prehistoric funerary monuments such as this, surrounding some oases, finds no equivalent elsewhere. In all, the research project has identified around 17,300 pendants. They appear to be arranged alongside and oriented — usually perpendicular — in relation to clearly identifiable pathways (funerary avenues), affording a wealth of clues from which to reconstruct past aspects of human mobility, settlements, social structures and, of course, funerary practices.

Funerary avenues are concentrated almost exclusively in the 500x300km region of North-West Saudi Arabia, with Khaybar at the heart of the phenomenon. The avenue-like arrangement of the funeral monuments and their proximity to perennial water sources, plus their concentration in such a vast area, “are likely the outcome of specific mobility, subsistence and settlement strategies, mediated through the opportunities and limitations

of prevailing environmental conditions, and underpinned by complex sociocultural, technological and economic factors” (p.193).

The article observes that prehistoric hydrology and human development of most water sources within the study areas remain unknown. Where associated with funerary avenues, therefore, it is assumed that perennial groundwater was available via shallow wells or natural springs.

Dalton et al. conclude that most aspects of the social life around inter-oasis connectivity in North Western Arabia remain largely unexplored, while bemoaning the widespread ongoing illicit excavation and massive land clearance for agricultural development that damage the cultural heritage of the surveyed areas.

#### **4. The Future: Maraya, And More**

Designed by Milan-based Italian visionary architects Giò Forma, Maraya is the world’s largest mirrored building, rising from the sand of Ashar Valley like a mirage. It has become the centrepiece of AIUla’s growing cultural scene: a fully functioning, 3-storey multi-purpose venue. Besides hosting exclusive events and concerts, it can accommodate business meetings, conferences, functions and weddings.

The iconic Maraya complex, a spectacular example of land-art architecture, forms an integral part of the sustainable approach to the development of AIUla.

Between 2019 and 2021 Giò Forma architects introduced Maraya to the Italian and international media. Some of the ideas behind the design are of particular interest, helping understand the meaning and purpose of Maraya.



Giò Forma explained that the first brief from the client (RCU) was to provide a complex capable of hosting concerts and events in an area of enormous archaeological and scenic value. Accordingly, the mission was one of considering how they might build in such a special place, and wondering how to establish a relationship between the construct and the existing environment in the most respectful way possible. When asked to think in terms of a permanent architecture, their initial response was: “No, it is not possible to build in such a beautiful place”.

The biggest challenge was having to place a man-made creation in pure and untouched territory. Creating a site-specific landmark was the key element. The aim was to add something to the past, not to replace it. They were inspired by the *genius loci* of AIUla’s desert, i.e. its distinctive atmosphere, the spirit of the place.

The most successful site-specific buildings all have a particular feature in common: the capacity to blend in perfectly with the environment they occupy, becoming the undisputed focal point but always making the most of the surrounding landscape.

Hence the idea of the mirror: if a building cannot compete with the landscape, it should enhance it. In the case of Maraya, the building becomes a theatre for its natural surroundings, which are the real attraction. The silent and respectful mirror cube finds a way to create a dialogue between nature, history and the future.

Giò Forma made every effort to let the art and the architecture and the sense of place emerge from the place itself. They sought to dialogue with what was there. To be inspired by what was there. It was a man-made vision of living in harmony with a desertscape that is very agile and resilient at the

same time. The environment in which they had to design has a life of its own, even the rocks themselves — they have their own spirituality and identity, they have a presence. They may simply be rocks, but they are very much alive.

It was decided that the cube should be a steel structure, not least in order to benefit from the non-invasive nature of this construction method.

The building is clad with 9,740 m<sup>2</sup> of mirrors, and indoor facilities include the conference hall, which has a seating capacity of 560 and is 26 metres high, a roof terrace, a conference centre, exhibition space and a restaurant. Most notably, Maraya Hall has a stage of Grand Theatre proportions (50m x20m), with a giant retractable window of 800 m<sup>2</sup> that opens onto the surrounding terrain, allowing shows to take place directly on the desert level, where mass-choreography can be staged in a unique in-and-outdoor scenario, blending landscape and entertainment. The automation of the giant window is the main technological innovation of the Maraya Concert Hall and can become part of the scenic movement adopted for theatrical performances.

The interior design favours restraint, with a preference for the use of local materials wherever possible, especially stone, to evoke a construction fashioned from the rock by man and by the wind. Indeed, the interiors feature materials that reflect the natural world, blending with the colours and textures of the landscape. For the decor, the decision was made to design a custom-made tile that would reproduce the spirit and shades of AlULA, like the custom Poltrona Frau seats and terrace materials.

The main concept of Maraya is one of “reflected beauty”. The architects made use of “the most beautiful local raw material: the reflecting image that gives life to a container for shows”.

Extensive study went into selection of the mirror, which had to ensure degrees of reflectivity and brilliance that would maintain a high level of fidelity to the AIUla colours in the surrounding landscape. A total of 3,000 pre-tempered panels were manufactured locally by Guardian Glass, which adapted its highly durable UltraMirror product to withstand harsh conditions like wind, sandstorms and extreme temperature fluctuations.

The mirror façade was a challenge due to the coplanar proximity of the single panels, which need air passages and cavity space since they tend to expand in high temperatures; to maintain maximum possible visual uniformity, close attention was given to the joints between the panels and the effect that the material would have. A subtle curvature built into the façade means that, from a distance, the building looks like a shimmering mirage of the surrounding panorama, but as visitors move closer, they see their image perfectly reflected.

In the words of the designers: “AIUla is a powerful place, a cultural landscape shaped by nature and humans for millennia, it is not a place upon which to impose an architecture. AIUla guides the designer – if we observe, we will see. If we listen, we will hear. The purpose of design is to contribute to harmony and balance – it is to bring us closer to AIUla and AIUla closer to us.” And again, “The reflections (maraya) give an overwhelming balance and a deep sense of the connection of human heritage with nature.”

Interestingly, mirrors are playing a more and more important role in Saudi Arabia’s new and audacious urban planning projects: in Summer 2022

it was announced that the futuristic zero-gravity vertical city, The Line, will have a mirror façade — The Mirror Line — a glass façade through which eyes on the inside can see out (Designboom, August 11, 2022).

### *AIUla Design Gallery and The International Airport*

To date, the involvement of Giò Forma in the AIUla transformation plan has extended to three other buildings besides Maraya.

They designed the AIUla Powerplant in the Ashar Valley, currently under construction, a completely ventilated building that uses traditional perforated brick to create a spectacular design pattern (Giò Forma, 2022).

With Black Engineering and the RCU Design Team, Giò Forma conceptualized the 500-square-metre AIUla Design Gallery in the AlJadidah district, which was inaugurated in Spring 2022.

The U-shaped building presents an outer skin of Corten weathering steel, and other materials used in construction include glass and polished concrete. The steel frontages are pierced with subtle geometric patterns resembling those of the concrete breeze blocks widely used in the area. This design feature is intended to convey the feeling of transparency and permeability between the interiors of the building and the public realm. Four traditional Al Jadidah patterns were selected, fed into the computer and distributed algorithmically across a grid filling the entire façade (Archilovers, May 19, 2022).

Giò Forma also designed the renovation of the Prince AbdulMajeed Airport (35 km from AIUla).

AIUla international airport opened to international flights in Spring 2021 (Al Arabiya English, March 5, 2021), and is now the fifth largest Saudi

airport, capable of handling 400,000 passengers per year. In keeping with the AIUla Masterplan, it embodies the RCU's approach to development that balances innovation with heritage, arts and culture, while unlocking economic potential to provide new opportunities for the local community.

Besides the expansion that will facilitate the 15,000 aircraft movements per year required to serve the expected 2 million visitors a year by 2035, and the renovation of the main building, with new interior and exterior designs for both arrival and departure halls, the development project included the construction of a VIP lounge terminal, built using local materials and reflecting the picturesque Al-Ula environment, and incorporating structural updates to improve passenger experience (RCU, July 3, 2020).

### ***The Sharaan Resort by Jean Nouvel***

With completion expected by 2024, and sustainability as its guiding principle, the Sharaan resort by Jean Nouvel promises to be a truly unique experience for visitors, and a journey through time and space. The concept designs were unveiled in October 2020, presented with the aid of renderings set in the majestic natural surroundings, from which observers can gain a full understanding of the ideas behind the construction.

Embracing the principles of ecotourism, the luxury resort will use emission-free power and set new standards in sustainability. Revitalize, restore and regenerate are the key words.

A resort carved into the rocks and desert of the Sharaan natural reserve, Nouvel's first major example of contextual architecture uses abstraction, sculpting within the landscape itself rather than competing with it. Since the temperature of the rocks is always at 20 degrees, guests can be

welcomed inside without consuming large amounts of energy. The facilities will include 40 suites, 3 villas and a retreat summit centre featuring 14 private pavilions. The resort is inspired by the way the Nabataeans interacted with their environment, exploiting both verticality and horizontality, and reconnected to the earth. The stated aim of the project is to play on the old ways of living to build on the present and meet the challenges of the future.

The resort will serve the wider aim of the Sharaan Nature Reserve, namely becoming a mechanism through which to build relationships at international level, enabling dialogue, collaboration and best practice in the realm of conservation, wildlife protection and environmental restoration (RCU, 2022a).

“AlUla deserves to acquire a degree of modernity”, says Nouvel. “Envisioning the future is a never-ending obligation that requires us to be fully alive to places in the present as well as conjuring up the past”. And this resort represents an opportunity to create a strong spatial, sensorial and emotional experience on the borders of nature, architecture and art — where the sound, musicality, harshness, tactility, power and complexity of nature are everywhere, from finely chopped stones on balconies to the singular granularity of each rock wall: all becomes an artwork in itself (RCU, October 27, 2020).

### *The Kingdoms Institute*

The Kingdoms Institute, at present active as a research organization running nine core research programs — the Jabal Ikmaḥ Inscription and Rock Art Research Project, the AlUla Cultural Oasis Assessment, the Dadan Archaeological Project and the Digital Survey of Key Heritage, among

others — will open its doors to the public by 2030 on a 28,000 m<sup>2</sup> site in AIUla (RCU, 2022b and 2022c).

The RCU expects that it will become a world-class centre for archaeological and conservation research, the first of its kind in the region, where the archaeological heritage of the AIUla area will finally have the showcase it deserves (see for example: Salles, 1996, 587, on the urgency to re-arrange an already rich, at the time regional museum in AIUla).

The Institute will be dedicated to the study of the history and prehistory of the Arabian Peninsula. It will also feature a university campus. Design work on the future Institute is still in progress, but the word is that it will be a red sandstone structure echoing the monumental works of the Dadan civilization and incorporating all the technological advances in modern archaeology. It is expected that when completed, the Institute will be an inspiring site-specific landmark able to attract scholars and tourists alike.

## **5. Conclusions: Remembering The Past, Always Looking Ahead**

The ongoing archaeological projects in AIUla reveal a vast and enigmatic monumental landscape, suggesting that the Sheikdom of Dadan, and thereafter the Kingdom of the Banu Lihyan, flourished and developed a far more complex and distinctive culture than once thought.

The Royal Commission for AIUla is sparing no efforts to build the transformation of AIUla around the pivotal principle of sustainability, which means that progress must not be at the expense of AIUla's glorious but fragile tangible heritage, and this also reflects the mandate of UNESCO.

There is a strong and steady commitment to reconcile protection and preservation of AIUla's illustrious legacy with a strong focus on the present

---

— translating first and foremost into job creation for local communities — and an ambitious vision for the future, reflected in the contemporary architecture projects.

AIUla has become a year-round leisure tourism destination offering eco-friendly entertainment opportunities that cater for all tastes, ages and budgets. However, its destiny will be primarily that of a global cultural destination — the recently launched Wadi AlFann initiative, along with others, points to this role (AfAIUla, June 28, 2022) — attracting cultural and regenerative tourism rather than mass tourism.

AIUla has always been a place of cross-cultural exchange, and the most intriguing discoveries about its largely mysterious past may not yet be made.

Maraya stands in the desert, silent and respectful, reminding the world that unspoiled beauty deserves to be shared and universally enjoyed.

It takes audacity and vision to insert modernity into the past, and although the transformation of AIUla is still a work in progress, it is undoubtedly a promising one.

It is important to raise awareness internationally as concerning the intrinsic historical value of this destination. Accordingly, it would be desirable for all works on AIUla and Northern Arabia authored by past and present Saudi archaeologists and historians to be translated into English and widely circulated. This would also help promote the commitment of the leadership to sustainable development.



## **Bibliography**

- AfAlula. (2022). *Accord entre le Gouvernement de la République française et le Gouvernement du Royaume d'Arabie saoudite relatif au développement culturel, environnemental, touristique, humain et économique et à la valorisation du patrimoine du gouvernorat d'AlUla dans le Royaume d'Arabie saoudite*. <https://www.afalula.com/en/media-gallery/#publications> (French and Arabic versions).
- AfAlUla. (June 28, 2022). *The French Agency for AlUla development is pleased to announce that five era-defining artworks will become part of new cultural destination Wadi AlFann, Valley of the Arts, AlUla*. Accessed August 20, 2022. <https://www.afalula.com/en/the-french-agency-for-alula-development-is-pleased-to-announce-that-five-era-defining-artworks-will-become-part-of-new-cultural-destination-wadi-alfann-valley-of-the-arts-alula/>
- Al Arabiya English. (March 5, 2021). *Saudi Arabia AlUla's airport opens to international flights after expansion*. Accessed April 17, 2022. <https://english.alarabiya.net/News/gulf/2021/03/05/Saudi-Arabia-s-Al-Ula-airport-opens-to-international-flights-after-expansion>
- Al-Ansary, A. (1999). The State of Lihyan: A New Perspective. *Topoi*, 9(1).
- Alkoutli, S. (2022). *Journey through Time. AlUla's Masterplan*. Accessed August 10, 2022. <https://www.saadialkoutli.com/work/alula-2/>
- Al-Theeb, S. A. (1989). *A Comparative study of Aramaic and Nabataen inscriptions from North-West Saudi Arabia*. Doctoral thesis. University of Durham.
- Al-Theeb, S. A. (2014). *Nuqūsh mawqī' Sarmadā', muḥāfazat Taymā'*. King Saud University, Riyadh.
- Arab News Japan. (August 4, 2022). *AlUla 'snapper' uses drone to catch 550m-year-old Fish Rock*. Accessed August 7, 2022. [https://www.arabnews.jp/en/saudi-arabia/article\\_77615/](https://www.arabnews.jp/en/saudi-arabia/article_77615/)
- Archilovers. (May 19, 2022). *Athr Gallery and the Design Gallery*. Accessed August 17, 2022. <https://www.archilovers.com/projects/301861/athr-gallery-and-the-design-gallery.html#info>

- Bowersock, G.W. (1996). Exploration in North-West Arabia after Jaussen-Savignac. *Topoi. Orient-Occident*, 6(2).
- Dalton, M. et al. (2022). The Middle Holocene 'funerary avenues' of north-west Arabia. *The Holocene*, 32(3).
- Designboom. (August 11, 2022). *Discovering a new urbanism with 'The Line'*. Accessed August 17, 2022. <https://www.designboom.com/architecture/neom-line-saudi-arabia-vertical-city-interview-tarek-qaddumi-08-11-2022/>
- French Ministry of Culture. (January 31, 2022). *First meeting of the Franco-Saudi Committee for AlUla in Paris*. Press release. <https://www.culture.gouv.fr/en/Presse/Premiere-reunion-du-comite-franco-saoudien-pour-AlUla-a-Paris>
- Kingdom of Saudi Arabia. (2022). *Saudi Vision 2030*. <https://www.vision2030.gov.sa/v2030/overview/>
- Nasif, A. A. (1981). *An historical and archaeological survey of AlUla with special reference to its irrigation system*. Doctoral thesis. Victoria University of Manchester.
- Nehmé, L. (2004). Explorations récentes et nouvelles pistes de recherche dans l'ancienne Hégra des Nabatéens, moderne Al-Hijr/Madā'in Sālih (Arabie du Nord-Ouest). *Comptes rendus des séances de l'Académie des Inscriptions et Belles-Lettres*. 148(2).
- Oxford Archaeology. (June 7, 2018). *AlUla Archaeological Survey*. Accessed April 5, 2022. <https://oxfordarchaeology.com/news/796-al-ula-archaeological-survey>
- Pavan, A. (2014). The New Saudi Educational Renaissance: in between the "Capacity to Aspire" and the "Capacity to Remember". *Higher Education Studies*, 4 (5).
- PR Newswire. (January 10, 2022). *Mysterious ancient tombs reveal 4,500-year-old highway network in north-west Arabia*. Accessed April 1, 2022. <https://www.prnewswire.com/ae/news-releases/mysterious-ancient-tombs-reveal-4-500-year-old-highway-network-in-north-west-arabia-887603213.html>
- RCU. *Journey Through Time Masterplan*. <https://ucl.rcu.gov.sa/>

- RCU. (2022a). *Sharaan Nature Reserve*. Accessed August 16, 2022. <https://www.rcu.gov.sa/en/fact-sheets/sharaan-nature-reserve/>
- RCU. (2022b). *The Kingdoms Institute*. Accessed May 8, 2022. <https://ucl.rcu.gov.sa/en/kingdoms-institute>
- RCU. (2022c). *The Kingdoms Institute. Archaeology-Infographics*. Accessed May 8, 2022. <https://ucl.rcu.gov.sa/getattachment/132e41da-c025-4f5f-a7c7-53145ef58d92/Archeology-Infographic.pdf?lang=en-US>
- RCU. (July 3, 2020). *Royal Commission for AlUla completes second phase of airport expansion, increasing annual capacity by 300% as several routes re-open*. Accessed August 17, 2022. <https://www.rcu.gov.sa/en/media-gallery/news/royal-commission-for-alula-completes-second-phase-of-airport-expansion-increasing-annual-capacity-by-300-as-several-routes-re-open/>
- RCU. (October 27, 2020). *New Jean Nouvel concept designs unveil a new era in architecture: a world-first 'masterpiece' resort hidden within the rock dwellings of AlUla, Northwest Arabia*. Press release (contents were confirmed by Ateliers Jean Nouvel via email on September 1, 2022).
- Salles, J. F. (1996). Al-'Ula - Dédan. *Recherches récentes. Topoi. Orient-Occident*. 6(2).
- Smith, S. (October 3, 2019). *Uncovering secrets of mystery civilization in Saudi Arabia*. Accessed March 15, 2022. <https://www.bbc.com/news/science-environment-49424036>
- The University of Western Australia. (January 14, 2022). *UNW archaeologists discover ancient highways in Arabia*. Accessed April 1, 2022. <https://www.uwa.edu.au/news/Article/2022/January/UWA-archaeologists-discover-ancient-highways-in-Arabia>
- Thomas, H. et al. (2021). The mustatils: cult and monumentality in Neolithic north-western Arabia. *Antiquity*, 95(381), 605-626.

## Maraya References (Italian and English):

Abitare. (July 16, 2020). *Visuali amplificate*. Accessed August 5, 2022.

<https://www.abitare.it/it/architettura/progetti/2020/07/16/gio-forma-maraya-concert-hall-in-arabia-saudita/>

Arab News. (March 18, 2020). *Maraya Concert Hall: The 'mirrored wonder' of Saudi Arabia's AlUla creates Guinness World Record*. Accessed July 31, 2022.

<https://www.arabnews.com/node/1642971/saudi-arabia>

Arab News. (March 18, 2020). *Saudi Arabia's Maraya Concert Hall: An architectural wonder of the world*. Accessed July 31, 2022.

<https://www.arabnews.com/node/1642926/saudi-arabia>

Archello. (2022). *Maraya Concert Hall*. Accessed May 1, 2022.

<https://archello.com/project/maraya-concert-hall>

Giò Forma. (2022). *Ashar Electrification Project*. Accessed August 10, 2022.

<https://www.gioforma.com/progetti/ashar-electrification-project/>

Harpers Bazaar Arabia. (December 31, 2021). *Sands Of Time: Can Man-Made, Contemporary Design Live in Harmony With The Natural Legacy of The Desert?* Accessed August 6, 2022.

<https://www.harpersbazaararabia.com/culture/alula-sands-of-time>

Isplora. (June 10, 2019). *Giò Forma: la nostra architettura democratica*. Accessed May 1, 2022.

<https://www.isplora.com/it/News/Architetti/intervista-architetti-gio-forma>

Stylepark. (June 3, 2020). *Radical Reflections*. Accessed August 5, 2022.

<https://www.stylepark.com/en/news/maraya-concert-hall-gio-forma>