

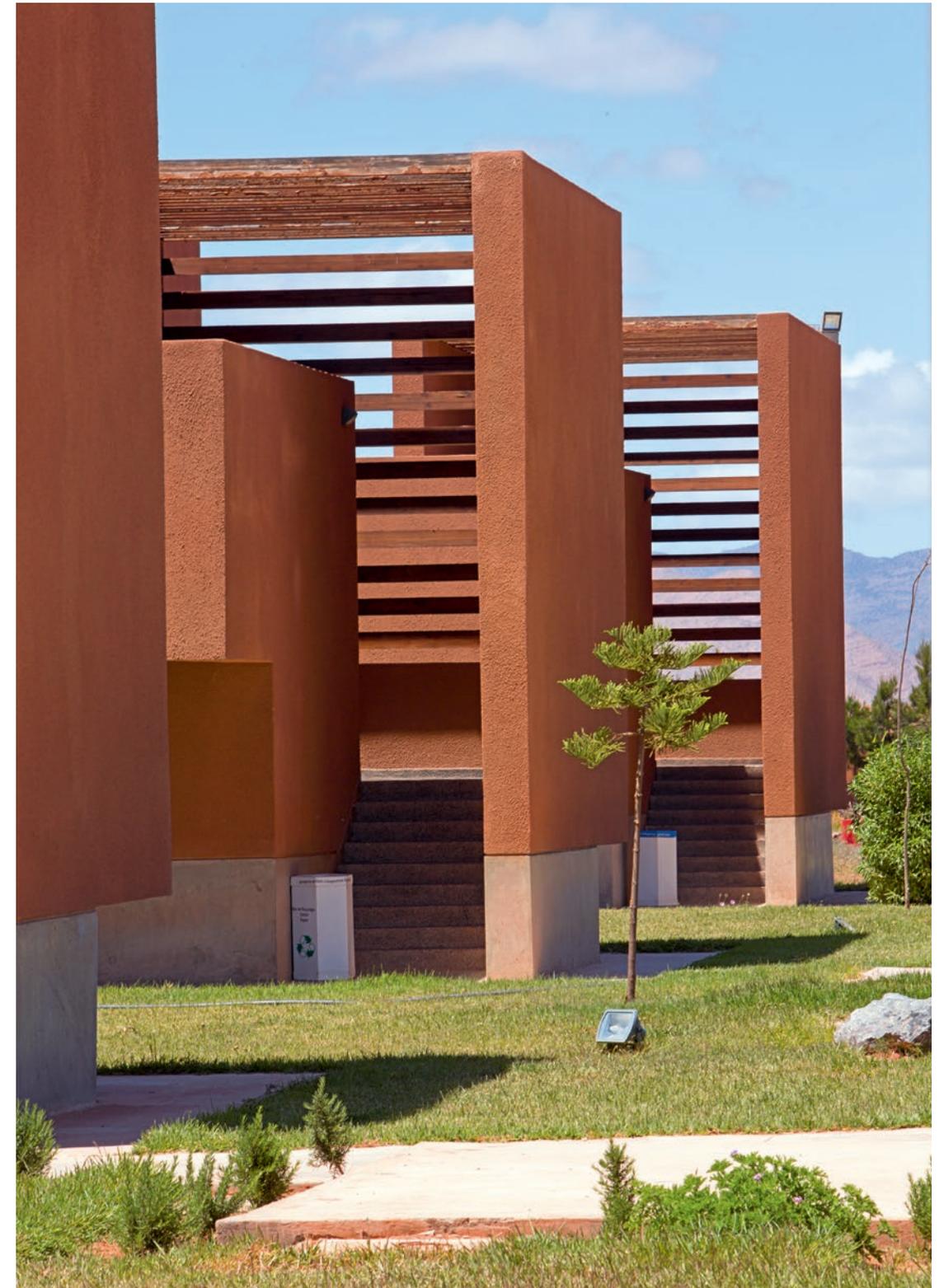
Guelmim School of Technology

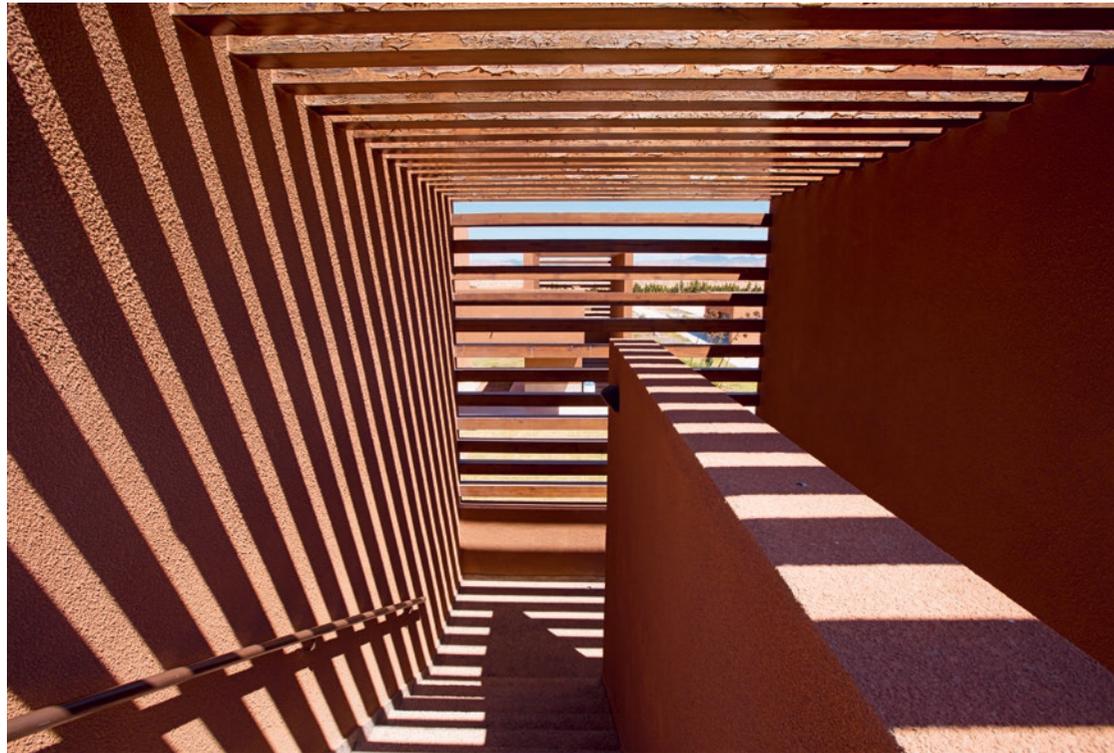
Guelmim, Morocco

Guelmim School of Technology grew out of the efforts of the Moroccan government and the Ibn Zohr University of Agadir to decentralise higher education and give students in remote areas the chance to go to university without having to move to one of the big cities – Agadir, Casablanca, Marrakesh. The repetitive, pared-down buildings that make up the school are simultaneously modern – blocks pierced by projecting window frames, louvers and narrow openings – and a tribute to the traditional buildings of the region. Known as the ‘Gateway to the Desert’, Guelmim is located on the edge of the Sahara in semi-arid, southern Morocco, with the Anti-Atlas Mountains to the north. Its proximity to the Atlantic serves to moderate its climate, though fluctuations in temperature can still be quite extreme.

For ease of navigation, the campus has a linear, branching organisation. The two main areas are arranged along a north–south axis around a series of courtyards and shaded walkways made of metal and timber elements. Spaces are easily differentiated by function: the southern part of the complex contains administrative offices and shared facilities such as the library, lecture hall and infirmary, while the northern section contains most of the teaching rooms and social spaces, such as the student cafeteria.

The three architects developed their own environmental brief in response to the context, ensuring that the campus is well adapted to the desert climate. The interior spaces are carefully organised to maximise natural ventilation and lighting, and are painted and furnished in white, with terrazzo flooring made from local stone. Green areas – formed of native plants, able to thrive in the dry climate – fill the spaces between the buildings, which are further integrated into their surroundings through the ochre colour of their facades. The rough render of these reinforced-concrete facades – reminiscent of traditional architecture – captures the light on the surfaces in a particularly expressive way. Indeed, the play of light and shadow is the only decorative element of the exteriors.





Client

Ibn Zohr University, Agadir, Morocco:
Omar Halli, president

Architects

Agence Saad El Kabbaj Architecte: Saad El Kabbaj, principal, Casablanca, Morocco
Agence Driss Kettani Architecte: Driss Kettani, principal, Casablanca, Morocco
Agence Mohamed Amine Siana Architecte: Mohamed Amine Siana, principal, Casablanca, Morocco

Structural Engineer

Bepol, Ouarzazate, Morocco:
Hassan Amgoune, director general
Jamaa Balil, project manager

Laboratory

LPEE, Agadir, Morocco:
Bachir El Cherkaoui, director general
Lahcen Erguibi, project manager

Technical Control Office

Dekra, Agadir, Morocco:
Imad Khamlichi, director general
Mustapha Essaadi, project manager

Construction Company

Zerkdi et fils, Agadir, Morocco:
Abdallah Zerkdi, director general
Houssine Idhamou, project manager

Project Data

Total site area: 45,000 m²
Total built area: 6,883 m²
Cost: 5,730,000 USD
Commission: January 2008
Design: January 2008–January 2010
Construction: March 2010–September 2011
Completion: October 2011

Saad El Kabbaj – Driss Kettani – Mohammed Amine Siana

Born in 1978 in Casablanca, Saad El Kabbaj studied at the Ecole Nationale d'Architecture in Rabat, Morocco, where he graduated in 2003, interspersing his studies with work experience abroad. He opened his office in Casablanca in 2005 and works especially on residential projects.

Born in 1978 in Fez, Driss Kettani spent his childhood in Côte d'Ivoire before coming to Morocco in 1996 and studying at the Ecole Nationale d'Architecture in Rabat, where he graduated in 2003. After some collaborative work, he opened his office in Casablanca in 2005, working on housing, office projects and design.

Born in 1979 in Casablanca, Mohamed Amine Siana graduated from the Ecole Nationale d'Architecture in Rabat, Morocco, in 2004. From 2000 he worked with

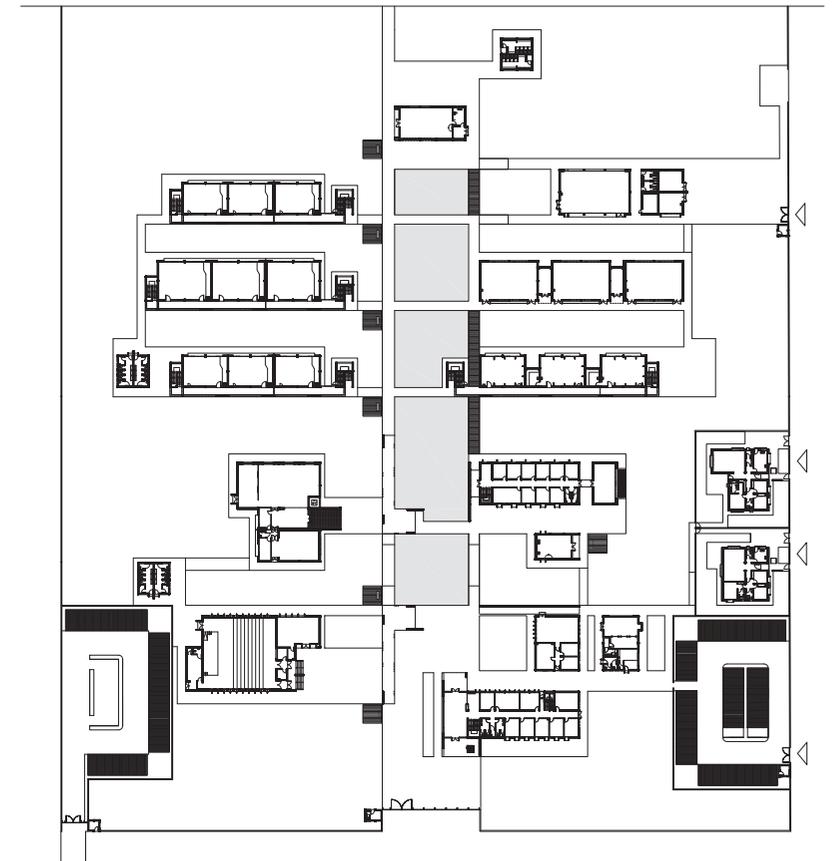
different architects both at home and abroad before opening his own office in Casablanca in 2005. He works on a range of projects including interior design, housing, health and design.

In parallel with their own projects, the three architects have collaborated on some important commissions. They won the competition for the Polydisciplinary Faculty of Taroudant in 2006, which was completed in 2010, and were awarded second prize in the competition for the Casablanca Grand Stadium with Portuguese partners Risco and LDS in 2011. They are currently at work on other educational projects, such as the Lycée Lyautey restructuring in Casablanca. Other projects include the Laayoune School of Technology and some mixed-use developments.

The Guelmim School of Technology won the 2015 Archmarathon Award in the educational category, and their work has been featured in exhibitions in New York, Milan, Melbourne, Paris and elsewhere. The architects have taught in the summer workshop Wave 2014 and at IUAV in Venice, and have given lectures in Morocco, Italy, Lebanon and France.

Websites

www.drisskettani.com
www.saadelkabbaj.com





Royal Academy for Nature Conservation

Ajloun, Jordan

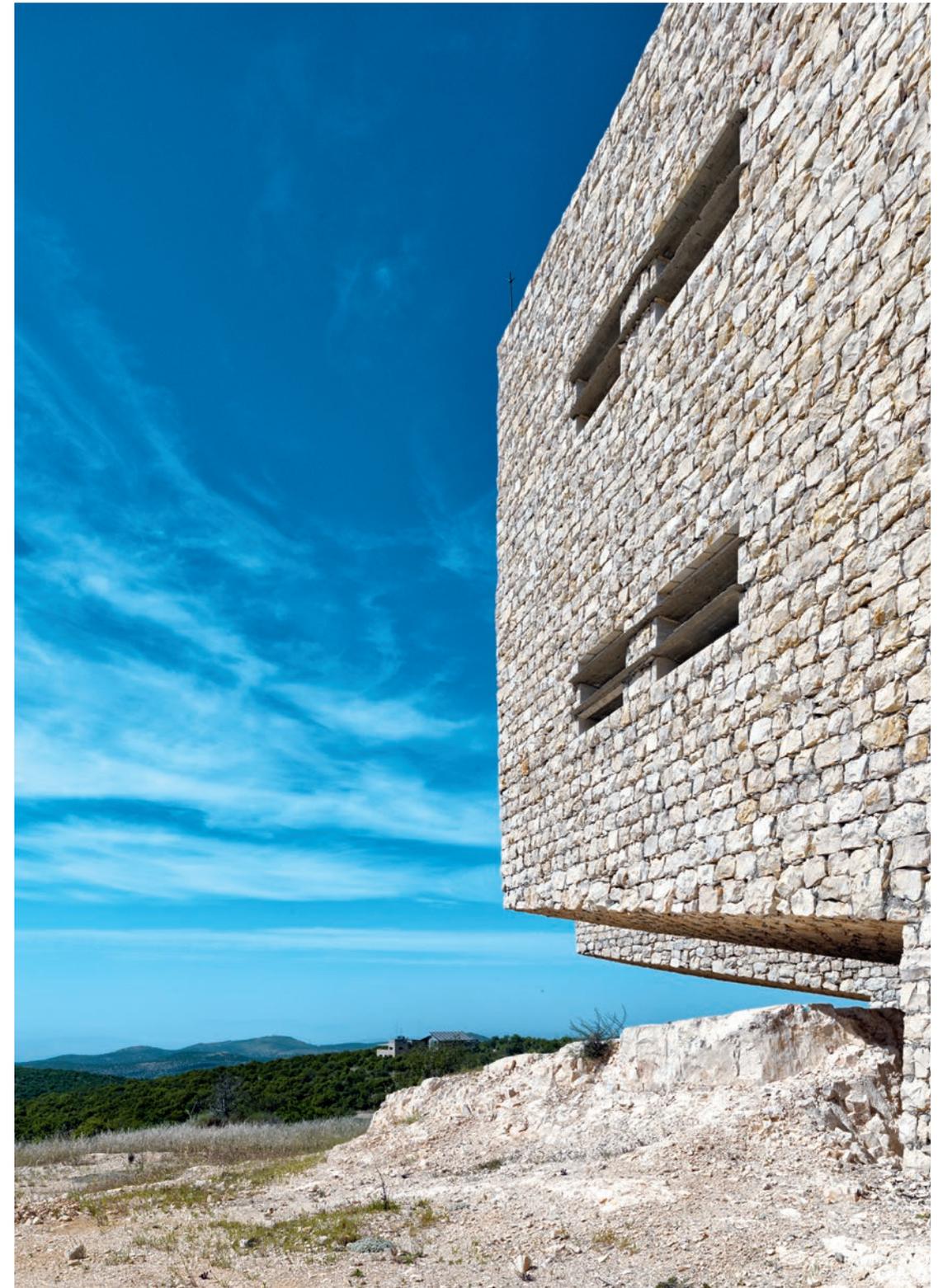
The Royal Academy for Nature Conservation is set in the Ajloun highlands, in a rolling landscape of farmland and forests of oak interspersed with pistachio, carob and wild strawberry trees. In addition to their agricultural value, these hills are also the source of the Anjara limestone found in much of Jordan's traditional architecture.

On being commissioned to design the academy – a centre promoting environmental education and ecotourism – the architect's first step was to have the building moved from the proposed site within the Ajloun forest reserve. Rather than clear protected woodland, he persuaded the client to build over a nearby abandoned quarry.

The irregular design of the limestone-clad facade follows the contours of the quarry – quite literally so, as the architect drew a line on the vertical surface of the rock to guide the stonemasons at the start of the work. The building rises from this line, transitioning almost seamlessly from bedrock to masonry construction – a mass of rough-textured local limestone. The south-facing facade is pierced by very small windows; solar gain is mitigated by tapered concrete louvers – vertical blade-like cracks shearing into zero width. On the other side of the building, diamond-shaped columns in exposed reinforced concrete are angled 45 degrees over the trees in order to create voids under the terraces and, most importantly, to reduce the impact of the construction on the surrounding environment.

Access to the academy is by way of a 30 m bridge, a hybrid structure of stone and reinforced concrete. The interior of the building is divided into two zones – an educational area and a restaurant/kitchen – organised around a central entrance lobby. The main circulation corridor is infilled with tapered stone blocks – smaller versions of the tapered concrete louvers inserted into the exterior windows. When the skylight above the corridor throws sunlight down over these blades of stone it creates a play of light that evokes the rough textures of the quarry outside.

From a construction point of view, it is partly ambiguous whether this is a building that is made from the materials of the quarry, or a quarry that is trying to make an architecture.





Client

Royal Society for the Conservation of Nature, Amman, Jordan:
Hasan Osama, construction manager

Architect

Khammash Architects, Amman, Jordan:
Ammar Khammash, principal
Osama Odeh, Deema Assaf, architects

Engineer

Al-Arabi Group Consulting, Amman, Jordan:
Mohammed Halawani, senior structural engineer
Mohammad Odeh, structural engineer

Contractor

Sami Al-Hafi Establishment for Contracting, Amman, Jordan

Geo-thermal System

GEO Contracting Company, Amman, Jordan

Electric

Energy Management Services (EMS), Amman, Jordan

Project Data

Total site area: 156,780 m²
Total project area: 3,600 m²
Building footprint area: 1,950 m²
Cost: 3,912,000 USD
Commission: April 2008
Design: April 2008–September 2011
Construction: May 2011–April 2014
Completion: May 2014

The Royal Society for The Conservation of Nature:

The Royal Society for The Conservation of Nature (RSCN) is a non-governmental organisation that aims to create, manage and act as advocate for a national network of protected areas to conserve Jordan's biodiversity and support local community development, while promoting wider public support and action for the protection of the natural environment within Jordan and neighbouring countries. Under the patronage of Her Majesty Queen Noor, RSCN was established in 1966 with His Majesty the late King Hussein as Honorary President. RSCN has the mission of protecting wildlife and wild places. Thus it is one of the few national organisations in the Middle East with such a public service mandate. As a result of its pioneering conservation work, the RSCN has achieved international recognition and acclaim.

Ammar Khammash

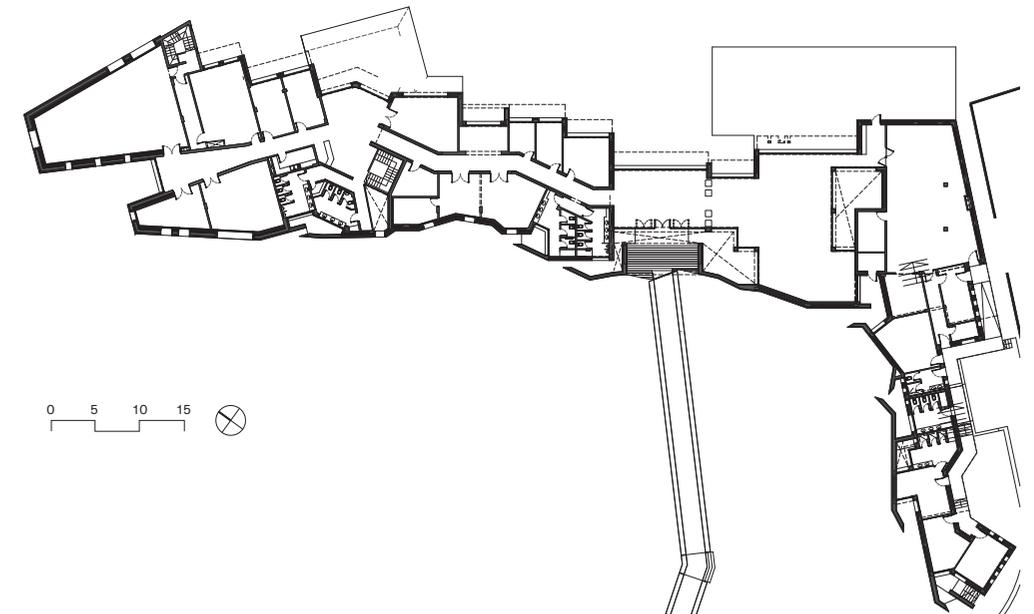
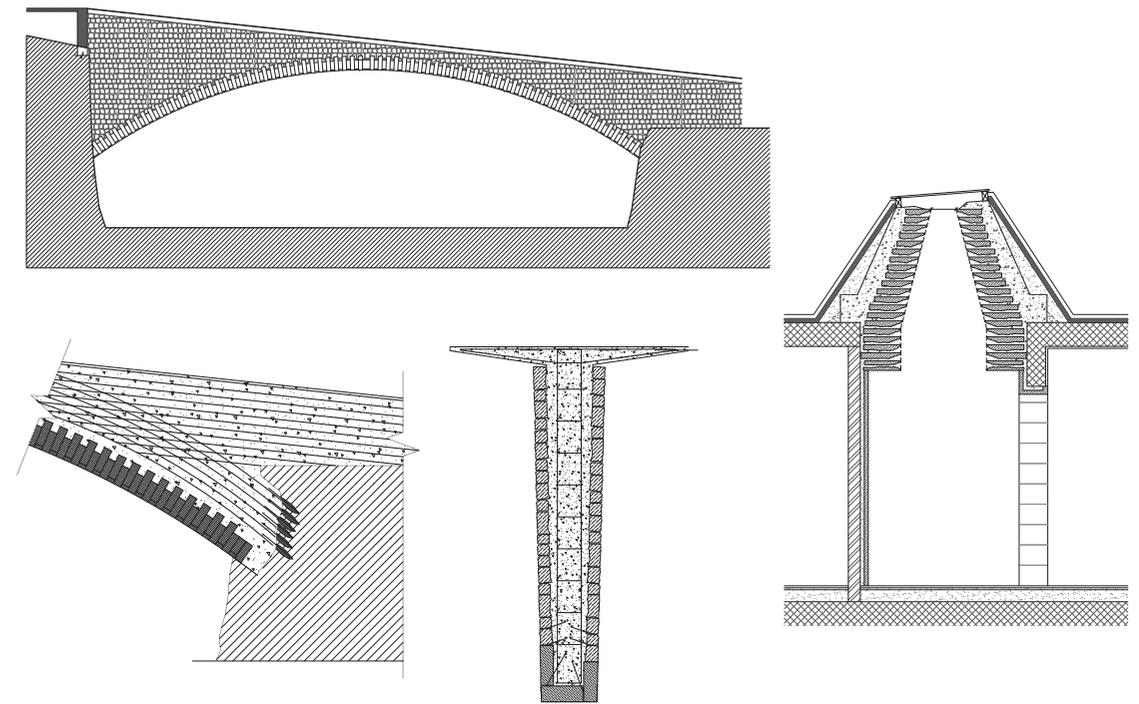
Ammar Khammash is the principal architect and founder of Khammash Architects in Amman. He received his bachelor's degree in architecture from the University of Southwestern Louisiana in 1986, and attended the post-graduate programme in ethno-archaeology at the Institute of Archaeology and Anthropology in Al-Yarmouk University (1987–1988). Khammash has undertaken a wide

range of residential, cultural and renovation work, sustainable tourism, research and planning, as well as 'destination design' projects. These include the Royal Academy for Nature Conservation in Ajloun (2014), Feynan Eco-Lodge in Wadi Feynan (2002) and the Wild Jordan Nature Center in Amman (2001).

Ammar Khammash is well established as an expert in Jordan's cultural and natural heritage and has launched a number of websites on Jordan's flora, geology and heritage. His expertise spans different disciplines including history, geology, archaeology, ecology, botany, ethnography and socio-economics. He is the author of a number of publications including *Notes on Village Architecture in Jordan* (1986). He is also an established painter in Jordan and has held more than 20 art exhibitions; his art work has been published in *Ancient Landscapes: The Landscape Paintings of Ammar Khammash* (2009).

Website

www.rscn.org.jo
www.khammash.com





Ceuta Public Library

Ceuta, Spain

Ceuta has a character all of its own, as a quasi city-state bordering Morocco but belonging to Spain, from which it is separated by the Straits of Gibraltar. And the city's public library is equally distinct. In addition to the typical functions of a modern library and cultural venue, it integrates within its structure important archaeological remains from a fourteenth-century Marinid city, built by Muslims retreating from the Iberian Peninsula.

The design of the structure developed out of extensive discussions with the site archaeologist, who identified three points where it would be acceptable to penetrate the ground, as the historical layers had disappeared. The columns were constructed on micro-piles: thick and wall-like, they set up a visual connection with the structure of the archaeological site – two parallel streets lined with houses. A viewing gallery allows the whole of the site to be appreciated from above, effectively 'in plan'. Taking advantage of the height differential in the sloping terrain, a second entrance at the back of the building, at mezzanine level, provides direct access for visitors wanting to see the archaeological exhibition rather than use the library.

The library has many different components – reading rooms, auditorium, activity rooms, multimedia areas, bookstore, terrace and outdoor reading area. To unify them all, the architects developed the idea of a 'veil'. The whole of the building above ground level is covered with aluminium panels, perforated both to filter the harsh glare of the sun and to provide views out. At an early stage, the architects drew viewpoints to identify the best outlooks – over the city and towards the Mediterranean – and made these an integral part of the design. Views to the building were also an important consideration, given its visibility on the sloping site. The lines created by the aluminium panels reflect the gradients of the streets, while the warm beige colour of the concrete base connects the library with the surrounding rocky landscape. The veil, wrapping around all sides equally, hides utilitarian functions such as ducts. At night the face of the building changes, as the veil becomes partially transparent.





Clients

Spanish Ministry for Culture, Madrid, Spain:
Amando Cuellas, general manager for infrastructure works

Municipality of Ceuta, Spain:
María Isabel Deu del Olmo, cultural manager

Architect

Paredes Pedrosa Arquitectos, Madrid Spain:
Ángela García de Paredes, Ignacio García Pedrosa, partners
Lucía Guadalajara, Álvaro Rábano, Clemens Eichner, Álvaro Oliver, Guiomar Martín, Eva Urquijo, Ángel Camacho, Ignacio Cordero, Blanca Leal, Roberto Lebrero, project team

Technical Control

Luis Calvo, Madrid, Spain
Antonio Zoido, Ceuta, Spain

Structural and Mechanical Engineering

Gogaite SL/JG Ingenieros, Madrid, Spain:
Alfonso Gómez Gaité, Alfonso Redondo Gómez, partners

Archaeological Survey

Municipality of Ceuta, Spain:
Fernando Villada Paredes, director of excavations
José Suárez, Elena Ortuño, Estrella Arcos, archaeologists

Project Data

Site area: 1,050 m²
Total combined floor area: 6,759 m²
Total cost: 12,000,000 USD
Commission: September 2007
Design: October 2007–May 2008
Construction: February 2010–April 2013
Occupancy: December 2013

Paredes Pedrosa Arquitectos

Ángela García de Paredes and Ignacio Pedrosa graduated in 1982 from the Escuela Técnica Superior de Arquitectura de Madrid (ETSAM), where they are now professors in the architectural design department. They are also visiting professors and critics at other universities as well as at the IUAV in Venice. After graduating, they worked with José García de Paredes until 1990, when they established Paredes Pedrosa, a firm mainly dedicated to competitions and projects for public cultural buildings. Their built works include La Olmeda Roman villa and public libraries in Ceuta and Córdoba, cultural buildings that integrate archaeological remains, and they have also undertaken specific interventions in historical buildings with heritage interest. Their work has been recognised with important awards such as Spain's Gold Medal for Achievement in the Fine Arts in 2014, the Spanish Architecture Award 2007 and, among others, the AADIPA European Award for Architectural Heritage 2015, the Eduardo Torroja Award 2014, an Honourable Mention for the Piranesi Prix de Rome 2014, the Gold Medal International Prize for

Sustainable Architecture 2012, Special Mentions for Europa Nostra, 2006 and 2010, and the AR+d Award for Emerging Architecture 1999.

Website

www.paredespedrosa.com

