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	04	Tiamat	2024	pavilion / Amman Design Biennale	Doha, Qa
	10	The Wonder Cabinet	2023	cultural organization	Bethleher
	19	Disorient	2023	pavilion	London, l
	28	Music Room	2023	exhibition / Taipei Biennale 2023	Taipei, Ta
	33	Dar Al-Majous	2022	refurbishment / cultural organization	Bethleher
	40	Cow Shed	2022	private housing	Widford,
	43	Nissan House	2022	private housing	Bethleher
	47	Hebron Courts Complex	2021	courthouse	Hebron, F
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	55	All-purpose	2020	pavilion / 17th Venice Biennale	Venice, Ita
	61	Amoud	2019	exhibition / Amman Design Week	Amman, C
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	73	Flat stone vault	2018	retail	Jerusalen
	80	MMAG Art Foundation	2018	cultural organization	Amman, C
	84	Analogy	2018	pavilion	Jerusalen
	89	Vault in Jericho	2017	pavilion	Jericho, F
	97	While We Wait	2017	pavilion / Victoria & Albert Museum	London, l
	104	Toulkarem Courthouse	2015	courthouse	Toulkaren

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⁰³ Elias & Yousef Anastas are partners at AAU ANASTAS architects, cofounders of Local Industries, co- founders of Radio alHara and cofounders of The Wonder Cabinet.

The studio focuses on tying links between crafts and architecture at scales that vary from furniture design to territorial explorations.

The studio has been advocating for a contemporary use of structural stone in architecture in Palestine and elsewhere. Elias & Yousef have been particularly interested in the politics of stone use for low carbon footprint structures, more resilient cities and more responsible quarries' exploitation.

They co-founded Radio alHara, a community based online radio that weaves unconventional nets of solidarities through sonic experiences. Linking hyper contextual conditions that are different a priori to create a new strengthened global critical discourse has been at the intersection of all of our practices.

Most recently they launched the Wonder Cabinet, a space-based initiative in Bethlehem for cultural productions that gathers a community of artisans and artists, technical and artistic realms in the aim of producing a culture of global provincialism.

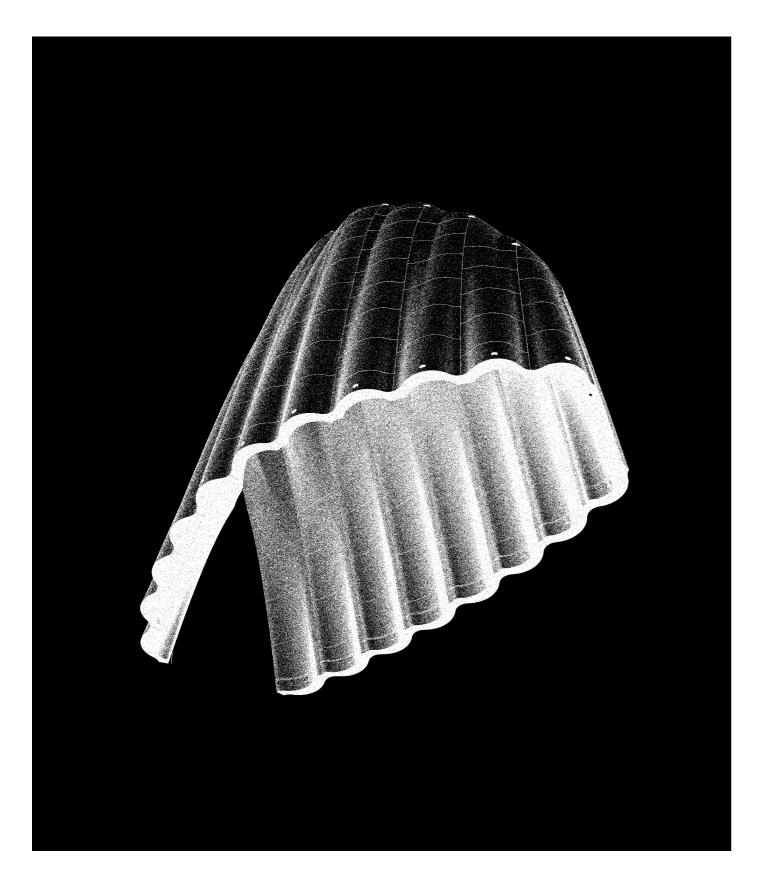
Their work is part of the permanent collection of the Victoria & Albert Museum, the Frac Centre-Val de Loire and the Vitra Design Museum.

They lectured at Columbia University, Bard University, Cooper Union, ETH, Ecole d'architecture de Paris Val De Seine, Ecole d'architecture de Paris Belleville, The Nieuwe Instituut, The Mosaic rooms, Mendrisio, Venice Bienniale, Storefront, Virginia Commonwealth University Qatar, Architecture Association London, Trinity College Dublin, University of Toronto amongst others.

Tiamat, 2024 Doha Design Biennale, Qatar

260 X 450 X 480 Niassa Limestone

photographs by Edmund Sumner

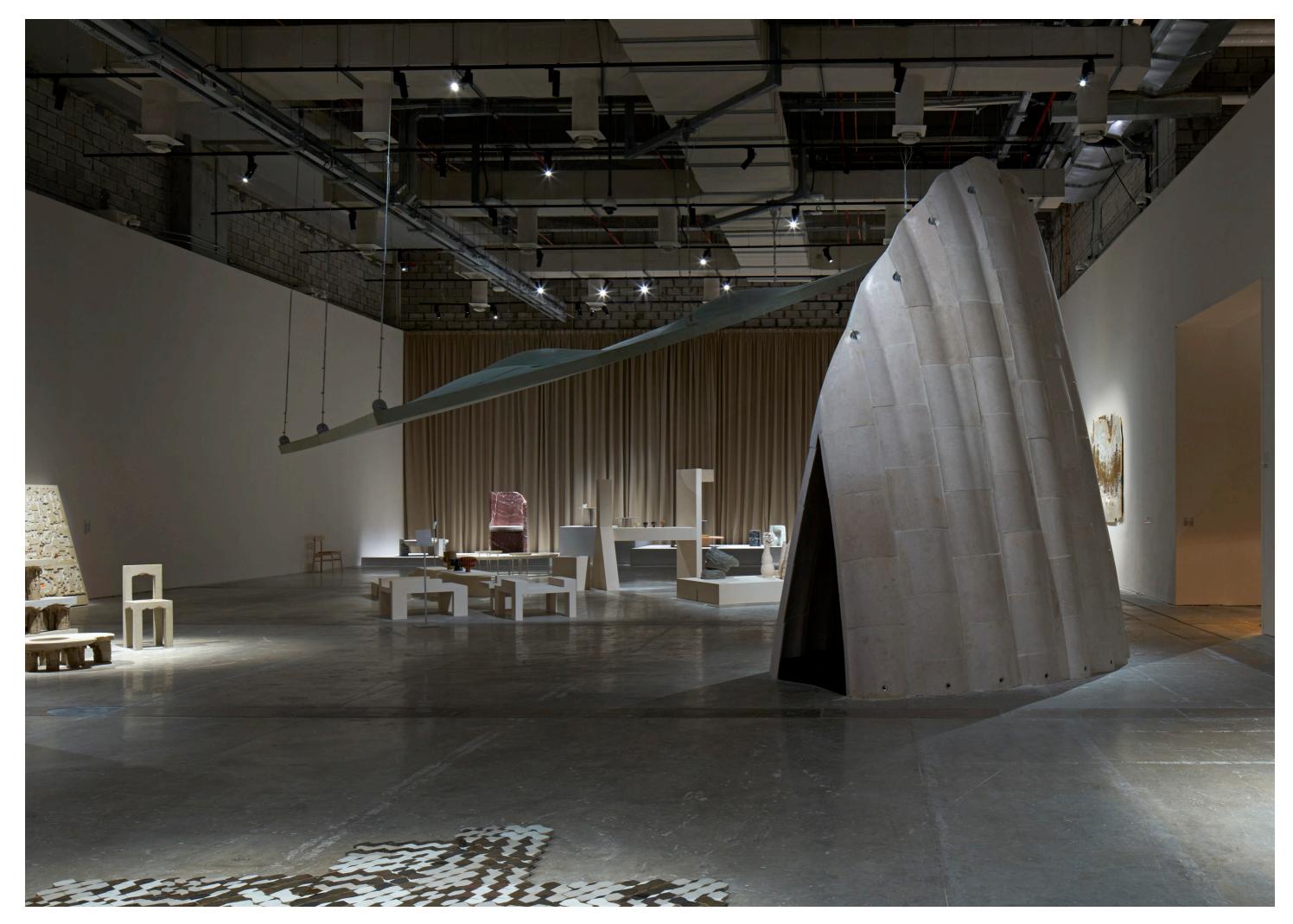


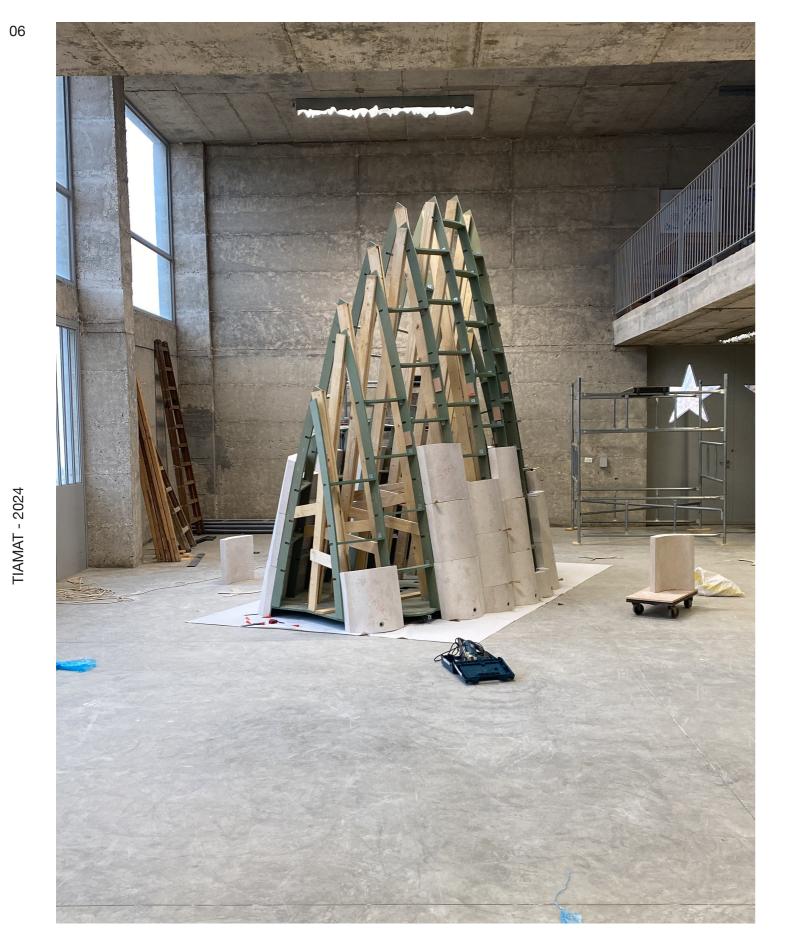
Building upon Stone Matters, Tiamat is the latest of its experimental iterations for contemporary architecture. Above all, Stone Matters looks with hindsight at the history of stone architecture in order to better expand the possibilities of building with stone today. It relies as much on paradigmatic theories set in the 1960's, in the 17th century or in prehistory. The understanding of stone architecture is peculiar in the sense that the material calls for an intuitive architecture: its history is not linear and, in some cases, theories may have followed and/or contradicted already grounded and established practices of architecture.

It is within that vast context, linking techniques, history and know-hows, that stone matters presents Tiamat, its latest iteration. The structure brings together intrinsic geometrical properties of surfaces inspired by ridges of sand dunes, ribbed structures and vaulted systems. It attempts to position itself at the intersection of different realms in the aim of opening up new families of possible structures made out of stone.

The structure presented is a unique architectural space with specific proportions that relates to a cavity where architectural atmospheres are proper to stone construction in terms of light, sound reverberations, climate control and textures. However, the system presented looks more widely at combining techniques, forms, theoretical and/or natural principles, to suggest new ways of using stone in contemporary architecture.

It leans on the historical background it stems from to better anchor and desacralize its contemporary formalization. Tiamat is a creature in the making that morphs Gothic architecture, the desert sand formations and stereotomy, to transform into a powerful organism setting new standards for contemporary architecture.



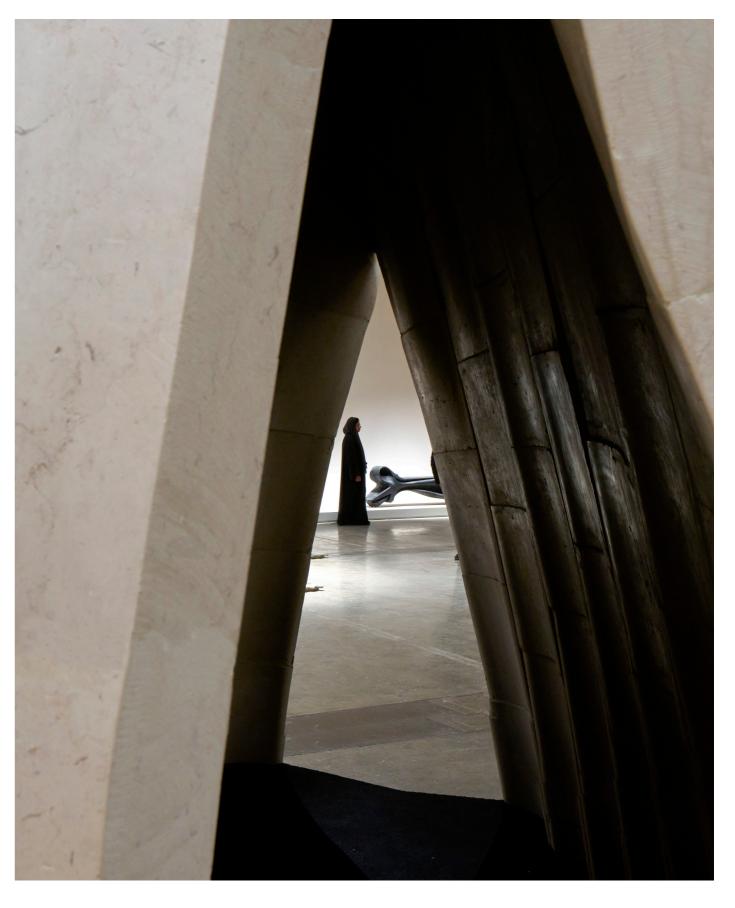




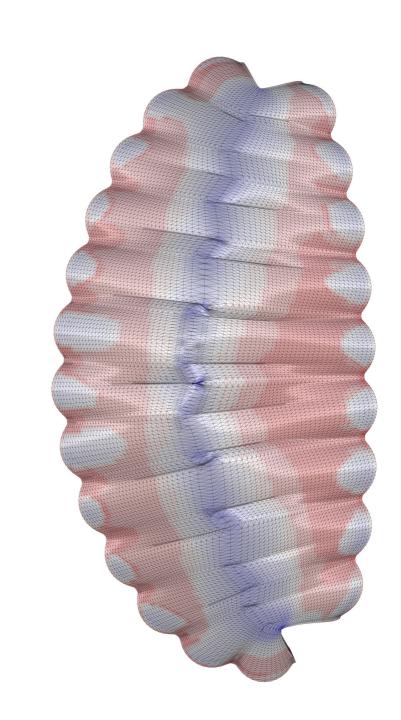




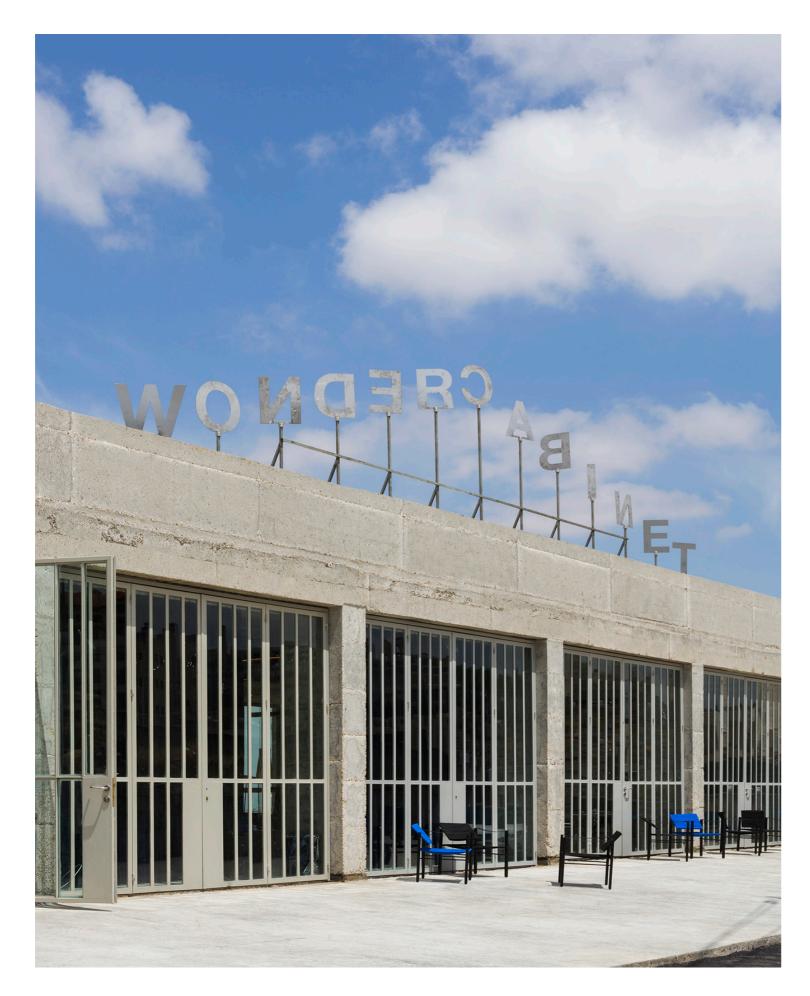








The Wonder Cabinet, 2023 *Bethlehem, Palestine*

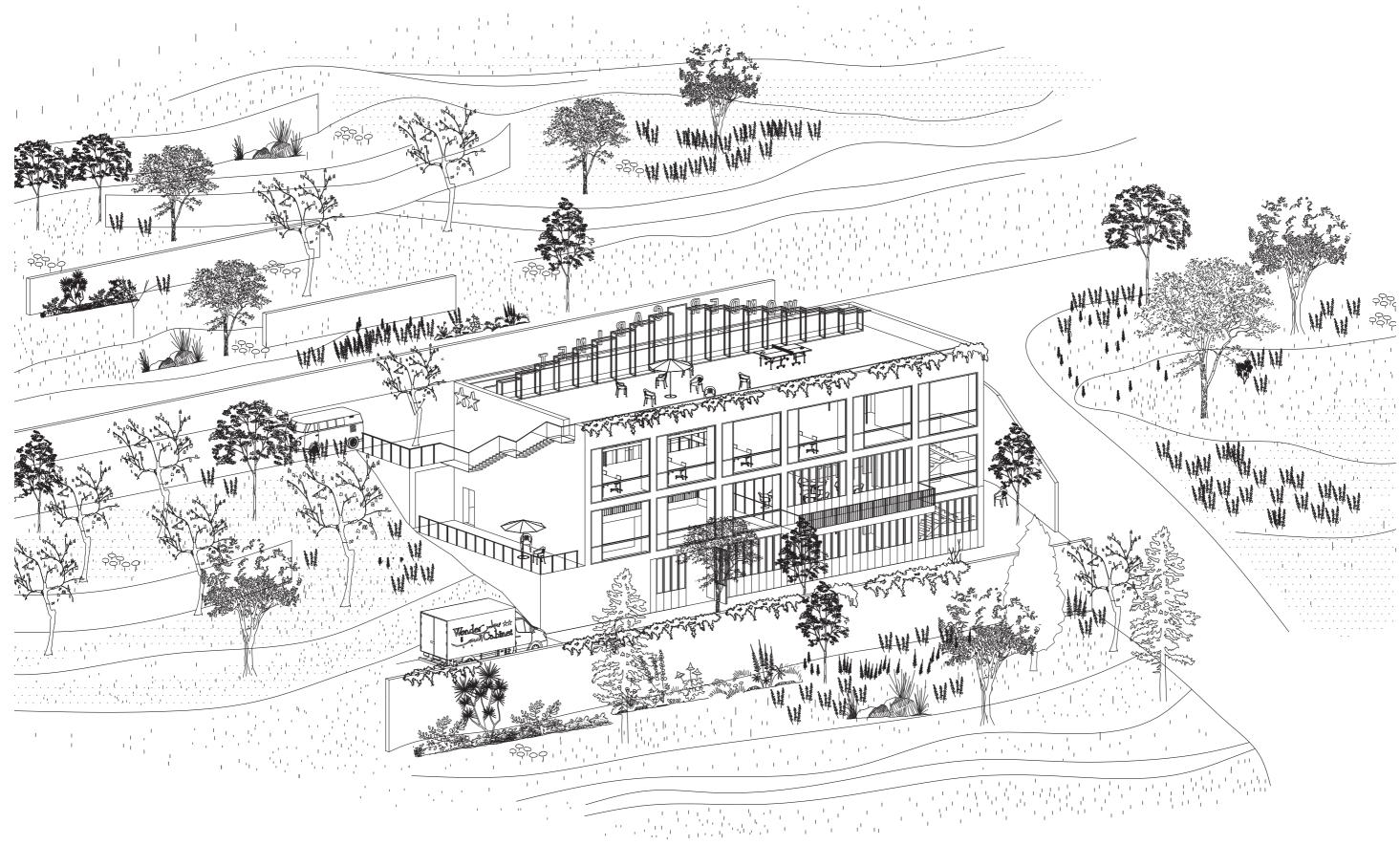


The Wonder Cabinet is a production-driven cultural space in Bethlehem, Palestine.

Each stainless steel letter of "W-O-N-D-E-R C-A-B-I-N-E-T" spins above the main facade as a weather vane for which Bishara alHadweh fabricated ball bearing aluminum tailor-made mechanical devices that ensure a constant smooth rotation of the letters. Underneath it, a rough concrete grinded pediment and a succession of steel and glass facades made by Local Industries from which the internal space can be seen as well as a glimpse of the facing valley on the other side of the building. In the building, three stories communicate through a cross sectional voids linking a triple heighted production space, artist studios, and a street esplanade used for ephemeral setups.

The building overlooks a valley whose climbing landscape is suddenly spoiled by the view on a settlement that used to be a forest twentysomething years ago. When entering the building on the north western side, the facades - made out of large fixed glass panels - direct the visitors' eyes towards the hilly Jordanian horizon. The plain timber windows are hidden behind the concrete columns that support a beam-less horizontal slab. While the partition-less internal spaces are bathed with light, the dimmed staircase only catches light through its protruding 80cm wide portholes that frame common and ever changing parts of the surrounding landscapes. They have been formed and rolled by Mohammad Husni, a blacksmith specialized in the fabrication of gigantic factory steel silos. Most of the lighting fixtures are made out of galvanized steel casings designed by Local Industries, laser cut in Hebron, bent in Beit Sahour and installed with caution by a local hero, Issa Haroun.

The wonder cabinet opening is first and foremost an invitation to explore the building and its surroundings through sound, discussions, objects, experimentations, food and the encountering of disciplines with each other. ¹¹ The Wonder Cabinet overlooks the Karkafeh valley, a mainly residential area in the north of Bethlehem, about two kilometers away from the old city and only a few minutes' walk from the entrance to the city coming from Jerusalem.





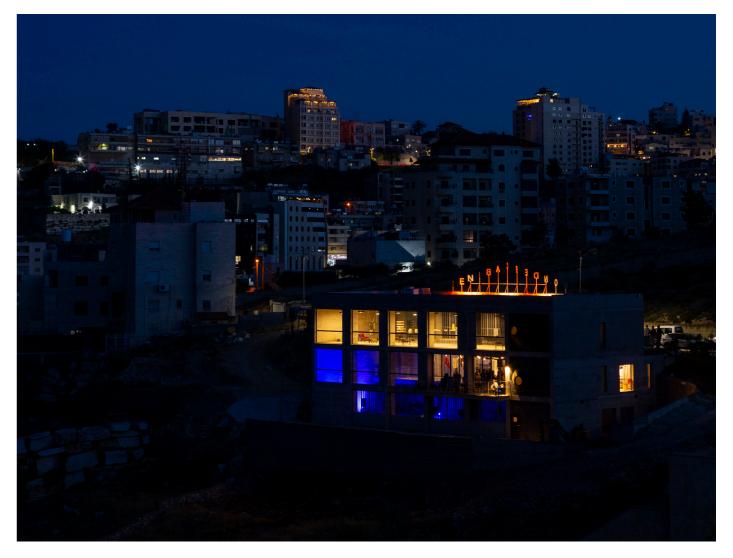


PHOTO OF WONDER CABINET FROM KARKAFEH VALLEY DURING NIGH TIME OPENING \wedge PERFORMANCES WITH BETHLEHEM IN THE BACKGROUND



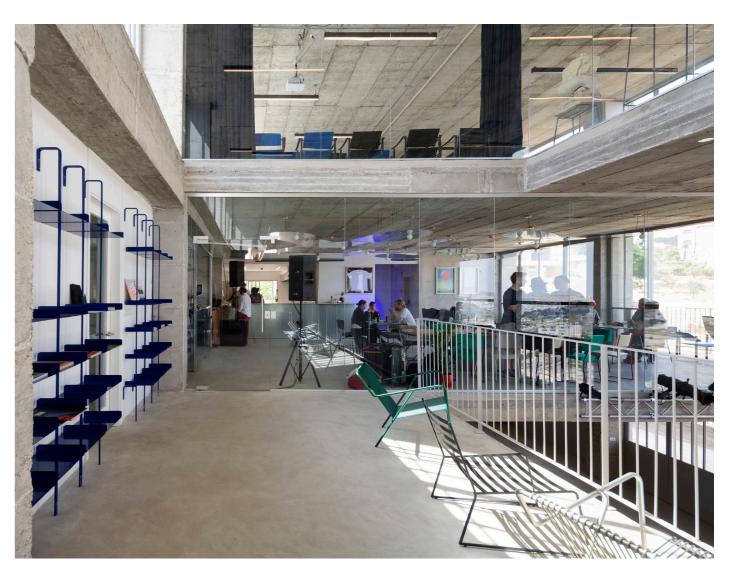
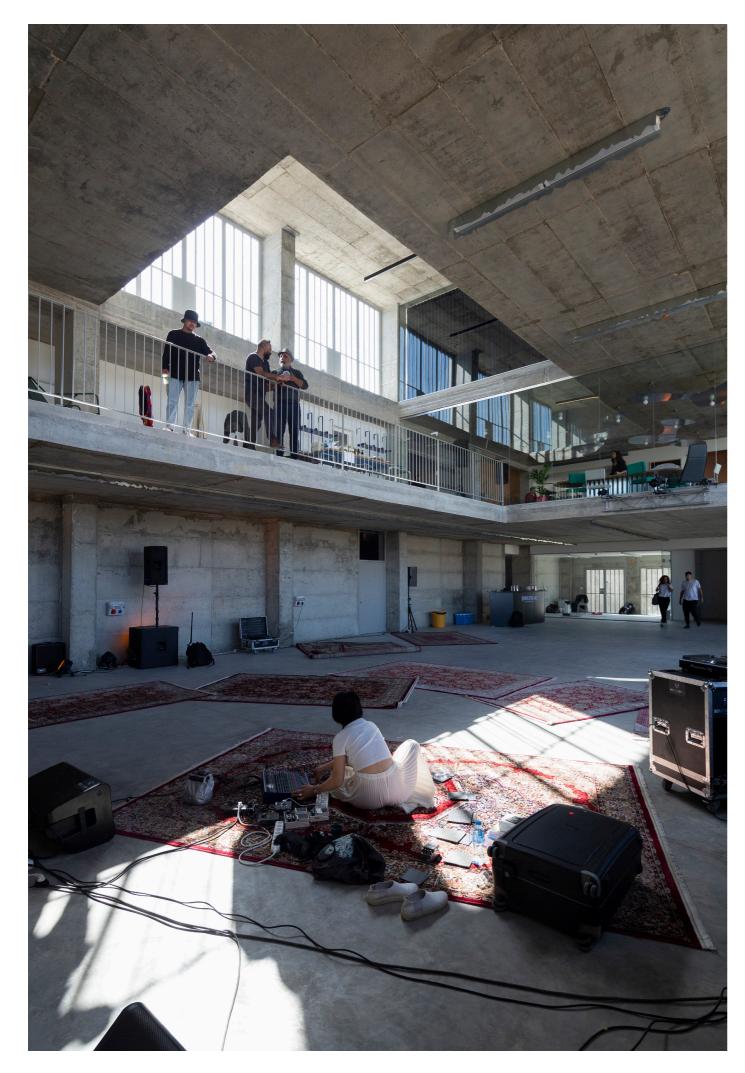


PHOTO OF THE RESTAURANT AND THE BALCONY OVERLOOKING THE VALLEY.
 LIGHTING STEEL "ISLANDS" BY AAU ANASTAS. CHAIRS, AND TABLES BY LOCAL INDUSTRIES

 PHOTO OF THE ARTIST RESIDENCY STUDIOS OVERLOOKING THE PRODUCTION SPACE. THE GLASS PARTITION SEPARATES THE RESTAURANT FROM THE STUDIOS.
 FURNITURE BY LOCAL INDUSTRIES

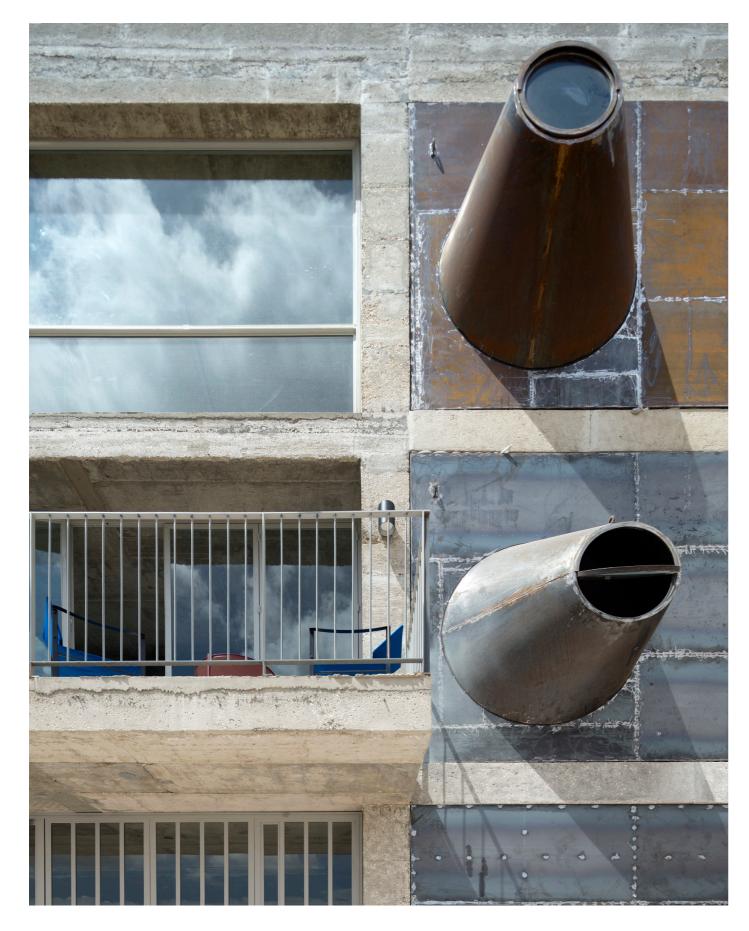




^ PHOTO OF THE MULTI-PURPOSE ROOM DURING THE OPENING DAYS. THE CURTAIN OFFERS POSSIBILITY OF TURNING THE SPACE INTO A DARK ROOM FOR TALK, MOVIE PROJECTIONS AND OTHER EVENTS. CHAIRS BY LOCAL INDUSTRIES

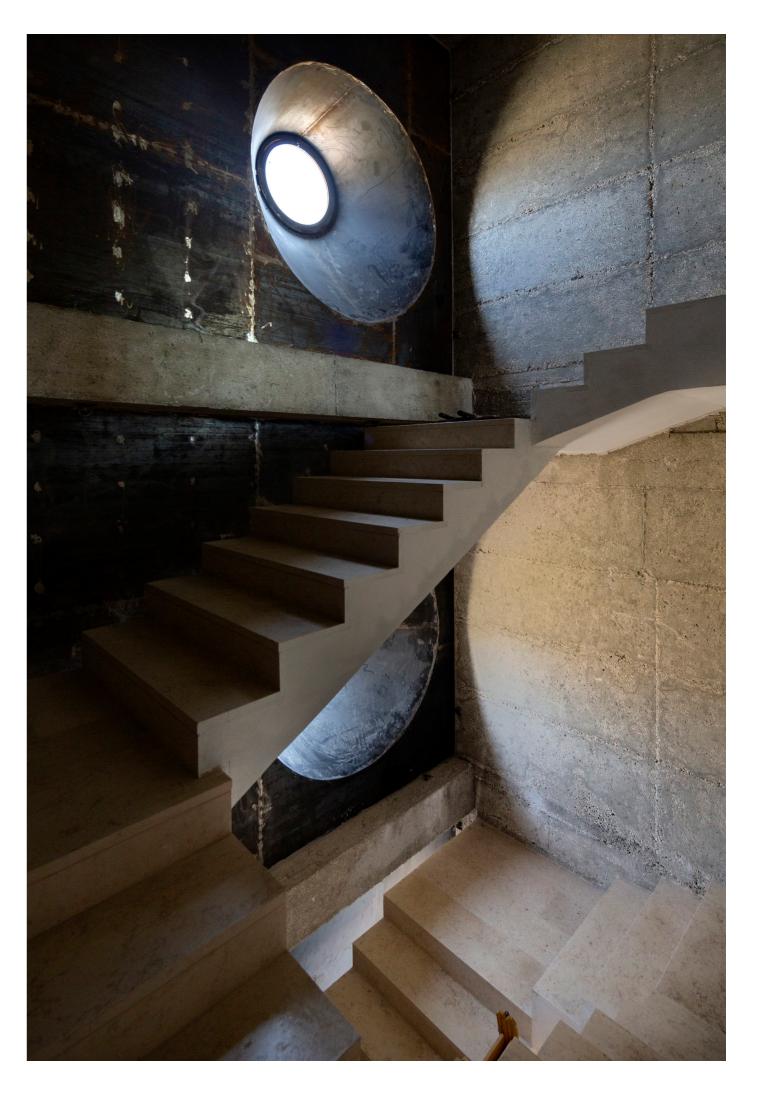
PHOTO OF THE PRODUCTION FACILITY DURING THE OPENING DAYS.
THE THREE CUT-OUTS OF THE SLABS SPATIALLY CONNECT THE BUILDING TOGETHER

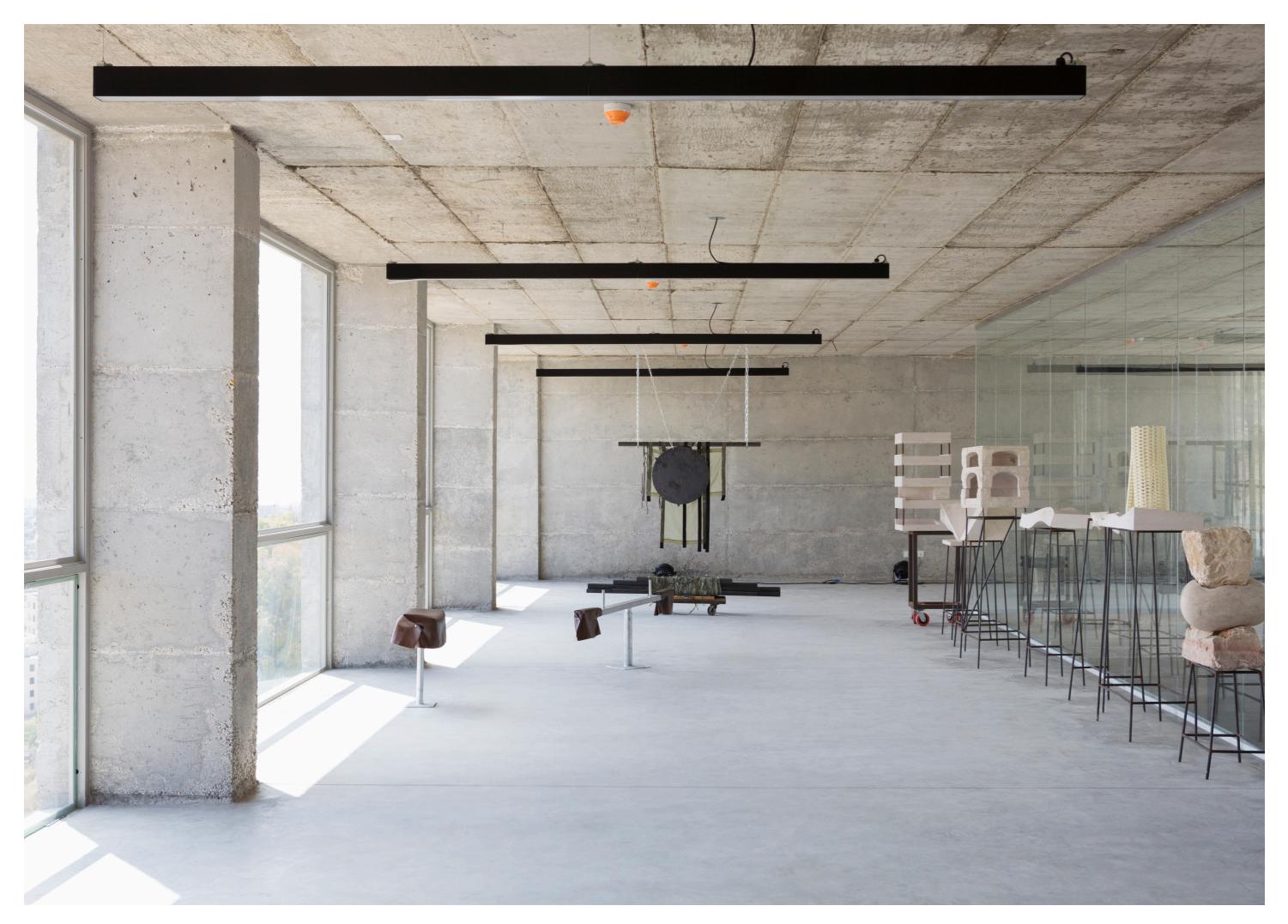




^ PHOTO OF THE OUTER FACADE WITH THE "PORTHOLE" IRON WINDOWS. THESE ELEMENTS ARE OBTAINED FROM A CONICAL SHAPE THAT EXTRUDES FROM THE FACADE BY 80 CM. FORMED AND ROLLED BY MOHAMMAD HUSNI.

> PHOTO OF THE "PORTHOLES" FROM THE INTERIOR STAIR. THE CONE CATCHES LIGHT AND PROJECTS IT DRAMATICALLY ONTO THE BUILDING'S WALLS







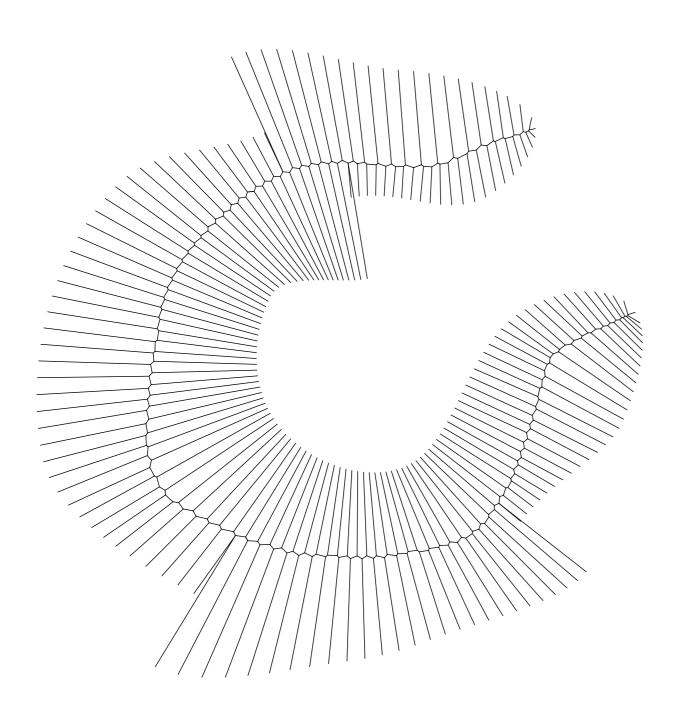






Disorient London, United Kingdom

Serpentine Pavilion 2024 competition proposal

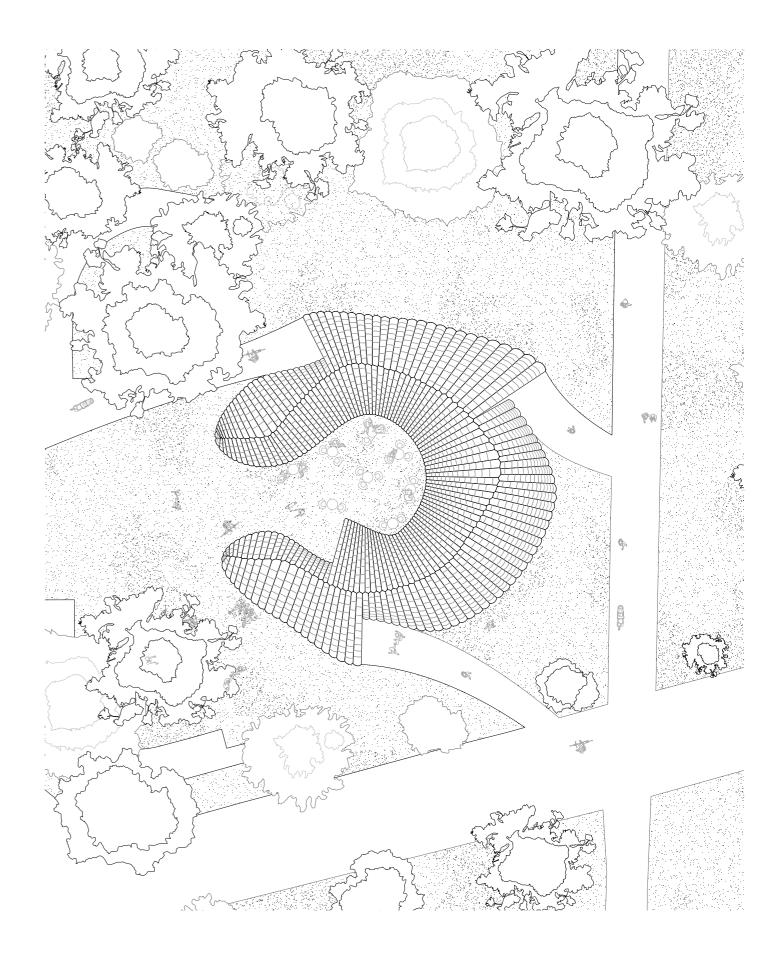


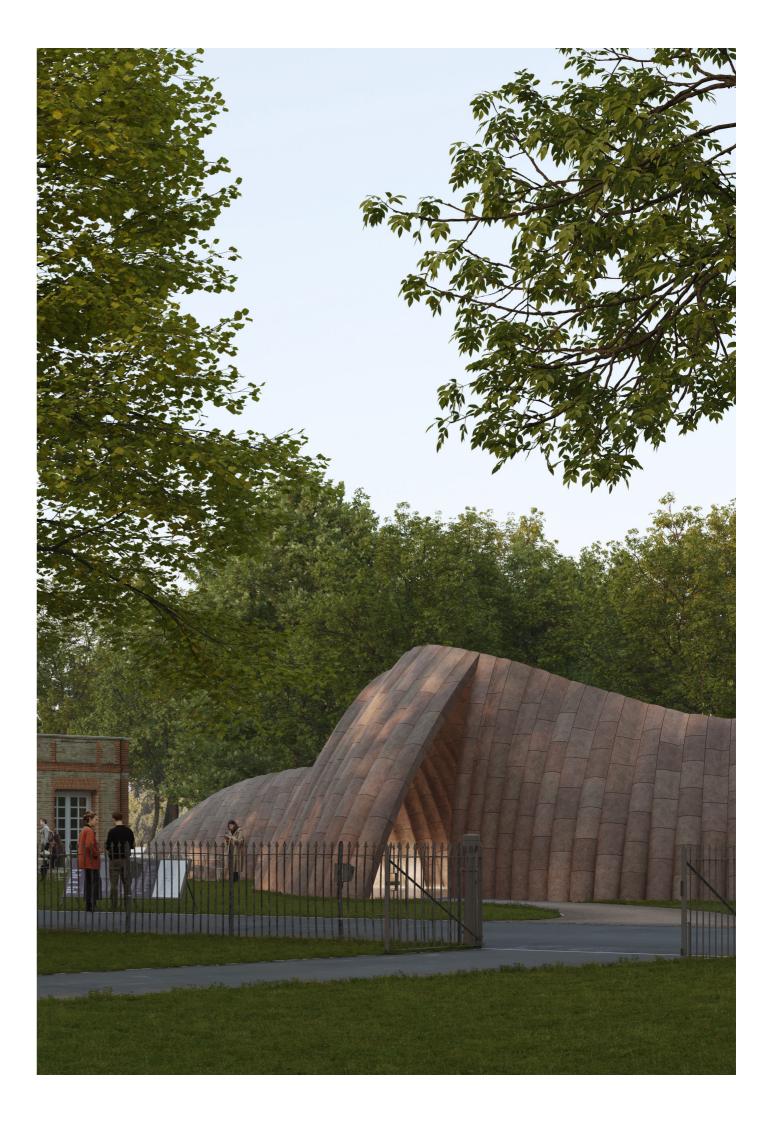
Disorient advocates for the beautiful act of building as the materialization of cultural, social and climatic practices. Understanding voids in between trees as space opportunities for built shelters relates to common intuitions for architectural habitats. The pavilion suggested snakes through groups of existing trees and curls up around a generated central courtyard. Rather than static spaces, its architecture creates moments shuffling between enclosed stone vaulted spaces calling for introspective contemplation and threshold spaces that dialogue with the surrounding landscape. The slits openings extend the existing promenades of the park into the interior space of the pavilion. The structure transitions from a public promenade to an interior space. In the most curved areas of its curled geometric setup the perception of scale slowly vanishes until it meets yet another threshold to the park. Its architecture is disorienting, at many levels.

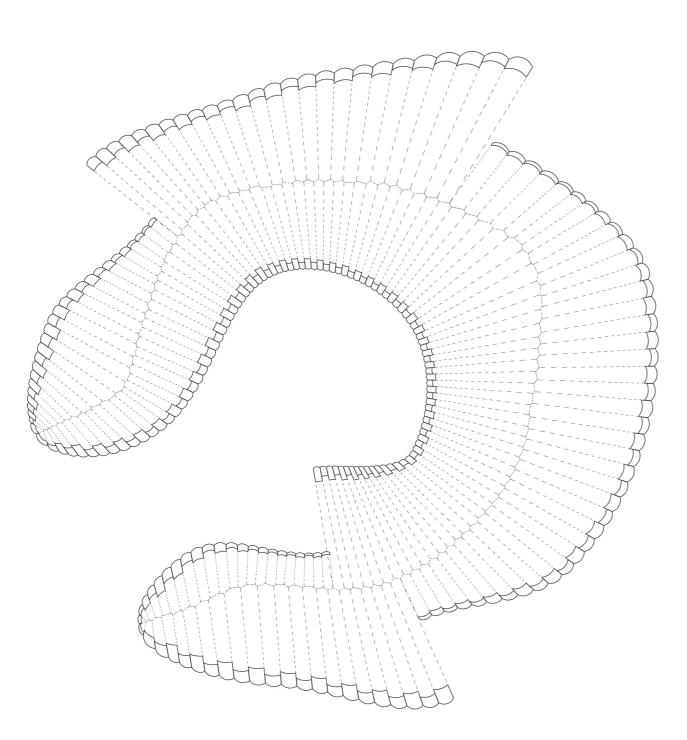
Disorient builds upon Stone Matters*, an experimentations-based research into the potentials for including structural stone in the language of contemporary architecture and for combining traditional craftsmanship and materials with innovative construction techniques. It relies as much on paradigmatic theories set in the 1960's, in the 17th century or in prehistory. The understanding of stone architecture is peculiar in the sense that the material calls for an intuitive architecture : its history is not linear and, in some cases, theories may have followed and/or contradicted already grounded and established practices of architecture**.

Disorient combines techniques, practices, forms, theoretical and/or natural principles, to suggest new ways of using stone in contemporary architecture. Its architecture leans on the historical background of each of its inspirations to better anchor and desacralize their contemporary formalization through an unconventional language.

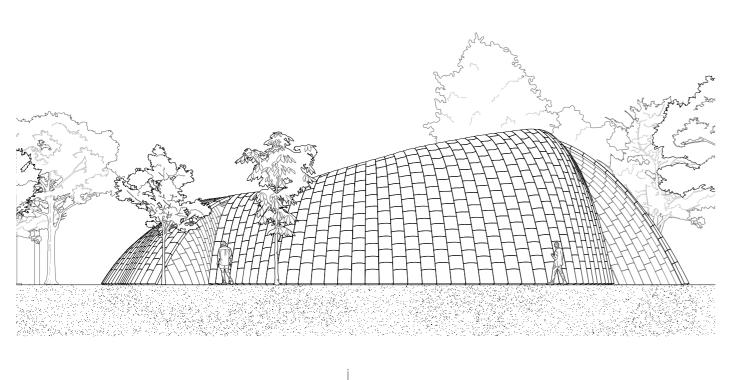


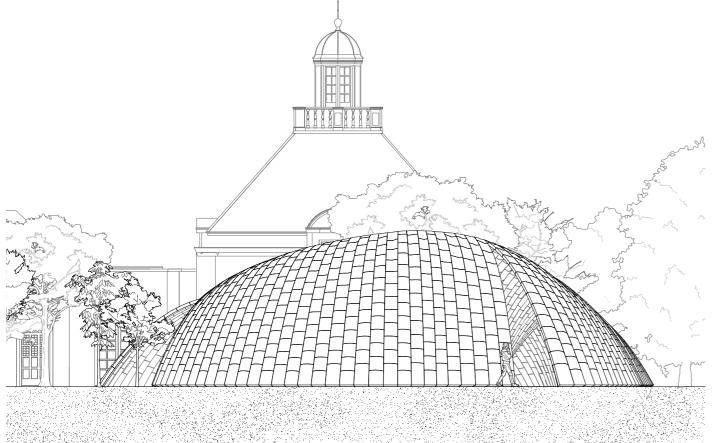






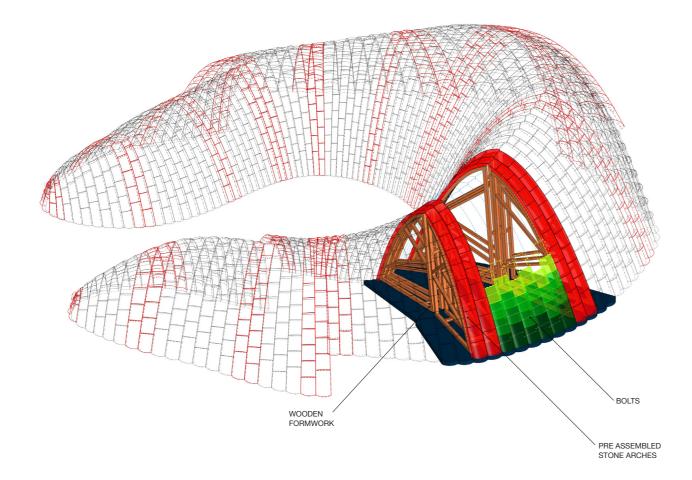
^ PLAN SHOWCASING PRIMARY AND SECONDARY RIBS







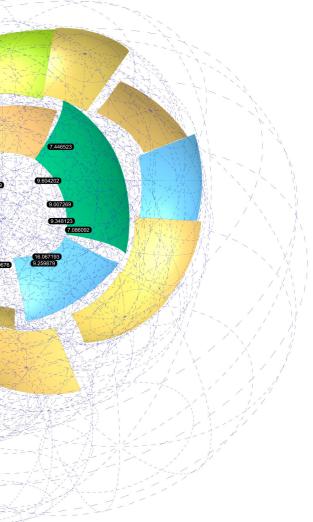
- ^ NORTH AND NORTH-WEST ELEVATION OF DISORIENT
- > DIGITAL IMAGE OF THE INTERIOR

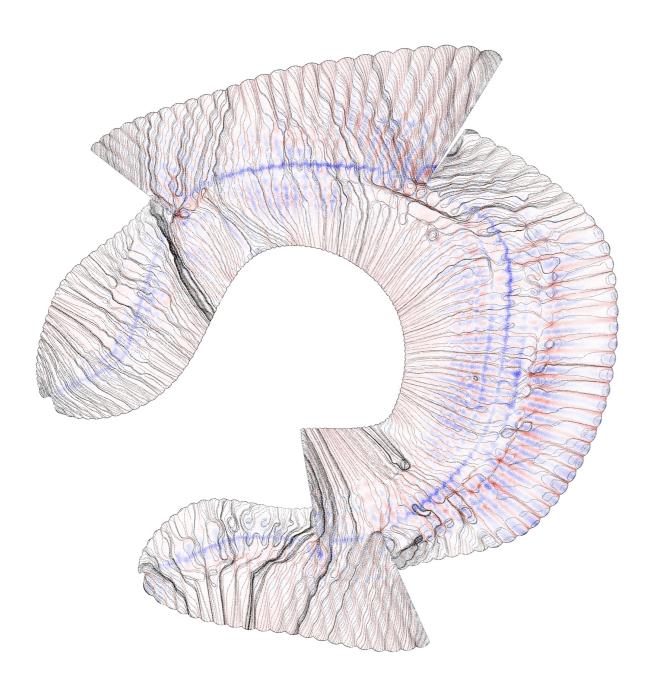


^ THE DIAGRAM SHOWS A PRINCIPLE OF MOUNTING / ASSEMBLING THE STRUCTURE USING A METHOD INSPIRED BY THE FORM WORK-FREE MOUNTING OF SANTA MARIA DEL FIORE DOME IN FLORENCE BY BRUNELLESCHI.

THE PRINCIPLE CONSISTS OF BUILDING MAIN ELEMENTS/ RIBS THAT ARE STABLE AND FILLING THE INTERSTITIAL SPACE BETWEEN THEM ROW BY ROW AS PLATE-BANDE ELEMENTS. IN FACT THE PRINCIPAL ELEMENTS (IN RED) WOULD BE PRE ASSEMBLED WITH THEIR FORMWORK IN THE WORKSHOP AND INSTALLED WITH A CRANE. ONCE IN PLACE EVERY ROW BETWEEN TWO PRINCIPAL ELEMENTS HAS STONE BLOCKS THAT ARE CUT WITH SPECIFIC ANGLES THAT AVOIDS THEM FROM SLIPPING IN TRANSIENT PHASES OF MOUNTING THUS NOT NECESSITATING A COMPLETE FORMWORK BUT LIGHT MOBILE PROPS. THE PLATEBANDES ELEMENTS ARE THEN STACKED ROW BY ROW.

IT IS ALSO INDICATED IN WHITE ON THE DIAGRAM BOLTS THAT CONNECT HORIZONTALLY THE PLATE BANDES TOGETHER AND TO THE PRINCIPAL ELEMENT (IN RED). THIS PATENTED SYSTEM IN WHICH WE ARE INVOLVED ALLOWS FOR A BETTER SEISMIC RESISTANT BEHAVIOUR AS WELL AS AN ^ THE FOLLOWING IS A DIAGRAM OF APPROXIMATION OF THE GLOBAL SHAPE WITH CONICAL, CYLINDRICAL AND SPHERICAL SURFACES. THE COLOR CODE IS DEPENDENT ON THE GEOMETRICAL PROPERTIES (RADIUS, ANGLES) OF THE SURFACES GENERATED: SIMILAR COLORS ARE SIMILAR SHAPES. THIS DIAGRAM SHOWS AN INTENT OF FINDING SIMILAR GEOMETRIES THROUGH THE GLOBAL SHAPE WITHOUT COMPROMISING ITS SMOOTHNESS. IT ALLOWS FOR A RATIONALIZATION OF THE PRODUCTION BY IDENTIFYING SIMILAR/ IDENTICAL STONE BLOCKS. THE PROCESS IS MEANT TO IDENTIFY AS MUCH AS POSSIBLE REPETITIVE TYPOLOGIES OF STONE BLOCKS WITHIN A SET DEVIATION TOLERANCE FROM THE INITIAL SURFACE. THE STRUCTURE WOULD BE THUS COMPOSED OF A FAMILY OF TYPOLOGIES OF STONE BLOCKS THAT WOULD INCLUDE A REASONABLE NUMBER OF REPEATED ELEMENTS.





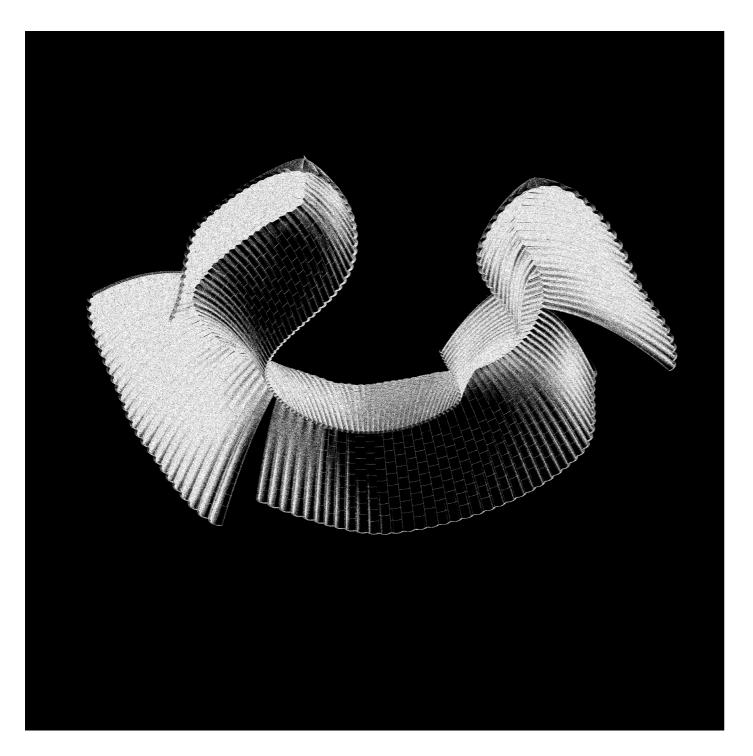


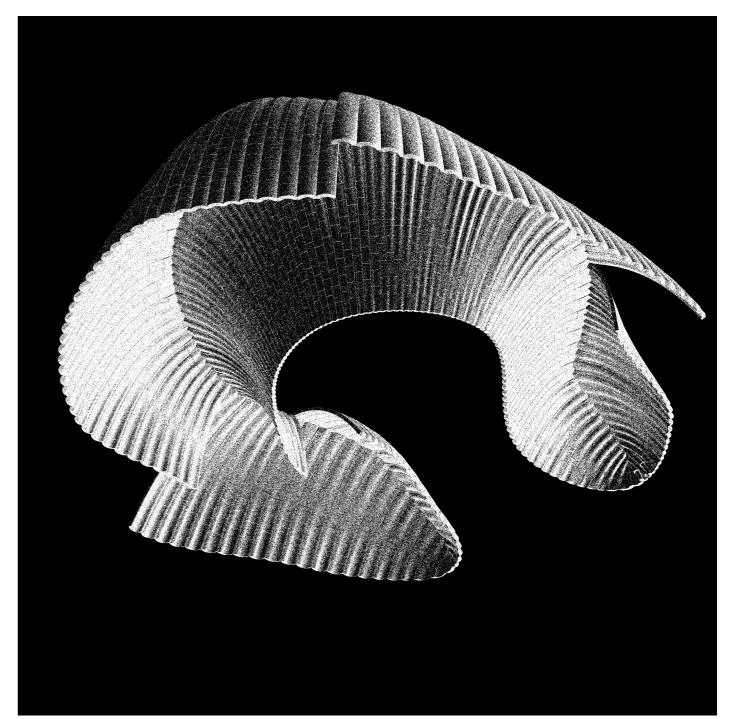
^ THIS DIAGRAM SHOWS THE PRINCIPAL STRESS LINES AS WELL AS (IN COLOR) THE VON MISES STRESS. THE MODEL IS A SIMPLIFIED LINEAR ELASTIC MODEL THAT ALLOWS TO UNDERSTAND A PRELIMINARY STRUCTURAL BEHAVIOUR. THE RESULTS OBTAIN HIGHLIGHTS THE FOLLOWING :

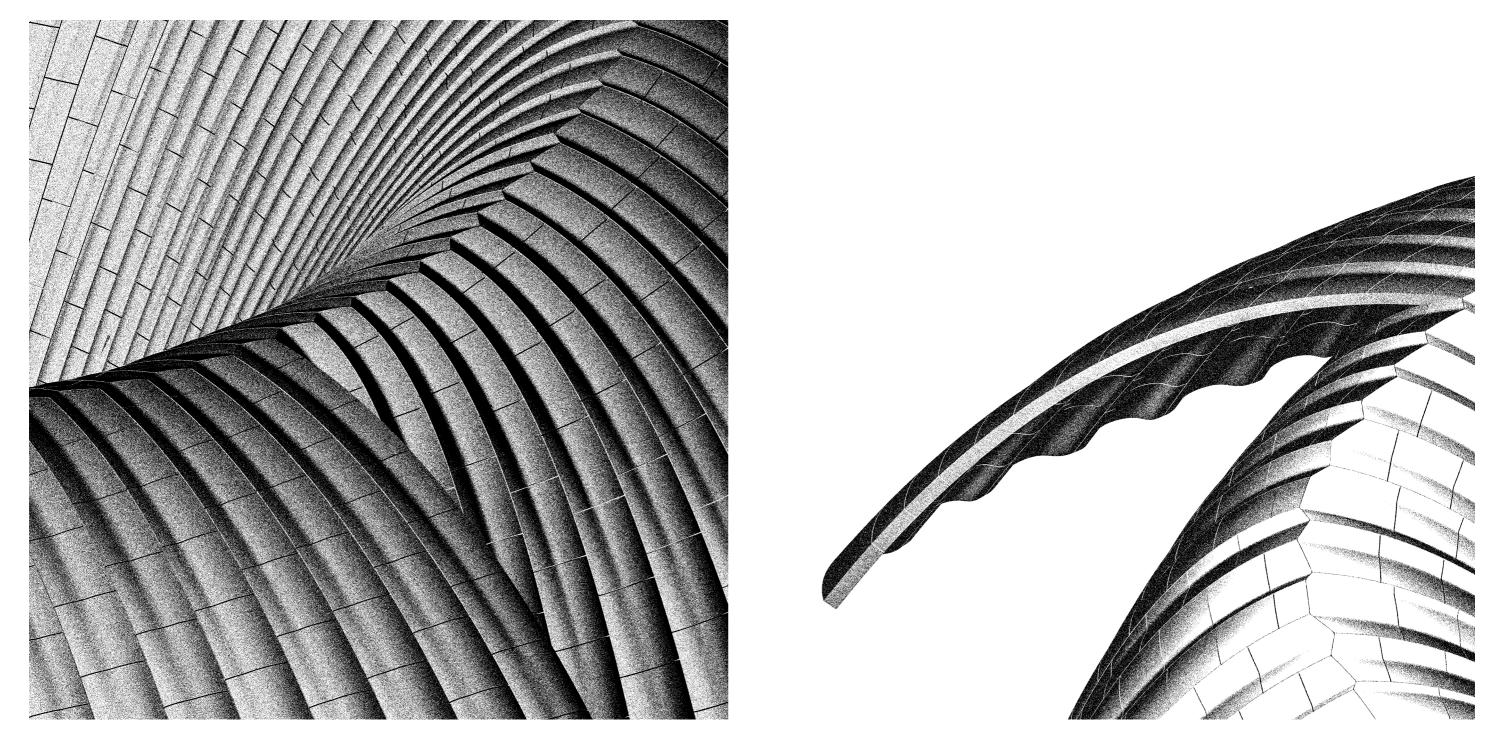
-TENSILE STRESSES ARE LOCATED ALONG THE TOP SPINE AND THEY INDICATE THE POTENTIAL NEED FOR REINFORCEMENT IN THAT AREA.

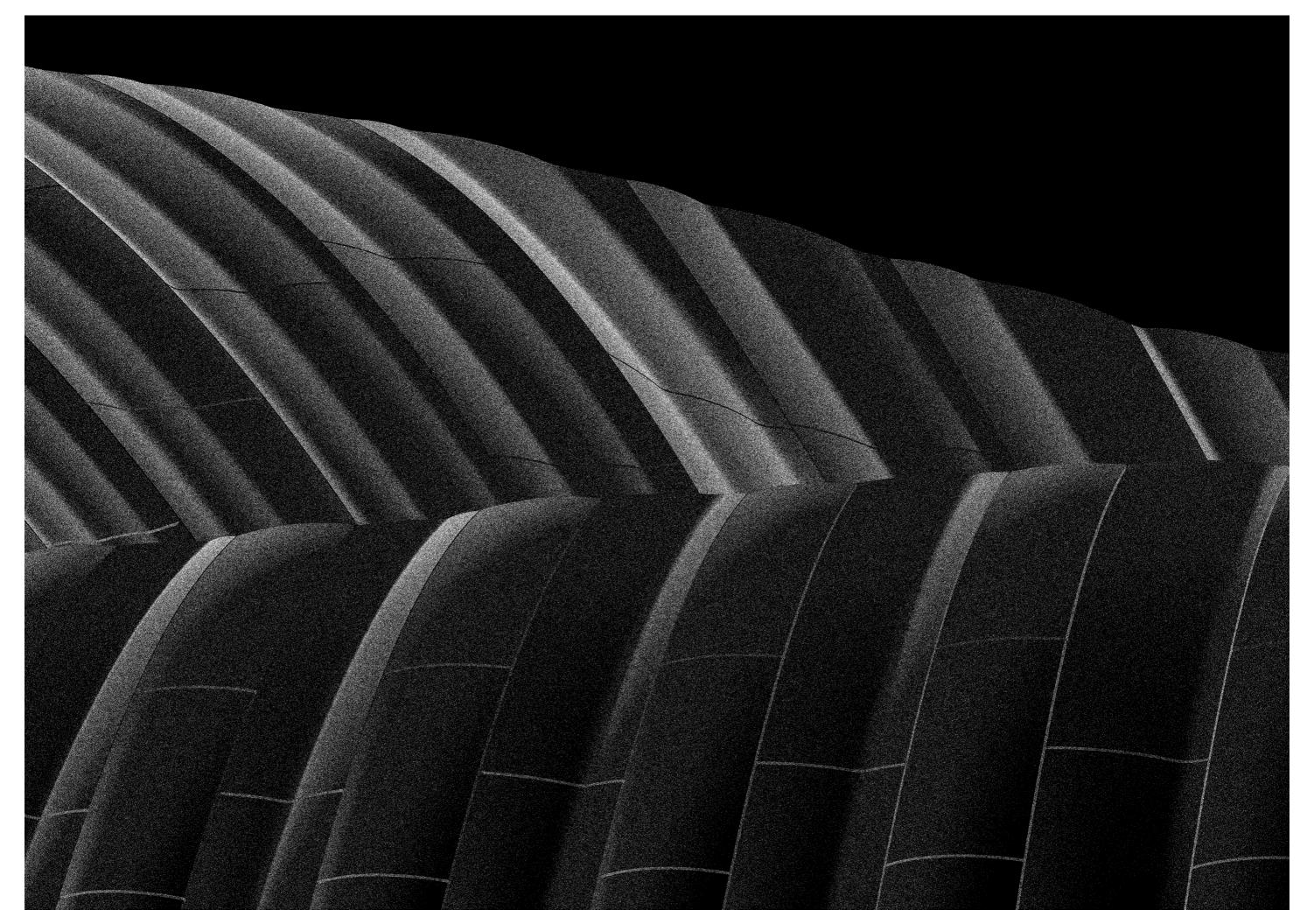
- THE PRINCIPAL STRESS LINES INDICATE THE CHANNELLING OF FORCES ALONG THE RIBS THAT CONSTITUTE THE GLOBAL STRUCTURE.

ALL IN ALL THE STRUCTURAL BEHAVIOUR REFLECTS AN INNOVATIVE APPROACH OF GEOMETRICAL FORM FINDING THAT COMBINES A TYPICAL CATENARY FORM WITH A RIB-LIKE STRUCTURE. IT AIMS AT CREATING A FORM RESISTANT SHAPE BY CHANNELLING FORCES THROUGH SUB VAULTS (COMPRESSION ONLY) AND STIFFER FORM RESISTANT RIBS..



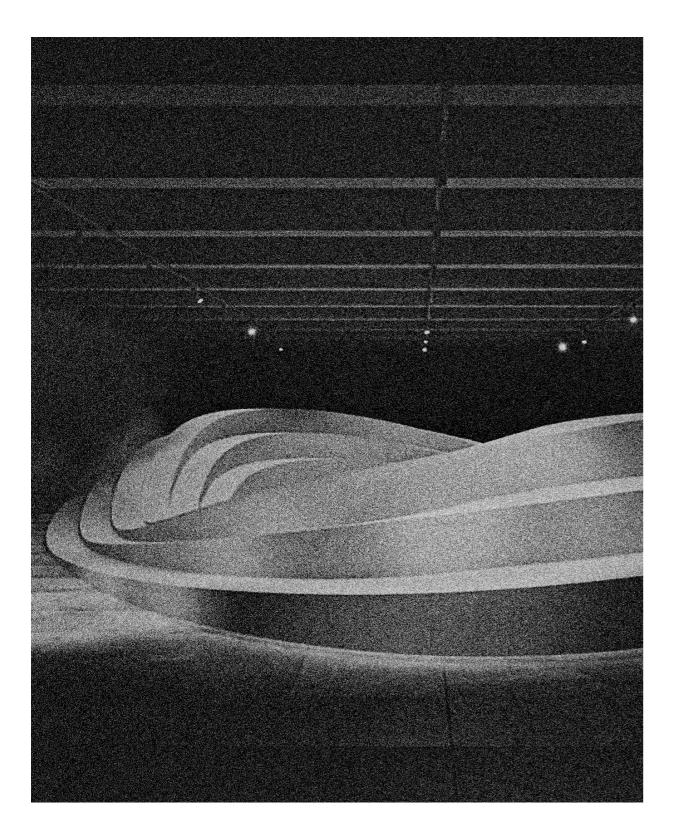






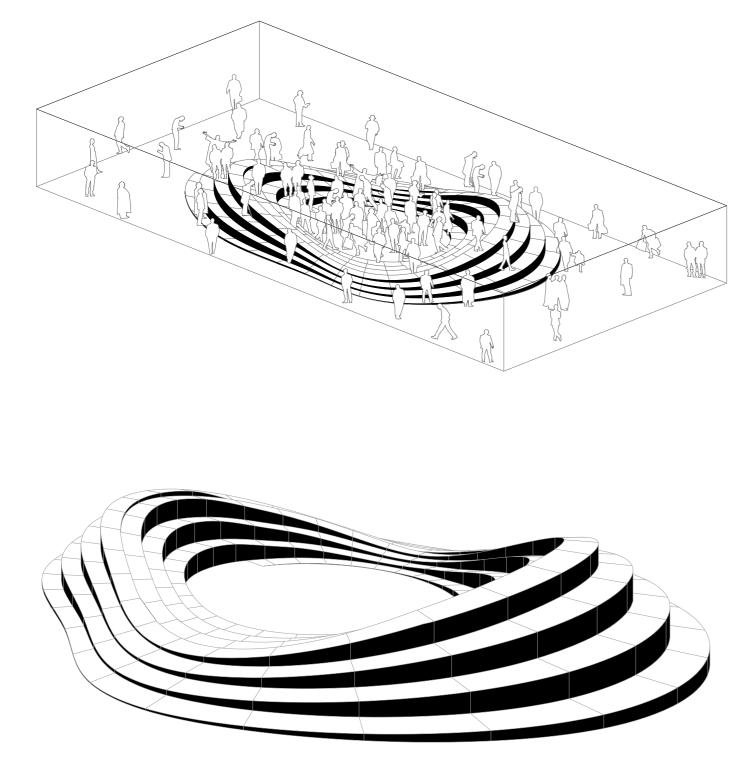
Music Room *Taipei, Taiwan*

Performative room for Taipei Biennale 2023

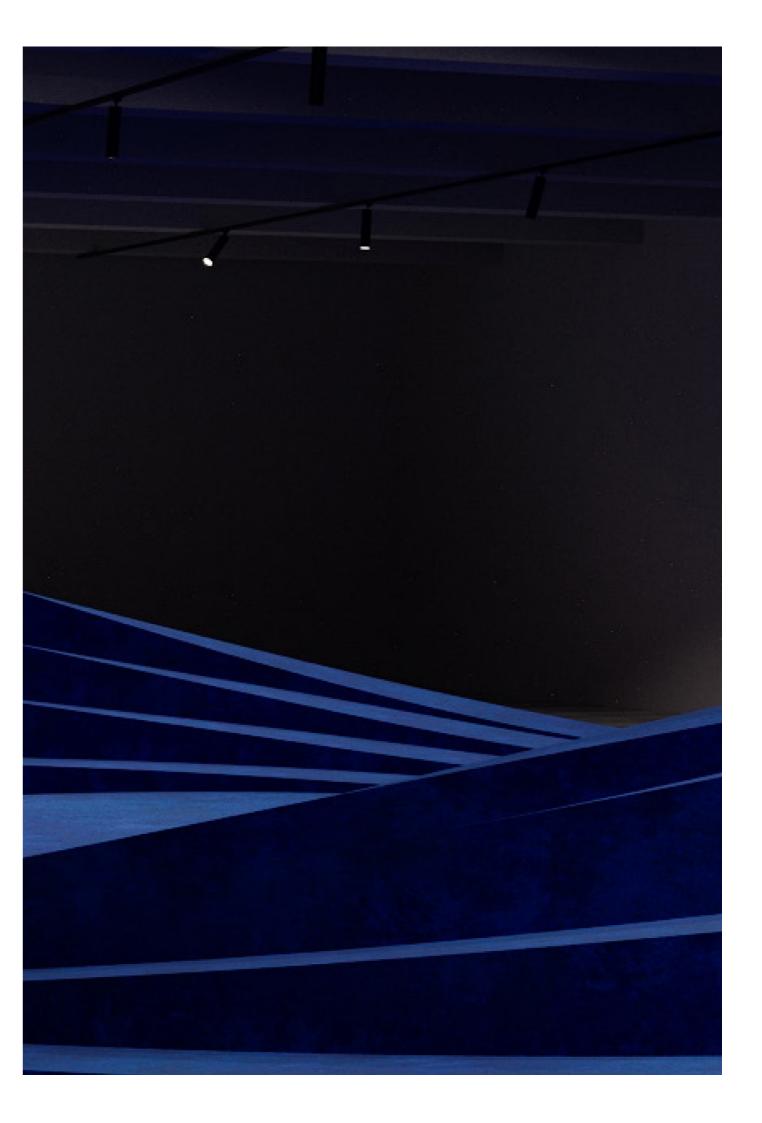


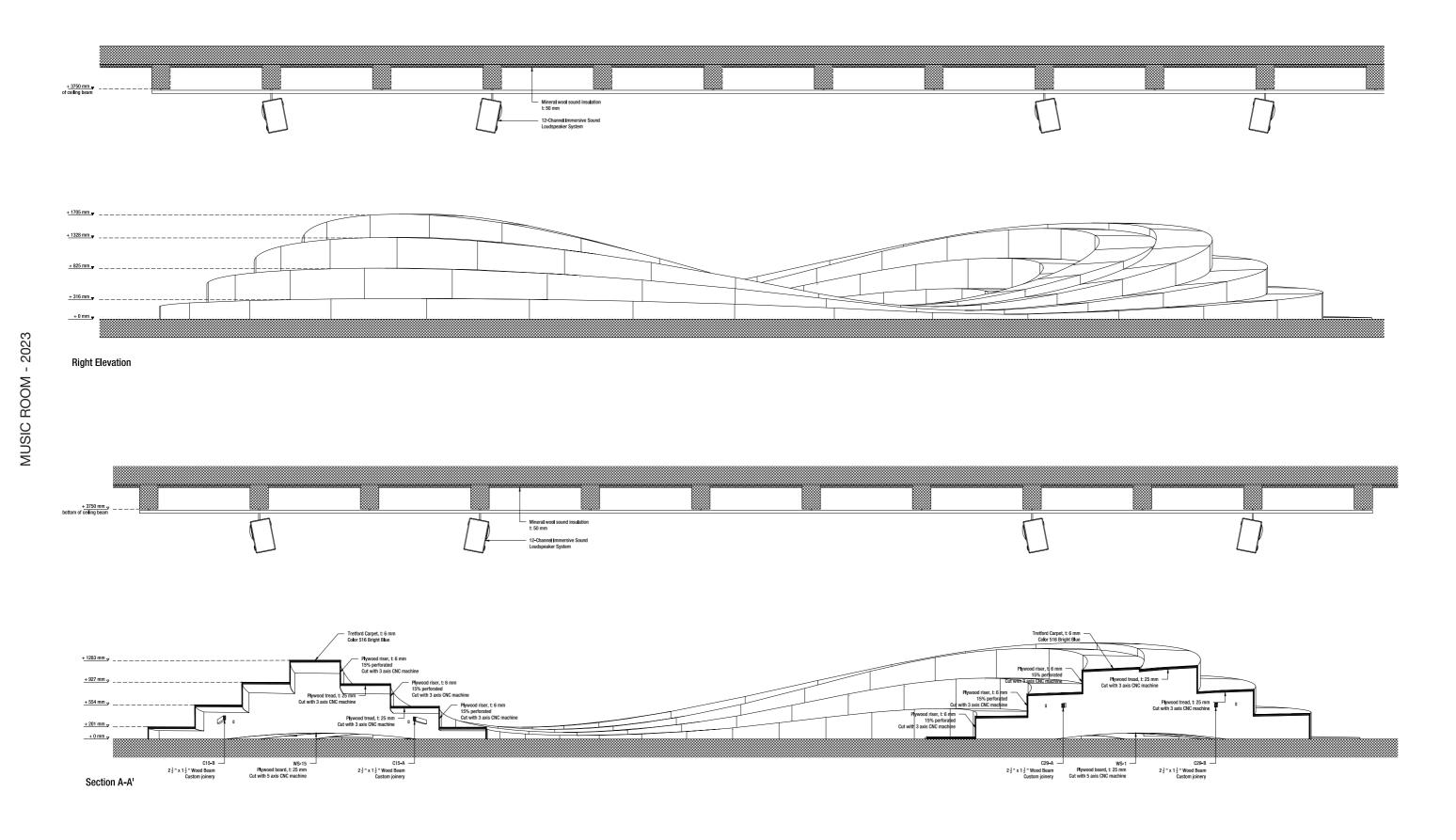
The landscape / soundscape proposed at the heart of the music room wraps around a central stage to create an immersive sound environment that is able to adapt to multiple scenarios and sound experimentations. A spiral path is constructed to accompany the visitors through the space. The central arena is proportioned to host different forms of performances and talks. The walls, floors, ceiling, landscape are all covered with a felt fabric responding to acoustic requirements and abstracting the environment of the room.

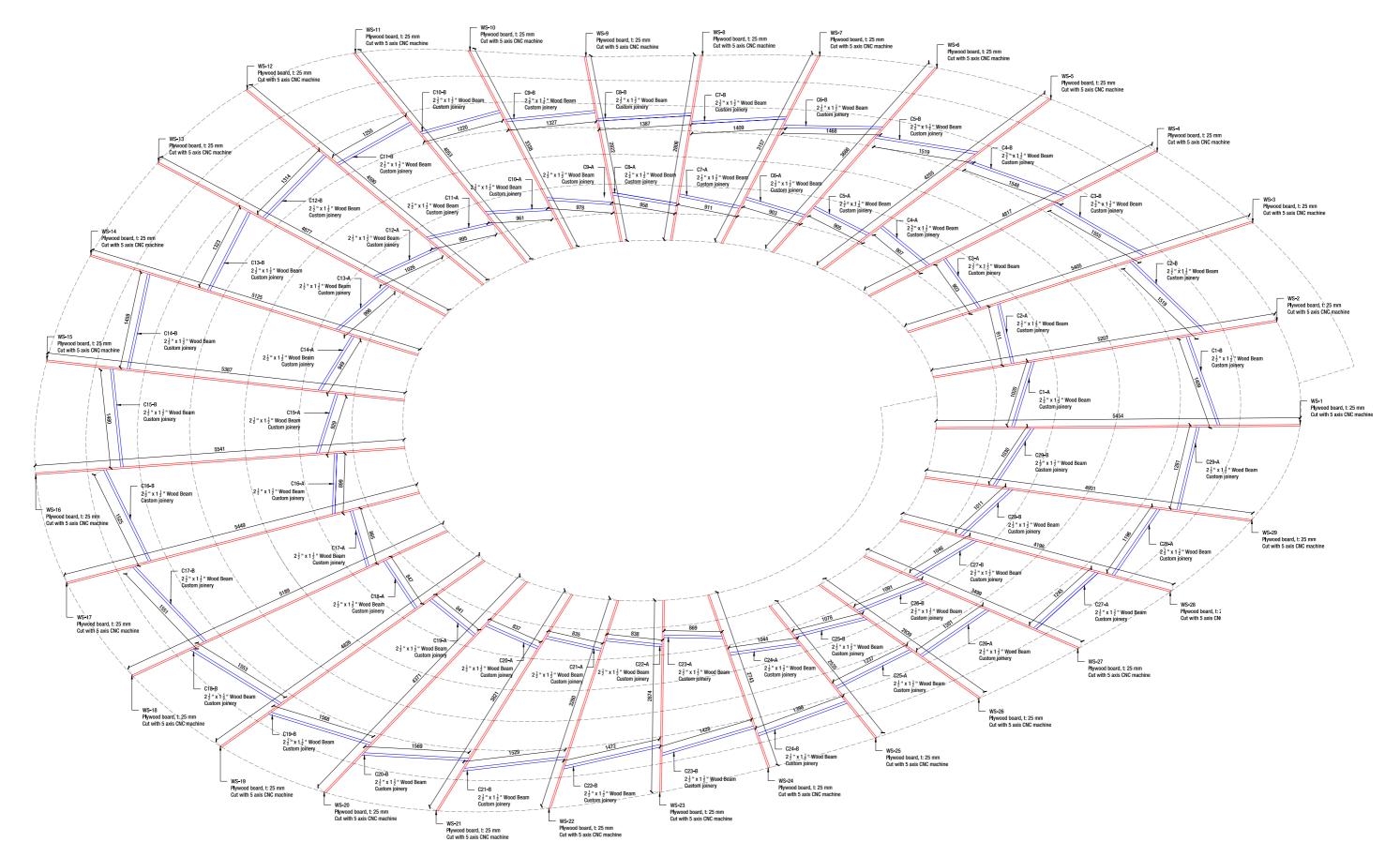
The structure suggested is one continuous spiral that unfolds into the room creating different potential space configurations along its path. The generated landscape creates a central concave scene. Unlike typical staged scenes, the structure features a spiral sloped surface that offers unique appropriations of the space, smoothly shifting from outwards oriented setups to an inward communal scene.

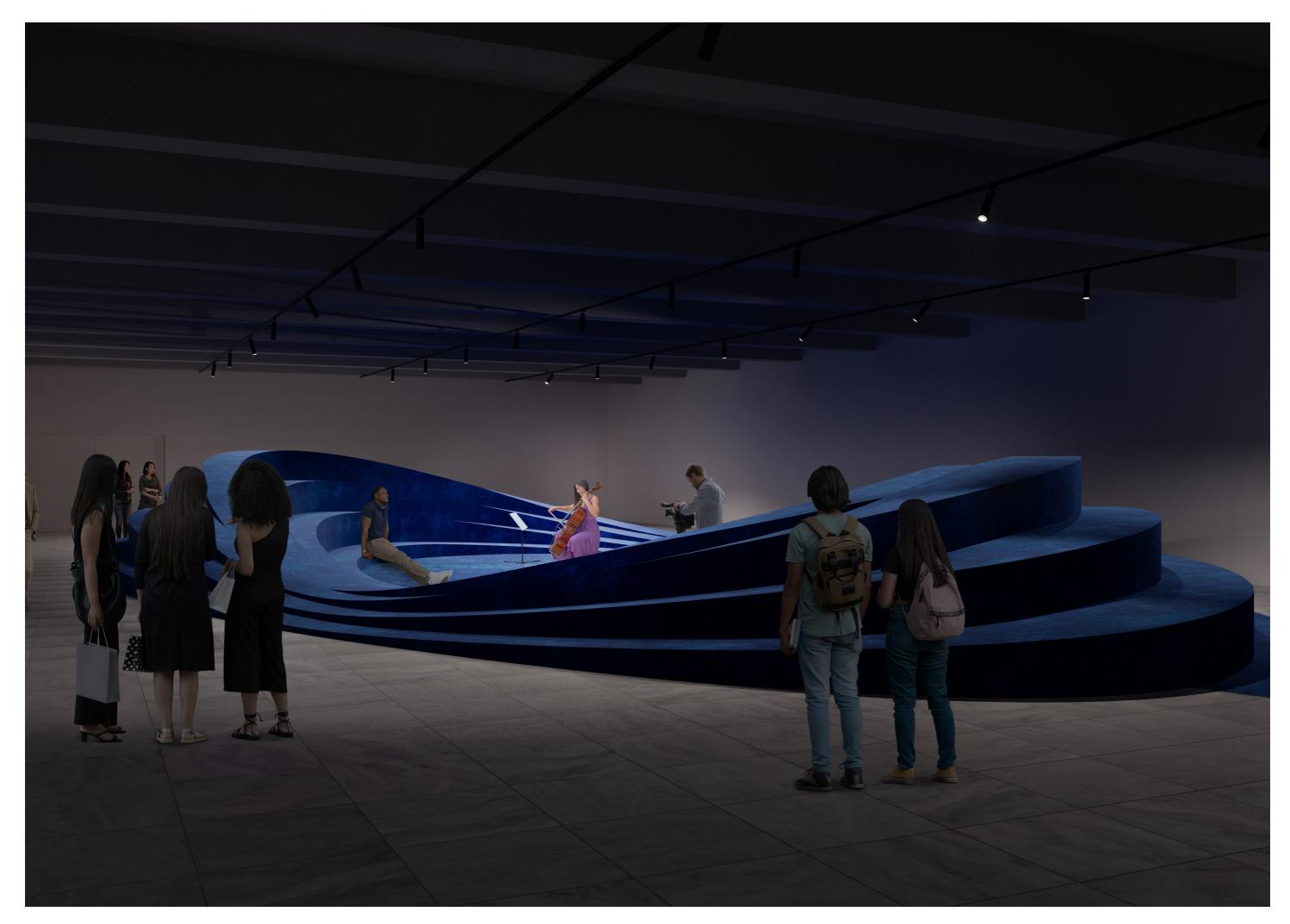


^ THE GEOMETRY CREATES TWO INTERSECTIONS WITH THE LEVEL OF THE GROUND ALLOWING PEOPLE WITH REDUCED MOBILITY TO ACCESS THE CENTER. IT ALSO RETRACTS AND FROM THE WALLS OF THE ROOM TO ALLOW AN EASY FLOW AROUND THE ROOM



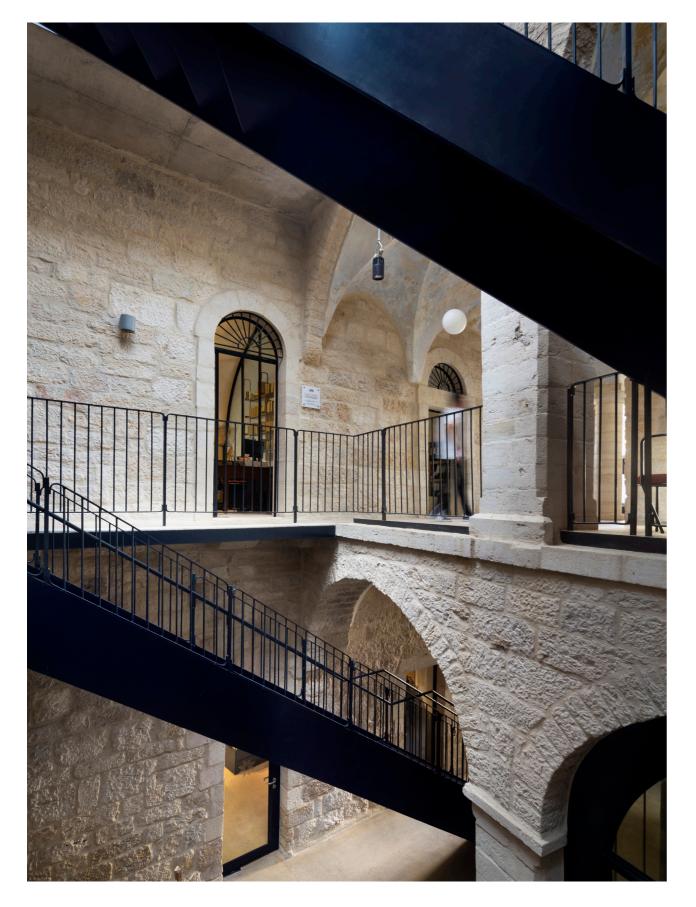






Dar Al-Majous, 2022 Bethlehem, Palestine

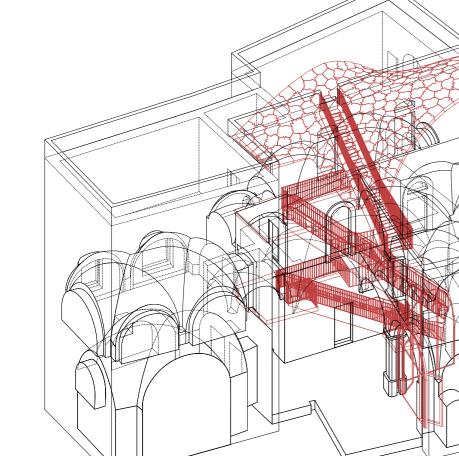
Photographs by Mikaela Burstow

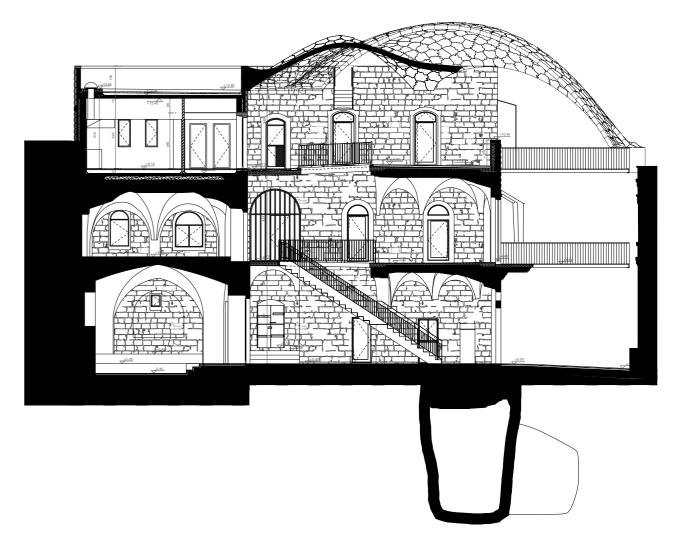


Located next to the Nativity square in Bethlehem, the Dar Al Majous project is a restoration of a historical residential building from the 18th century. The suggested architecture highlights the shift between a domestic use to a public use of the building. As such, new passages are created, new perspectives on the old building appear, and a new covered vaulted space is built. The projected stairs link the four levels together by inhabiting the interior patio of the building. The vault completes the unfinished part of the building while revealing from the street some of the richness of the interior vaulted spaces. The structure of the vaulted space is made out of massive stone and leans on supports that are either newly built or in strategic positions with regards to the historical building.

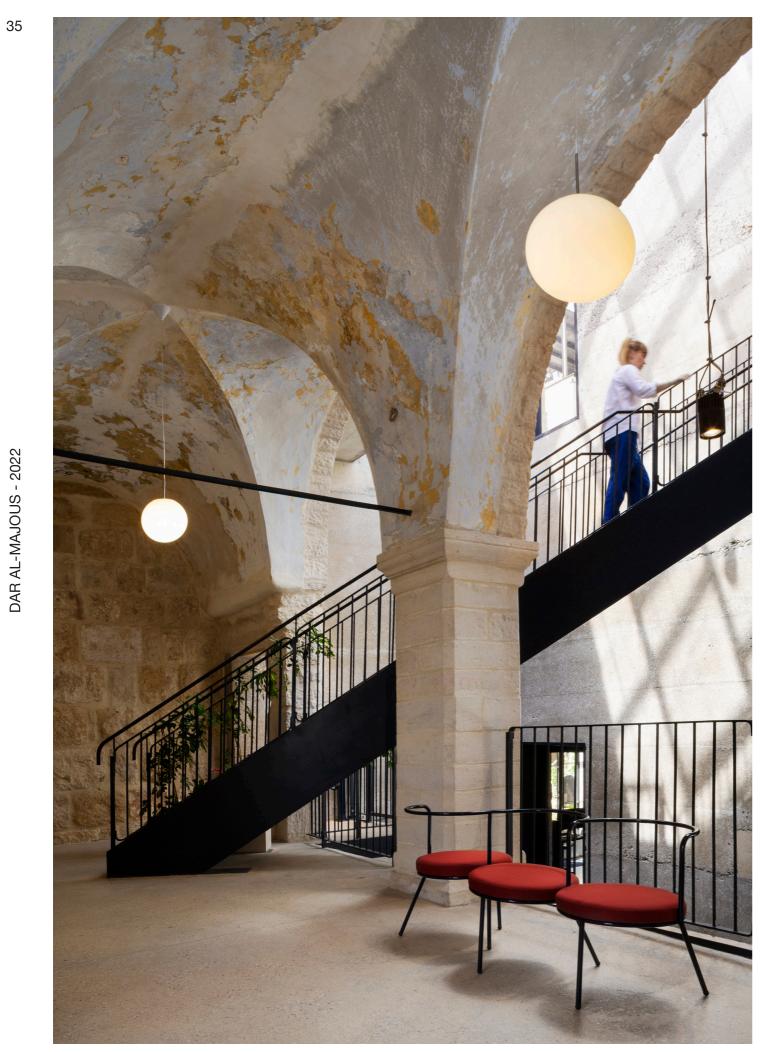
The historic building of Dar Al Majous has an architecture that is resolutely modern because it relies on systems rather than forms. As such, it is more dynamic and potentially adaptable, transformable. The richness of its diversity is a result of the use of typological spaces. In that sense, it is a gem of ingenious flexibility. Generic spaces stand out because they are abstract, they can adapt or transform, they can have any size. Understanding the extreme modernity of Palestinian cities' architectural vocabulary helps better seize the scale of the city and the relevance of questioning its contemporariness. It leaves no room for static, romantic, folkloric reproductions of ancient architecture: it calls for an architecture that can adjust, change or reinvent itself in light of potential forthcoming new scenarios.

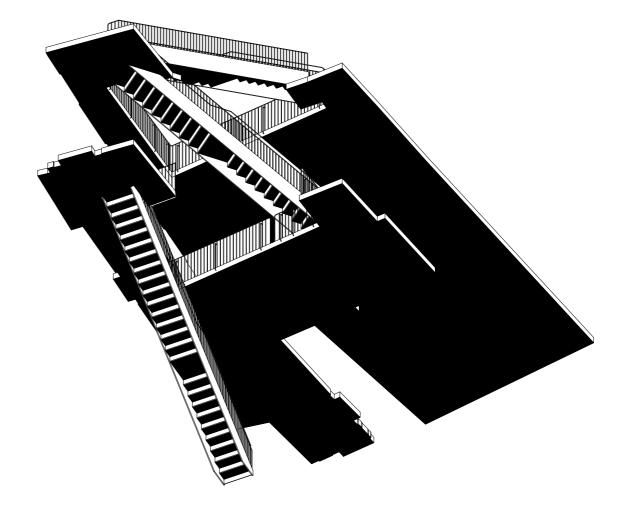
In that context, the project of Dar Al Majous focuses on the capacity of the existing building and its attributes to absorb functions that were not initially expected.





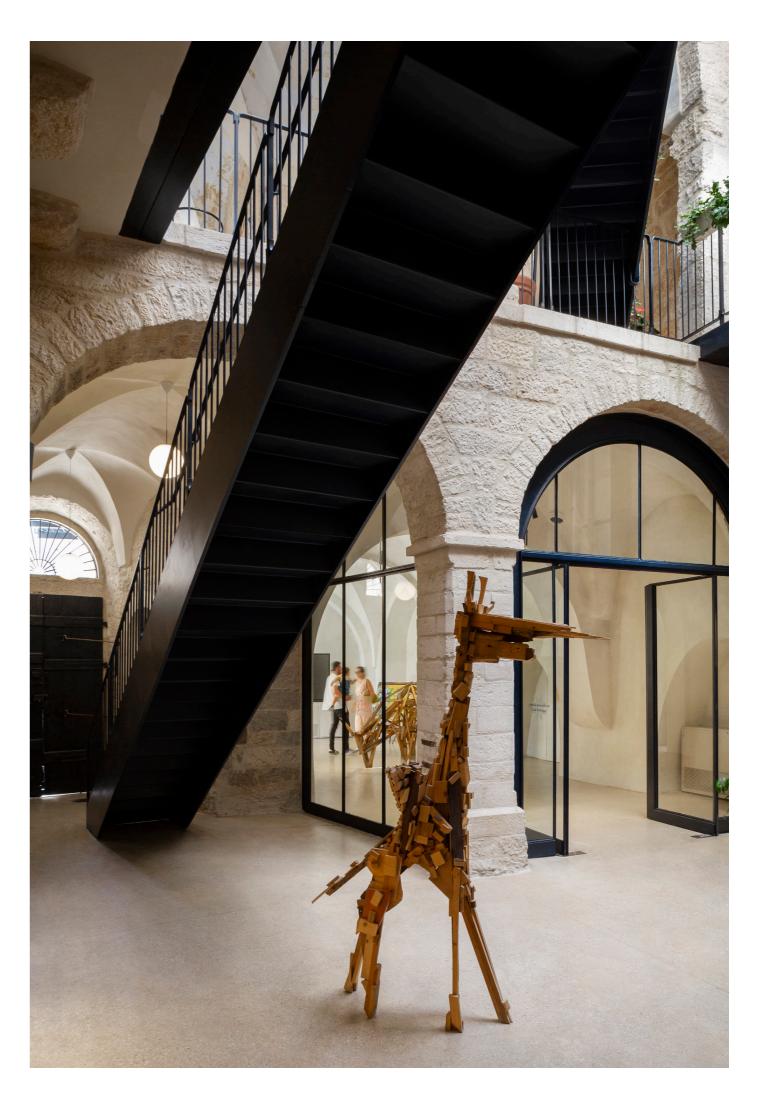
A AXONOMETRICAL VIEW OF BUILDING ILLUSTRATING MAIN INTERVENTION: A VERTICAL CIRCULATION SYSTEM AND A MASSIVE STONE VAULT COVERING LAST FLOOR OF BUILDING.





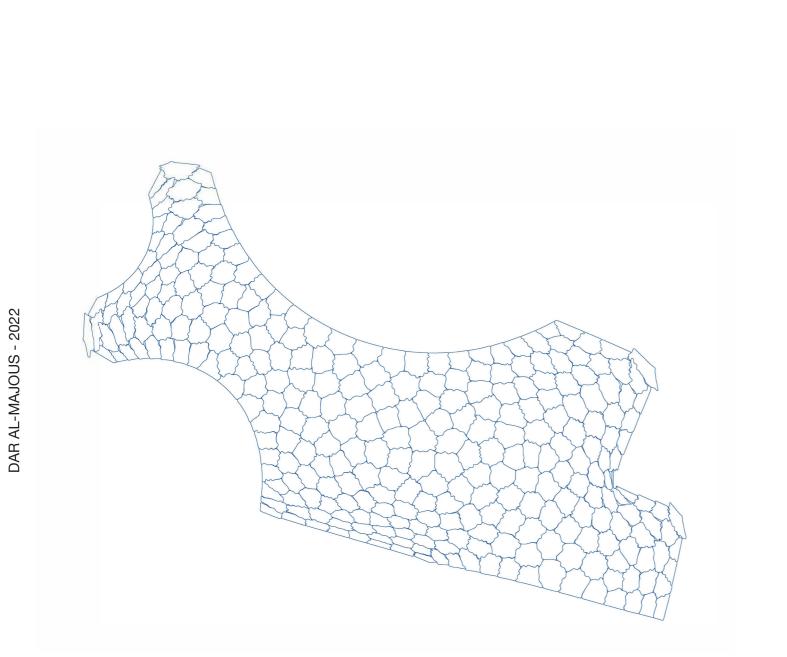
- STAIRCASE SYSTEM DIAGRAM \wedge
- THE STAIRS ARE POSITIONED TO CREATE NEW PERSPECTIVES IN THE BUILDING THUS <







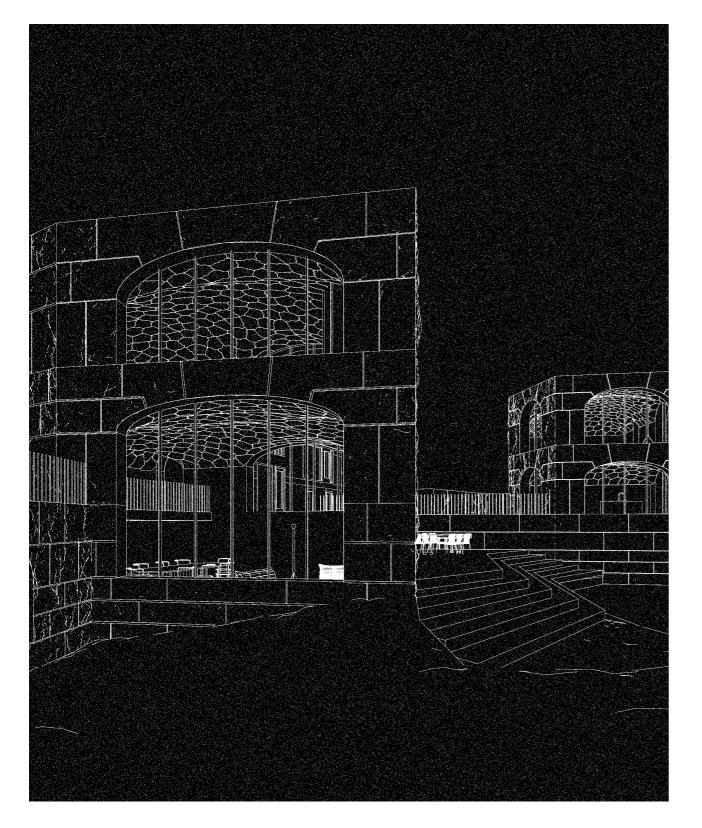








Cow Shed, 2022 Widford, United Kingdom

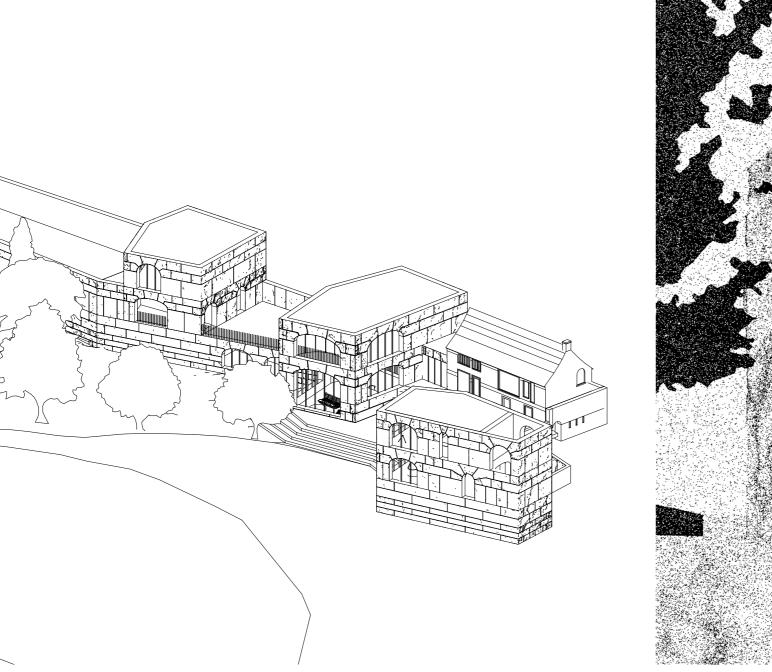


Situated in the Cotswolds Area of Outstanding Natural Beauty, on the River Windrush, the site sits within West Oxfordshire District Council. The site was part of Widford Mill and Farm.

The development was once a cloth and then paper mill through the late-18th and 19th centuries followed by a period as a corn mill and finally adopting various industrial uses. The farm buildings were a collection of architecture built of stone with stone tiled roofs. According to Asthall and Swinbrook Estate sale catalogue in 27 Sept 1925, apart from the mill building, there were 5 other farm buildings within the current site boundary including the carthorse stable loosebox and harness room with large loft over, stable and granary. Traditional farmsteads comprise the farmhouse and other working farm buildings. They include barns, cart shed, coach house, cattle housing, dairies rooms, granary, stable, well house, mill and long house.

The farmstead typology consist of a cluster of single or double storey buildings positioned in an organic manner around several yards apart. Traditional farmsteads have wide range of distinctive landscape features, primarily based on position of farm buildings in relation to the large farm, perimeter walls and hedges which form the boundary of the farmland. Typical features of a mill include structures of two storeys or more with storages areas for the grain and milled flour, the mill machinery and associated water wheel.

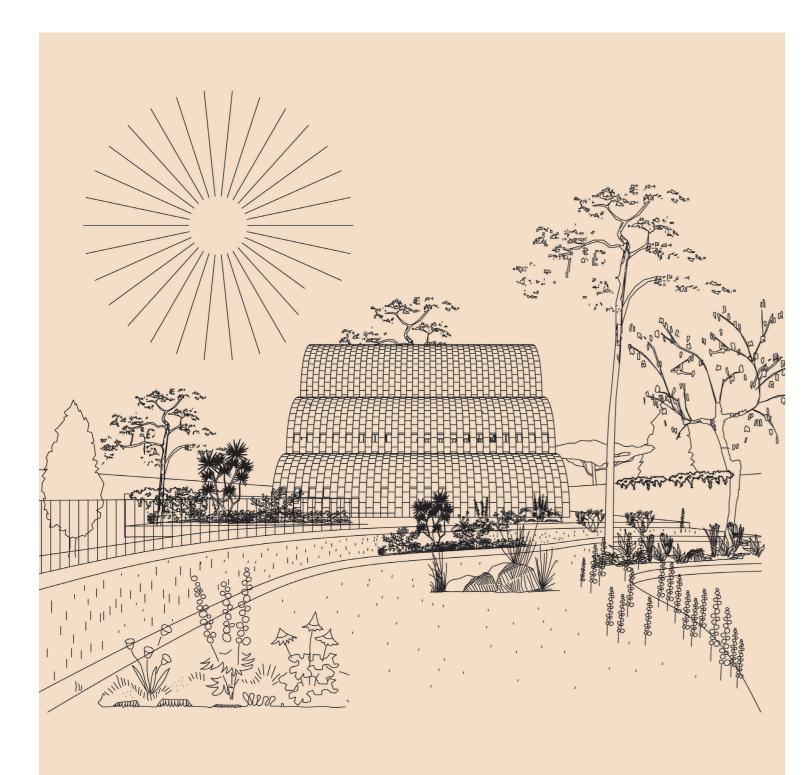
The proposed scheme reinterpret traditional farmsteads, mills and farm buildings typology in a contemporary dwelling arrangement.





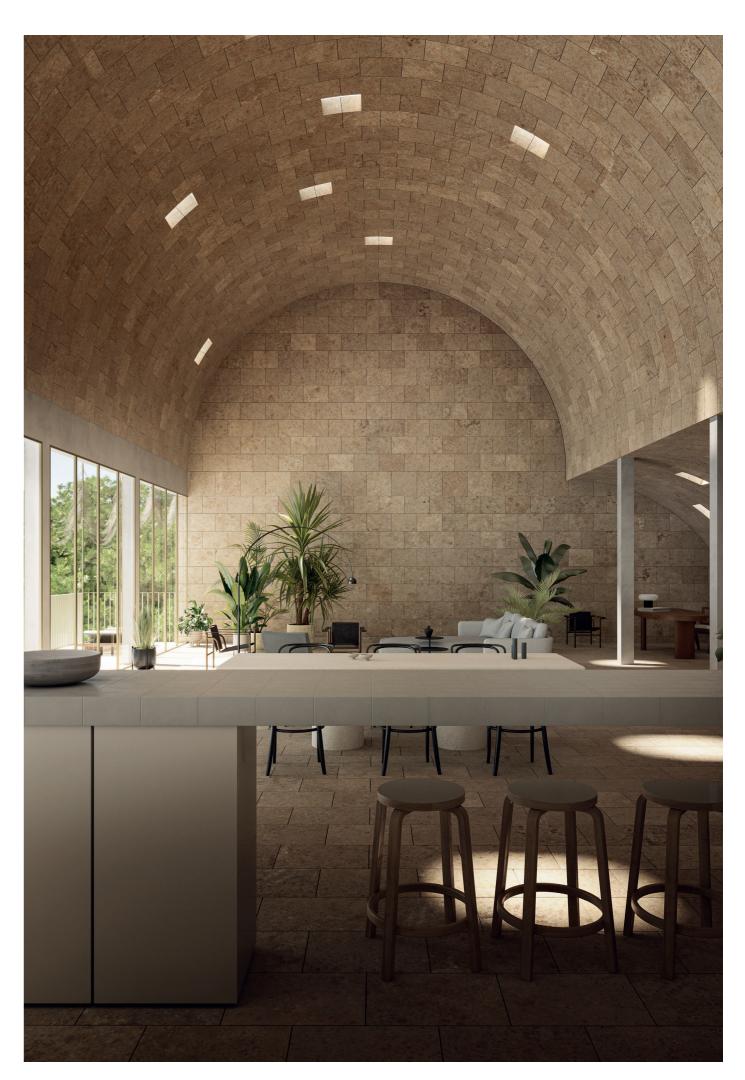


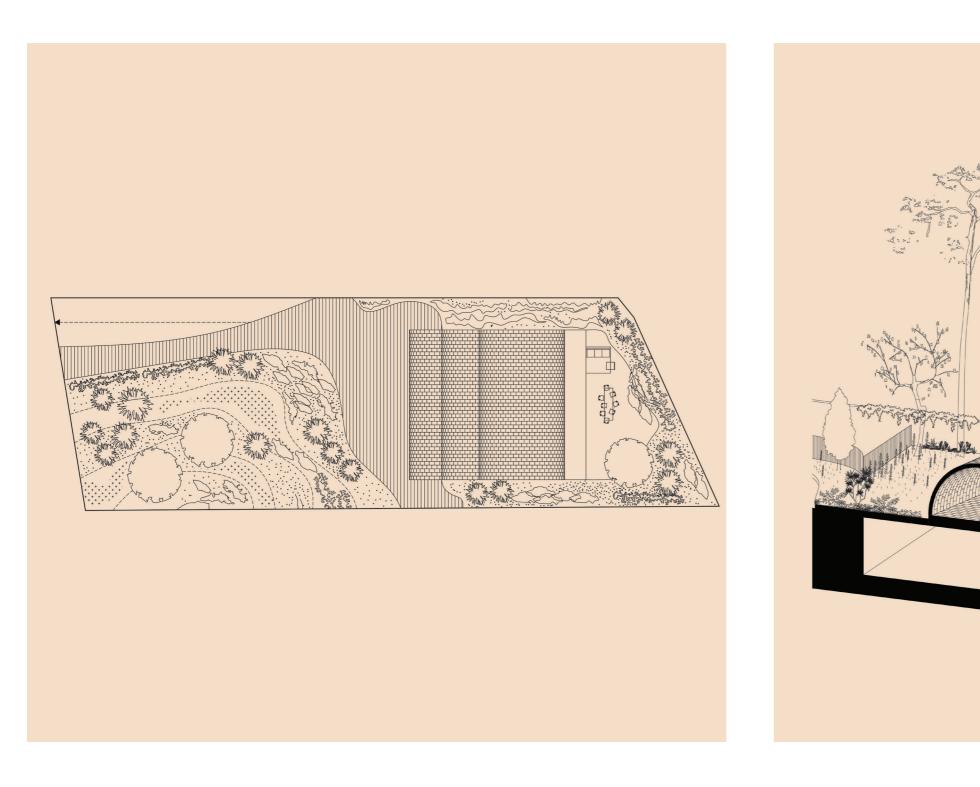
Nissan House, 2022 *Bethlehem, Palestine*



^ NORTHERN FACADE VIEW

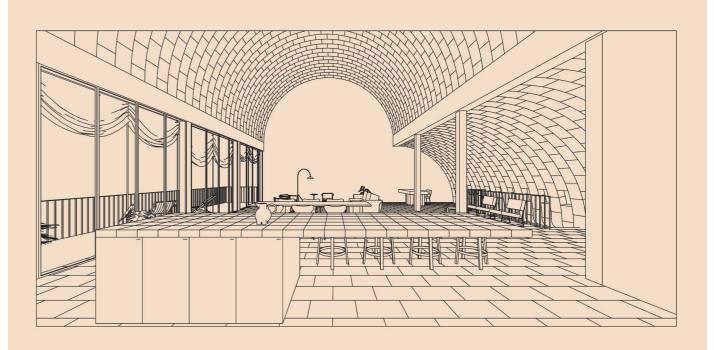
> INTERIOR VIEW OF THE HOUSE





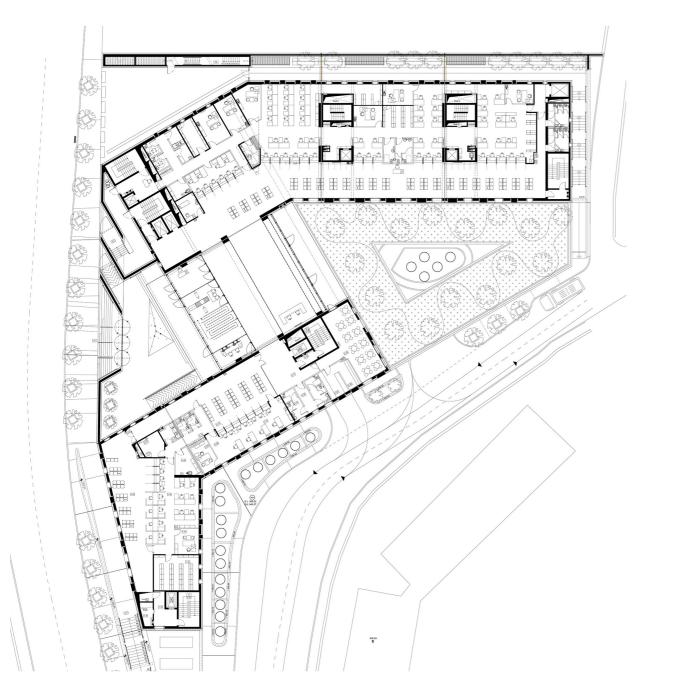








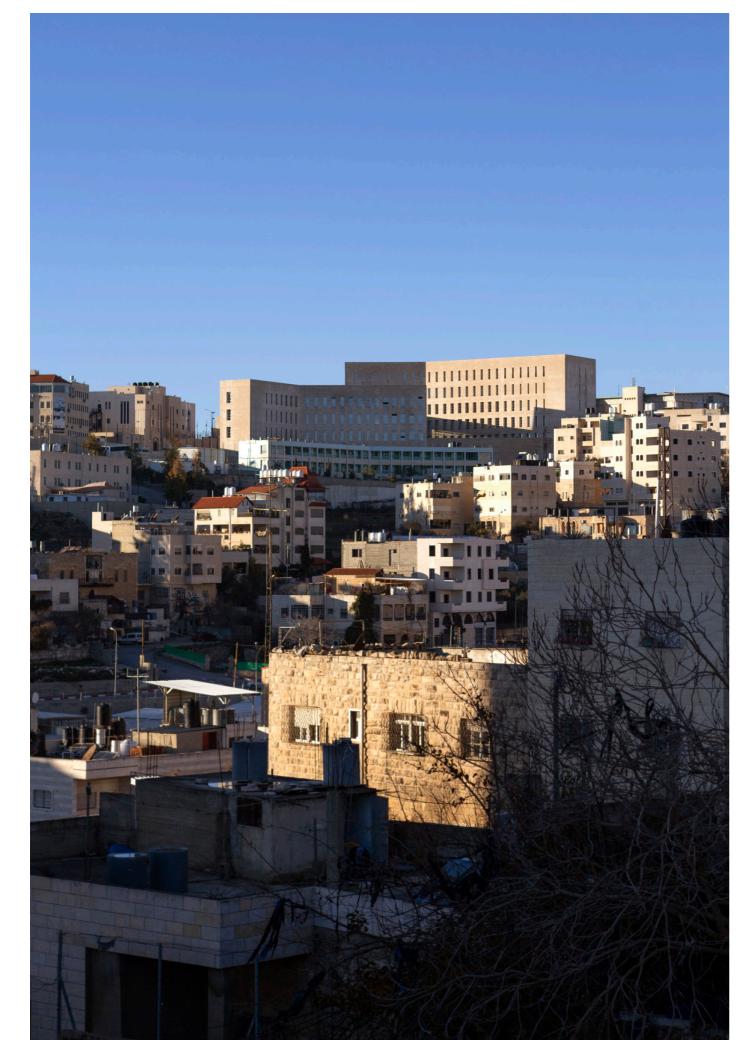
Hebron Courts Complex, 2021 Hebron, Palestine



Located in a developing business district in the northern part of Hebron, the project will constitute a structural component of the area's urbanism. The project's parcel has an irregular shape, and is surrounded by public governmental buildings. The proposed volume of the courts complex follows the shape of the parcel. Two buildings are separated by an open patio. The main building accommodates the court halls, and the second building, the services and the prosecution department. Inspired by the porosity strategy found in the Palestinian architecture, the Hebron courthouse is thought as one continuous monolithic abstract envelope. The courthouse becomes a monument in the city.

Inspired by the porosity strategy found in the Palestinian architecture, the Hebron courthouse is thought as one continuous monolithic abstract envelope. The courthouse becomes a monument in the city. Adapting fundamentals of Palestinian architecture to a more contemporary programmatic demand, is our response to integrating large scale public buildings into the urban fabric of the city. Our stance is to consider historical reference a main enhancer of monumentalism.









Thermal Delights, 2021 Al-Ula, Saudi Arabia

Architects in Residence 100 Architects for 100 Houses



The millennial-long inhabited land of civilizations alongside desertic unforgiving landscapes is what makes the existential uniqueness of AlUla. It is also what our proposal is about: working with the specificities and subtleties of the site, yet suggesting an elemental form of architecture. One that is inscribed in its immediate context all the while suggesting possible destinations for architectural fundamentals. The site offers an extreme freedom of imagination because its historical, geographical, and cultural conditions are at thresholds of known or prevailing architectural concepts. Our proposal resonates with site specific conditions, such as the positioning of the existing palm trees and the historical structure, while also guestioning global architectural questions such as ecological challenges.

L'abbé Laugier defined the "primitive hut" in a way that re-centers architecture around Man and elemental principles. The architecture suggested is made out of two main opposed elements that create site specific ways of living with regards to climate. Above ground the house hosts "semi public" functions (dining area, kitchen, workshop, and the main living room) in structures that are shaped by the locations of the palm trees while below ground, the house hosts its "private" functions such as its three bedrooms and their amenities.

The architecture of the house is to be understood as a whole and it centers its future inhabitants at the core. Above ground, the architecture relates to built tents while below ground it relates to carved caves. It seeks to transition from one extreme to the other, and to interact with the desert's sharp and extreme heat in summer daytime to cool and shaded edgeless caves. It seeks to enhance the contrasts between stone vaults sitting on 2.3 meters high columns and vaults that resemble introspective caves.

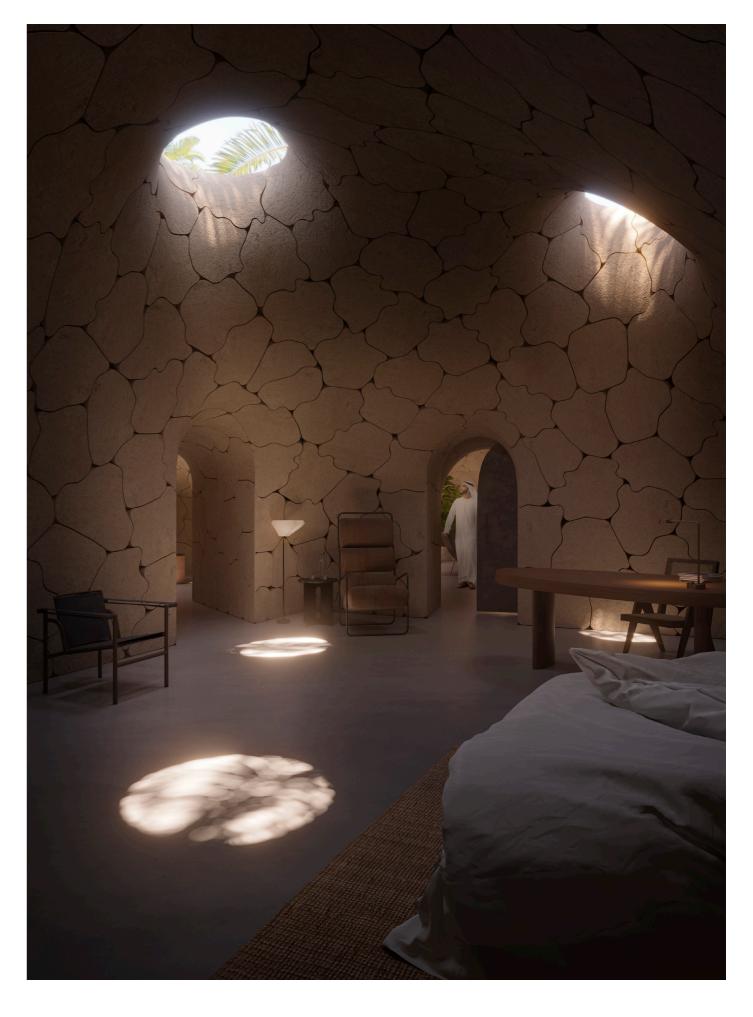
The house questions the path that ecological architecture is taking in contemporary architecture by suggesting a man-centered structure that highlights thermal delights. Instead of heavy technical multi layered isolated envelopes, it suggests spaces of thermal and architectural sensations. It provides comfort through an architecture that is shaped by its immediate entourage and spaces that provide a diversity of sensational living conditions.

The house is built out of local sandstone and relies on techniques of

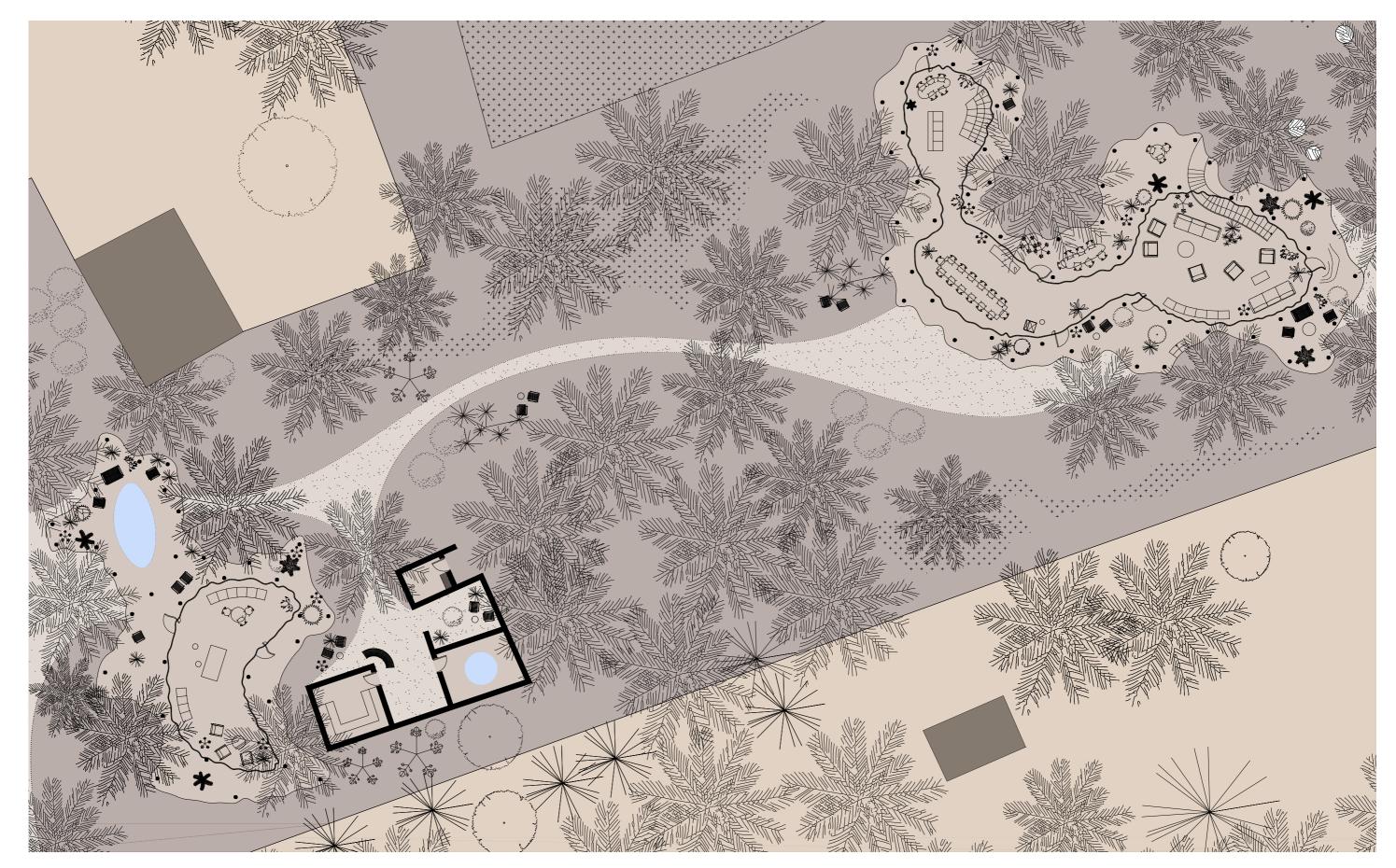
50 stereotomy - or the art of cutting stones in specific shapes in order to assemble them in larger configurations. The thermal inertia of stone is particularly effective in climates with considerable differences in temperature between day and night, regulating the interior comfort through the accumulation and diffusion of heat in winter time and cool freshness in summer.

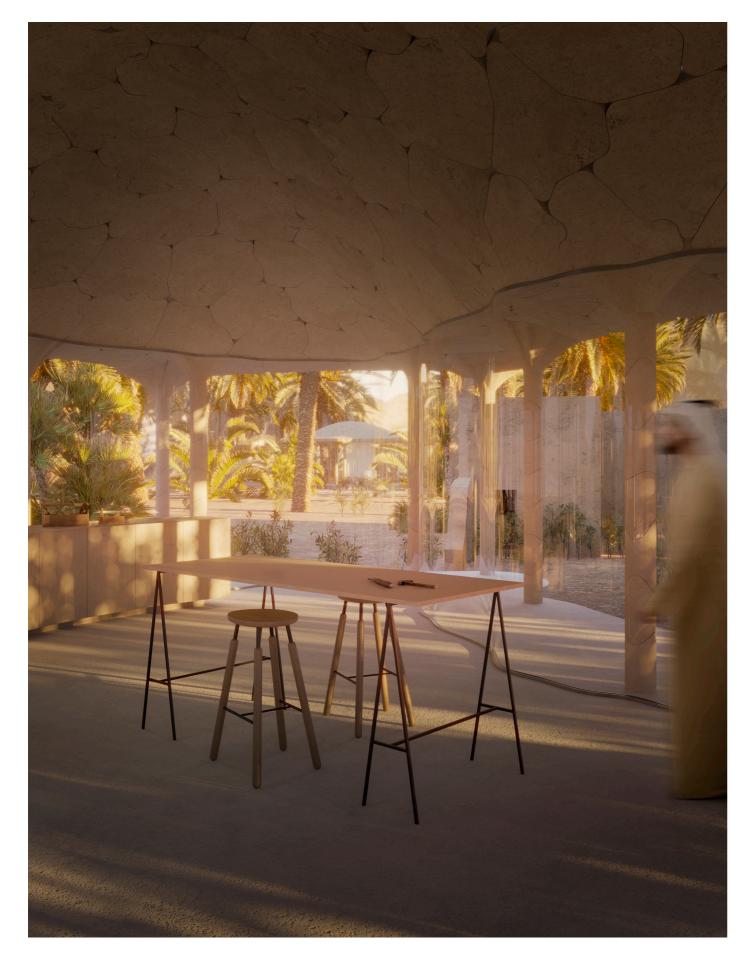
The proposed house provides extreme architectural and thermal conditions that enrich the Man-centered space and comfort sensations as a radical habitat model.



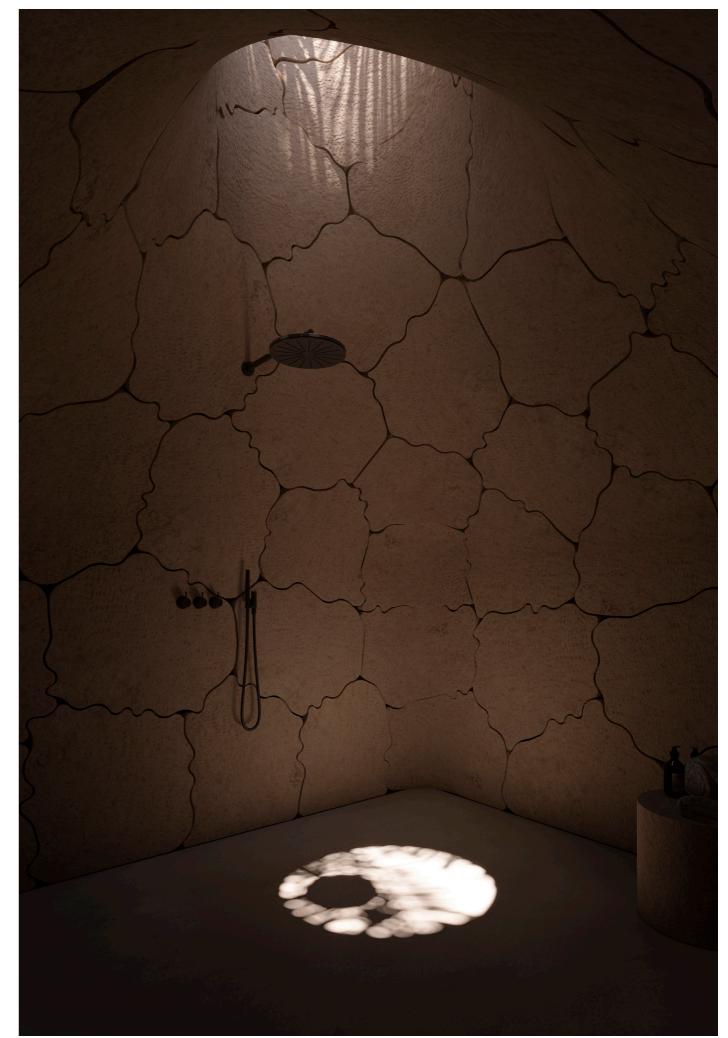


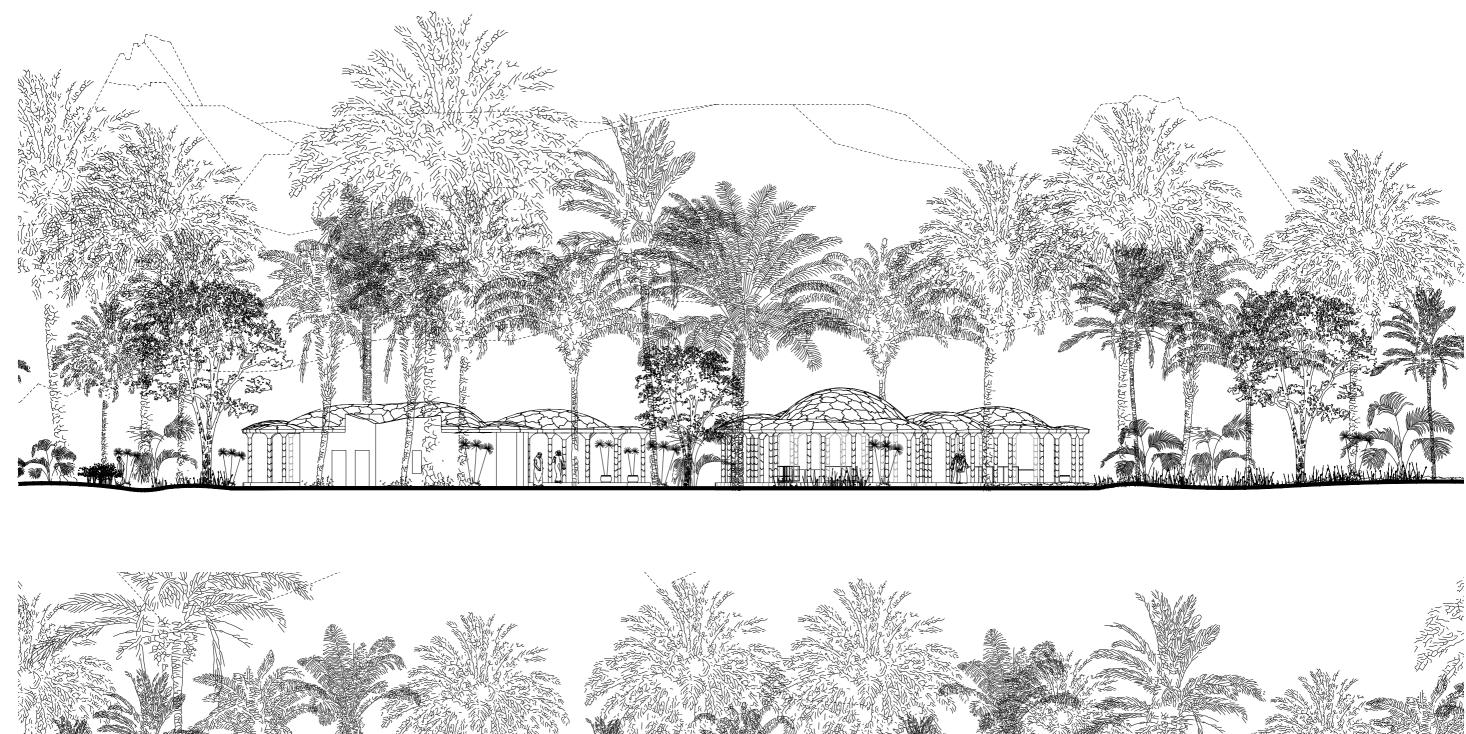
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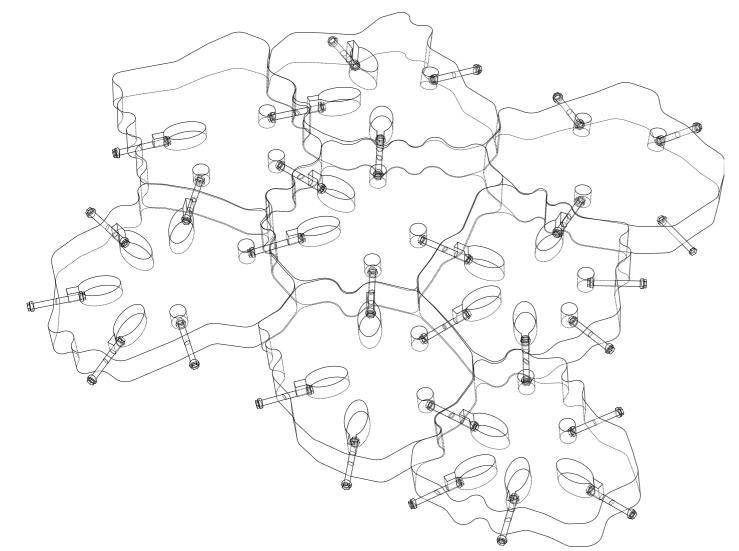
- ^ WORKSHOP SPACE OVERLOOKING THE HISTORIC RUINS AND MAIN BUILDING
- > SHOWER SPACE IN BASEMENT

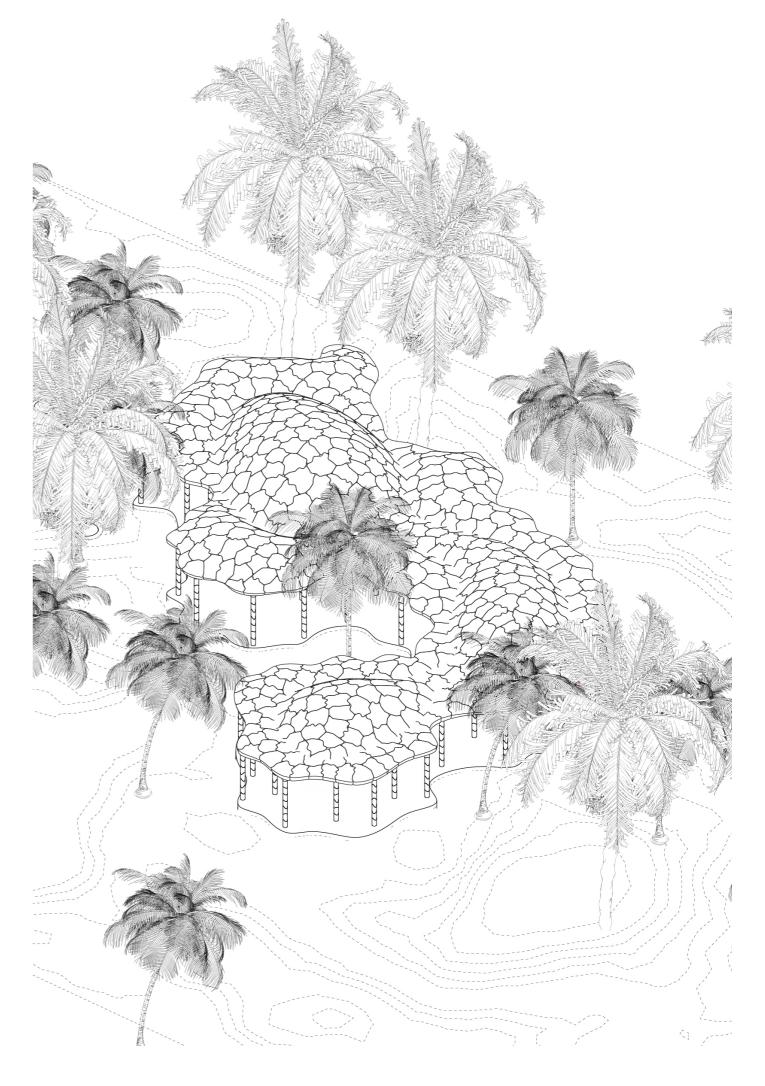




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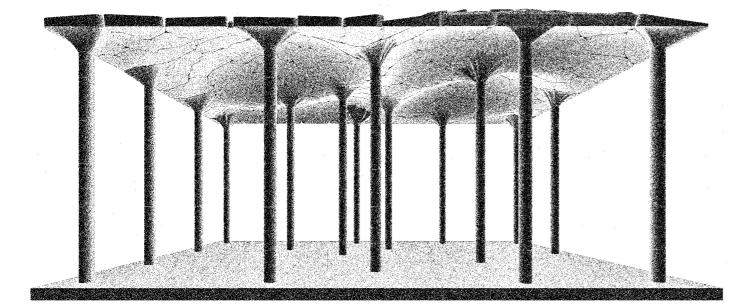


All-purpose, 2020

Stone, 600 × 400 × 300 cm

17th International Architecture Exhibition La Biennale di Venezia, How will we live together? Curated by Hashim Sarkis

Photographs by Antonio Ottomanelli

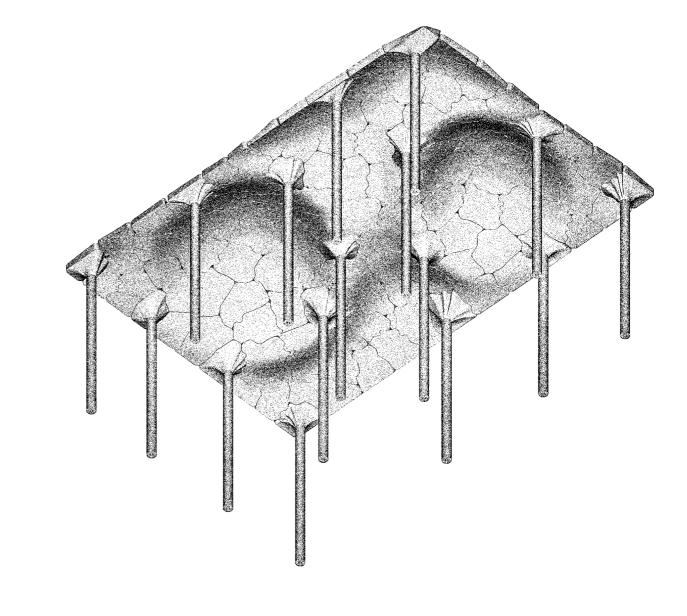


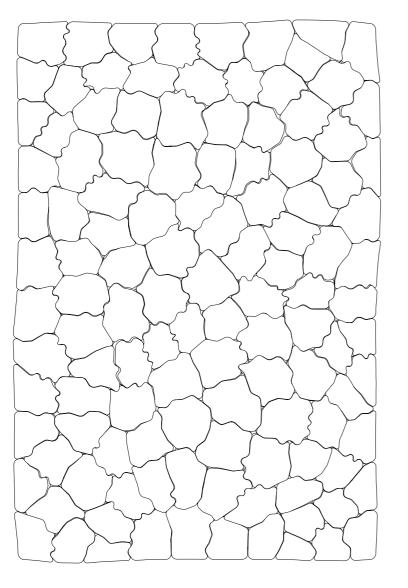
All-purpose focuses on differences and similarities, analogies that bring together cultures through architecture and by highlighting their nonhierarchical yet intricate dependencies. It challenges established relations of knowledge supremacies in order to imagine new possible ways of living together. The exhibition presents a new form of architecture that stems both from Palestine and from the world, investigates material explorations and architectural living spaces. All-Purpose, is an installation on the state of stone in contemporary architecture in Palestine.

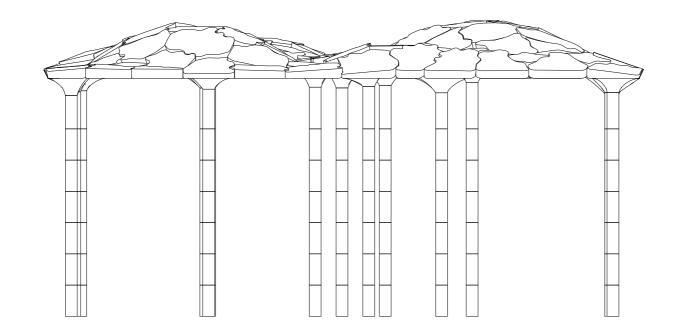
While the change in the use of the material is largely linked to global transformations in the construction world, the exhibition is meant to present the evolution of the material in relation to contextual political, urban, and cultural realms. The intersections of global and local events is used as a way to better understand the present state of stone in Palestine as well as place its future in a global discourse on the use of the material in contemporary architecture.

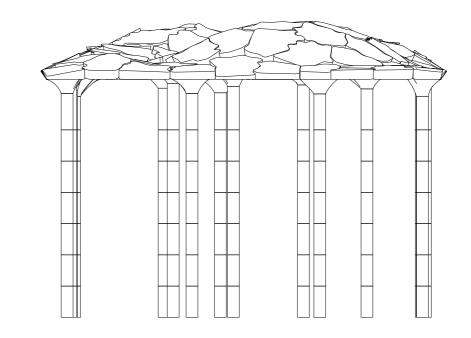
The title of the exhibition All-Purpose refers to a known expression used for construction materials and/or products that are used for more than a single purpose as well as to the systematic consumption of stone in Palestine as a physical and symbolic matter serving multilayered agendas. The exhibition will tie links between different scales, periods, and locations in Palestine and beyond as a way of blending approaches and place the use of stone in contemporary architecture at the intersection of local and global matters. In the disparate architectural context of Palestine, certain architectural attributes, originally found locally, returned to Palestine as imported elements. The exhibition challenges the common approach of imperial transmission of knowledge. Instead, it traces architectural elements and techniques beyond borders and historical periods.

All-Purpose builds up its content on Stone matters, a six year-long experimentations based research that formalizes into a series of site-specific stone structures in Palestine.













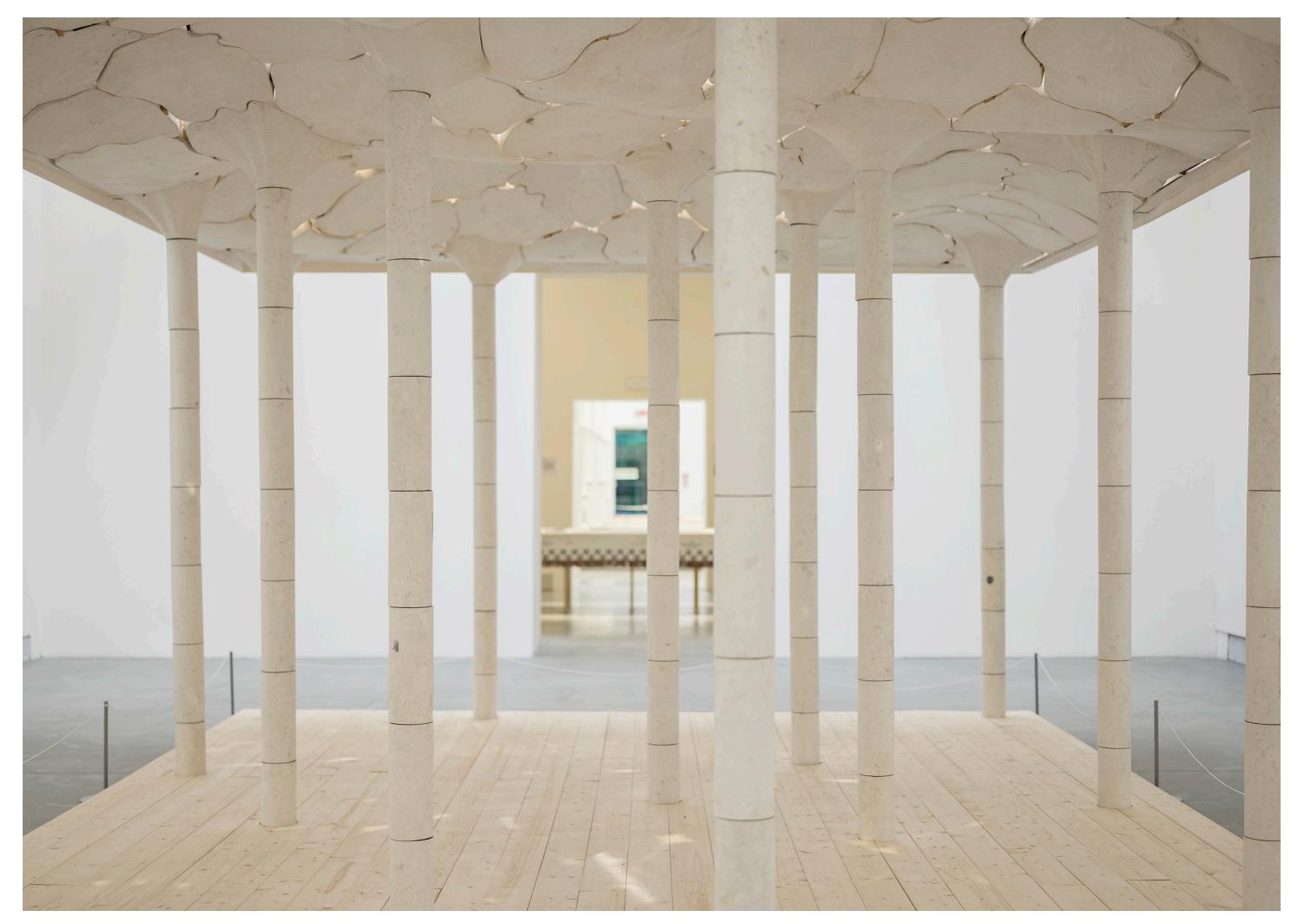


- THE STRUCTURAL SYSTEMS CREATES A NEW FLOOR PLAN ARRANGEMENT \wedge
- CLOSE UP ON THE STONE COLUMN AND VAULTED SURFACE <





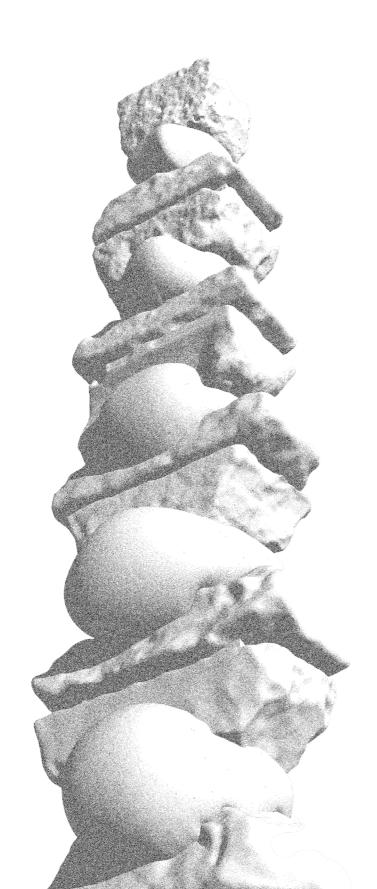




Amoud, 2019

Amman Design Week Curated by Noura Alsayeh Directed by Rana Beiruti

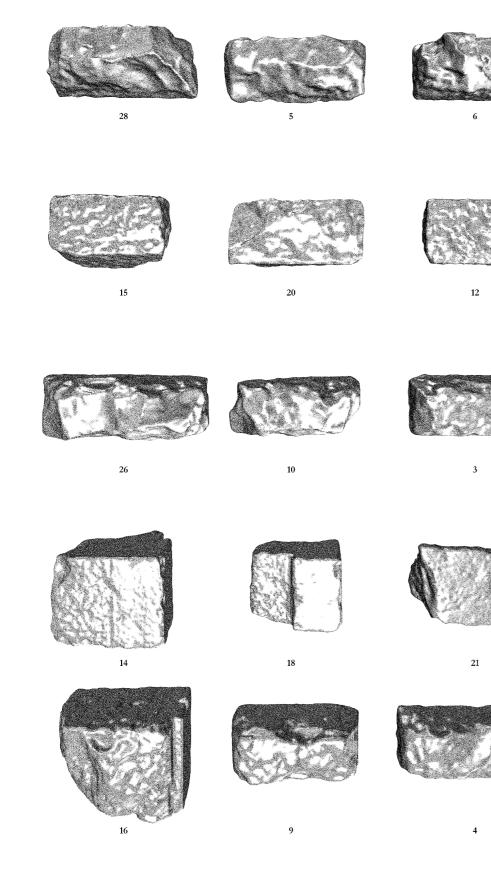
Photographs by Edmund Sumner



The latest project of Stone matters is Amoud. It addresses the reoccurrence of stone-made forms and spatial configurations in Palestine through time. While proper to the constitution of the Palestinian city's urban fabric, they are archetypal forms of geometry, spatial devices found throughout the history and distribution of architecture.

Amoud explores the inherent qualities of architectural fundamental elements (including vaults, lintels, and columns) towards finding novels ways of expressing each. It deliberately desacralizes the use of stone, too often associated exclusively with noble constructions, towards creating a vocabulary of stone use in contemporary architecture. Amoud is also meant to be fed by an academic year-long student seminar, which would transform, in a second stage, into a master's program.

Amoud is a stone column made out of collected stone architectural ruins. The different stone elements come from different periods, illustrate different techniques of construction. It addresses the question of the possibilities of reusing stone as a structural material as well as the finite resource that it embodies and its consequent effect on the natural landscape. On a more global note, the approach seeks to integrate salvaged building components in contemporary architecture. The stones that will be collected will be geometrically analysed and interfaces based on our actual stereotomy research will allow to create a self standing massive stone column. Under the actual state of the research we are trying to look at the reuse of stone elements and their adaptations to new forms and configurations as structural elements of architecture.



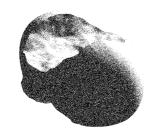
27



 COLLECTED STONES FROM A DEMOLISHED BUILDING FROM 1885 IN BETHLEHEM, PALESTINE

< IDENTIFICATION OF STONES FROM AN ILLEGALLY DEMOLISHED BUILDING FROM 18TH CENTURY



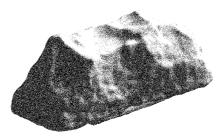


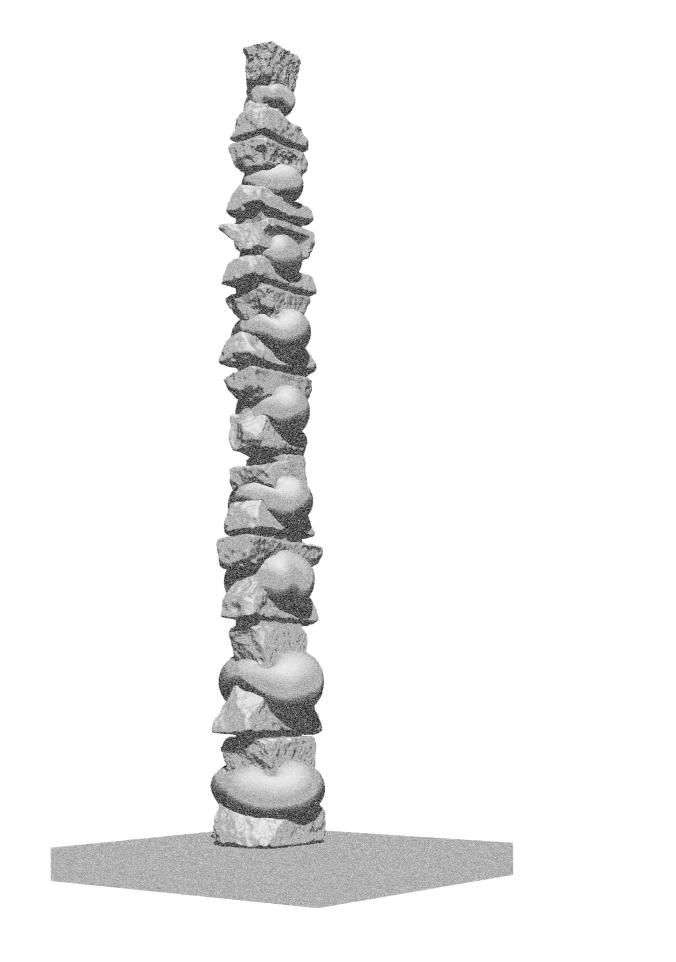










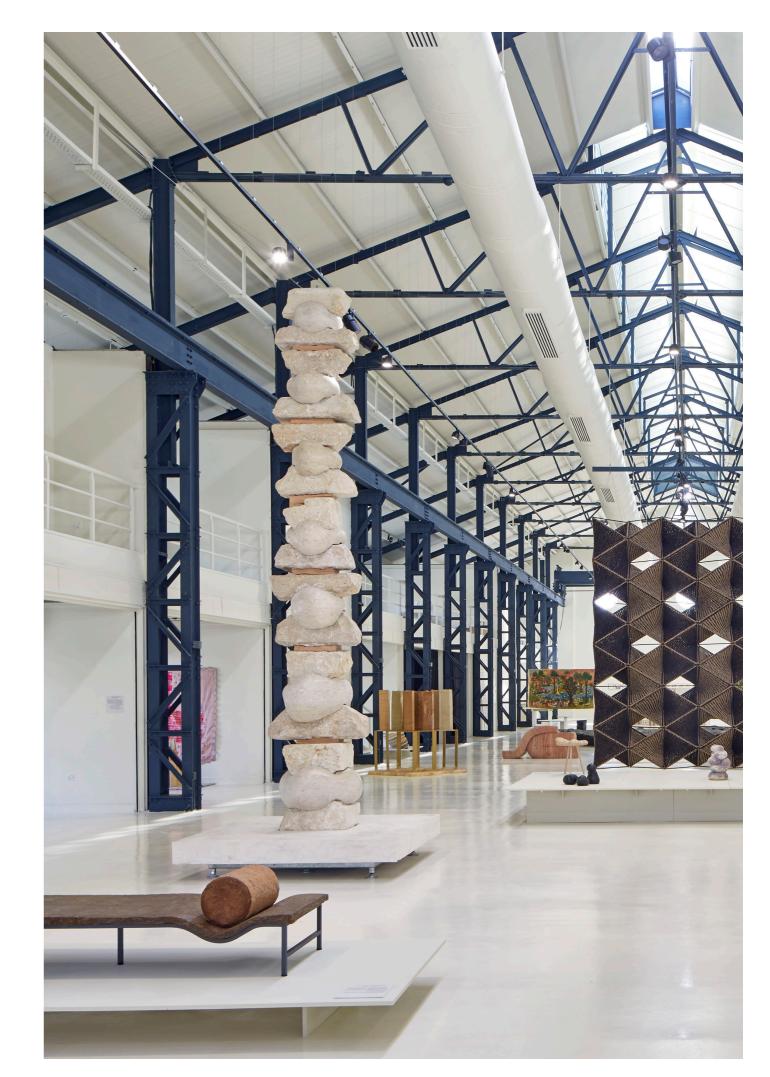


- PERSPECTIVE DRAWING OF AMOUD \wedge
- EXPLODED AXONOMETRY OF STONES ASSEMBLY <





A AMOUD IS PART OF STONE MATTERS RESEARCH PROJECT. IT LOOKS INTO THE POSSIBILITIES OF RE-USING MASSIVE STONE IN CONTEMPORARY ARCHITECTURE







- ASSEMBLY DETAIL \wedge
- <

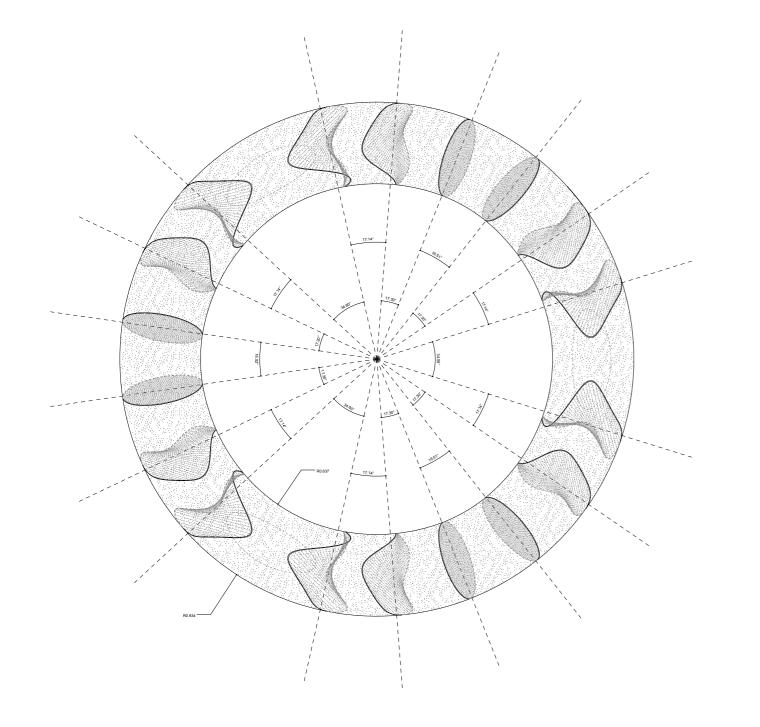
THE NEW CARVED STONE CREATE A STABILITY AND REPOSITION THE CENTER OF GRAVITY



Qamt, 2019

ANALOGY / Stone matters Permanent Collection of The Victoria & Albert Museum London, UK

Photographs by Edmund Sumner

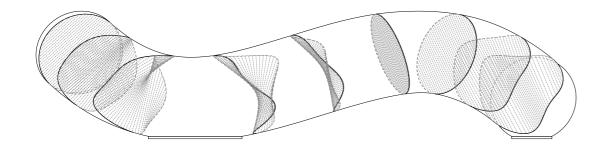


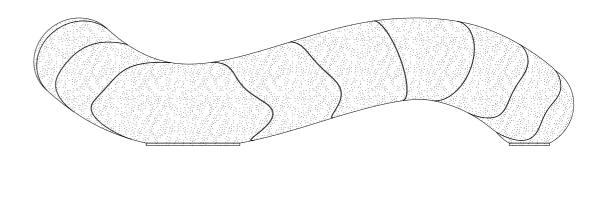
Born as a reaction to a systematic misuse of clad stone in Palestine, Stone matters is an experimentation-based research project examining the potential of including structural stone within the language of contemporary architecture and combining traditional craftsmanship with innovative construction techniques.

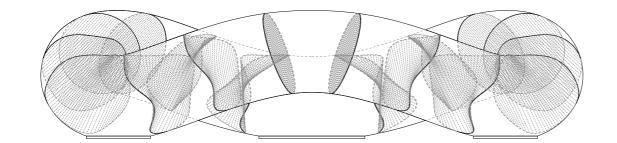
The architecture of Palestine combines disparate architectural elements brought by various civilisations with local elements found in-situ. In an attempt to blur the limits between local and global architecture, Stone matters takes the form of a series of real scale installations, academic articles and a worldwide online atlas of stone architectural elements.

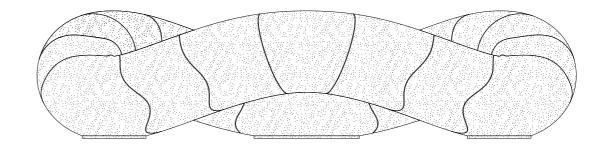
Stone matters explores the qualities of architectural fundamental elements (including vaults, lintels, and columns) and finding novel ways of expressing each. It deliberately desacralizes the use of stone, often associated exclusively with noble constructions towards creating a vocabulary of stone use in contemporary architecture.

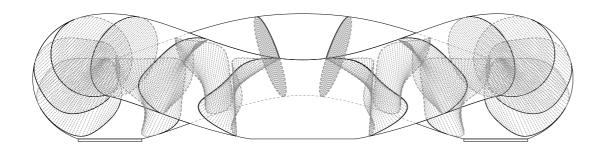
'Qamt', a circular lintel bench is the second experiment presenting systems of lintels inspired by stereotomy found in Jerusalem. It serves as a functional element as well as an illustrative architectural fundamental element. It is an effort to question the local and global exchange of techniques and trace unseen analogies between architectural forms across borders.

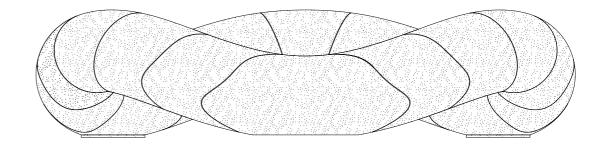




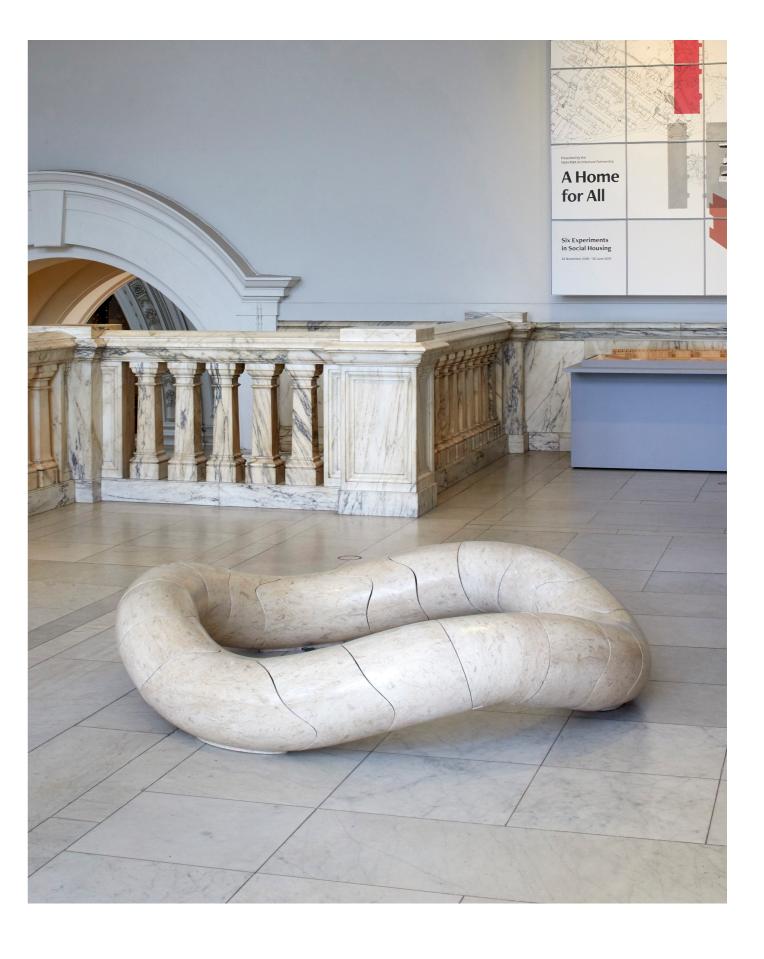


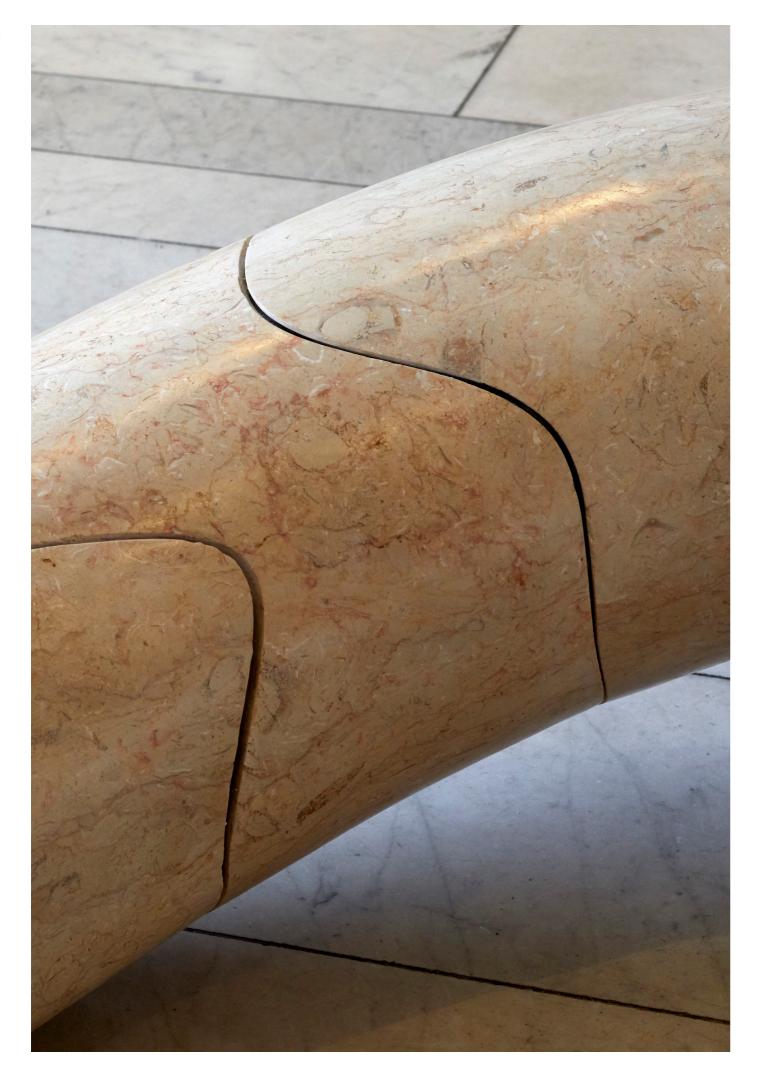


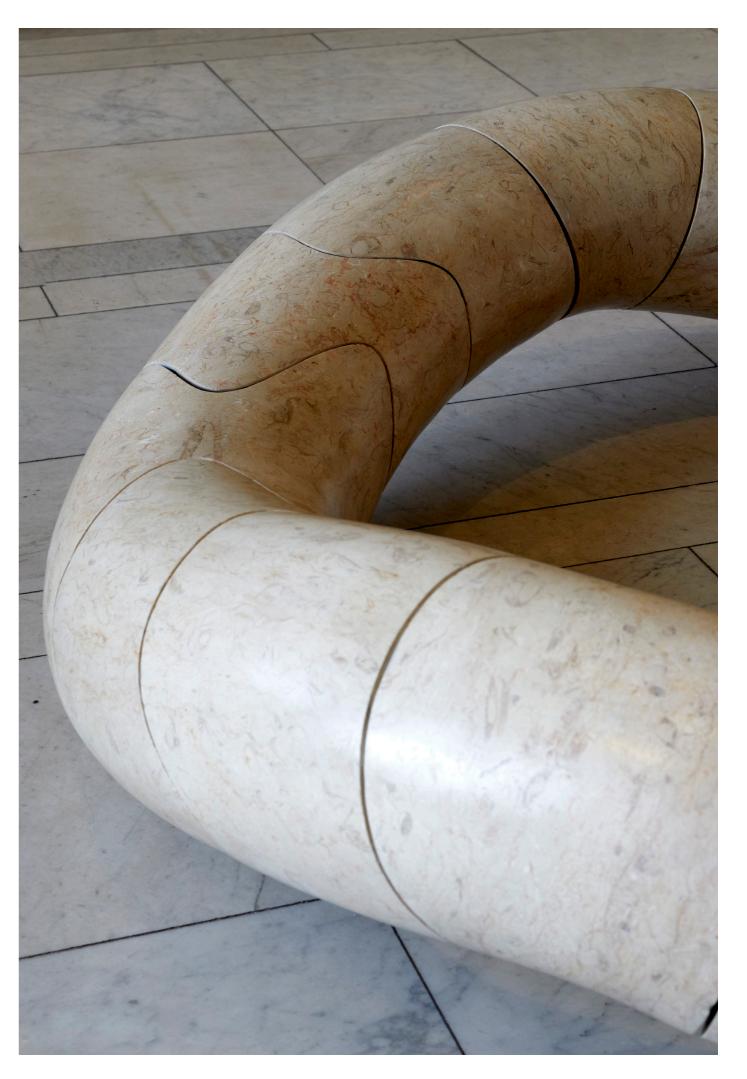


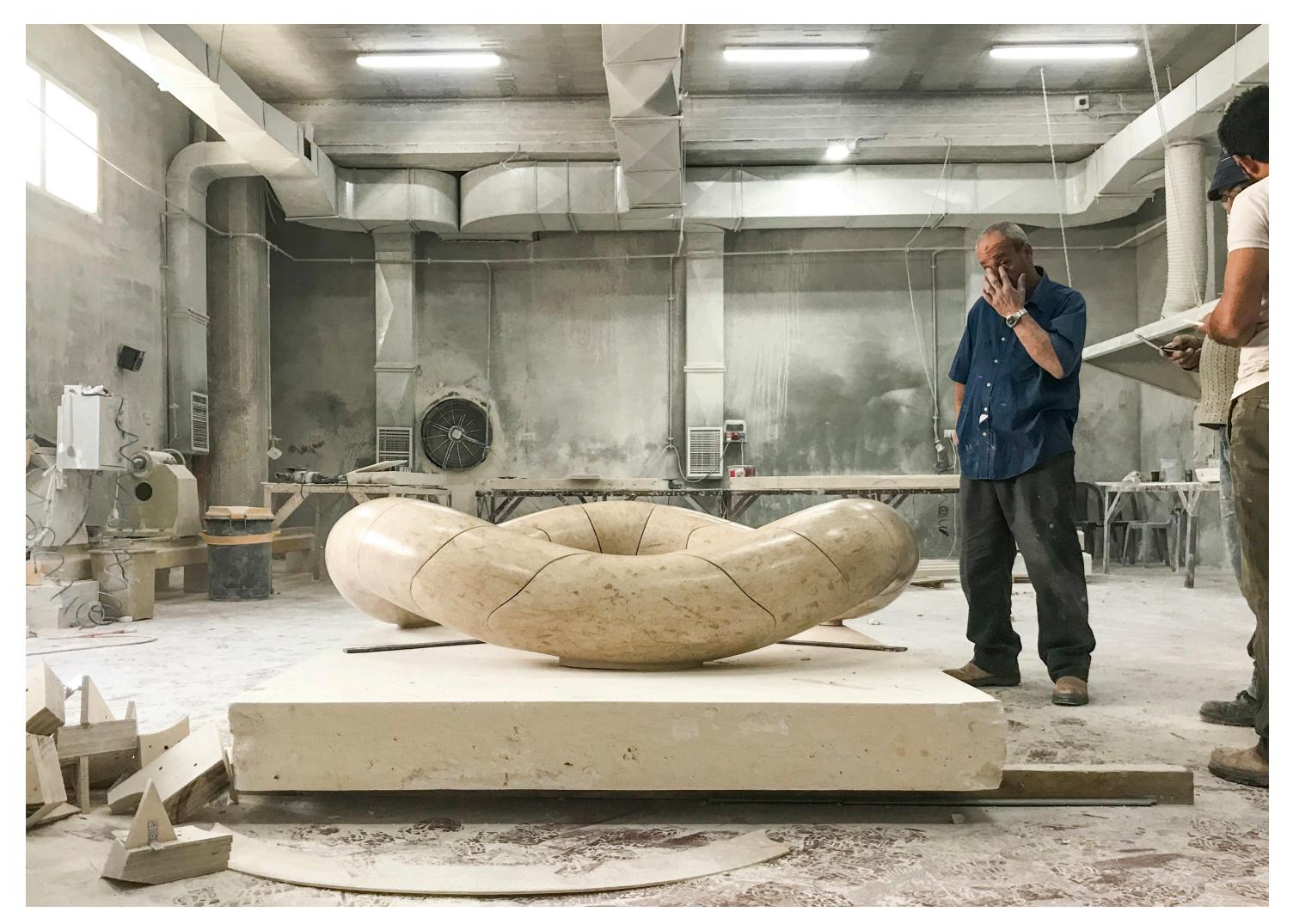










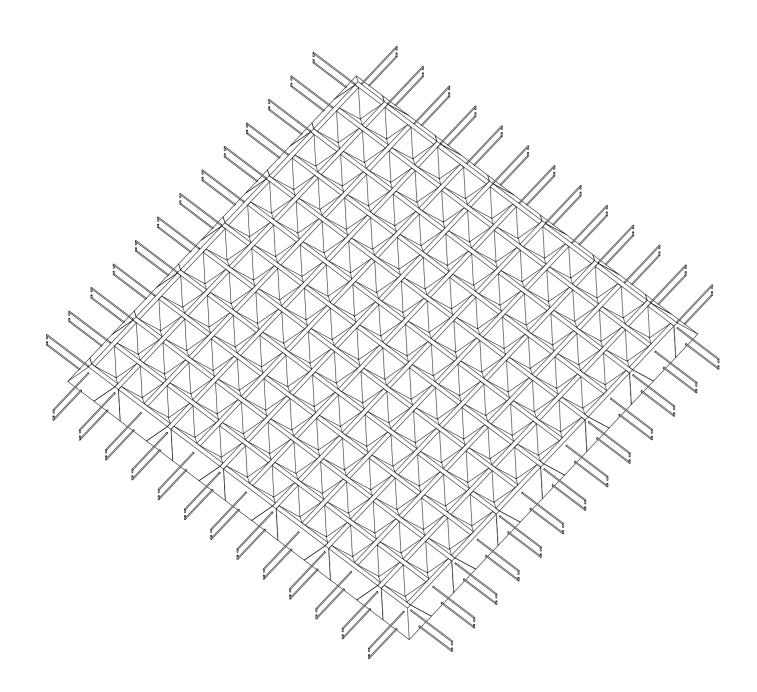




The flat stone vault, 2018 *Jerusalem, Palestine*

Abbaye Sainte Marie de la Resurection, Jerusalem in collaboration with Laboratoire GSA ENSA Paris Malaquais

Photographs by Mikaela Burstow



The St Mary of the Resurrection Abbey is one of Jerusalem's most valuable witness of crusaders' architecture. The site is one of the five French domains in Jerusalem including the Tombs of the Kings, the Pater Noster, Sainte Anne, and the French General consulate. The church was built in the 12th century by the Crusaders. Its architecture offers a complete example of what was the architecture of the Crusaders in Palestine; a combination of different architectural elements that they brought from abroad and local elements that they found in situ.

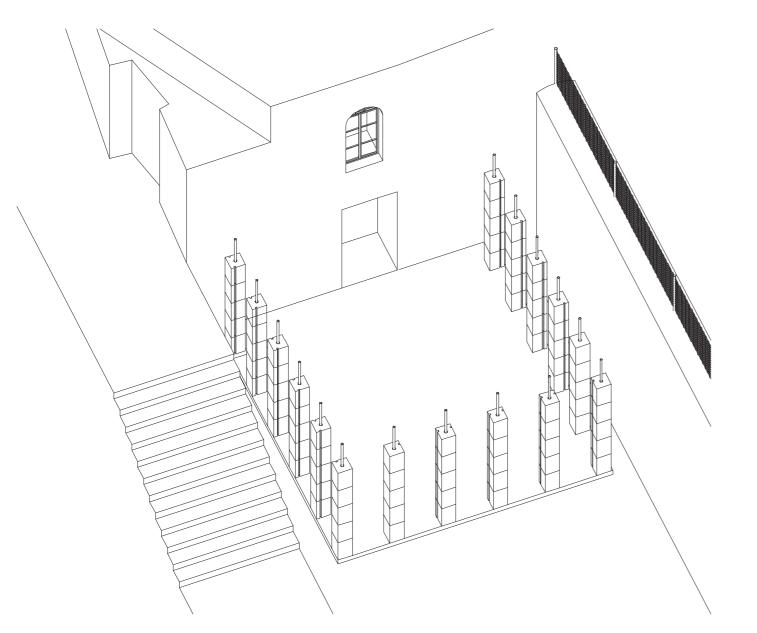
The newly built flat stone vault is an extension of the monastery's shop. Architecturally, it consists of a juxtaposed volume addition. However, the strategy of integration in the site does not rely on the formal aspect of the architectural element but rather on the construction techniques: the new shop is thought as a stone structure. Just like most of the architecture of the monastery – including the church's crypt – the soundness of the structure relies on a delicate work of stereotomy.

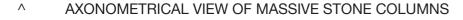
The columns of the new shop are made out of massive stone, and the ceiling is a flat stone vault composed of 169 interlocking voussoirs. The system is inspired by the invention of French engineer Joseph Abeille (1673-1756), who patented in 1699 a special system that allowed the building of flat vaults.

The design for the new shop is based on an innovative construction principle, literally weaving stones together to achieve the first reinforced flat stone vault of such a scale.

The extension of the monastery's shop – in such a heavy historical context - is above all an attempt to adapt existing construction principles to novel design and fabrication methods as well as a specific local stone masonry know-how.

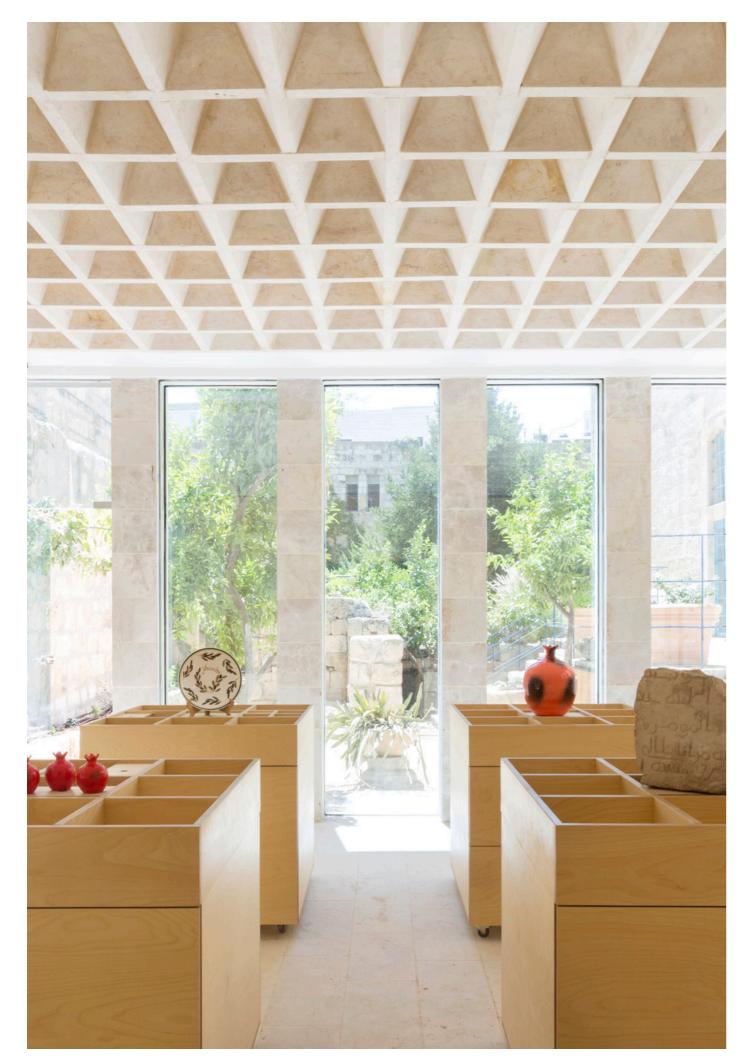
The flat stone vault echoes stone construction techniques, inherent to the monastery's architectural history and to the crusader's architecture in Palestine, in a contemporary way. ⁷⁴ The new shop is organized in a square plan inserted in the dedicated area of intervention. The plan is organized around a sequence of columns on its three facades. The massive stone columns create shelving spaces as presentoirs for the shop. The stone columns act as structural elements bearing the load of the massive stone vault.

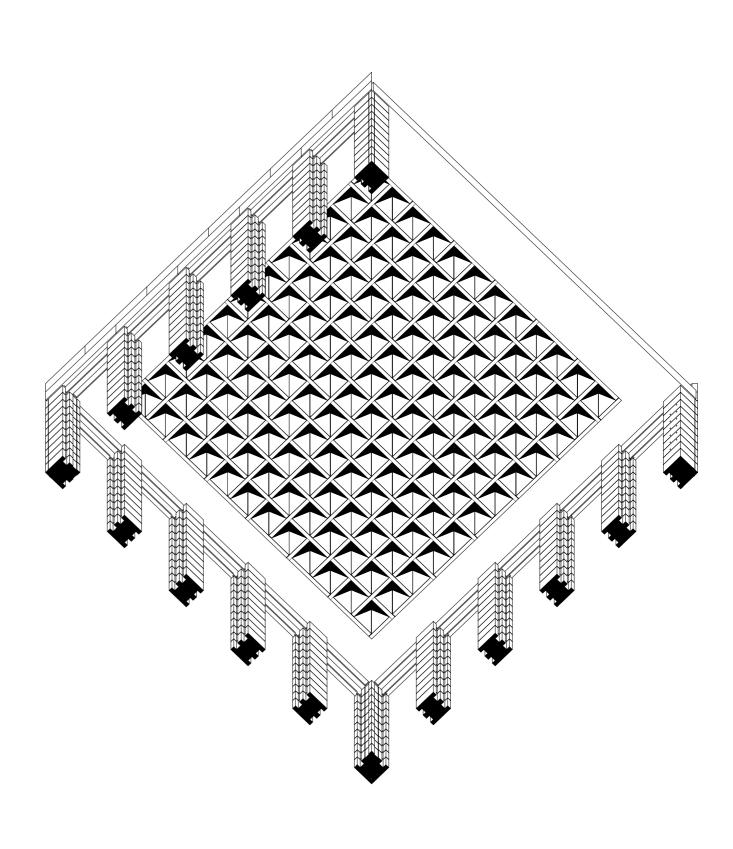




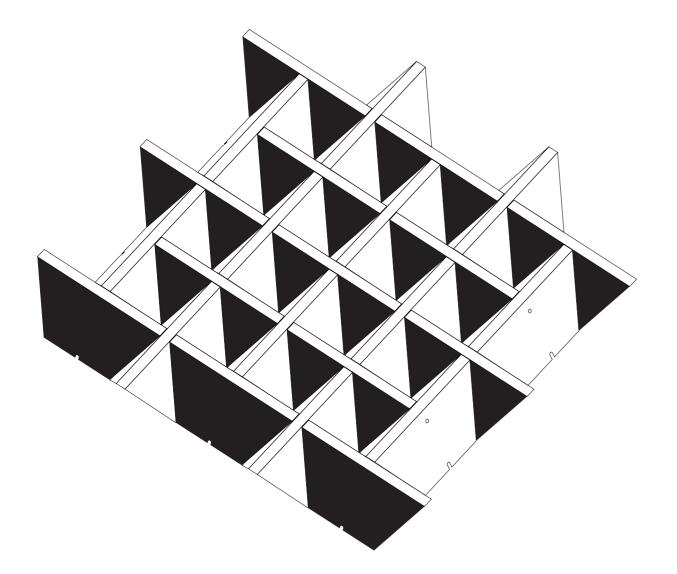


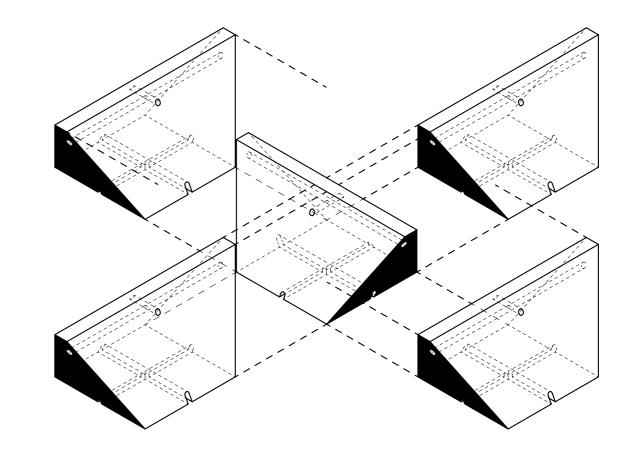






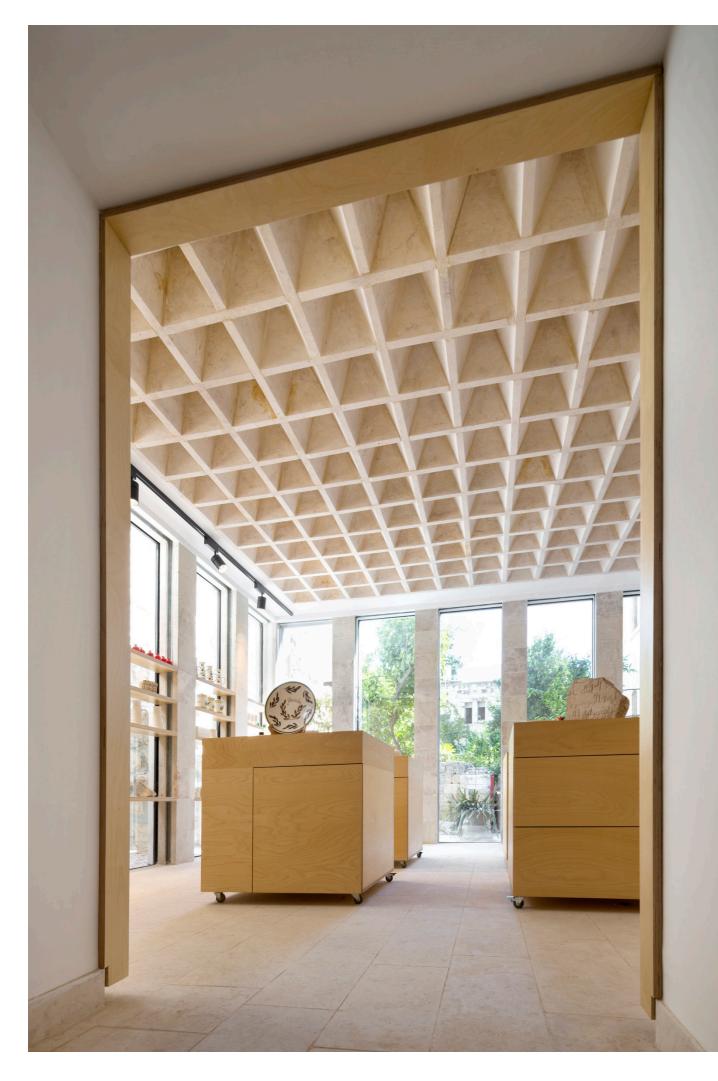
- AXONOMETRICAL VIEW OF THE STONE STRUCTURE \wedge
- INTERNAL VIEW OF THE SHOP <





THE FLAT STONE VAULT - 2018



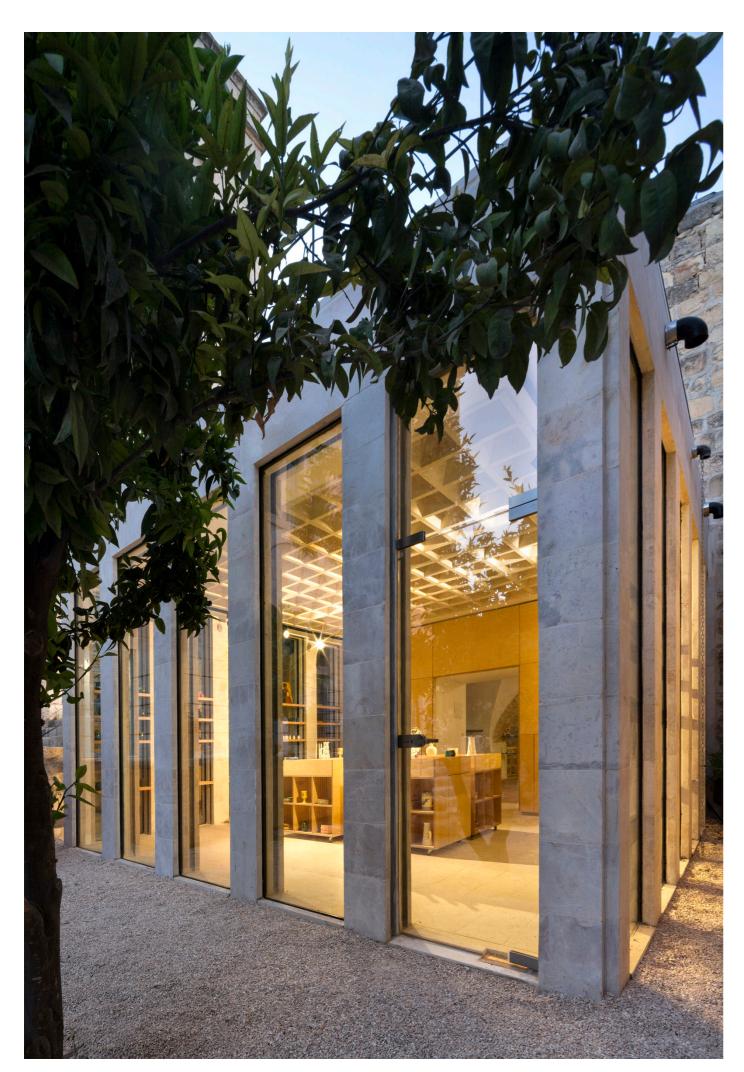


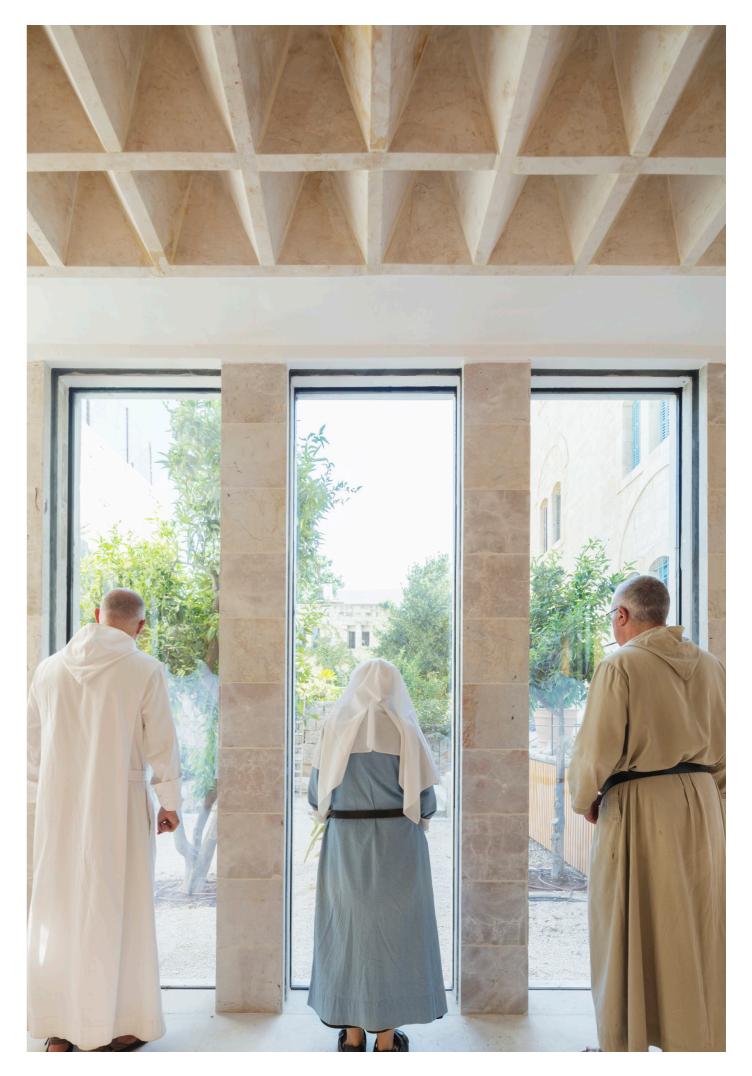


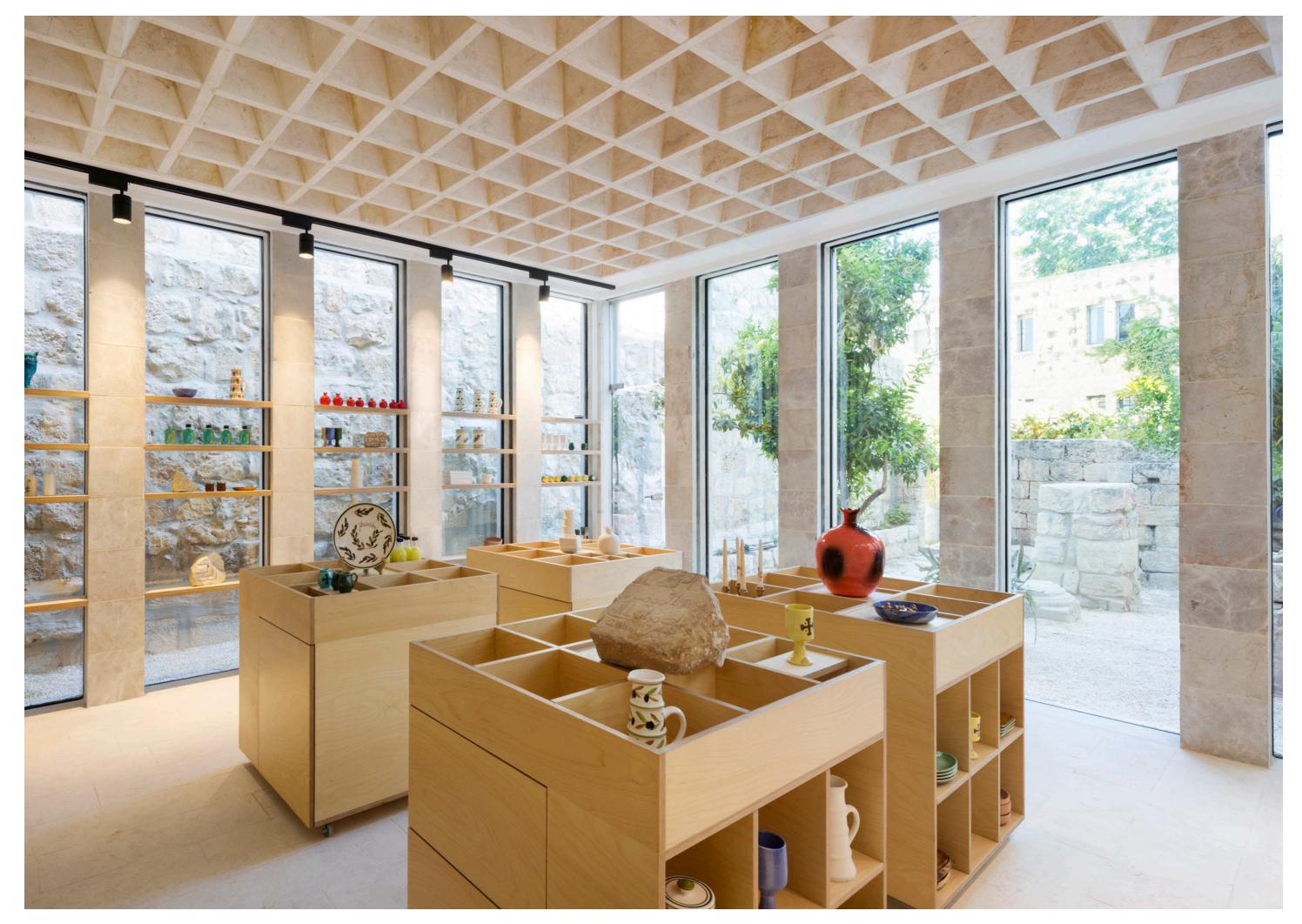
< ^ INTERNAL VIEWS OF THE SHOP

^ TRANSVERSAL SECTION OF THE VAULT









MMAG Art Foundation Amman, Jordan

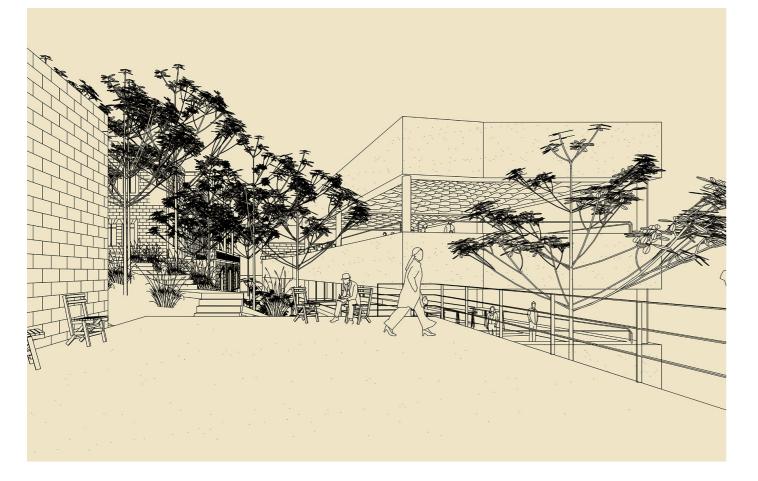
2018

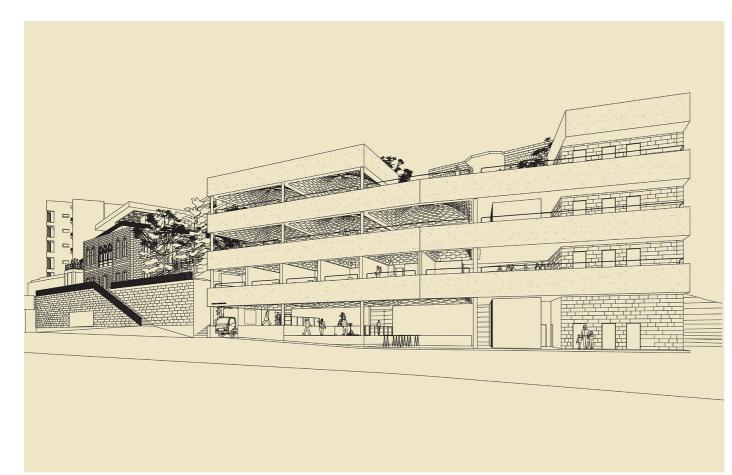


Sitting on Muath Bin Jabal street in Jabal Amman, the proposed building acts as an infrastructure opened to the city and to the foundation campus. The building is designed as an infrastructure able to adapt to different spatial configurations, offering to the foundation flexibility and versatility, in contrast with the existing structures. Built with advanced stone construction techniques, the spaces are organized in relation to the structure and the volumes it creates. Each floor is composed of a number of vaults, that vary in dimension to adapt to the functions required. On the street level, the ground floor is imagined as an extension of the public sidewalk; the space accommodates large production workshops (carpentry and blacksmithing) and storages. The First floor accessible either from the ground floor vertical circulation core, or through an external staircase that wraps around the building on its eastern side, leads to a patio in contact with 5 artists studios or hotel rooms. The rooms are conceived as independent structures within the building and are each independently accessible. The second floor is organized under three large stone vaults that will receive art studios including painting, photography, movement etc. Last floor is organized with a multi-purpose lounge and a large terrace opening up the view of villa ka'war towards the city.

The proposed building echoes the existing parking structure in downtown Amman, and creates an equilibrium in between its roughness in terms of masses and a delicate work on its stone vaults structures.

- Λ DRAWING OF MAIN FACADE FROM STREET LEVEL
- STONE AND STEEL MODEL OF MMAG ART FOUNDATION

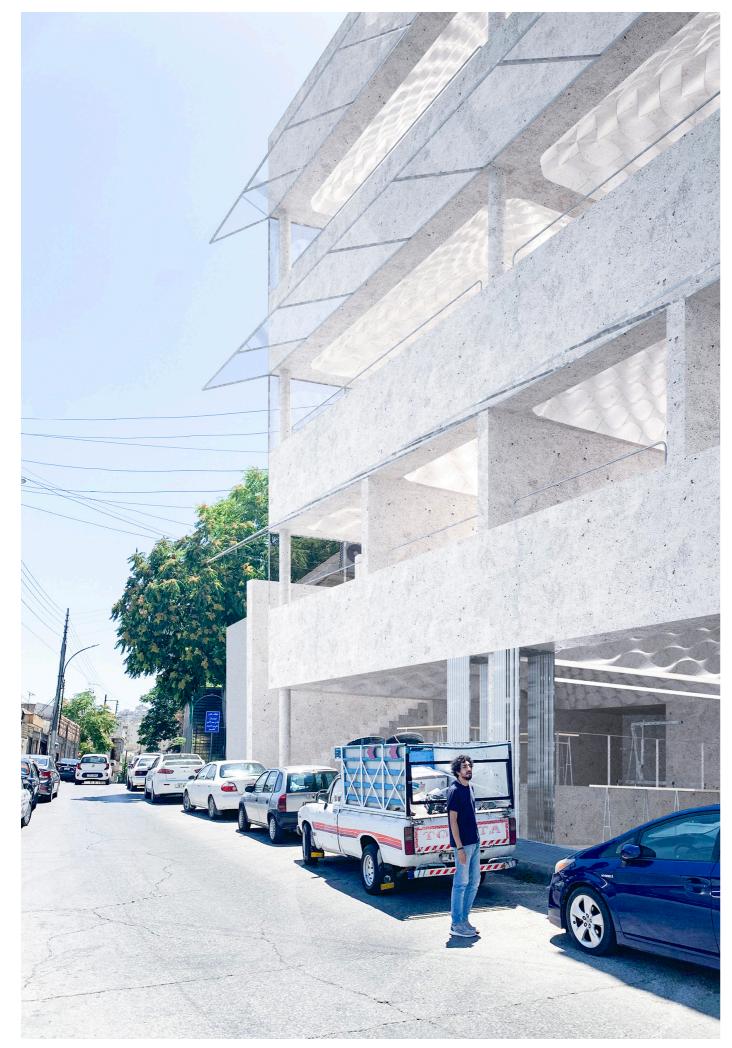




- ^ PERSPECTIVE DRAWINGS OF THE TOP LEVEL AND OF ONE VAULT
- > STONE AND STEEL MODEL SHOWCASING THE VAULTS INFRASTRUCTURE







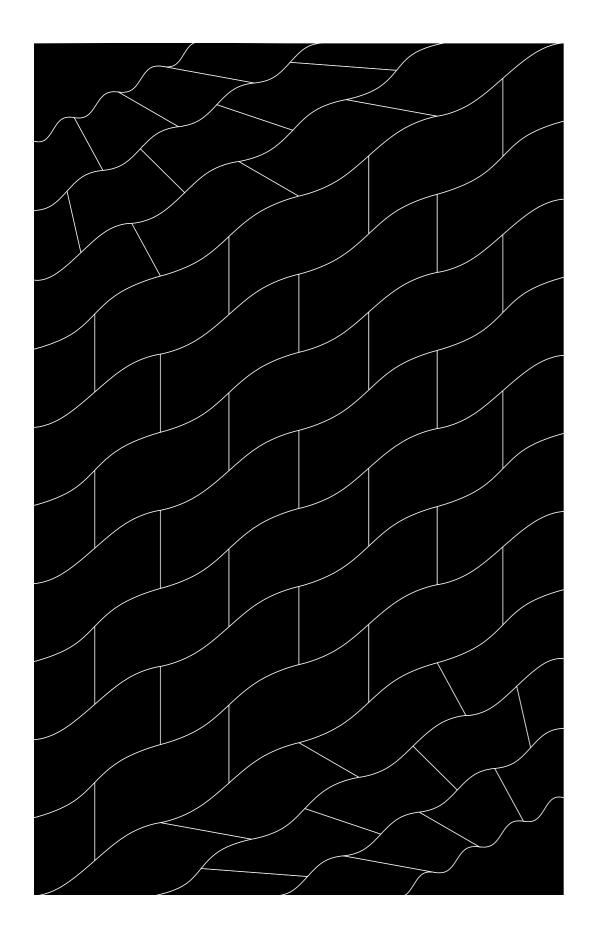


- INTERIOR VAULTED SPACE OF THE UPPER FLOORS \wedge
- THE MMAG ART FOUNDATION FROM THE STREET LEVEL <



Analogy, 2018 *Jerusalem, Palestine*

Jerusalem Show 2018



Analogy is a project about the re-occurrence of forms and spatial configurations in Jerusalem, through time.

Analogy ties different archetypal fundamental architecture elements together, producing a new entity in which the characteristics of each entity takes part.

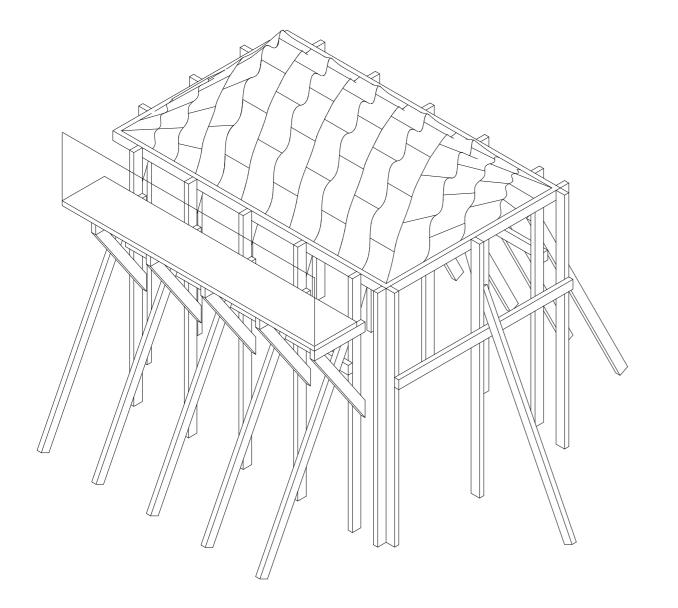
The architecture of Jerusalem is a combination of different architectural elements that various civilizations brought from abroad and indigenous elements that they found in situ. Through time, some, originally native, architectural attributes came back to Jerusalem as imported architectural techniques whereas - retrospectively - they may be more accurately designated as imported indigenous elements. Jerusalem's architecture is inscribed in a time and space that is politically, socially, religiously and historically charged. Architecture bridges between the autonomy and heteronomy of projects: it looks at confronting internal coherence - involving form, structure, and proportions - to external conditions in which the project exists. In Jerusalem, the heteronomous layers create a state of unbalanced architecture. Analogy does not seek to take elements of architecture out of their context but rather tries to explore their inherent qualities - in their purest kind of expression – in the aim of finding novel ways of expressing each archetypal element. In an imaginative way, Analogy combines different elements of architecture found in Jerusalem to produce a series of sculptural pieces through which the internal coherence of each element is revisited.

In the frame of the biennial, a first architectural element of the series will be on show.

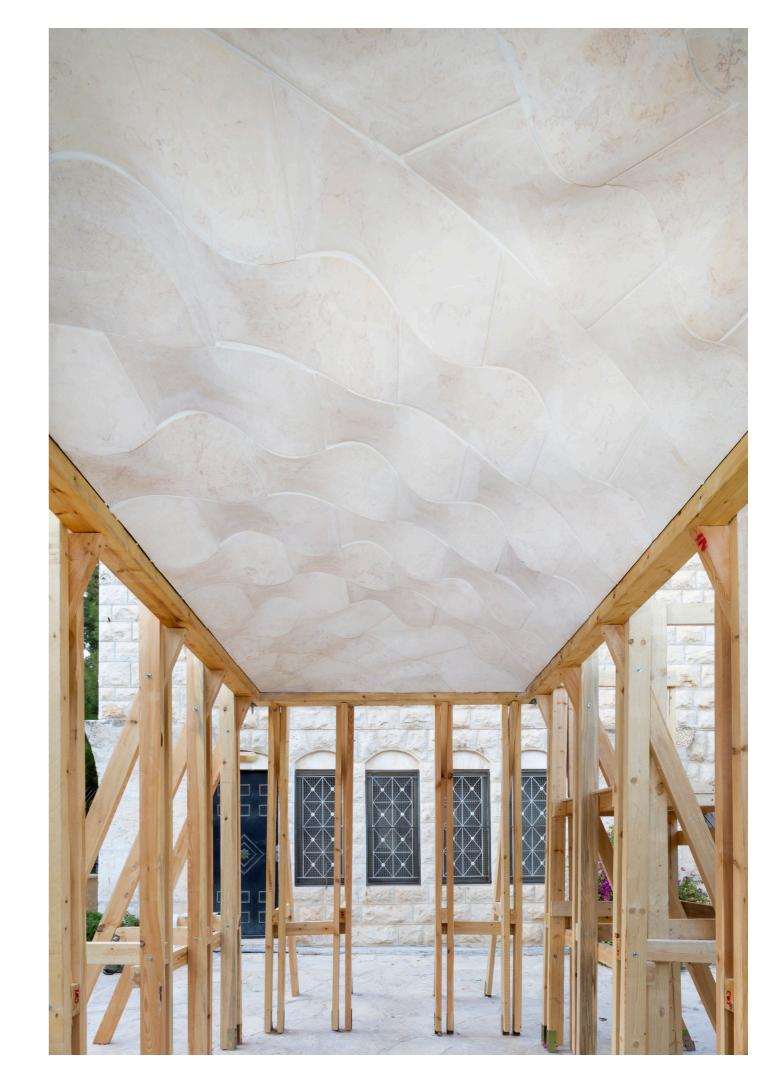
It will present a vault inspired by the "ouqad", a typology that was widespread in Palestine at the beginning of the 20th century and that has the specificity of having a rectangular peripheral support system.

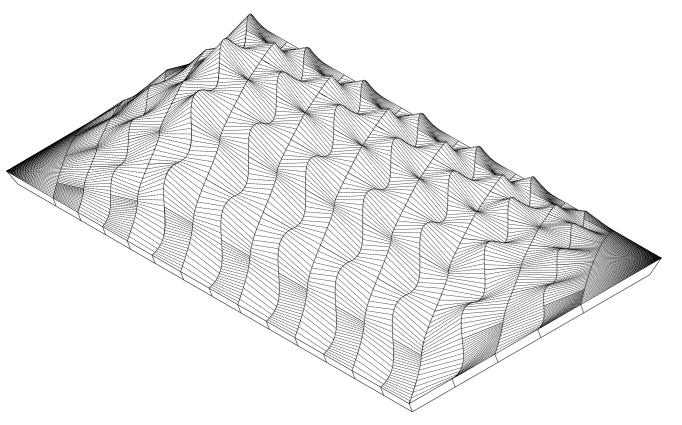






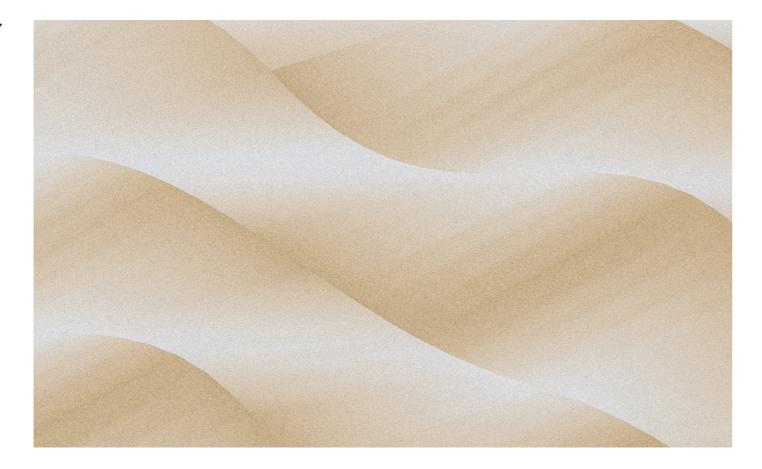
- ^ AXONOMETRY OF ANALOGY
- > PHOTOS OF ANALOGY



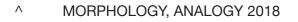


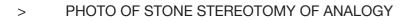


ANALOGY - 2018







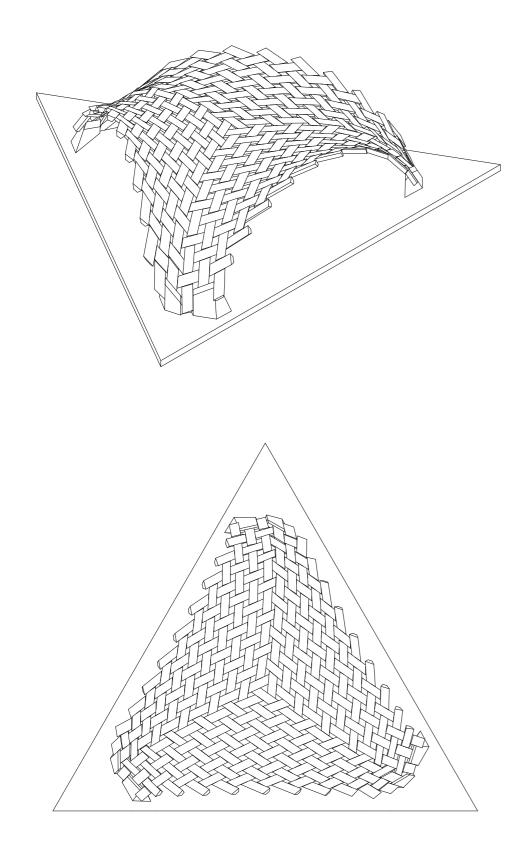






Stone Matters, 2017 Vault in Jericho, Palestine

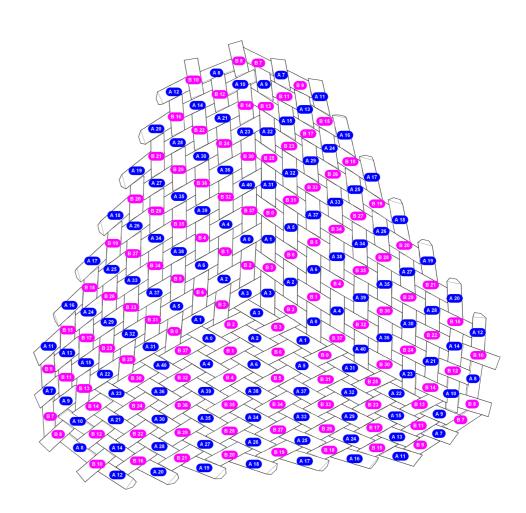
Prototype of massive stone vault Photographs by Mikaela Burstow



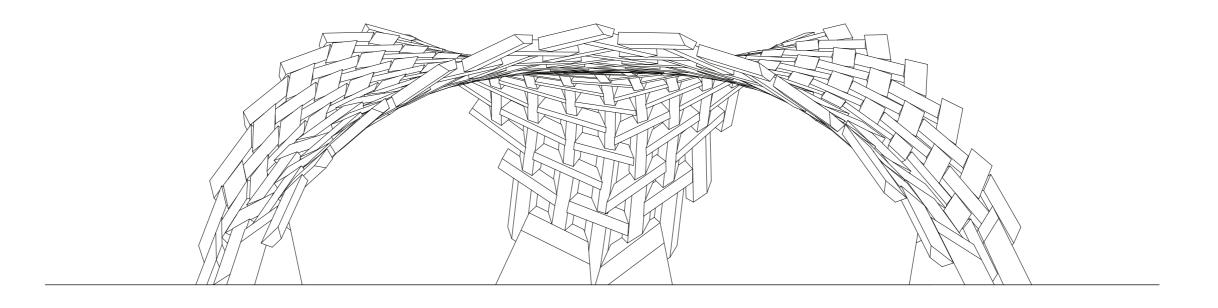
The vault covers a surface of 60 m2 and spans 7 meters with a constant depth of 12 cm. The geometry follows the shape of a minimal surface on which geodesic lines are drawn and set the pattern of the interlocking stones. The whole structure is made of 300 mutually supported unique stone pieces.

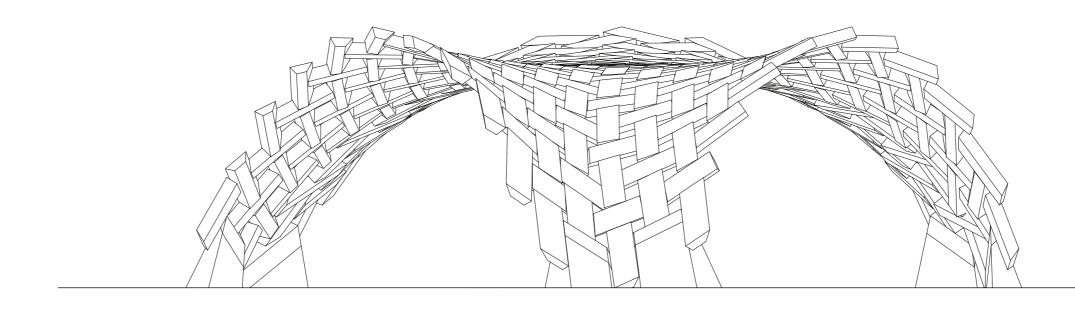
The geometry of the vault follows the shape of a minimal surface on which geodesic lines are drawn and set the pattern of the interlocking stones. The whole structure is made of 300 mutually supported unique stone pieces. Each stone has 4 inclined interfaces, that allow the assembly of the different stone voussoirs.

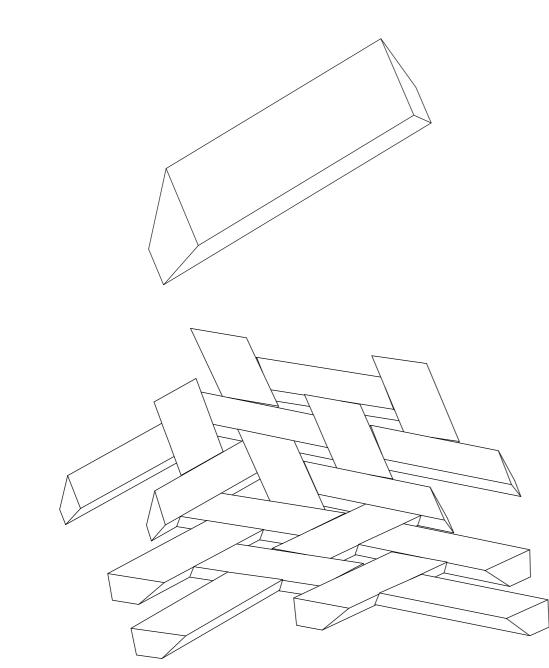
Based on geometrical parameters as the overall shape, the density of the paving, the inclination of contact surfaces, the size of the voussoirs, and number of voussoirs types, a specific structural criteria can be improved.



- STONE SPOTTING DIAGRAM
- CEILING PLAN AND ISOMETRIC VIEW OF THE VAULT



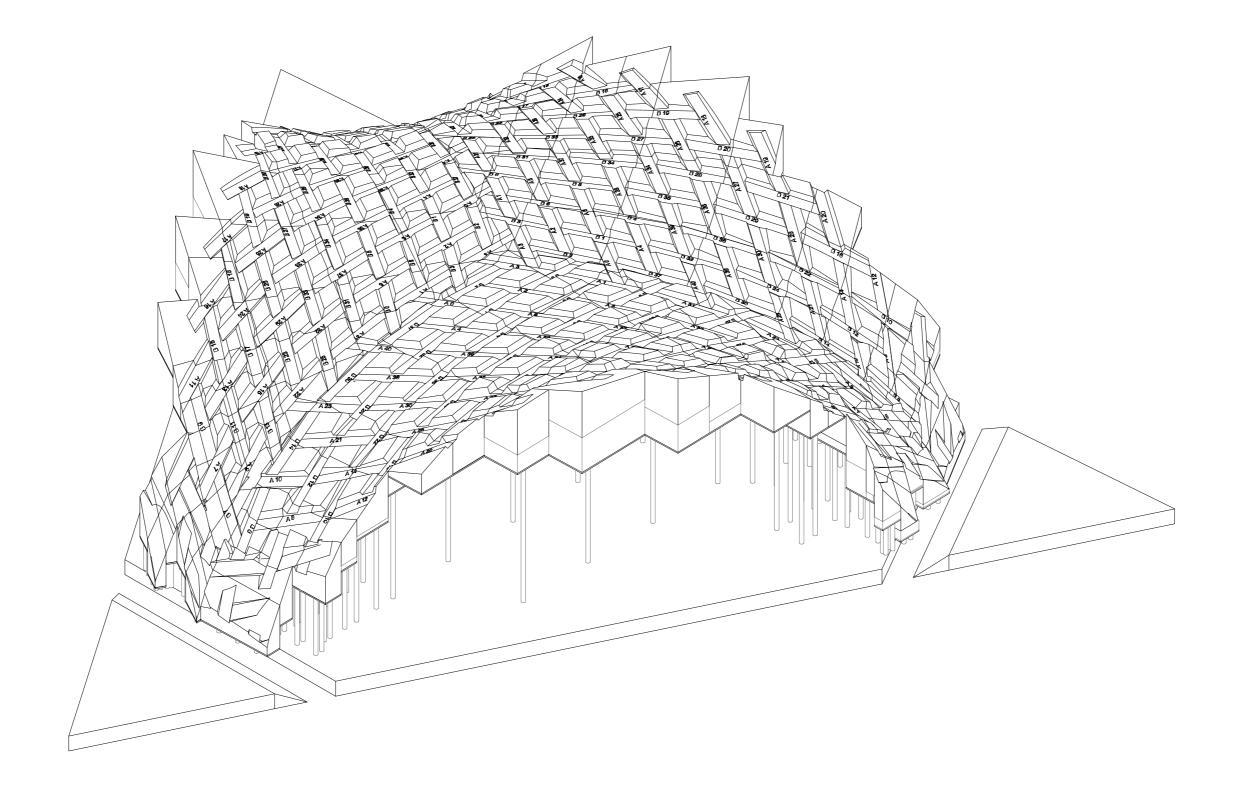








- STONE CUTTING USING A 5 AXIS CUTTER \wedge
- STONE MOUNTING ON TOP OF POLYSTYRENE FORMWORK \wedge





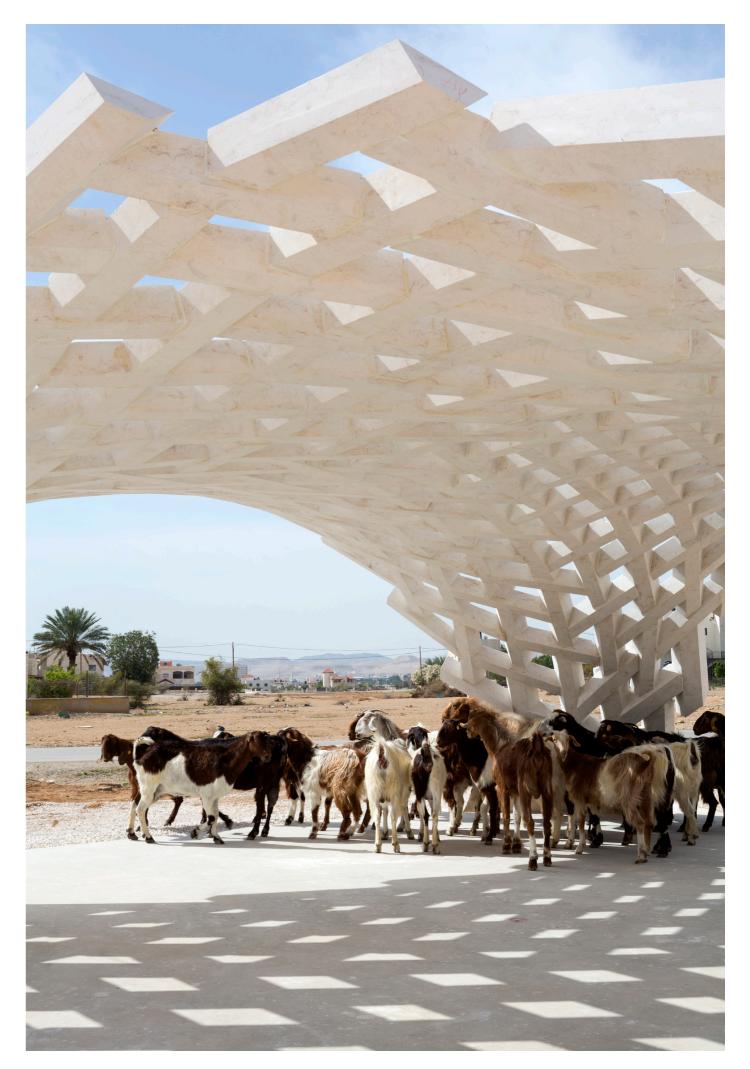




- THE STRUCTURE SPANS 7 METERS Λ
- PAVING OF THE STRUCTURE AND FOOT DETAIL <



Until the beginning of the previous century stereotomy, or the art of cutting and assembling stones, played an important role in the aesthetics as well as in the structural construction principles. Today's stone factories only produce standardized blocks of few cm, used as cladding of a reinforced concrete structure. The techniques used for building with stone have an effect on the speed of construction, the urban spread of territorial boundaries, and the morphology of all buildings. In other words, stereotomy and the construction methods leave a trace on the Palestinian landscape.









Reinvigorating stereotomy as a way of optimizing structural performance using advanced design simulations is the founding principle of stone matters. Based on geometrical parameters as the overall shape, the density of the paving, the inclination of contact surfaces, the size of the voussoirs, and number of voussoirs types, a specific structural criteria can be improved. The whole process is an in-progress work flow which will aim at using computational design and advanced fabrication techniques in order to present a modern stone construction technique as part of a local and global architectural language.

< DETAIL OF THE VAULT EDGE

[^] CLOSE UP OF THE VAULT'S SPAN

While We Wait, 2017 London, United Kingdom

Commissioned by the Victoria & Albert Museum, London

Curated by Salma Tuqan Sound commission by Tareq Abboushi Photographs by Mikaela Burstow

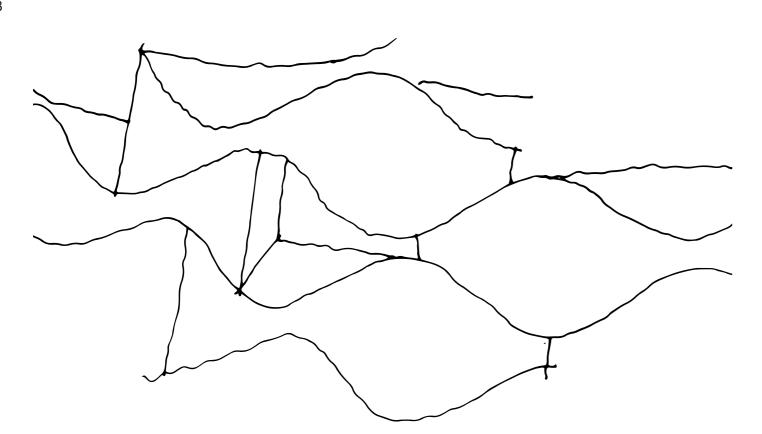


While We Wait is an immersive installation by Bethlehem-based architects Elias and Yousef Anastas about the cultural claim over nature. The towering structure consists of small elements of stone from different regions of Palestine, fading upwards from earthy red to pale limestone. The stone elements are shaped by both revolutionary and traditional techniques: they are designed on a computer, cut by robots and handfinished by local artisans.

The process of 'stereotomy', the art of cutting stones so they can be assembled into a larger configuration, enables the lace-like structure to support itself. Moreover, gaps between the stones allow the viewer to see out, while being encouraged to imagine the installation's eventual surroundings in Palestine through evocative sound and video elements.

After being exhibited at the V&A, While We Wait is destined to live permanently in the Cremisan Valley, where the controversial separation wall is currently being built, threatening to segregate the community, isolate land from its owners and sever the historic link between the valley and its eponymous monastery. In stark contrast to the rectangular concrete wall, which dominates and divides the Palestinian landscape, this installation will venerate its extreme natural beauty. Returning to the very earth from which it was made, it celebrates the visual, symbiotic relationship between nature and architecture.

Moreover, the structure will unite the local community by becoming the focus of their non-denominational Friday gatherings in protest of the wall. While We Wait therefore suggests an alternative to the cultural claim over nature.

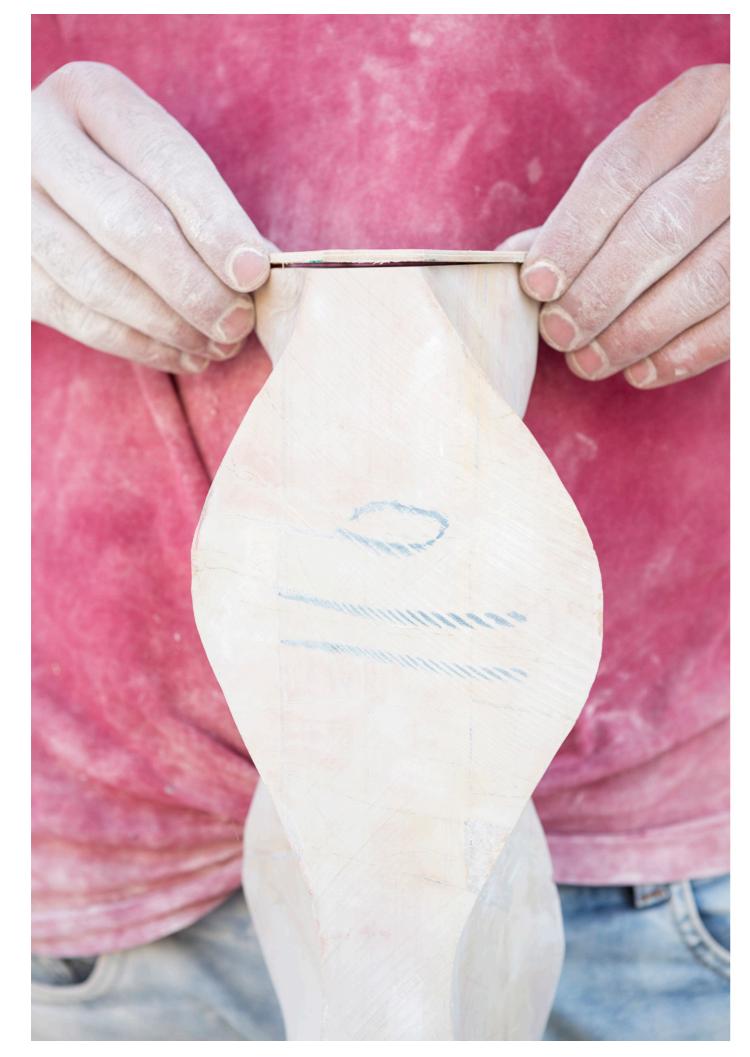


A stone dentelle construction is thought as a witness of the diverging cultural claims of nature in the hyper-local context of the Cremisan valley. If imagined in situ, the object which could serve as a multi-religious meditation space is meant to perpetuate the link between the local community and the monastery. Its architecture is meant to resist the elimination of the place caused by the spoiling of its landscape.

Unlike the plain, uniform concrete of the separation wall, it is built out of a lace-like texture that strengthens its relationship with the surrounding landscape. The construction highlights the pre- dominant value of nature in the Cremisan valley by paying tribute to its durability. It is built out of elements of stone that are small with respect to the entire structure. It calls for an architecture of relations, respecting its surroundings instead of dominating them.

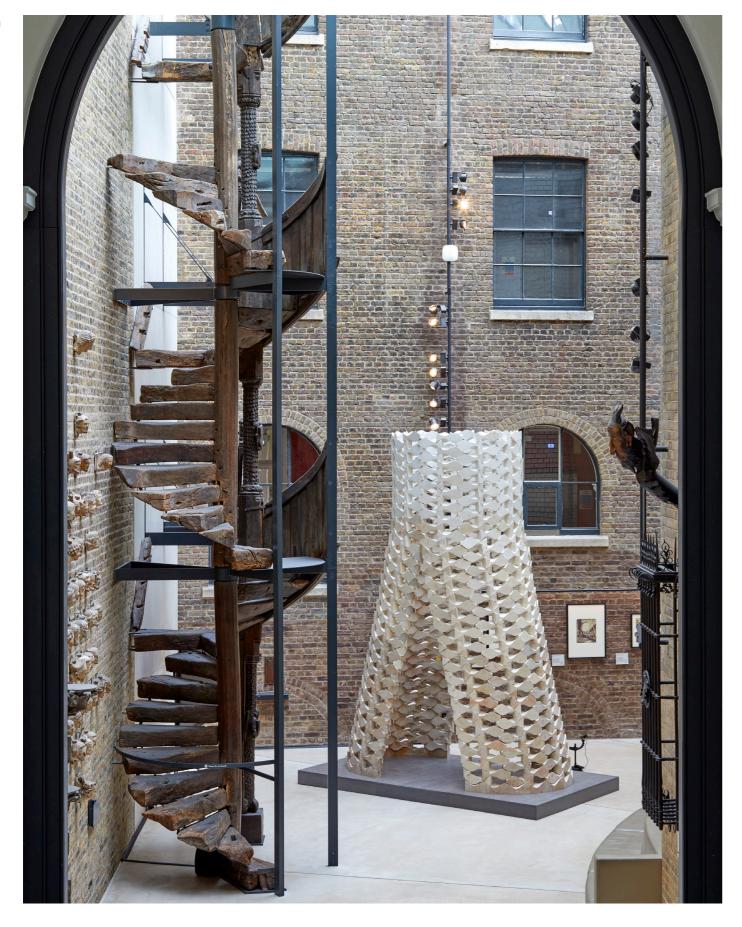


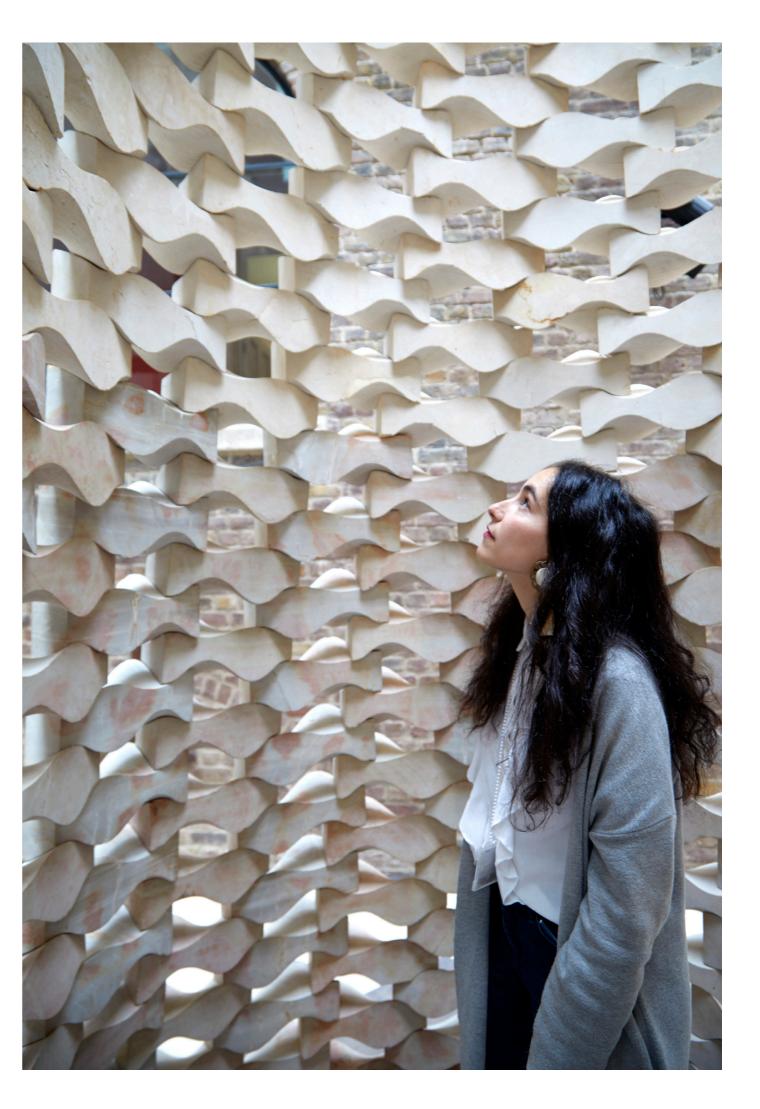
^ SKETCH OF STONE DENTELLES JOINERY



















Toulkarem Courthouse, 2015 Toulkarem, Palestine

Commissioned by the United Nations Office for Project Services (UNOPS)

Photographs by Mikaela Burstow

Located on a triangular parcel of approximately 5,000 sqm at the entrance of Toulkarem city, the courthouse houses the magistrate and first instance courts.

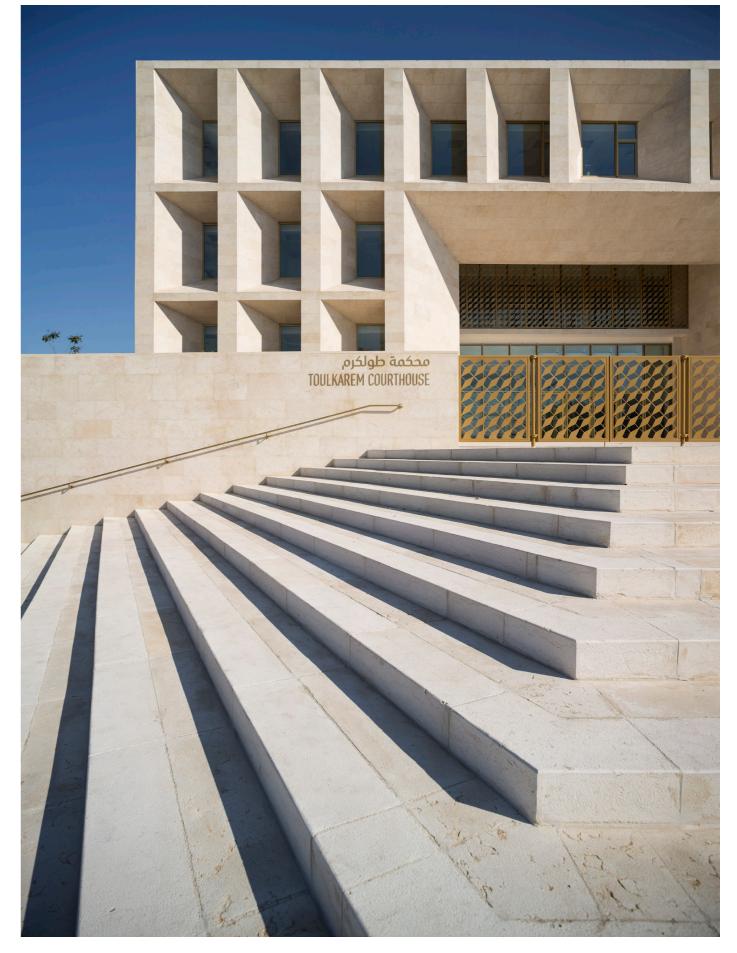
The urban concept proposed is based on the succession of volumes. On Toulkarem's way to the city, the first building, at the top of the triangular parcel, accommodates the administration of the courthouse - including the registries, cashier and notary - while a second building housing the 12 courtrooms unveils itself along with a locally cultivated interstice space.

The first building is directly connected to a front public space, that anchors the building in its direct urban context and offers to the citizens of Toulkarem a social gathering space. The difference in levels between the street and the ground floor of the building, creates a public space setup that stimulates the citizens to invest the space. The massive stone walls are carved with different inclined geometries protecting the interior space from sun radiations during working hours, while offering large framed views of the neighbouring landscapes.

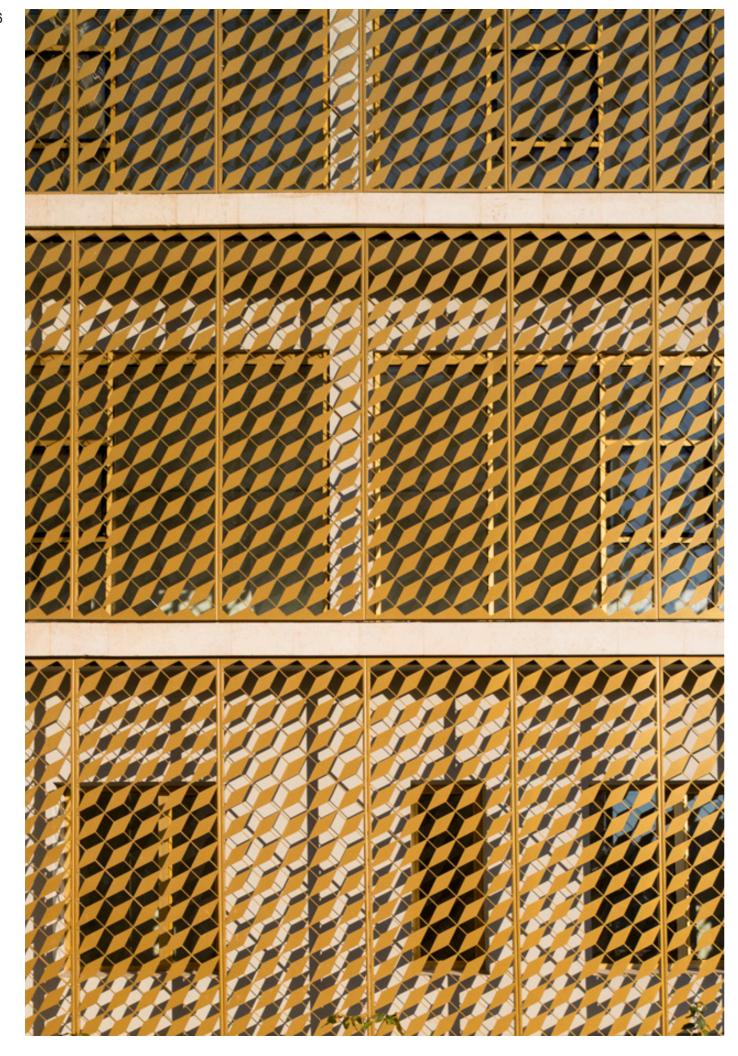
The courtrooms building is separated from the administrative building by a longitudinal planted interstice crossing the parcel, that marks a fine shimmering steel envelope filtering light and permeable to the cultivated island of freshness.







- ^ CLOSE UP OF THE COURTHOUSE ENTRANCE
- < PHOTO OF ENTRANCE STAIRCASE





- PHOTO OF THE COURTHOUSE INNER COURTYARD \wedge
- DETAIL OF THE FACADE OF THE BUILDING <





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