

DESIGN RESEARCH ESSAY

Archaeotecture: The Future of Tyre's Collective Memory

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Archaeotecture is a design-based theory that proposes the convergence of the architectural and archaeological professions, and which explores the notion that the process of archaeological excavation is also a form of making architectural space. It represents an attempt to avoid drastically altering the original aesthetics and authenticity of an archaeological site without imposing a surface-based, ideologically driven, structural solution: instead, Archaeotecture applies what can be described as a reverse-palimpsest approach. As a result, it aims to reveal the city's forgotten layers in-situ through the tunnelling of subterranean spaces to foster a unified collective memory. The idea of a collective memory, as proposed by Aldo Rossi in his book *The Architecture of the City*, emphasizes the relationship that inhabitants have with their urban environment, whereby the memories created through urban artefacts and monuments give meaning to that city.

Archaeotecture's alternative methodological approach is an indirect result of, and critique of, contemporary building techniques and of the questionable conservation methods used in archaeological and historic urban environments. It argues that such trends consequently endanger the philosophically defining characteristics of a ruin as proposed in the essays 'Nostalgia for Ruins' by Andreas Huyssen and 'Causality: Ruin Time and Ruins' by Florence Hetzler. The design component of this essay emphasizes the idea that a ruin separated from its natural setting is no longer part of that ruin, since it has lost its sense of time, space and place.

The multi-ethnic and multi-religious ancient city of Tyre in southern Lebanon, as a UNESCO World Heritage Site, will be investigated through its fragmented urban artefacts to propose solutions to encourage communal unity, via an appreciation and merging of archaeological heritage with new architecture. Given that Tyre continues to suffer from sectarian tensions, causing also seemingly uncontrollable urban expansion, the visually unobtrusive nature of Archaeotecture deliberately avoids any explicit ideological impositions in its efforts to reconcile this divided city, whilst also promoting archaeological activities that can maintain a romanticized state of ruination.

Keywords: Archaeotecture; Archaeology; Ruins; Nostalgia; Excavations

Keyword Summary

Ruins (from Andreas Huyssen, 'Nostalgia for Ruins')

'The architectural ruin is an example of the indissoluble combination of spatial and temporal desires that trigger nostalgia. In the body of the ruin the past is both present in its residues and yet no longer accessible, making the ruin a powerful trigger for nostalgia.' [1, p. 7]

Ruin Time (from Florence M. Hetzler, 'Casualty: Ruin Time and Ruins')

'Ruin time, proposed as the principal cause of ruin, serves also to unify the ruin. In a ruin the edifice, the human-made part, and nature are one and inseparable; an edifice separated from its natural setting is no

longer part of a ruin since it has lost its time, space and place. A ruin has a signification different from something merely human-made. It is like no other work of art and its time is unlike any other time.' [2, p. 51]

Ruin Value (from Albert Speer in 'Ruinenwerttheorie')

The Ruin Value Theory is the notion that the building designed as planned ruins, through the use of natural materials, will enter a natural and aesthetically pleasing state of decay in future when left behind without maintenance.

Collective Memory (from Aldo Rossi, *The Architecture of the City*)

'The city itself is the collective memory of its people, and like memory, it is associated with objects and places. The city is the locus and the citizenry becomes the city's predominant image, both of architecture and of landscape, and as certain artefacts become part of its memory, new ones emerge. In this entirely positive sense, great ideas flow through the history of the city and give shape to it.' [3, p. 130]

Palimpsest (from Meriam-Webster Dictionary, 2016)

A manuscript or piece of writing material on which later writing has been superimposed on top of effaced earlier writing; something reused or altered but still bearing visible traces of its earlier form.

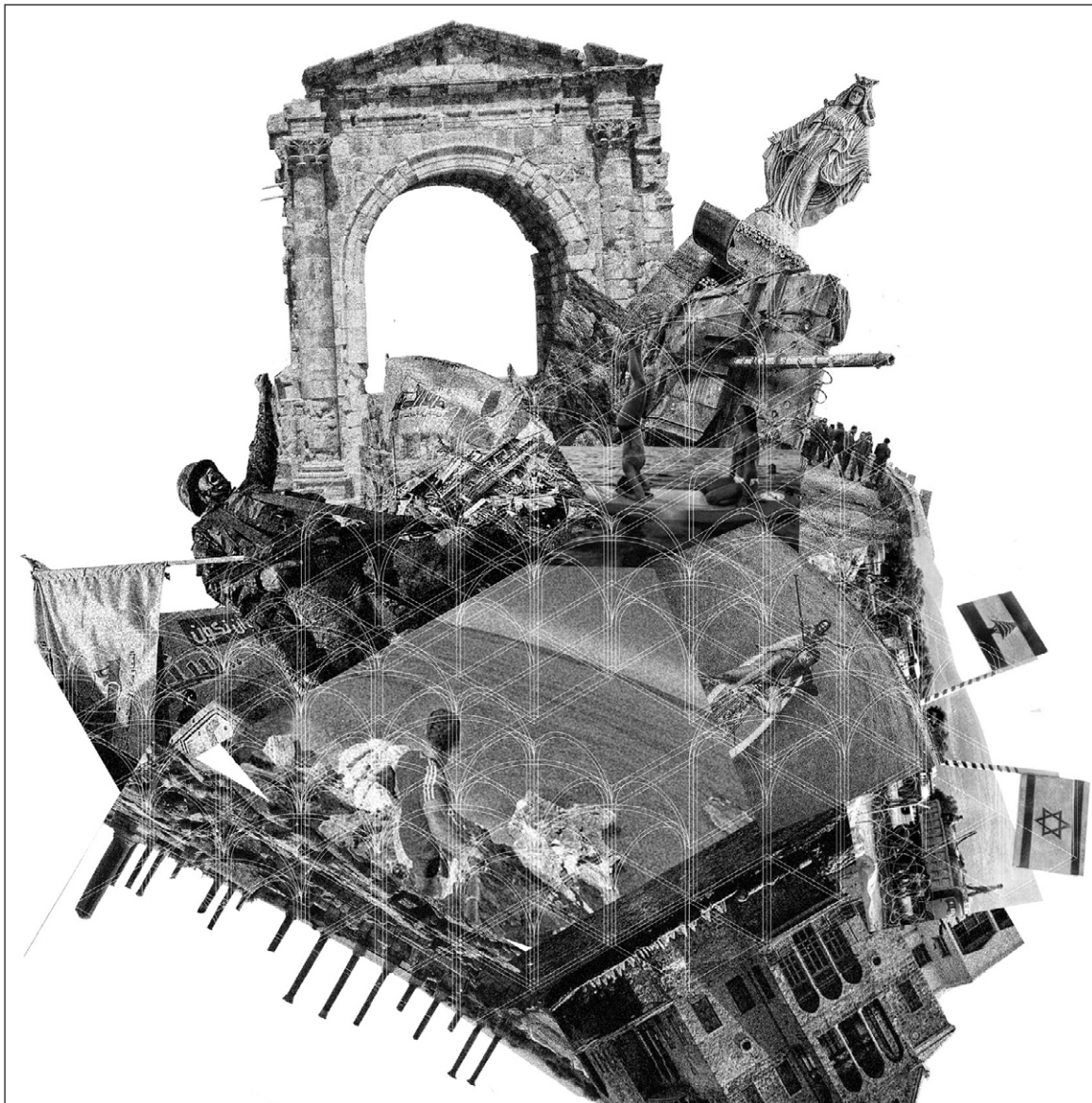


Figure 1: Sects and the City, showing a chaotic cultural mosaic of contradicting ideologies (Drawing: Karl Abi Karam).



Figure 2: Tyre today, with points of interests (Drawing: Karl Abi Karam).

Tyre: Setting the stage

The ancient city of Tyre, renowned for its mythical legends in popular culture such as the birthplace of Europa and of Queen Dido, founder of Carthage, as well as numerous literary works like Shakespeare's Jacobean play, *Pericles of Tyre*, has become a battleground for opposing modernities steeped in sectarianism and confessionalism. In addition to its cultural layers of Phoenician, Greco-Roman, Byzantine, Arab and Crusader remains, the present-day old town of Tyre occupies the social status of being a perpetual palimpsest. As noted, a palimpsest creates a identifiable 'duality between the existing layers of meaning accumulated through time, and the act of erasing them to make room for the new to appear' [4, p. 218]. The contrasting residential districts of the old town of Tyre inevitably force its inhabitants to create distinct communal enclaves to minimize ideological transgressions, despite the apparent urban and ethno-religious symbols that inevitably create a 'relentlessly surreal image of the other' [5]. By maintaining these defensive stances within their own urban sectors, Tyre has inconsequently abandoned a sense of collective custodianship over its archaeological heritage. Today, these traces of its rich history lie silent and ignored. Ironically, the nostalgia for ruins, popularized by the famed pre-Islamic Jahiliya poetry of 'wuquf-al-atlal', also permeates Lebanese society as it laments the past that it knew before the explosive urban growth of the twentieth century.

An architectural intervention that upholds the theme of nostalgia, as discussed by Andreas Huyssen, as well as the philosophy of 'ruin time' proposed by Florence Hetzler, could be the remedy for the current situation in Tyre. Contemporary society in many countries is inevitably nostalgic for ruins of the past, since they seem to hold a promise that has vanished in the age of industrialization and modernity: the promise of an alternative future [1, p. 9]. Despite this general lamentation about the past, many of the archaeological remains in Tyre have in fact been subjected to vandalism and to questionable conservation techniques that have, irreversibly, sanitized its nostalgic lure. While these ruins have continued to succumb to the forces of nature, 'à la Piranesi', they have likewise fallen victim to squatting, unregulated school trips, looting, and unregulated construction projects, threatening those very elements that constitutes Hetzler's theory of ruin time. Furthermore, the tension between ethno-religious groups in Tyre, and the impending fear of a potential outbreak of war between Israel and Hezbollah, is stifling potential archaeological projects in the city, as

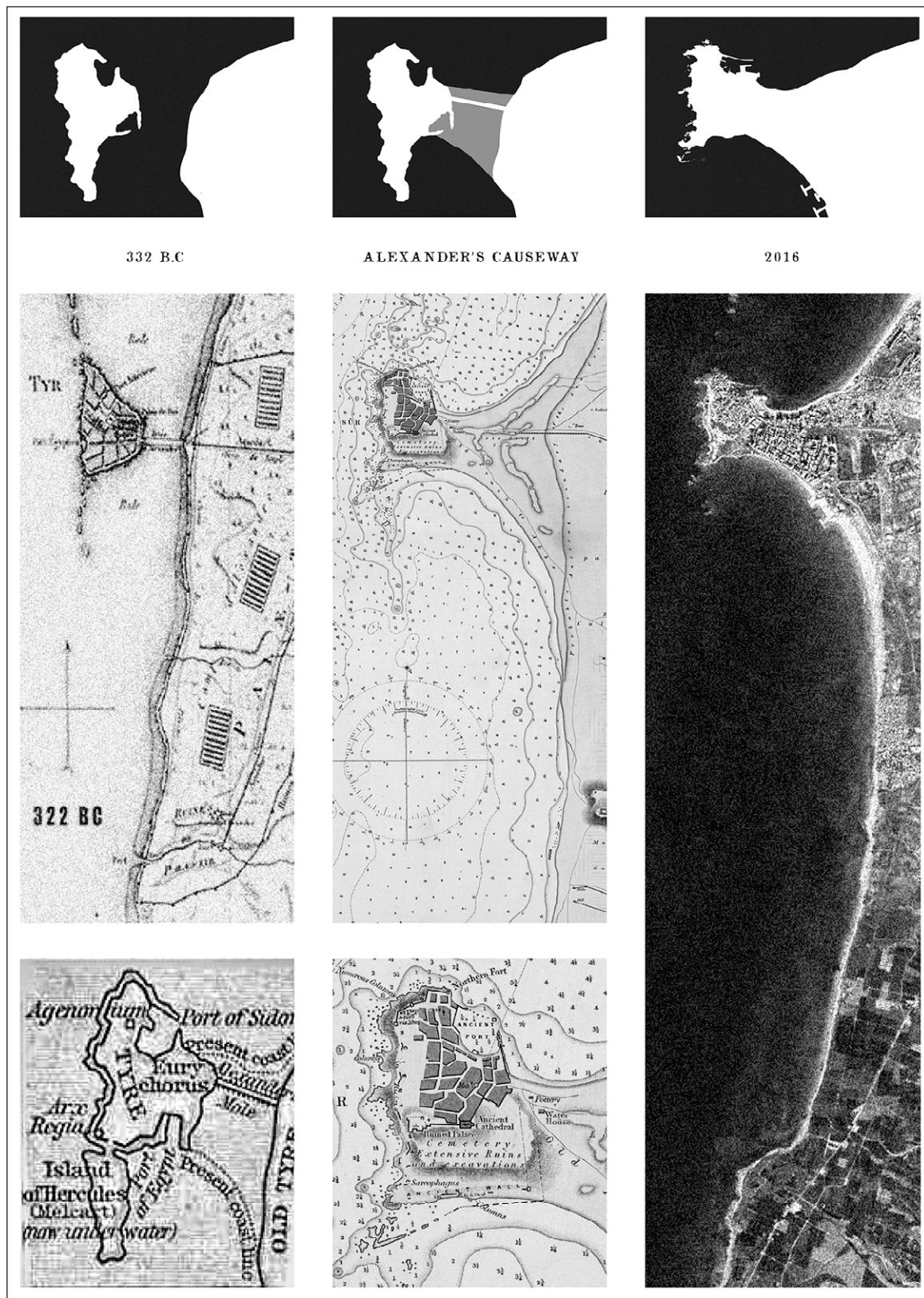


Figure 3: Urban transformations of Tyre throughout the ages (Drawing: Karl Abi Karam).

well as commercial tourism and infrastructural development. This causes Tyre to retain its sleepy port town feel that it has unintentionally embraced since the eighteenth century.

The inability in Lebanon to sustain a unified government to resolve ethno-religious tensions has allowed Tyre to follow a pattern of chaotic suburban sprawl that nurtured the growth of local Palestinian refugee camps. This inevitably creates severe visual and physical intrusions into its historic urban fabric and main archaeological zones. In order to produce a collective urban memory and reconcile the fragmented city of Tyre, the proposal here is that a design-based approach is needed to interpret its archaeological remains fully within their cultural, social and landscaping context. While museums are generally born out of the sacralisation required by national legitimization [6, p. 294], the city of Tyre instead must be subjected to alternative methods of musealised preservation because of the conflicting local narratives that continually defer its path towards some form of unification.

This dissertation will therefore explore the socio-political urban narratives of Tyre, and will aim to merge archaeological and architectural professions in order to tackle the multi-faceted relationships between its existing heritage elements. In addition, my design research approach will also serve as a critique of current architectural conservational practices that are counterintuitive in terms of maintaining a ruin's lure, especially when it is now sited amid a 'concrete jungle', just as is the case in Tyre.

Tyre through history: Cycles of rise and fall

The island city of Tyre was a maritime mercantile powerhouse of the ancient Mediterranean world in which its inhabitants, the Phoenicians, played an important role in the diffusion of cultures between the East and the West. The various independent Phoenician city-states did not consciously adapt doctrines of political expansionism and control but sought only to establish trading outposts, yet inevitably, they created an empire of relatively peaceful commercialism [7, p. 13]. Tyre, derived from the Semitic word 'sur', meaning rock, was an island city founded around 2750 BCE according to Herodotus in *The Histories*, making it now the twelfth oldest continuously inhabited city in the world. Despite enjoying a relatively autonomous status under Achaemenid Persian rule, its 46-metre-tall fortified walls situated on the rocky island proved to be no match for Alexander the Great's military prowess. In 332 BCE, Alexander ordered the Macedonian army to construct a one-kilometre-long causeway, which was no more than two metres deep, over to the island of Tyre in order to breach its walls by deploying siege towers and movable artillery. According to a study by France's National Centre of Scientific Research led by a geo-archaeologist, Nick Marriner, this causeway was able to alter the coastal currents and flow of sand, 'helping permanently join the island of Tyre with the mainland' [8, p. 184]. As a result, the isthmus became a defining factor for the urban expansion that occurred during the later Greco-Roman period, and which continued to prosper thereafter.

According to a book titled *The Geography*, as written by Greek geographer, Strabo, in the first century CE, he described Tyre's architectural endeavours as being even more impressive than those of Rome, emphasizing its multi-storied houses and the size of its urban development. The city, despite the gradual decline of Phoenician civilization, continued to hold onto to its mercantile roots as an economic hub for the eastern Mediterranean region. In recognition of the city's commercial importance, Emperor Trajan allowed Tyre to mint its own official currency, and thus this emblem of the city spread to all corners of the Roman Empire. While its urban environment surpassed many of the great cities of the Mediterranean Sea in the ancient world, the city began to decline once the Eastern Roman Empire began to lose its foothold in the Middle East in face of Islamic Arab invasions during the early seventh century. Furthermore, from the tail end of the Christian Crusades through until the eighteenth century, Tyre was scarcely mentioned in records, except for brief mentions in traveller's accounts as a desolate and barren land that lay in ruins. After its sacking in 1793 by the Ottoman Empire, the remains of the devastated city primarily served as a quarry, which means that the city's stones and columns can today be found across the Near East and Anatolia. Tyre's growth was severely stifled as a consequence, and indeed it only began upon recovery after the defeat of the Ottoman forces in the First World War.

Tyre in modernity: The consequences of confessionalism

The quest to uncover the history of Phoenician civilization in Lebanon was conducted through several archaeological expeditions from the turn of the twentieth century, following on from clandestine digs during the late nineteenth century that had done much to disturb the sites found in Tyre. Most of the notable discoveries during the 1920s were led by Antoine Poidebard, a French archaeologist who pioneered the use aerial archaeology in the Middle East, along with Emir Maurice Chehab, the first Director General of Antiquities of Lebanon, and who was also later to lead excavations after the Second World War. The symbolic importance

of Tyre, which retaining its sleepy port town feel, being nothing but a husk of its ancient glory, persisted well after the formation of the Lebanese national constitution of 1926 – a document that enshrined the national ideology of the new country, still under French ‘protection’. Proponents then of a distinctive form of Lebanese nationalism, known as Phoenicianism, supposedly distinct from Arab culture, argued that Tyre had championed the first-ever civilization rooted in the ideals of being a multinational trading empire. Despite this heavily romanticized notion, archaeologists and historians do now generally agree that the expansion of ancient Phoenician trade was in fact a Tyrian initiative. Arguably, the promotion of Phoenicianism in Lebanon from the 1920s was indirectly propelled by excavations in Tyre, as well as by those who supporters of Henri Lammen’s rhetoric in *La Syrie: Précis Historique*, written in 1921, in which he wrote about Lebanon as a Phoenician nation that evoked a pre-Islamic cultural imaginary [9, p. 116]. This mid-twentieth-century ideology of Phoenicianism, drawn mainly from Christian right-wing political parties, was hence created as a direct response to the rising popularity of pan-Arabism in the Middle East during the period.

After the granting of Lebanese independence in 1943, amid the Second World War, the nation experienced a short-lived era of economic prosperity before the so-called ‘Crisis of Lebanon’. In 1958, the country was threatened by a civil war between Maronite Christians and the Muslim population after its President, Camille Chamoun, decided not to sever ties with the western nations that had attacked Egypt during the Suez War. By maintaining a pro-western stance against the rising tides of Arab nationalism, as led by the Egyptian president, Gamal Abdel Nasser, the 1958 crisis escalated religious and socio-political tensions in Lebanon, triggering a three-month period of US military intervention, considered to be the first application of the Eisenhower Doctrine (which aimed to combat the spread of Communism in the region). This political move however proved as a decisive factor in creating a rift within the historic urban fabric of Tyre, whereby which Chamoun’s supporters built a road that separated the northern Christian quarter from its southern Muslim counterpart [5]. It is a separation that continues to permeate today within the psychology of Tyre’s urban composition, affecting its respective communities.

Subsequently, the presence of Palestinian refugees began to grow in Lebanon after the creation of the State of Israel in 1948. One of the first transit Palestinian camps, Al Bass, situated north of the archaeological site of Tyre’s Necropolis, added more to the urban divisions. Following the outbreak of the Lebanese Civil War in 1975, Tyre was transformed into a battleground for foreign powers, being heavily damaged during the Israeli invasion that triggered the South Lebanon conflict in 1978. In addition, Tyre experienced heavy artillery fire from Israeli forces during the 1982 Lebanon War, given that the Palestinian Liberation Organization (PLO) were conducting their military operations from the city. According to the Biblical Archaeology Review in 1982, ‘the PLO placed the ancient Roman ruins of Tyre off-limits even to its Lebanese custodians and turned the site into a PLO arsenal’ [10, p. 75]. Yet, curiously, reports indicate that the site did not experience serious damage during this conflict. Furthermore, despite the excessive bombardment that resumed during the 2006 Lebanon War between Israel and Hezbollah, according to *National Geographic* [11], the archaeological zones in Tyre remained unscathed despite Israeli ground and air operations, whereas some of the individual ruins continued to be affected by vandalism, poor urban planning, and systematic looting. Ever since Tyre’s ancient archaeological zones were inscribed as a UNESCO World Heritage Site in 1979, some major conservation and redevelopment projects have been undertaken by the Cultural Heritage and Urban Development Project (CHUD), a body that is financed by the World Bank. Despite the rehabilitation of several pieces of infrastructure, including the western cornice, the city’s urban memory remains heavily fragmented.

Tyre today: An investigation into current urban issues

‘Like the two faces of Janus: what is real in one isn’t in the other, and the presence of one necessitates the existence and dissimilarity of the other’ [12].

The contemporary city of Tyre, with a population of less than 200,000 people, is located about 50 kilometres south of Beirut and roughly 20 kilometres north of the United Nation’s ‘Blue Line’ that borders Israel. As the city continues to suffer from ethno-religious division, the government-sponsored media campaigns such as ‘LiveLoveLebanon’ has branched out to create ‘LiveLoveTyre’, portraying the city in a positive light and brimming with beach activities and a vibrant nightlife. Tyre is advertised as a tourist haven where one could easily be forgiven for assuming that the photographs were taken in a southern European setting [13]. While the ‘LiveLoveTyre’ campaign is being promoted by user-submitted images from mostly Lebanese nationals, on a platform that is being carefully curated by the government, the actual built environment of Tyre portrays a different scenario. The ethno-religious tensions that have persisted after the

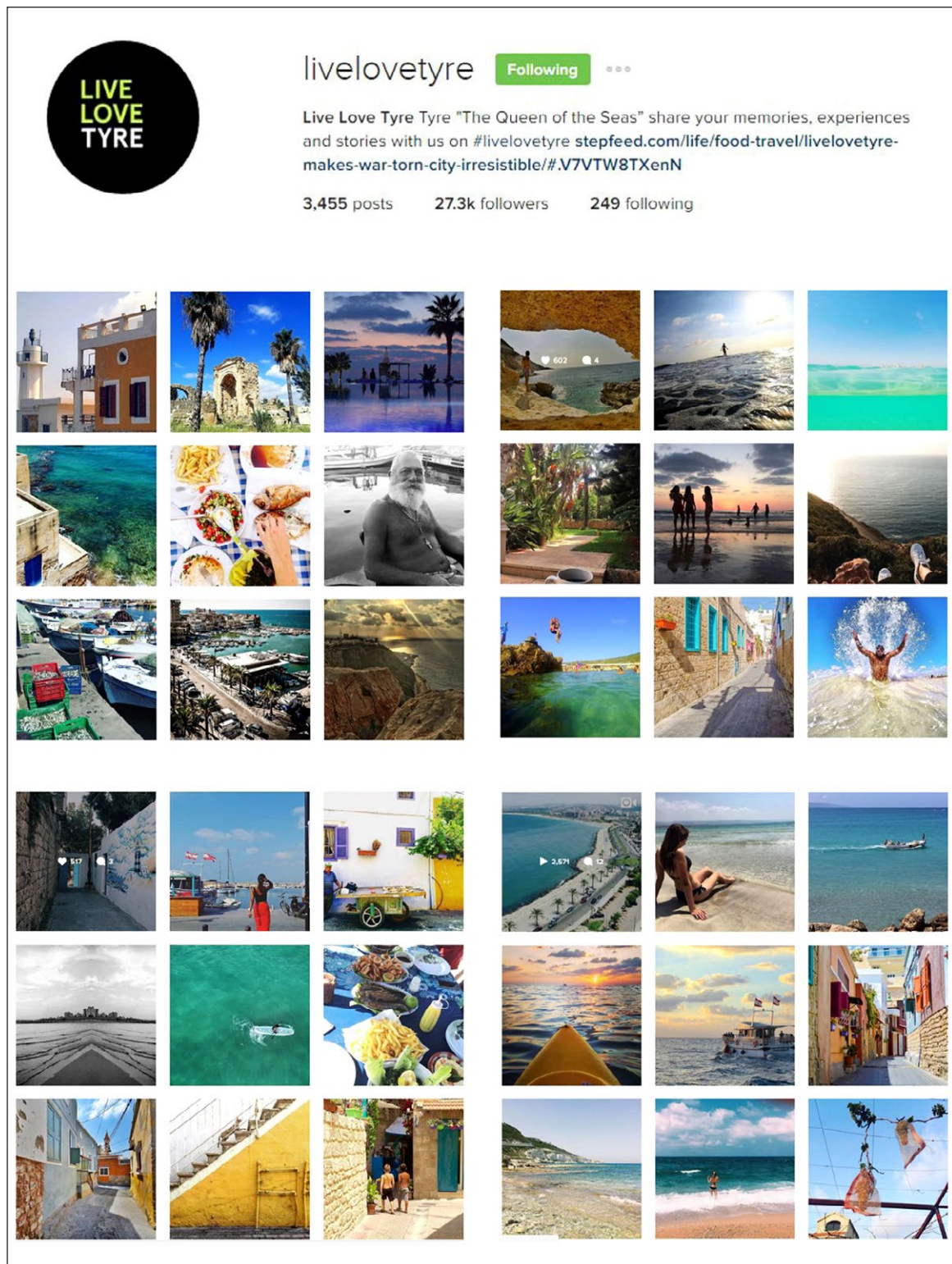


Figure 4: #LiveLoveDenial? (Photographic composite: Karl Abi Karam).



Figure 5: Contesting urban artefacts, as shown by political posters and religious symbols (Photographs: Karl Abi Karam).

ending of the Lebanese civil war in 1991, and the addition now of Syrian refugees to the already bulging Palestinian refugee camps, due to the outbreak of the Syrian Civil War in 2011, has pushed Tyre into a further phase of urban sprawl, inevitably creating physical and visual intrusions upon its historic zones. As the sources of external and internal socio-political problems escalate, and Tyre falls into urban ruin, any further archaeological discoveries and heritage initiatives are now stalled.

The Palestinian refugee camp of Al Bass and the unregulated construction of concrete apartment blocks are together creating chronic physical and visual intrusions within Tyre's historic areas. While the Tyrian populace often criticizes the Lebanese government's failure to protect and manage its heritage sites, while avoiding any direct accusations towards Palestinian refugees, there is an informal consensus that 'the camps in key parts of Tyre imperilled the region's heritage', since the 'most important archaeological and historical sites are under the Palestinian camps' [14]. However, Palestinian refugees are quick to deny that their presence poses a threat to these archaeological zones, and often claim that they are privileged to have such direct access to these ancient sites. Such statements appear to have reassured the concerns of the International Association to Save Tyre (IAST), yet the historical sites, including the Imperial City's hippodrome and the Al Mina site, have clearly become dumping grounds. Extensive damage is also evident, since many of the ruined sarcophagi are now being used to deposit rubbish, meaning that the remaining bone fragments of Tyre's ancient citizens, who once lived under Greco-Roman rule, are now mixed up with cans, bottles and empty cigarette packets. One can also spot traces of looting in which thieves have deliberately chipped off important pieces of the ancient statues and sarcophagi. Furthermore, the wooden barriers that separate the pathways from the protected sites are frequently breached, and work on the historical museum, constructed by CHUD over the Roman catacombs, appears to have been temporarily halted, with its rusting metallic architectural materials moving fast towards a dilapidated state. Other issues have also spread to the Tyrian shoreline, with reports indicating that several Phoenician shipwrecks have been looted, and that criminals are now often rigging these underwater historical sites with dynamite to ward off archaeologists. With strong condemnation from UNESCO due to the current lack of conservation efforts in Tyre at a governmental level, rumours have also surfaced that city might have its valued status as a World Heritage Site revoked [15]. Arguably, these concerns about civic and governmental failure to protect its heritage can be pinpointed to Tyre's sectarian divisions, as are expressed in its contemporary built environment.

Tyre's two distinctive cultural enclaves, following opposing ideals of modernity, can be found in the eastern sector of the city, across the isthmus from the suburban sprawl and the ancient remains of Tyre. The Christian quarter, often portrayed as an 'urban utopia', is characterized by a series of expansive courtyards with its twentieth-century stone houses complimenting the winding streets in a highly picturesque manner, in stark comparison to the adjacent, poorer Muslim quarter. A low birth-rate among the Christian population has allowed its housing area to become less densely populated, inevitably creating better living conditions. As well as holding a smaller population, many of the houses in the Christian quarter are now rented out to tourists or have been sold to business entrepreneurs, which in turn have transformed Tyre's northern shores into ideal locations for boutique hotels, restaurants and pubs. With alcohol being served freely as tourists and nationals sunbathe under the Tyrian sun, the built environment in this quarter indeed feels idyllic. The Muslim southern quarter offers a very different perspective. As well as high birth-rate, the streets here are narrower, and an impression of overly densified urban spaces is accentuated by many closed-off courtyards, 'offering blank walls to the outside' [5]. Despite the Muslim quarter being situated around the old souk and possessing what is clearly a far more vibrant street life, the more favourable social conditions in the Christian northern quarter can be seen spatially as unintentionally constructing a sense of cultural supremacy of one over the other. This urban divide is being created as much through contested ethno-religious practices and ideologies as by the economic class struggle that has created these distinctive communal enclaves, thereby also ignoring the rest of Tyre's urban zones.

By using Aldo Rossi's concept of collective memory as a theoretical apparatus for defining a city, Tyre's urban fabric can be seen to offer a rather fragmented and disjointed composition. In identifying what constitutes its collective memory – such as monuments, preservation projects, historic sites and public institutions – it becomes evident that Tyre's divided enclaves do not share any common urban artefacts. It is quite different from what Rossi had in mind. 'What is clear that primary elements and monuments, because they directly represent the public sphere, acquire and increasingly necessary and complex character which is not easily modified. The residential quarter, being an area, has a more dynamic character, but it nevertheless depends on the life of these primary elements and monuments and participates in the system constituted by the city as a whole', he wrote [5, p. 95]. In Tyre, therefore, due to a lack of shared monuments and a natural



Figure 6: Tyre's Christian northern quarter, as characterized by its picturesque seaside houses and boutique hotels (Photographs: Karl Abi Karam).

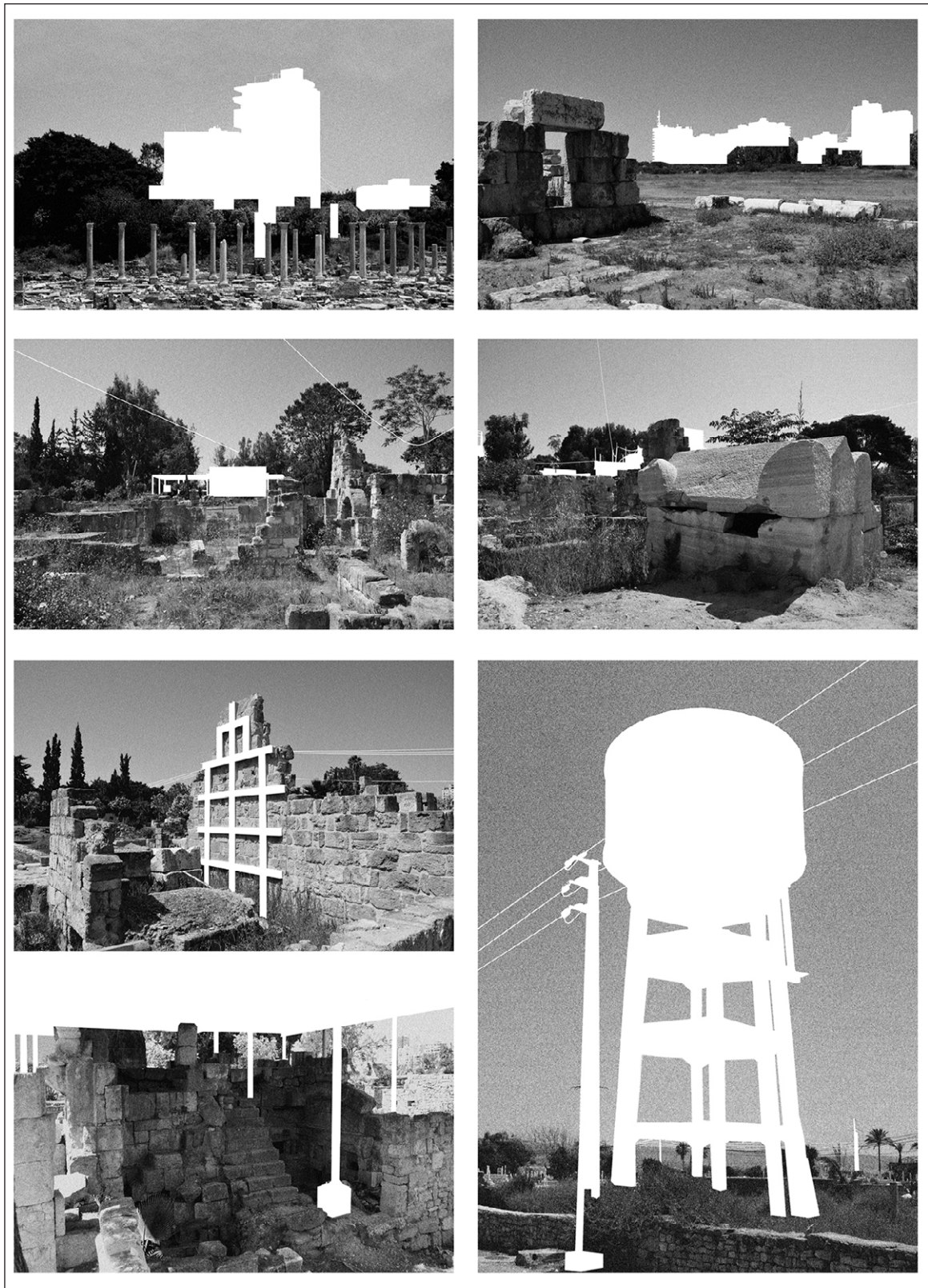


Figure 7: Visual intrusions at Tyre's archaeological sites, depicting contrasting elements of antiquity and modernism (Photographs: Karl Abi Karam).



Figure 8: Scattered ruins along the sleepy Tyrian shore (Photographs: Karl Abi Karam).

inclination for its Christian and Muslim quarters to adhere to their sectarian lines, as demarcated by their respective symbols, it means that preservation projects are rarely pursued. Inevitably, in such a situation, the UNESCO World Heritage Site loses any sense of belonging to a collective and national custodianship. Efforts in many countries to encourage collective memory through the secularization of societies with such strong ethno-religious divisions have proven problematic. To further complicate the problem, the city of Tyre cannot possibly be classified in terms of Samuel Huntington's tendentious 'civilizational divides' [16] as either being a western, Orthodox, or Islamic city, given that its old town has over time been equally divided in an aggregated fashion, both spatially and demographically, in a way that mirrors the national scale. With its diverse ethno-religious groups today consisting of Shia Muslim, Sunni Muslims, Maronite, Melkite Greek Catholic and Greek Orthodox, along with a further separation of diverse political holdings, this challenges the notion of defining the core identity politics of Tyre. Without spaces of congregation and plazas to encourage a much needed dialogue between contested visions and pluralistic identities, the town criers that were once found in its city squares, and the pleas to save Tyre's historic urban environments, can now only be really heard on social media.

A Tyrian dilemma: The future of ruins within contemporary culture

Indeed, various social media platforms such as 'Old Beirut Lebanon' and 'The Lebanese Heritage' are dedicated to posting a variety of vintage photos and antique prints regarding Lebanon's past. However, they are often met with negative comments filled with remorse about the loss of cultural heritage. Other social media campaigns have been initiated to save other historic city centres in the country, most notably the capital's 'Save Beirut Heritage' that involves activists from a variety of ethnic and socio-political backgrounds under one banner of heritage protection. However, the city of Tyre has yet to experience any such movement on a similar scale. While the efforts of CHUD have often been commended at a national and international level in regard to its efforts to conserve and rehabilitate the waterfront and several historic buildings in Tyre, including the Mameluke House and the nineteenth-century Evangelical School, urban divisions persist despite such accomplishments. Arguably, attempts to resort to traditional conservational methods have to be seen as cosmetic applications that fail to provide sufficiently surgical treatment for the city's historic fabric.

As mentioned above, a popular literary form during the pre-Islamic Jahiliya period, known as 'wuquf al atlal' – which translates as 'standing by the ruins' – expresses a common theme in which a lover stands over the ruined home of a loved one, and still resonates so strongly in Lebanon today. The popularity of this poetry has been attributed as result of 'the anomie and psychological trauma' of the country's bitter civil war [17]. This seems to further confirm a general fascination with ruins whenever society begins to evolve drastically at an unprecedented rate, as in the recent Lebanese impetus towards what is described as turbo-capitalism. According to Nina Dubin's book, *Future and Ruins*, which explores those works that depict the ruination of past civilizations in a consciously nostalgic and romanticized fashion, they serve as a symbolic representation of societies that are experiencing an estrangement of their past because of rapid change in their built environments [18, p. 2]. In the current age of market-driven urbanism and ever more materialistic cultures, the notion of authenticity is now approached through architectural 'face-lifts' that are creating built commodities which are continuously being recycled. The future of the state of ruins, ironically, seems bleak, since it appears to have no place within a material culture that emphasizes the recycled. Nostalgic values are often criticised as a factor that impedes societal progression, 'whether they are framed dialectically as philosophy of history, or sociology, and economically as modernization' [1, p. 7]. Inherently, as Gustav Mahler's famous dictum might suggest, nostalgia may be regarded as a form of worshipping the ashes rather than of passing on the flame to future generations. However, Huyssen suggests that the very nature of nostalgia is dichotomous, consisting both of the 'sentimental lament over a loss' as well as the 'critical reclaiming of the past for the purpose of constructing alternative futures' [1, p. 8]. To construct such an alternative future through the form of architectural intervention is hence to walk a difficult line between maintaining a ruin's integrity and retaining its authenticity.

There are important temporal and phenomenological aspects involved in this issue, as has been pointed out by Florence Hetzler:

'A ruin is thus a combination of various factors: of the art, science and technology that produced the structure in the first place; of nature including earth, rain, snow, wind, frogs and lizards; and of time, which causes an edifice to become a ruin. Time is the intrinsic cause of a ruin as a ruin. One should also note that all the senses save taste are employed in the appreciation of a ruin' [2, p. 51].

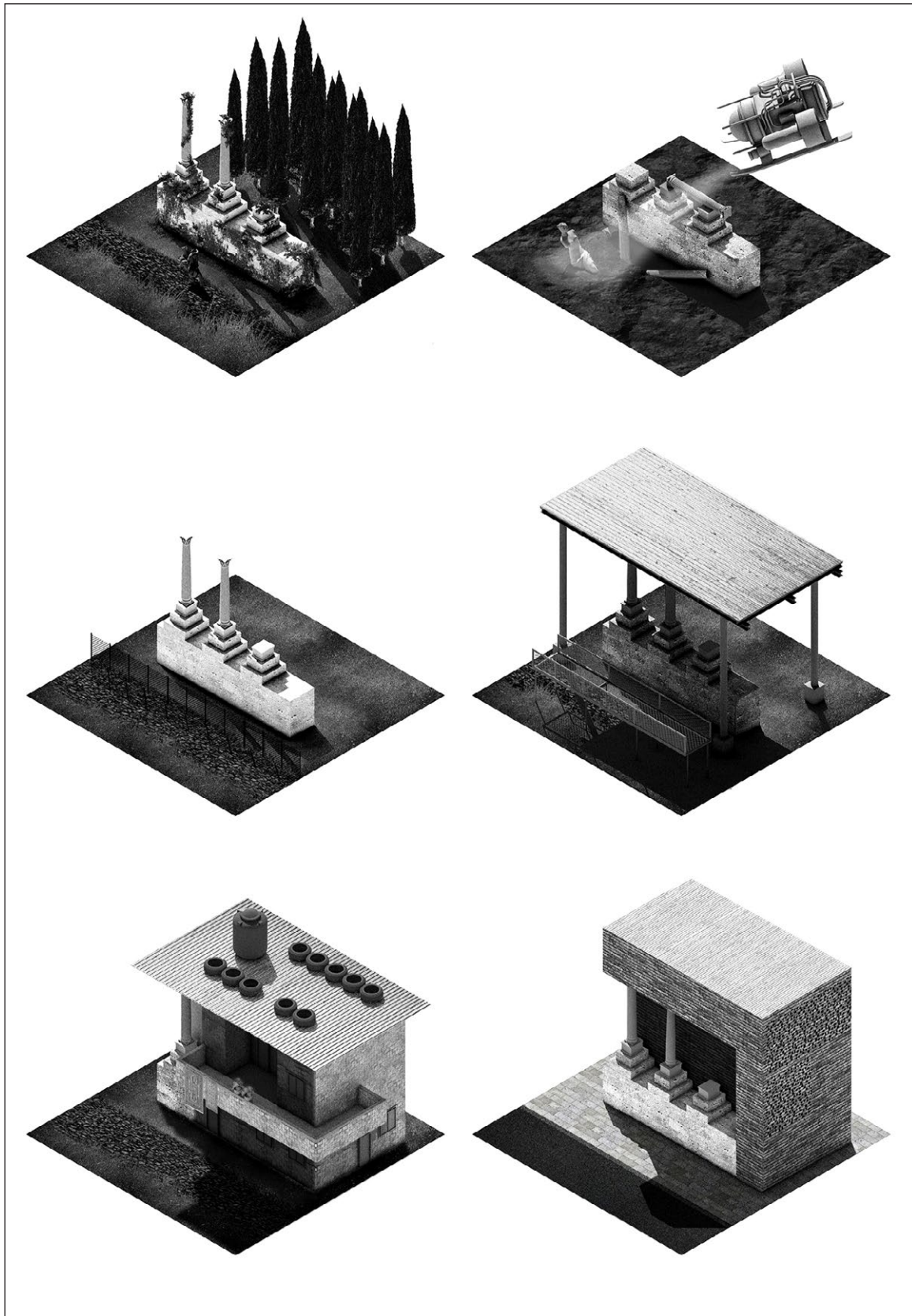


Figure 9: Archaeotecture's spatial typologies: the devolution of nostalgia. These diagrammatic renders visualize how Tyre's ruins can be imaginatively re-integrated into its built environment (Drawing: Karl Abi Karam).

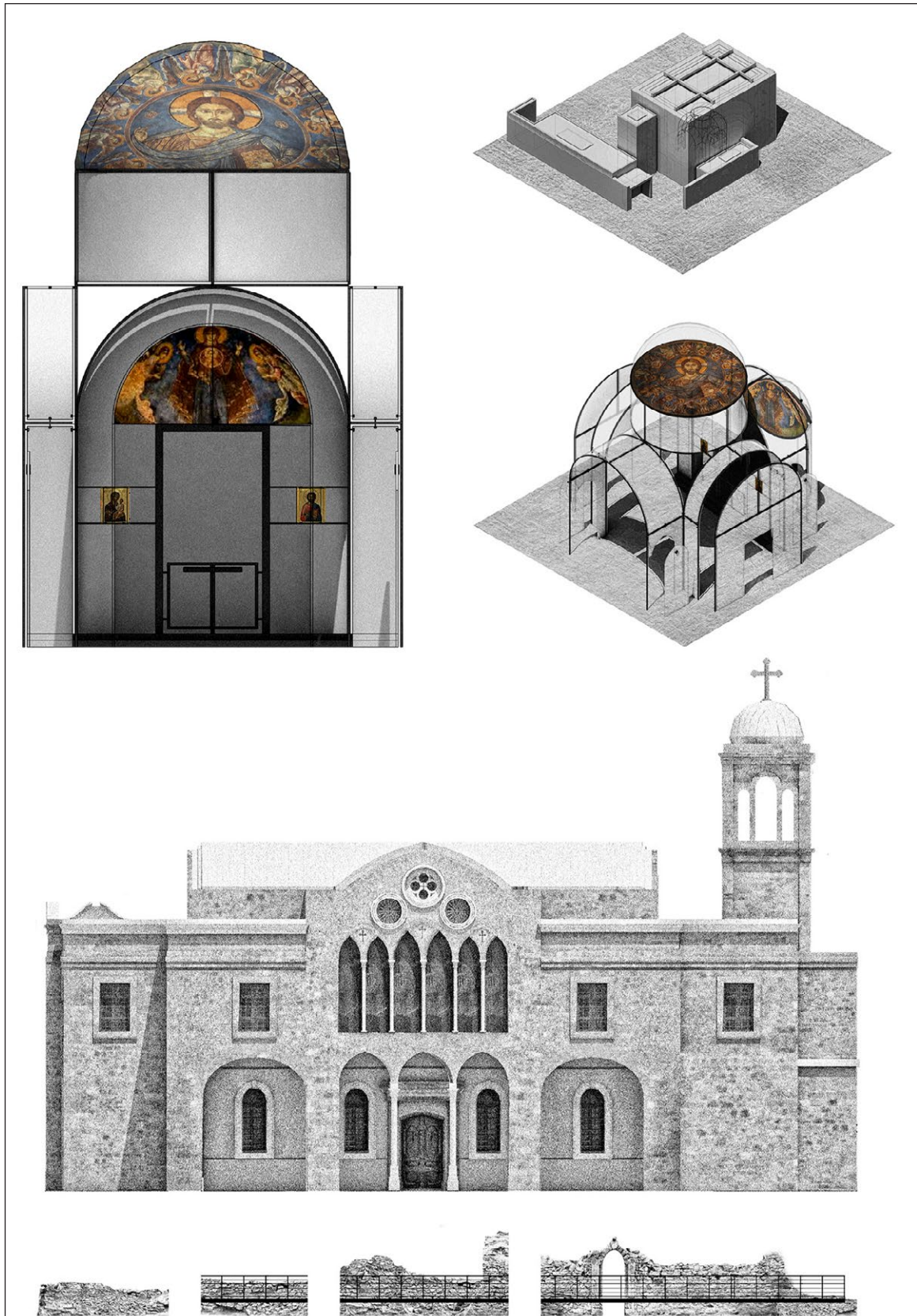


Figure 10: Sensitive selective historicism. Reconstructing spatial narratives through archaeology and architecture in the cases of St. George Cathedral in Beirut, Lebanon, and the New Byzantine Fresco Chapel in Houston, Texas (Drawing: Karl Abi Karam).

While the edifices of ruins therefore consist of a human-made part, through the way in which the original structure once used natural materials to construct it, its subsequent return to nature allows the architecture to once again become one with the land. However, through contemporary architectural interventions, which utilize ever more modern materials, the status of a ruin is inherently placed at risk. Huyssen observes that 'modernist architecture refuses the return of culture to nature' [1, p. 20], because glass and concrete are not subjected to natural erosion and decay, and therefore produce rubble instead of ruins. 'No art can capture simultaneously nature plus the human made plus the human being plus the original place' agrees Hetzler [2, p. 55]. While Albert Speer, Hitler's chief architect during the Second World War, proposed the minimum of construction materials in his efforts to design planned ruins, seeking to avoid the creation of mere rubble, the problem is that such a methodology – with its open intention of producing aesthetic ruins for the future – is often associated with Fascist tendencies. Albert Speer's aim was to encourage the process of natural decay in order to communicate the accomplishments of a nation, similar to Greco-Roman ruins [19, p. 231]. With the negative connotations that nostalgia holds today, and the troubled ideological basis for Speer's concept of planned ruins, many architectural interventions only create issues in regards to materiality, causing frictions between secular and political claims over the built heritage. This can be examined by looking briefly at a few case studies that have attempted to address the dilemma.

Museal issues: Reconstructed historic spatial narratives

Given that many contemporary societies continue to debate issues about historical authenticity, and their responses to the implications of artistic works like Robert's and Piranesi's famous depictions of ancient ruins, alternative methodologies therefore need to be proposed if we ever wish to overcome the crisis arising from the potential disappearance of ruin time: i.e. the ability to grow old and decay gracefully. However, most architectural efforts in this regard, while claiming to be attentive and considerate to the historic built context, have only exacerbated the problem.

For example, the Byzantine Fresco Chapel designed in 1997 for Houston in Texas, USA, by an American architect, Francois de Menil, replicates the form of a typical Byzantine chapel through its use of suspended opaque glass, rough stonework and rich woods to create a spatial presence encompassing both a spiritual and museal nature. This project, through its minimal design and its use of different textures, aimed to create a new context for displaced icons that had been initially stolen and then sold illegally during the Turkish invasion of Cyprus in 1974. However, the frescoes and their incorporation into a familiar composition despite its seemingly alien use of materials, directly diminishes the essence of ruin time. Much like the reconstructed Temple of Dendur in the Metropolitan Museum in New York might be considered for historical and educational reasons as a work of art, the Byzantine Fresco Chapel cannot however be considered as a ruin, since it has lost its own particular time, space and place. 'Time creates the ruin by making it something other than what it was, something with a new significance, and signification, with a future that is to be compared with its past,' writes Hetzler. 'Time writes the future of a ruin' [2, p. 54]. This is true also of other case studies such as the eighteenth-century Greek Orthodox Cathedral of St. George in Beirut, which is built atop the remains of a sixth-century Eastern Roman Byzantine cathedral. The new museum, designed by a Lebanese architect, Yasmine Maakroun, and inaugurated in 2011, showcases these diverse historical layers through a subterranean and sequenced cultural path with 12 stops, each of them uniquely and museographically displayed [20]. Its current surface layer, being entirely glazed and clear, represents a spatial succession that sits upon the ruins of Hellenistic, Roman, Byzantine, Medieval and Ottoman eras. As a religious edifice, as well as a structural imposition, it makes a spatial claim over the historic remains, physically proposing itself as their architectural and ideological successor, while quashing their hope of existing independently in time.

While the St. George Orthodox Cathedral in Beirut seems an obvious architectural concept for religious purposes, as well as an attempt to reclaim the lost lineage of Byzantine presence in Lebanon, there have been other cases throughout history whereby the dangerous usage of archaeology and ancient monuments were applied in support of specific political agendas. A prime case study was the Museum of the Ara Pacis in Rome, where the use of archaeology and architecture proved counterproductive in trying to unify an urban collective memory. Benito Mussolini, leader of the Italian Fascist Party, and the prime minister from 1922 to 1943, wished to use architecture and archaeology to legitimize his power by a glorification of Rome's past. Throughout his rule, he began slowly to associate himself with Rome's first emperor, Augustus Caesar [21, p. 126]. Mussolini commissioned an Italian Rationalist architect, Vittorio Morpurgo, to design the plaza surrounding the mausoleum, as well as a museum to house the Ara Pacis, an altar

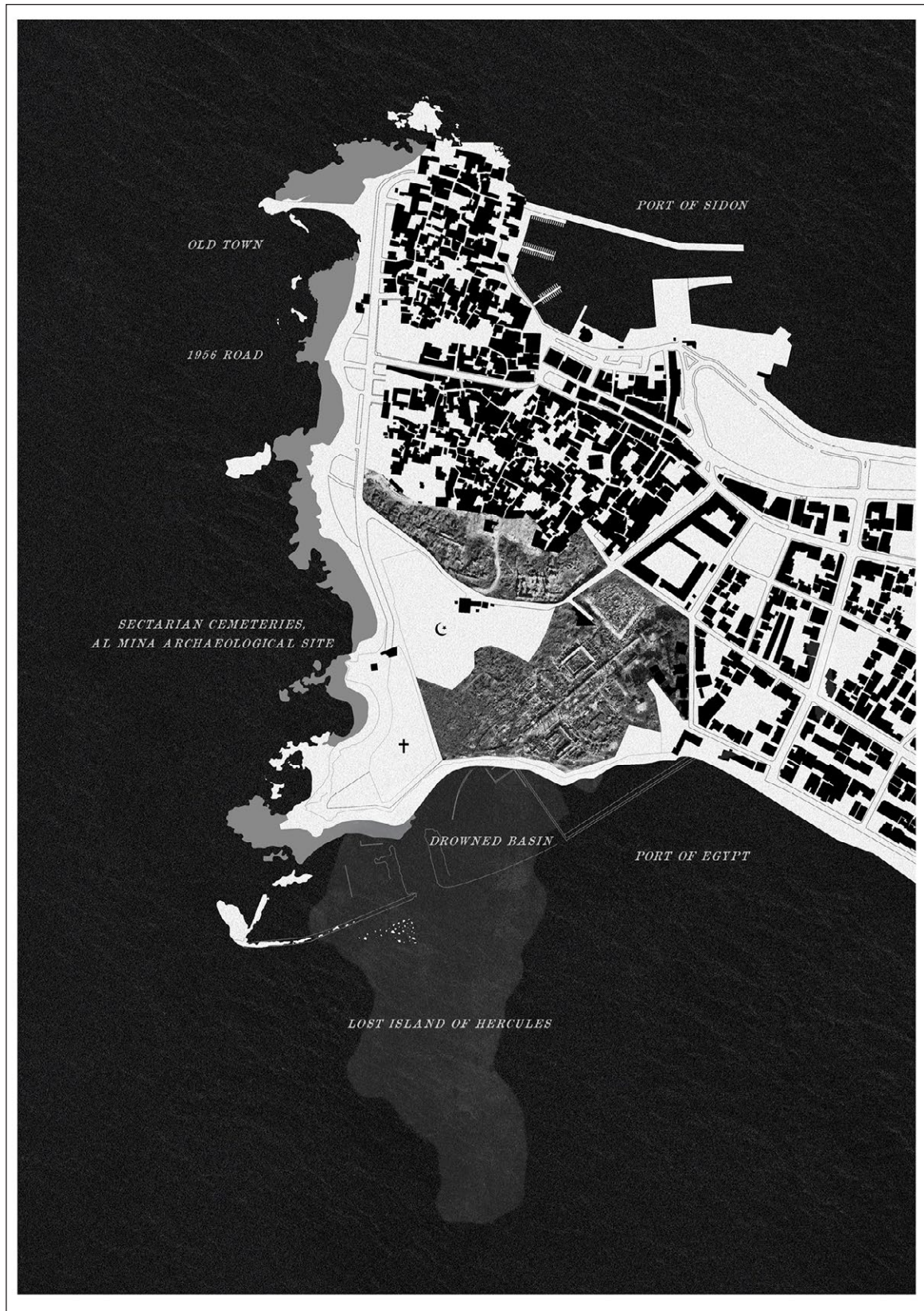


Figure 11: The old town of Tyre: a lost island full of urban memories and archaeological potential (Drawing: Karl Abi Karam).

dedicated to Pax, the Roman Goddess of Peace. Despite the work of archaeologists, architects and hydraulic engineers in uncovering the remaining pieces of this altar, the controversy posed by the project continues today within Roman society. An attempt to eradicate traces of its Fascist history was even attempted in 2000, when a new museum was designed by Richard Meier, a noted American architect. However, his scheme, when realised, faced heavy criticism because of its visual intrusiveness in a sensitive historic site, and because of its overtly modernist aesthetics [22]. A combination of the financial crisis of 2008, which presented difficulties in sustaining archaeological excavations and urban redevelopment, plus its troubled Fascist past, means that 'the Mausoleum of Augustus is separated from the life and energy of the city that surrounds it' [21, p. 131]. Despite the mausoleum having undergone multiple reuses over its history – including for defensive fortifications, agricultural cultivation, and even as a concert hall – the site today retains a fragmented urban memory because of Mussolini's harsh attempts to form an illusory national imaginary.

With this erasure of the ability to allow a sense of time and decay in historic built environments, due to contemporary architectural values, it is evident that drastic measures must be explored to remedy the dilemma faced by Tyre. In addition to finding a way to enable the nostalgic lure of ruins, as a vital part of our cultural belief system, alternative forms of space are also required so that architects are able to create more acceptable forms of visual intrusions within historical sites. Hence the design based-research proposition that will now be proposed seeks to explore a novel conception of archaeological excavations as a technique for space making within historic sites. In addition, the translation of this investigation into specific architectural designs for Tyre aims to avoid direct political agendas, and above all to uphold Hetzler's theory of ruin time.

Archaeotecture: The architectonics of archaeology

The approach offered by Archaeotecture is thus intended as an alternative, multi-faceted design-based methodology that combines the architectural and archaeological professions simultaneously. It aims to create an ongoing working dialogue in between the process archaeological excavation and architectural spatial creation process as influenced by the surrounding cultural, social and landscape context. While many university initiatives around the world have focused on issues of 'how to possibly resolve tensions between preservation, heritage management, renewal and urban expansion', it seems in actuality that 'professional practice does not seem ready to change its dynamics' [23, p. 293]. Such themes are rarely investigated in a constructive manner. Furthermore, the 'Architecture, Archaeology and Landscape' research initiative that has been conducted in recent years at Tiermes in Spain, like numerous workshops of the same nature, only attempts to propose strategies to enhance visitor experience by designing different methods of access and paths across the particular archaeological zone in question [23, p. 296]. In contrast, Archaeotecture envisages a more radical system in which archaeologists and architects simultaneously work together, using a reverse-palimpsest approach, to unveil the various archaeological layers.

To implement the Archaeotecture strategy successfully in the case of Tyre's ancient ruins, the design project here proposes a tunnelling system that is cast in place, and which uses a deliberate minimal design, so as to enable visitors to view the sites without excessive visual intrusions. While the archaeologists will continue to excavate and define the layers of soil that show signs of the strongest archaeological potential, by using their conventional methods such as geophysical surveys and remote sensing, their counterparts within the architectural team for Tyre will be designing a vaulted modular-based system that supports the subterranean investigations being carried out by the archaeologists. In turn, these vaults will also protect the excavated layers without any need to eradicate them in order to continue with their digging work. Typically in the field of archaeology, excavations are carried out as controlled explorations that involve the exposure, processing and recording of remains, usually carried out carefully and systematically in gridded trenches. Despite being regarded as a vital method for extracting knowledge about the past, it is also widely realised that the process of archaeological excavation is inherently destructive. Because of the activity of digging, the typical excavation can be seen as an irreversible procedure that 'removes both the artefacts and surrounding soil matrices from their original context' [24]. The objects/data that are extracted, known by archaeologists as the artefactual material, once it is removed, cannot then simply be put back into the same place in the ground given that the stratigraphic composition has been so drastically altered by the very process of digging. Therefore, it is highly advised, and indeed essential, for archaeologists to record meticulously the information they have extracted from a site by way of notes, photographs and drawings so that they can later reconstruct the trenches they have formed, if not ever in actuality.

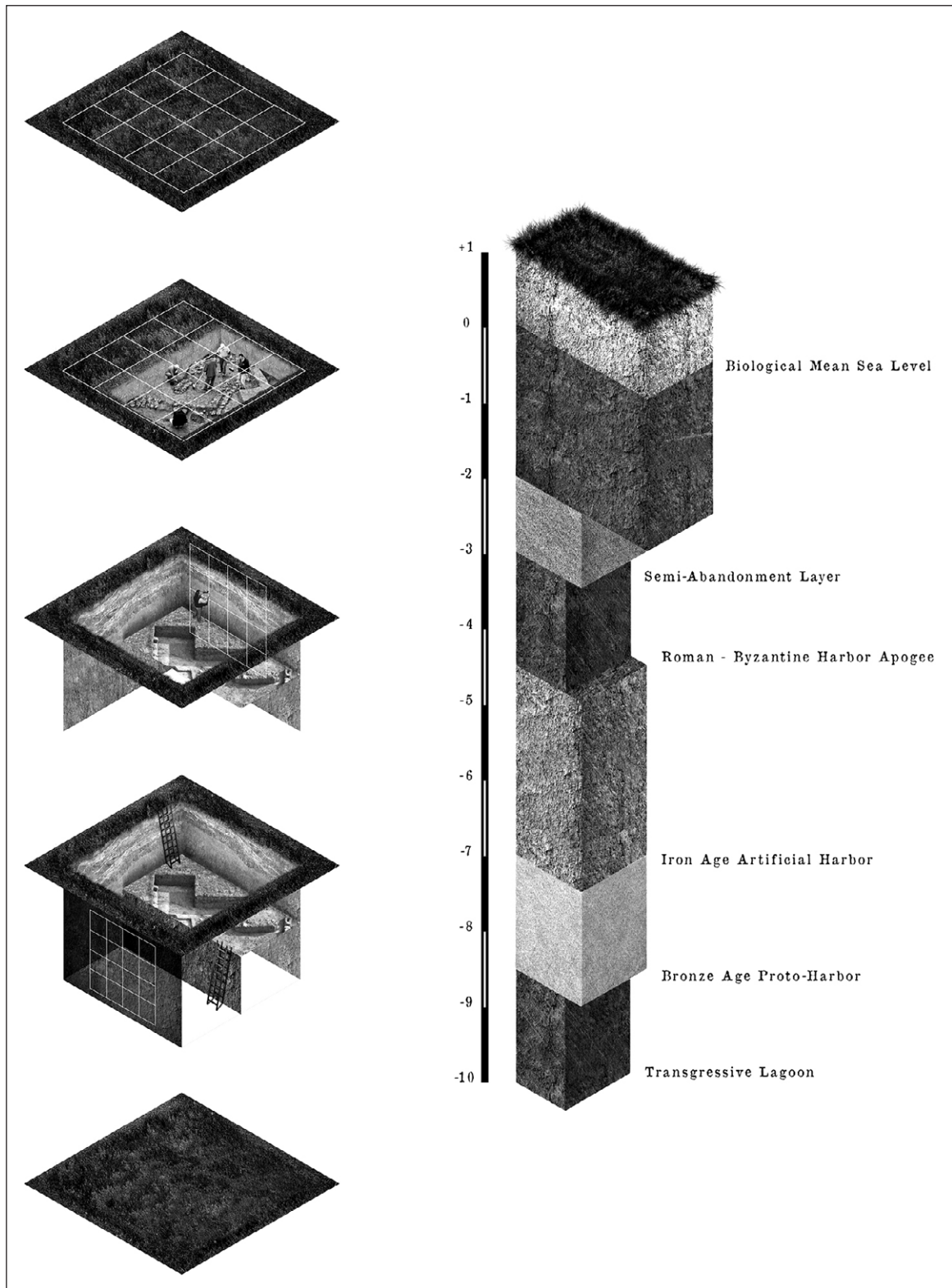


Figure 12: Excavational study of the Tyrian stratigraphy to unveil its historical palimpsest. Archaeological excavations are irreversible when using traditional methodologies, inherently denying visitors of experiencing a real sense of traversing amid the forgotten stratigraphic layers of Tyre (Drawing: Karl Abi Karam).

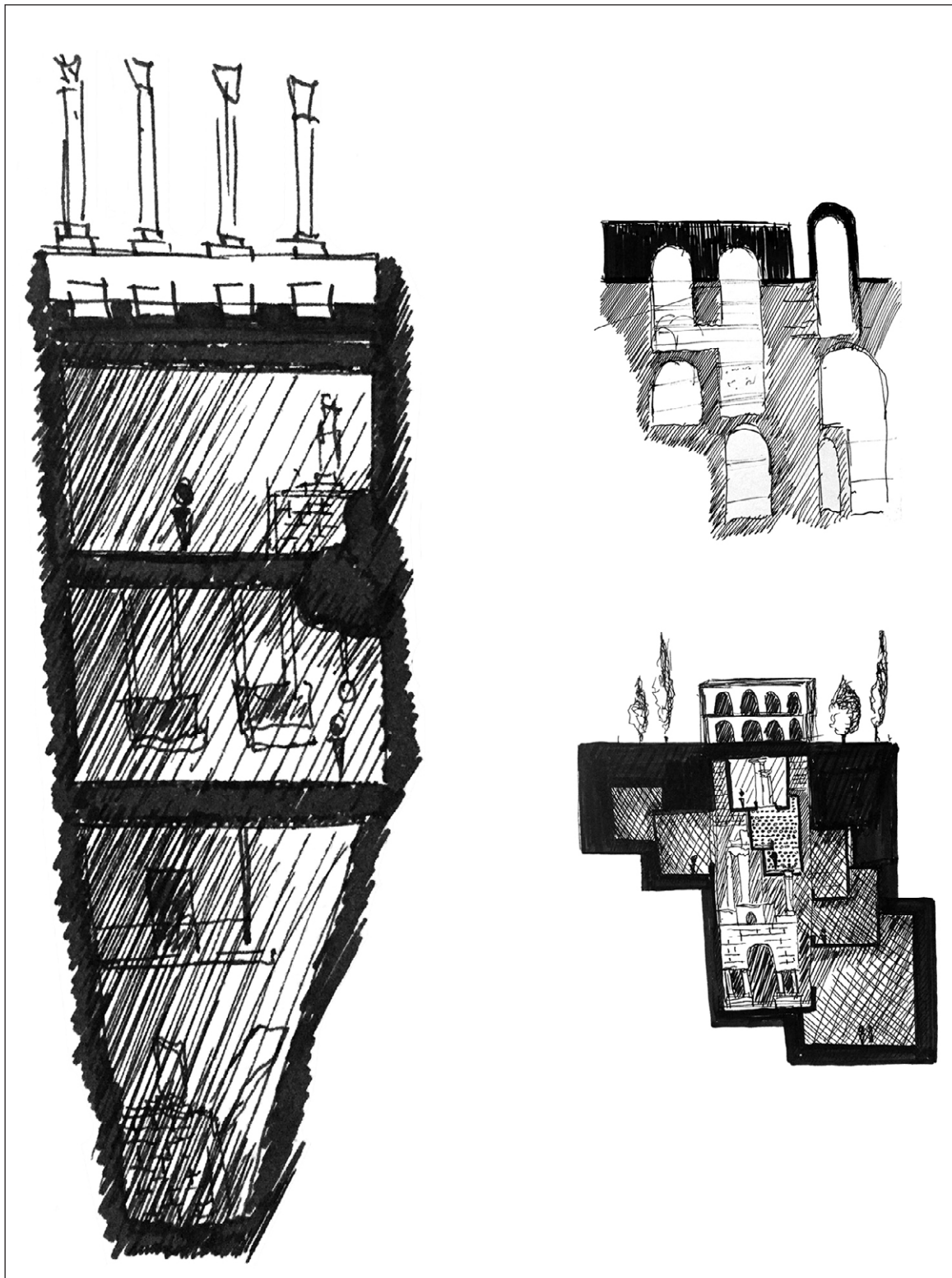


Figure 13: Subterranean inverted ruins. These concept sketches indicate the preservation of Tyre's existing ruins in situ, within the new subterranean complexes. Rather than extracting artefactual materials and other remnants of the past from their original context, and then infilling those digs, visitors can instead experience the untouched state of the archaeological finds as perpetual ruins (Drawing: Karl Abi Karam).

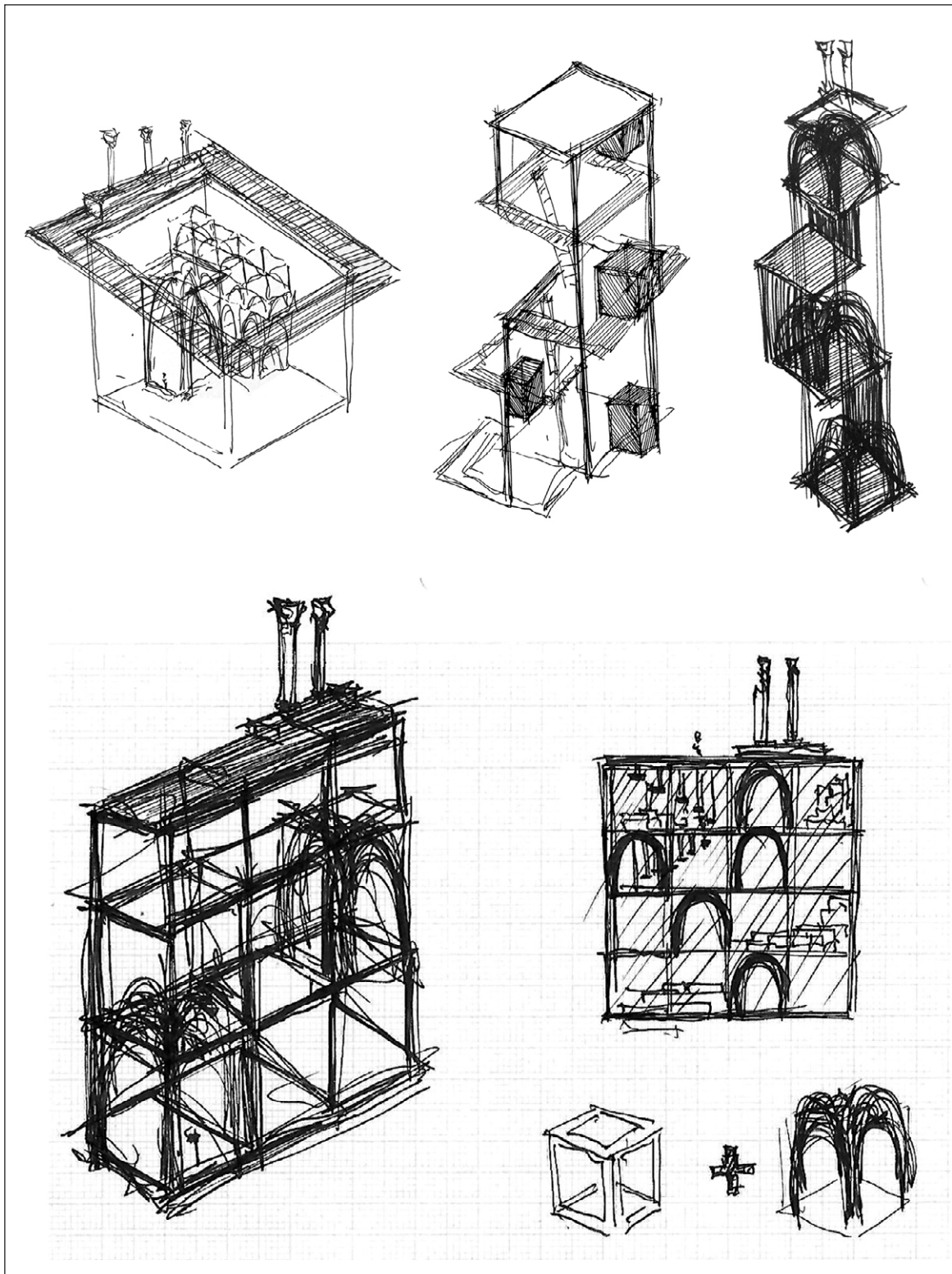


Figure 14: Vaulted structural components. Sketches of a structural framework than can support the excavational digs, with the intention also of transforming them into anti-museum spaces (Drawing: Karl Abi Karam).

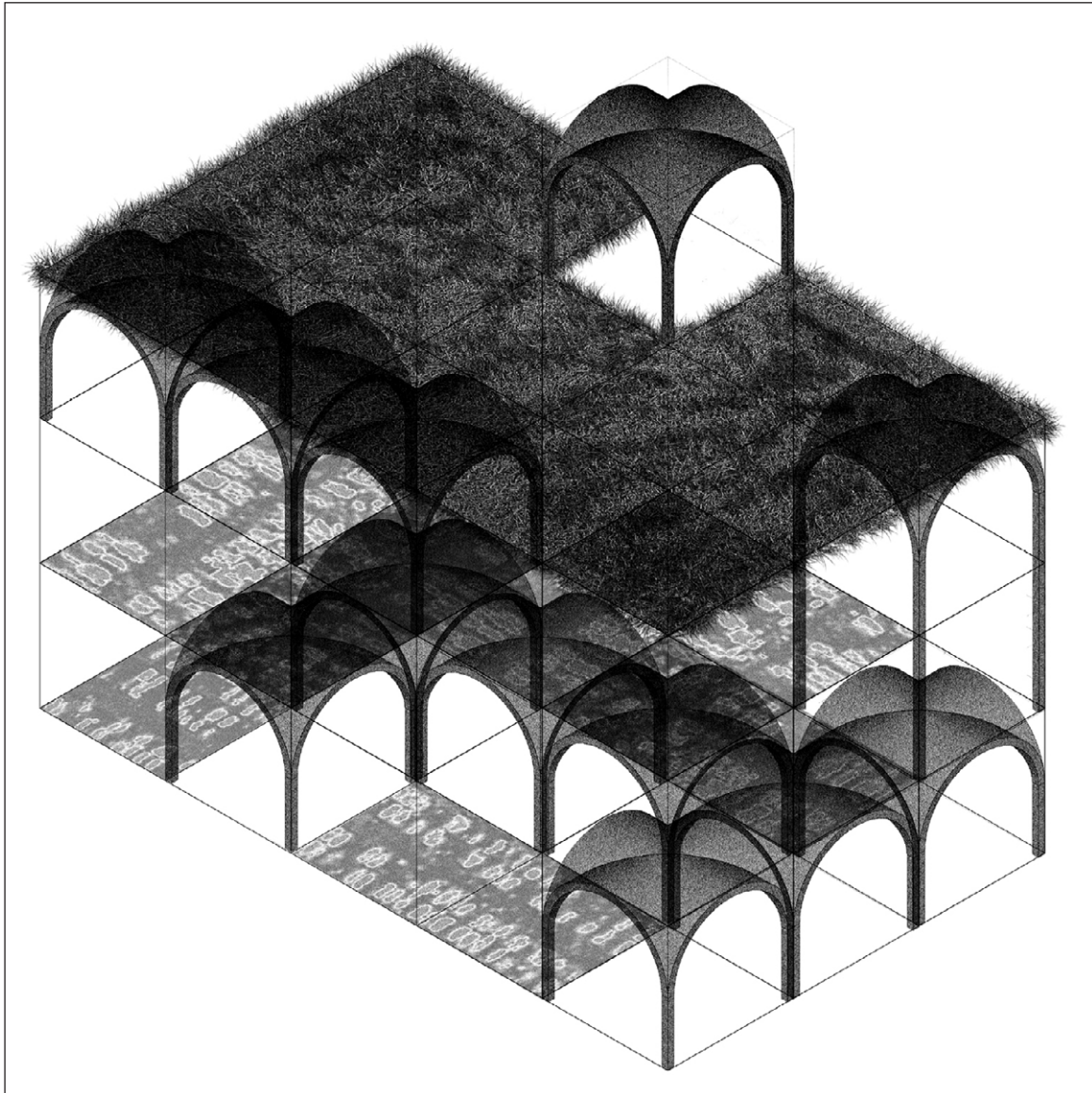


Figure 15: Archaeotecture's ground-penetrating radar. The archaeological finds at Tyre are to be supported by a modular 5-metre \times 5-metre grid system that aids further excavations, with its form based on the results yielded from radar systems that located artefactual evidence. Rather than the infill procedure at the end of usual archaeological excavations, here the vaulted modular components are constructed to become usable spaces (Drawing: Karl Abi Karam).

What the Archaeotecture approach suggests instead is that the imposition of a more comprehensive three-dimensional horizontal and vertical grid, which augments the usual spatial recording of archaeologists, enables the latter to work together with architects to create constructed spaces that can protect Tyre's ancient ruins in their actual current locations. This use of an Archaeotectural method, based on a 5-metre \times 5-metre structural grid, would allow enough room for visitors to venture through the excavated areas, enabling thereby the rich layers of history to be kept in place and showcased. Such layers are rarely exposed through the current musealised form of historical preservation, in which the artefactual materials from archaeological sites are almost always redeposited elsewhere, in some kind of museum building, thus creating an information altering layer that is termed reverse-stratification. 'Stratification is the long-term build-up of sequential layers of earthen material through human and geological activities' [24], and typical archaeological practices clearly run counter to this process. In nature, because the processes of sedimentation change so clearly at different points during the history of a particular site, this means that discrete deposits of organic and geological composite will form that vary in terms of their soil composition, colour, texture, thickness and associations with artefactual materials. Hence the diverse textures found in these layers

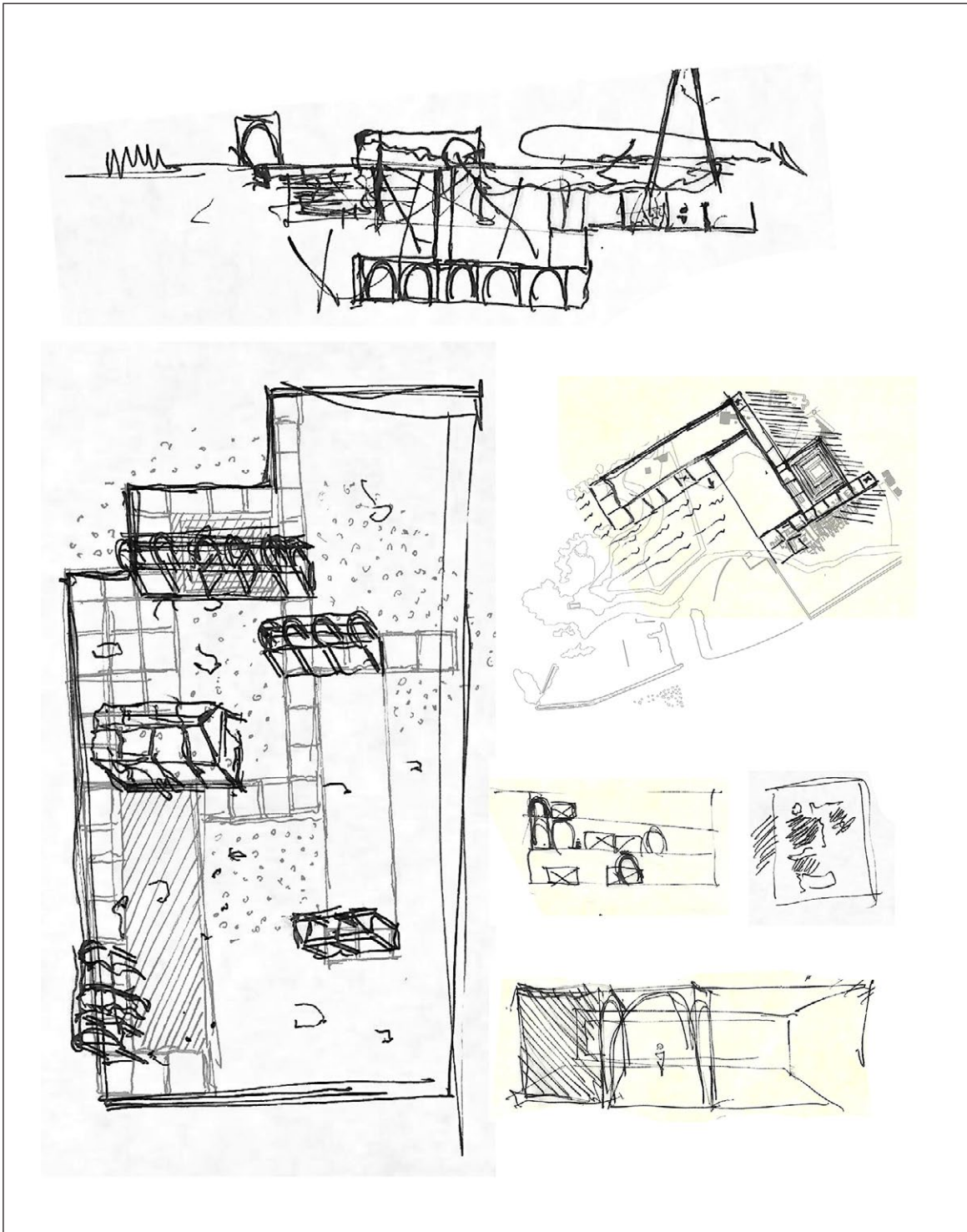


Figure 16: Archaeotecture's grids and stratigraphic preservation methods (Drawing: Karl Abi Karam).

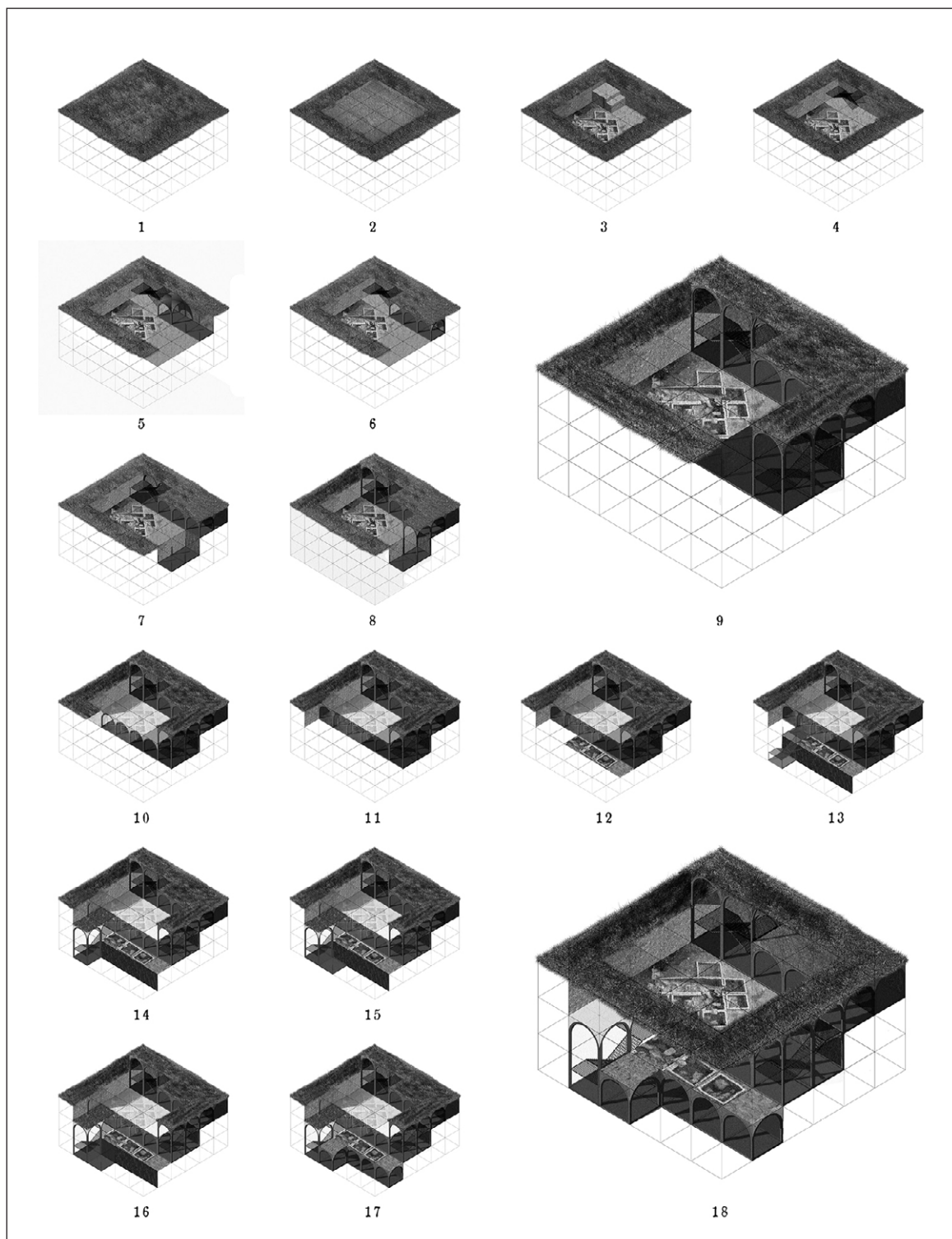


Figure 17: Archaeotecture's spatial sequence. Here the diagrammatic render shows the way in which the creation of architectural spaces through excavations is continually evolving around the discovery of new archaeological finds. Thus the archaeologists subconsciously play the role of architects, simultaneously uncovering the remnants of Tyre's past while also creating new spaces (Drawing: Karl Abi Karam).

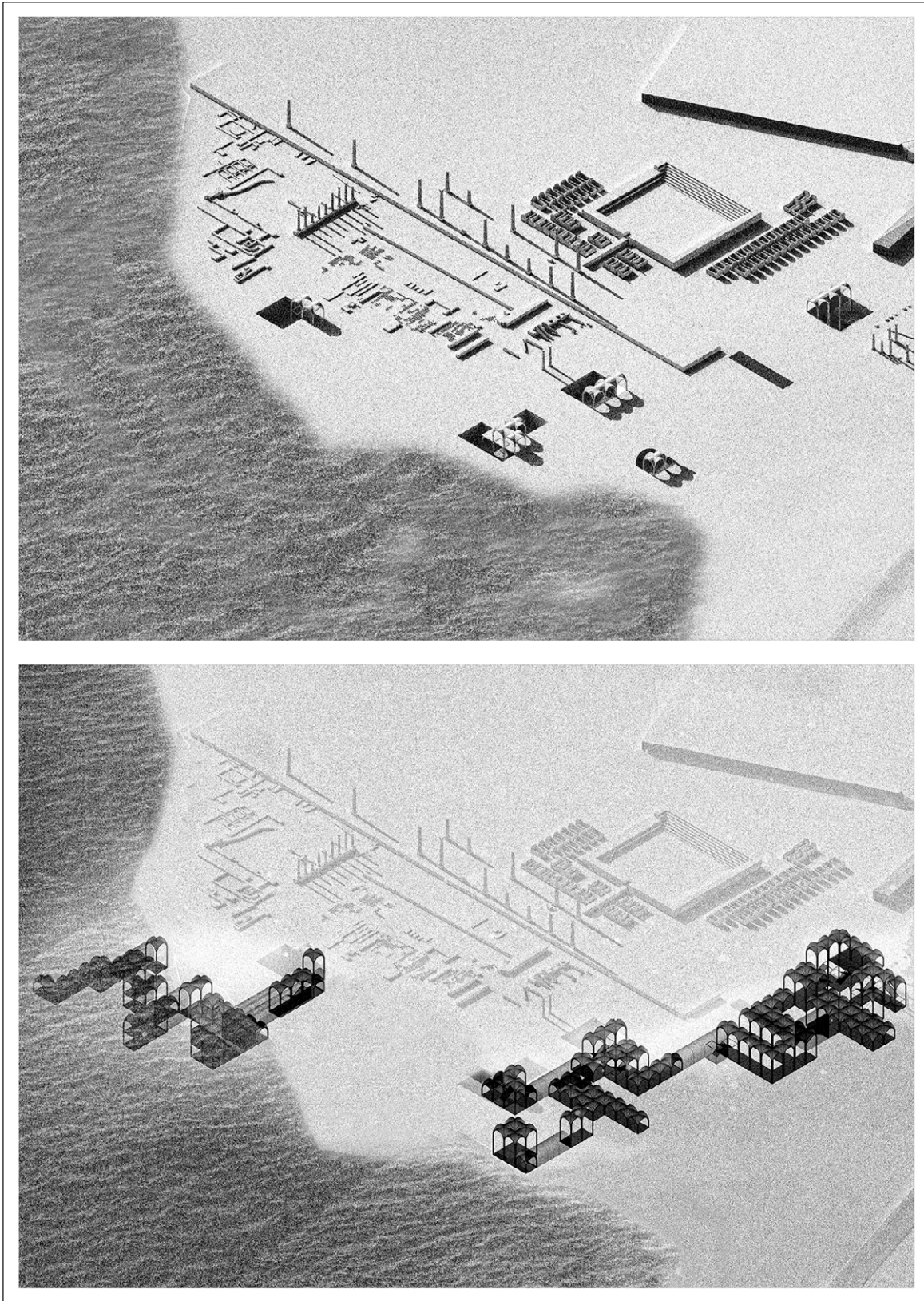


Figure 18: Modular and meandering pathways. A speculative study that highlights the additions to the subterranean 'anti-museum' that still maintain the site's integrity minimizing visual intrusions in an otherwise restricted and protected historical zone (Drawing: Karl Abi Karam).

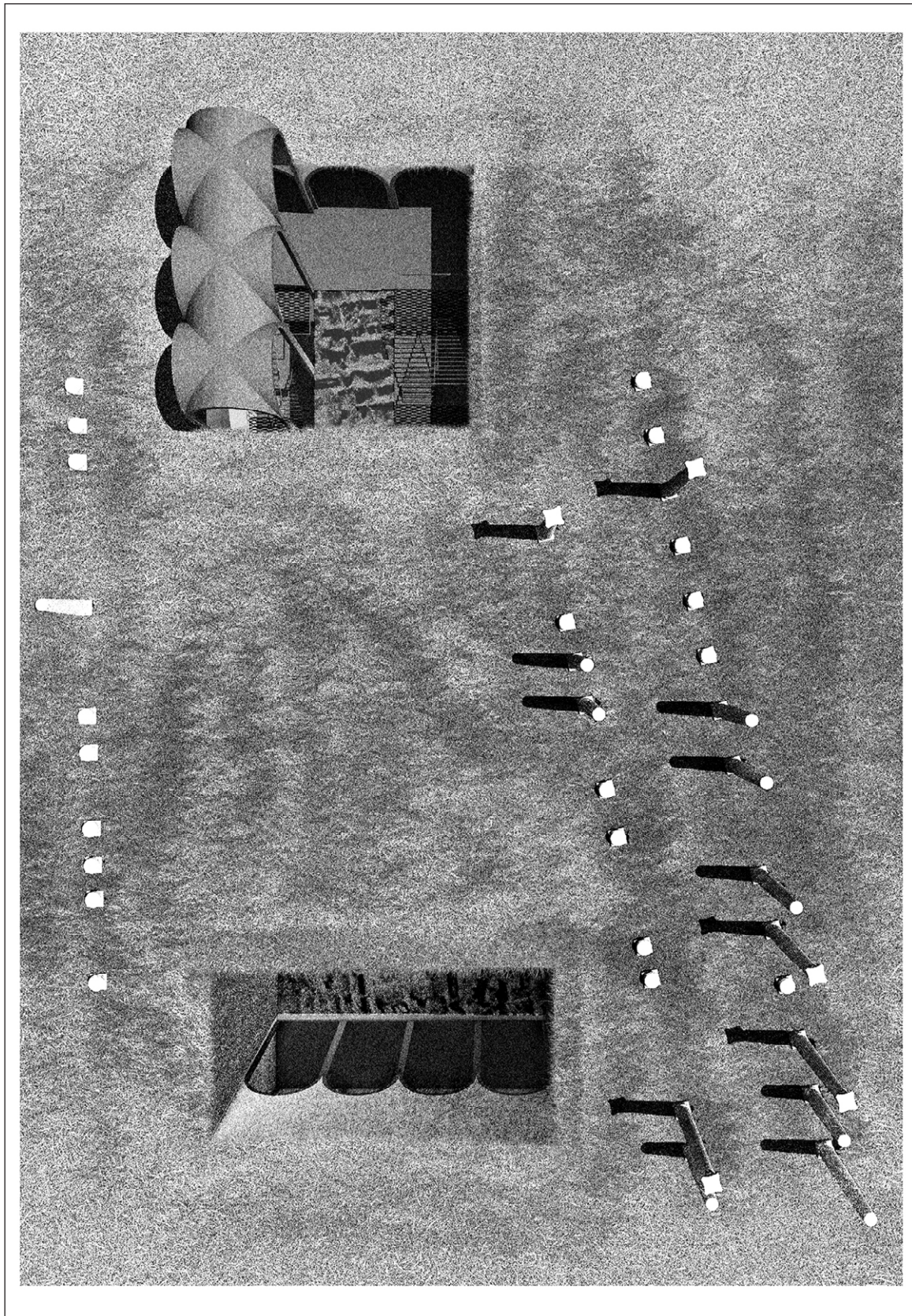


Figure 19: Exposed layers and the preservation of authenticity. The subterranean portals are at times deliberately exposed in order to sustain the nostalgic lure of Tyre's archaeological sites. It means that some of the subterranean complexes are exposed to natural daylight, revealing the archaeological ruins in the context of their stratigraphic layers (Drawing: Karl Abi Karam).

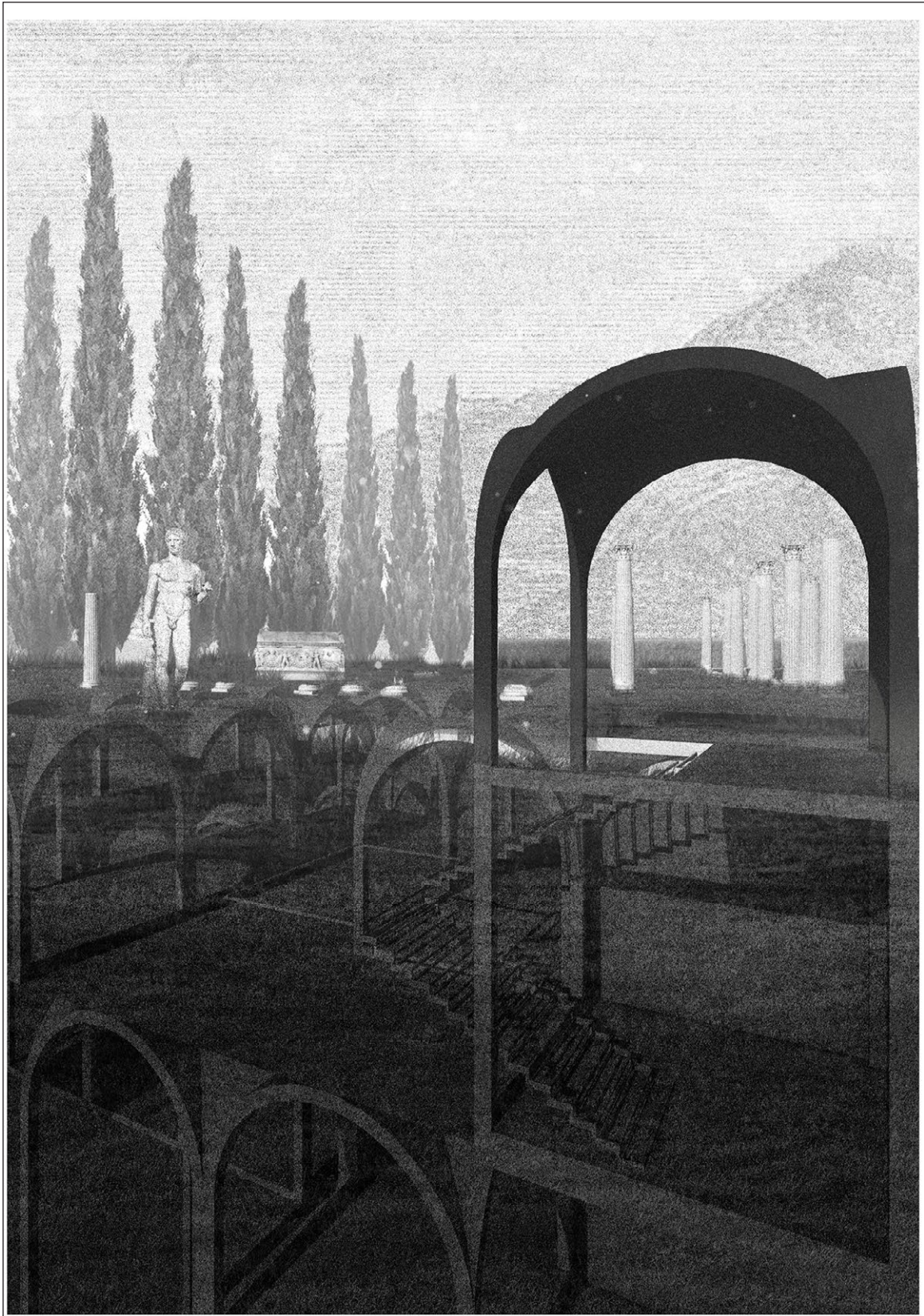


Figure 20: Subterranean portals and the creation of an underground sacred grove. Here the X-ray image illustrates how the ground level can remain virtually untouched in comparison to the excavation works beneath, creating a visually unobtrusive and esoteric 'anti-museum' for the city's inhabitants (Drawing: Karl Abi Karam).

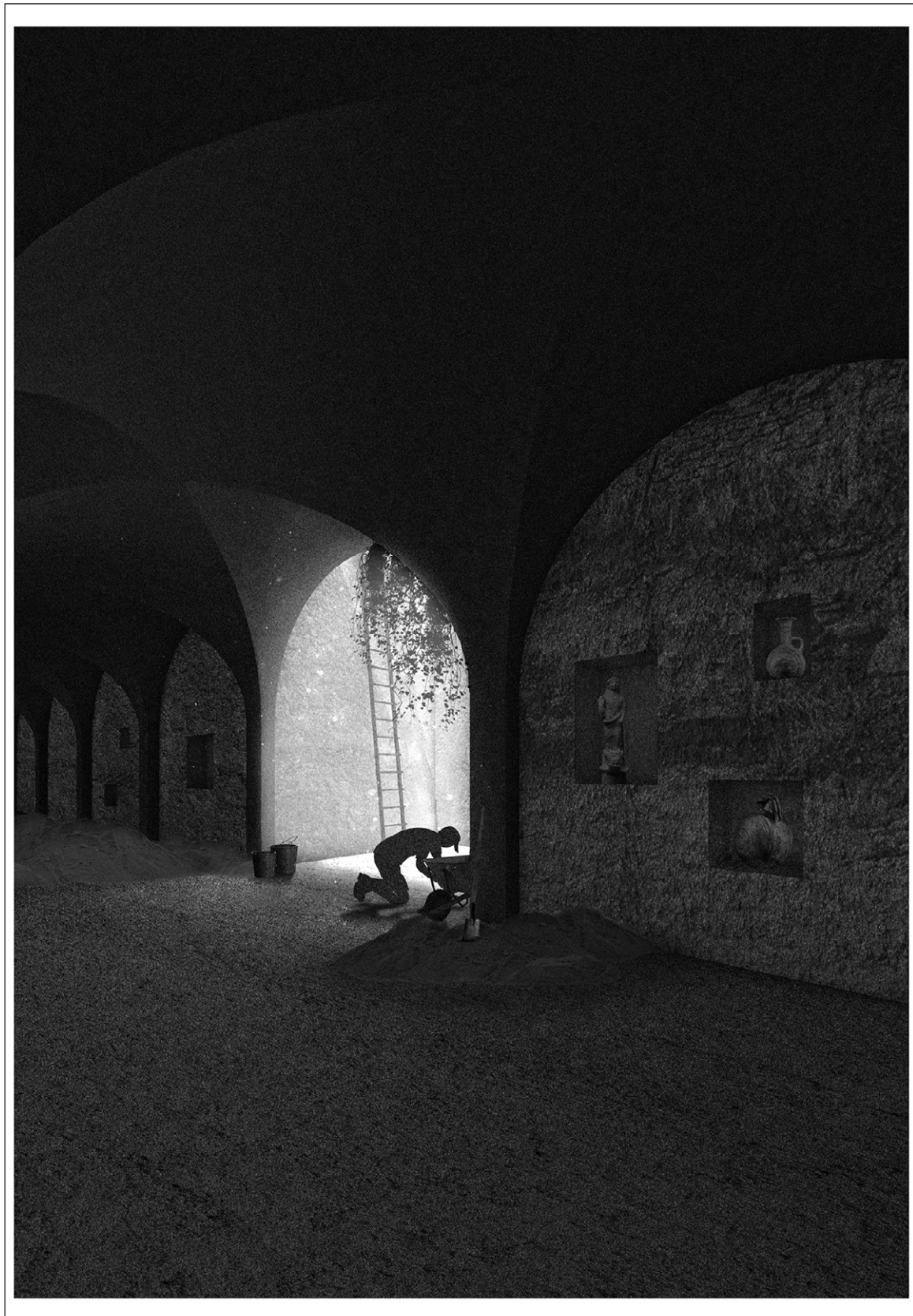


Figure 21: Space making through excavations. Through this approach of preserving ruin time, the subterranean layers and exposed artefacts, in their in-situ positions, creates a walled compendium with a vibrant internal façade of diverse materiality (Drawing: Karl Abi Karam).

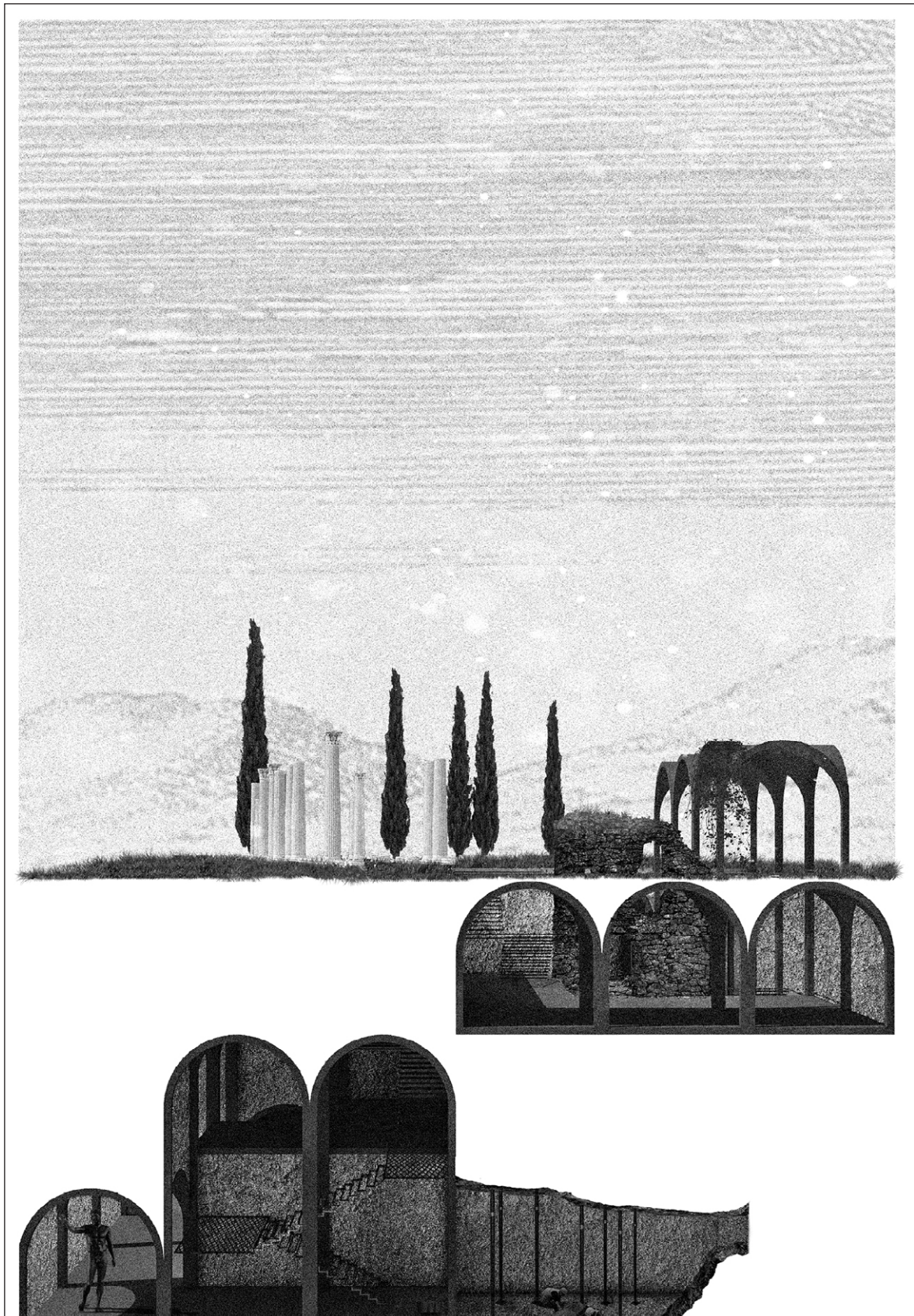


Figure 22: Modular constructions for the inverted 'anti-museum'. This sectional study depicts the ruins and artefacts that are found, yet left in situ, as well as the archaeologists who through their excavating also help to create the building (Drawing: Karl Abi Karam).



Figure 23: The great inverted atrium. In all cases, the archaeological ruins and artefacts will be left in the context of their respective stratigraphic layer, to maintain authenticity, while those of particular aesthetic importance emphasized by cuts to admit natural daylight (Drawing: Karl Abi Karam).

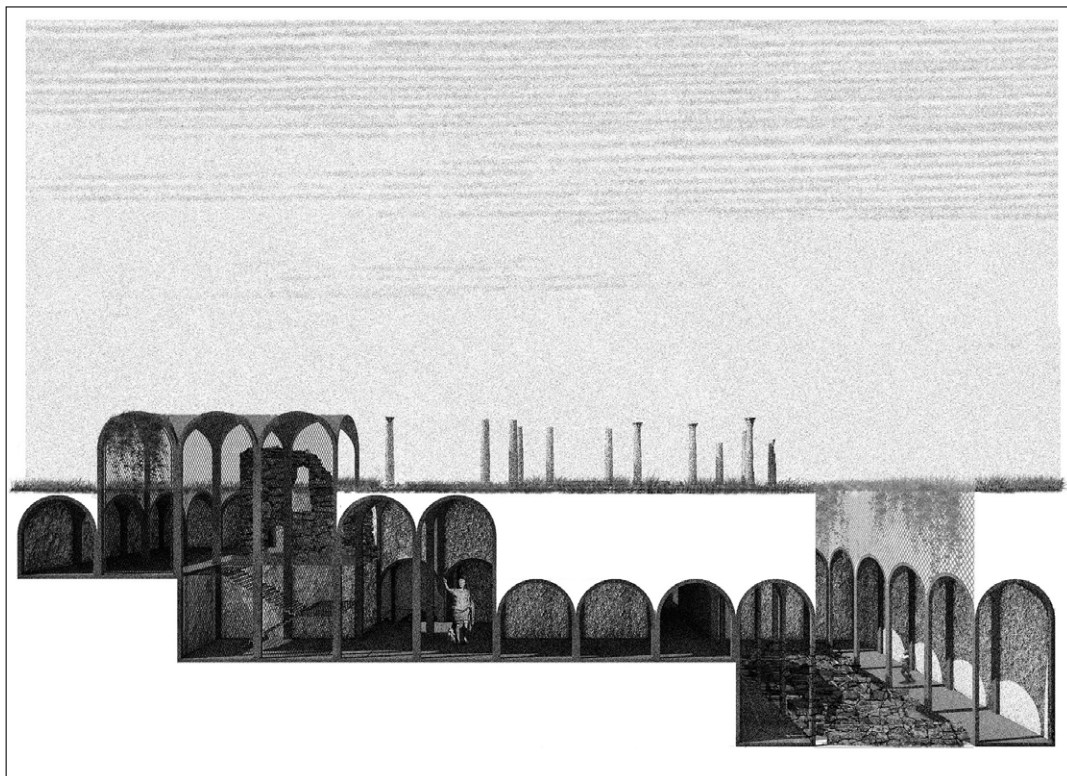


Figure 24: The inverted 'anti-museum', showing that the height and placement of the specific modular vaulted components are to be determined by the archaeological finds and by excavational processes (Drawing: Karl Abi Karam).

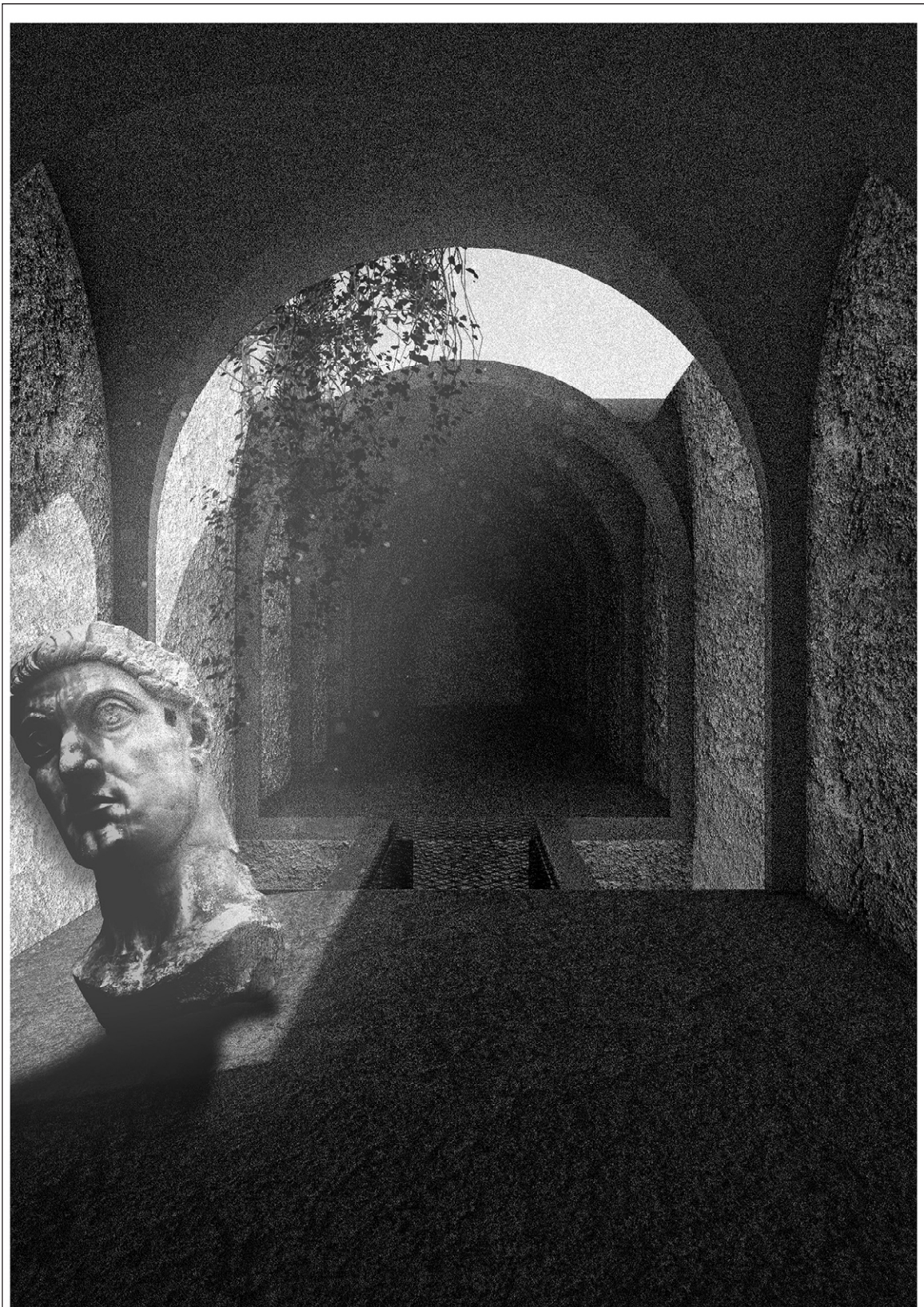


Figure 25: The exposed catacombs, showing one of the multi-level subterranean complexes with an artefact displayed in situ. Here the stratigraphic layers are exposed and supported by the modular vaulted components placed in order to help these deep archaeological excavations (Drawing: Karl Abi Karam).



Figure 26: Tyre 'a la Carceri'. As in the great inverted atrium, artefacts of archaeological and aesthetic importance are also here highlighted by high-vaulted ceilings to bring in daylight to the subterranean spaces (Drawing: Karl Abi Karam).

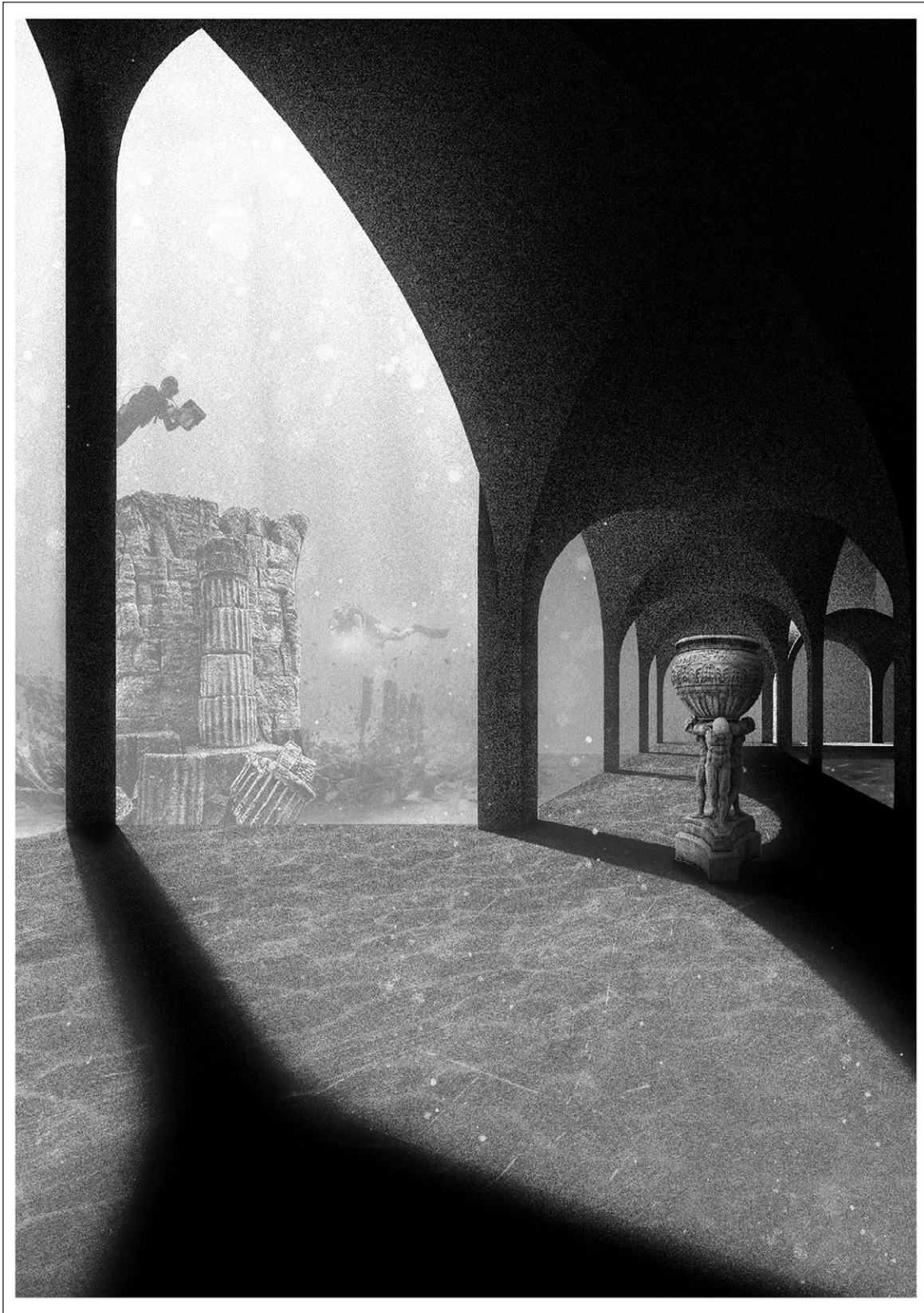


Figure 27: Atlantean Tyre. This image shows the intersection of the new subterranean 'anti-museum' complex with the Southern Basin of what was once the ancient Egyptian port. The museum allows visitors to view first-hand the submerged ruins and to witness maritime archaeologists at work, highlighting the city's submerged urban fabric (Drawing: Karl Abi Karam).



Figure 28: Transgressions on a sacred grove. An unknown soldier overlooks the newly enshrined Al Mina Archaeological Site. By upholding ruin theory within the design philosophy of Archaeotecture, the site becomes visually detached from the chaos of Tyre's urban fabric (Drawing: Karl Abi Karam).

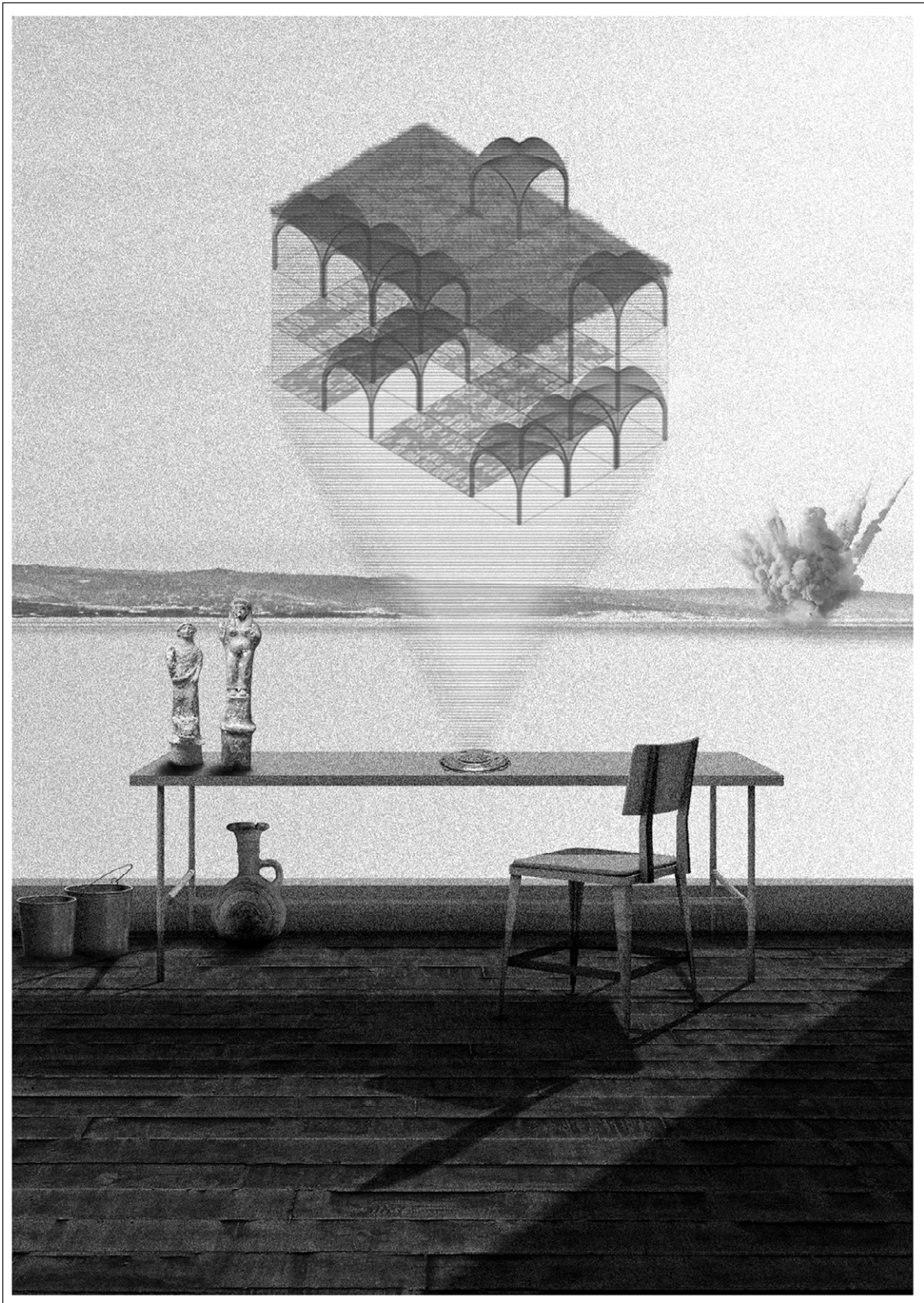


Figure 29: Architect + Archaeologist + Arch-nemesis. Given the current convergence of such different cultures in Tyre, the future state of its rich archaeological history remains uncertain, not least because of ideological contestations and the possibility of a further outbreak of armed conflict (Drawing: Karl Abi Karam).

of sediment are a combination of man-made and natural material, a realisation that is reminiscent of Hetzel's concept of ruin time. In the new Archaeotectural approach that I am proposing for Tyre, this act of exposing the layers and their artefacts in-situ will create both a sense of being inside a walled compendium of archaeological data, as well as a vibrant internal façade of diverse materiality and texture. These archaeological layers will also act as walls that help to minimize visual intrusions and destructions from outside.

One of the most notable examples of an architectural intervention that tries to preserve the existing vertical stratigraphic layering can be found in the 'Archaeological Collection' retained within Syntagma Metro Station in Athens, Greece. Here, a known method known as 'salvage' [25] is the process whereby many of the artefacts were left in-situ for the viewing pleasure of metro users. However, rather than resorting to a man-made, curator-defined approach to display the discovered artefacts, the artefactual materials within the Archaeotectural project in Tyre will be positioned according to the archaeological digs themselves, and hence will be kept in their respective current stratigraphic locations. Therefore, the architectural composition of the display will be predetermined by the activities of those people who lived in Tyre in the ancient past, and of the later histories of their grand edifices that have been altered over time through geological and cosmological actions. Therefore, my design project for Tyre will not just be created through the decisions of architects and archaeologists, but more by unplanned factors of human-made interventions, nature, and time – i.e. precisely those factors that create the essence of a ruin. This supports the theory of an architectural ruin as a 'disjunctive product of the intrusion of nature upon the human-made without the loss of the unity that our species produced' [2, p. 51]. Through its proudly hidden, subterranean nature, the Archaeotecture strategy aims for minimal surface exposure so as to avoid adding to the already overly plentiful modern visual intrusions that exist in Tyre's archaeological sites. The addition of flora and sunlight penetrating through the surface openings of the project seeks to accentuate the ruin effect, creating a scene more reminiscent of the 'Ruined Gallery' of Hadrian's Villa near Tivoli as drawn by Piranesi.

As such, it is an express intention of the Archaeotecture approach to reconcile the ethno-religious divisions between Tyre's communities without any need to erect an expensive, bloated, ideologically driven, surface located museum building. With museums now commonly being described as the representation of financial power and the secular legitimization of national unity, Archaeotecture offers instead a more discreet path towards cultural reconciliation. In addition to reinforcing society's nostalgia for ruins, Archaeotecture seeks to invert the ruin value theory once proposed by Albert Speer. Rather than creating an exposed museum edifice that in time will become a 'planned ruin', as part of the aspiration to immortalize a particular nation [19, p. 231], the subterranean structure proposed here for Tyre wishes to play upon the lure of exposed ruins without the need for ostensible architectural interventions. By using a minimum amount of modern construction materials, the problem of creating future rubble within archaeological ruins will be reduced, therefore avoiding any sense of there being 'reverse-stratification'. Through the application of Archaeotecture, this reworked historical site in Tyre will consist almost entirely of the materials and histories that have, to date, constituted that site.

Conclusion: Archaeotecture and the future of Tyre

Tyre's urban fabric may be considered as uncharted ground in terms of understanding the city's collective memory, yet the Archaeotecture approach seems essential given the dire need for some kind of architectural intervention given the current condition of neglect, looting, and destruction of its ancient remains. It is not right to do nothing, and hence a more creative and fresher approach is required. With the increasing nostalgia for ruins in many countries around the world, due to the rise of globalized design methods and the over-sanitization of historical structures as a result of modern tourism, the alternative strategy offered by Archaeotecture seeks to expose and enjoy the palimpsest layers of the ground itself, wishing to become a ruin along the lines set out by Florence Hetzler. The creation of these new underground spaces in Tyre through archaeological excavation is not only to be realized by dialogue and collaboration between architects and archaeologists, but is largely shaped by the concoction created by previous human-made structures, and by time and nature. To support the idea of creating a new ruin through Archaeotecture, the project for Tyre is both an ongoing construction and an ongoing process of discovery. Through its facilitation of archaeological excavations, and the simultaneous creation of what can be described as an 'anti-museum', the new subterranean complex aims to be devoid of any overt or direct political statements. While the archaeological zones of Tyre are situated a short distance away from its distinctive ethno-religious enclaves, the process involved in Archaeotecture can aid the city to provide its residential quarters with the kind of subtle monuments that the citizens deserve.

Through Archaeotecture, a form of spatial 'ubi sunt' is created whereby visitors, regardless of their ethno-religious affiliations, will be able to reflect upon their own mortality and the transience of life while passing through the underground spaces in the new 'anti-museum'. By carefully revealing the city's historical palimpsest, yet without any dissociation from the existing structures or the layers of the earth – thereby maintaining the authentic remains – the powerful nostalgia for ruins can foster the creation of new ideas about alternative futures. The ascetic nature of my design project, situated away from the routines and weight of modern civilization, attempts in part to reconcile Tyre's fragmented communities. Through this new project, expressive of governmental and communal efforts to preserve the city's decaying monuments, Tyre could also hopefully produce at last its much-needed and coherent form of collective memory. The Archaeotecture approach will help Tyre to regain its collective memory by exposing the ancient monuments – while also allowing these monuments to remain in a state of ruin, sufficiently removed from the narrow socio-political claims of the ethnic groups that currently inhabit the city.

Competing Interests

The author has no competing interests to declare.

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