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متحف زايد الوطني
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DEPARTMENT OF CULTURE
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Foreword

The Department of Culture and Tourism - Abu Dhabi operates an emirate-wide archaeological programme in line with the organisation's mandate to preserve, protect and promote the ancient history and cultural heritage of Abu Dhabi. The emirate contains some of the most prized and unique cultural and historical attractions and finds in the region and internationally. Unlocking the secrets of history through world-class archaeological explorations, we are committed to protecting and celebrating our historical treasures and sharing these discoveries with the world.

The roots of archaeological discovery in the emirate go back to even before the unification of the Emirates. In 1959, archaeologists began their work on Umm an-Nar (Sas Al Nakhl) at the invitation of the Ruler of Abu Dhabi, Sheikh Shakhbut bin Sultan Al Nahyan. During that year, Sheikh Zayed bin Sultan Al Nahyan invited the same archaeologists to come to Al Ain, where he was the Ruler's Representative before becoming the UAE's Founding Father in 1971. Their work around Jebel Hafit revealed 5,000-year-old tombs from the beginning of the Bronze Age and marked the inception of a journey of discovery that led to Al Ain being declared a UNESCO World Heritage Site in 2011.

Sheikh Zayed's foresight in inviting archaeologists to the area reflected not only his deep interest in the history of our country but also his belief that Al Ain, in particular, was a place of enormous historical importance in which there must be archaeological evidence of a distant past.

This intuition reflected what Sheikh Zayed learned growing up in Al Ain, where he listened to people talk about their city's history. This history had been told and retold for centuries. An early-19th-century English explorer of Abu Dhabi described an encounter with Sheikh Zayed's ancestor, Sheikh Tahnoun bin Shakhbut Al Nahyan, in the following terms: "Tahnoun the late Shaikh of Abothubee [Abu Dhabi], in 1822, offered to escort a party of us to what he described to be an ancient city, situated in a most fruitful country, seven days journey from the sea." Many experts agree that this fruitful ancient city is likely Al Ain with its verdant oases.

From these early beginnings, we know that the UAE has a deep archaeological past that stretches back over a quarter of a million years. At that time, the ancestors of early humans walked across this land and eventually populated the world from Europe to Australia. During the Neolithic period, over 8,000 years ago, communities adapted to a changing environment and forged a prosperous society built upon a selective and sustainable use of resources. Sustainability remained a key characteristic of our ancient societies and is best represented in the invention of *falaj* irrigation 3,000 years ago, which is still seen in Al Ain.

Discoveries of our more recent past have highlighted that there were flourishing Christian communities on the islands of Sir Bani Yas in Abu Dhabi and Siniya in Umm Al Quwain, pointing to a long history of peaceful co-existence that is still characteristic of our society today.

The papers presented in this volume report on the many discoveries that have taken place in the last few years. Importantly, they also indicate that there is still much to uncover; and with every new find brought to light comes more questions that will drive future research. It is particularly gratifying to see in this volume the results of the hard work and inquisitive minds of many young Emirati scholars who have inherited Sheikh Zayed's passion for understanding our history.

Mohamed Khalifa Al Mubarak
Chairman

Department of Culture and Tourism – Abu Dhabi

Another side to the story

Preliminary results from the renewed excavations on the eastern flank of Tell Abraq (2021–2022)

Michele Degli Esposti, Federico Borgi, Maria Paola Pellegrino,
Rania Hussein Kannouma

with Camille Abric and Francesca Barchiesi

Abstract: Excavations on the eastern flank of Tell Abraq, within the territory of the emirate of Umm Al Quwain, during the 2021 and 2022 field seasons, yielded remarkable results that help to better understand how the site was occupied in the second half of the 2nd and throughout the 1st millennium BCE. Evidence for several phases in the site's occupation is connected with buildings and features characterised by largely differing architecture, dimensions and associated materials, before a final switch (in the Late Pre-Islamic period) to the funerary use of the area, with several burials that were likely the target of later robbing. Scattered artefacts, comprising exceptional items unique in the UAE, might be referred to the original inventory of these graves, as contemporary architecture has not been discovered so far. Some of these artefacts illustrate the strong influence of foreign productions conveyed both overland from South Arabia and oversea, via Characene, during the first centuries CE.

Keywords: Umm Al Quwain, Bronze Age architecture, Early Iron Age, Late Pre-Islamic Arabia, geomorphology, archaeology of Southeast Arabia

Introduction

In 2019, the Italian Archaeological Mission in Umm Al Quwain (IAMUQ), in cooperation with the Department of Tourism and Archaeology Department of Umm Al Quwain (TAD), began a new programme of stratigraphic excavation in the eastern part of the multi-period, pluri-stratified site of Tell Abraq, the western part of which conversely lies in the emirate of Sharjah (Figure 1) as the major component of the Abraq Research Project.

While the results of the first two seasons (2019 and 2020) have been summarised elsewhere (Degli Esposti *et al.* 2022), this contribution aims at presenting some highlights from the 2021 and 2022 field seasons, especially as they provide some perspective on the site's life, which comes partially unexpected, considering the results of previous excavations at the site by other teams.

The first archaeological investigations at Tell Abraq belong to a period that can be placed at the beginnings of the archaeology of Southeast Arabia,

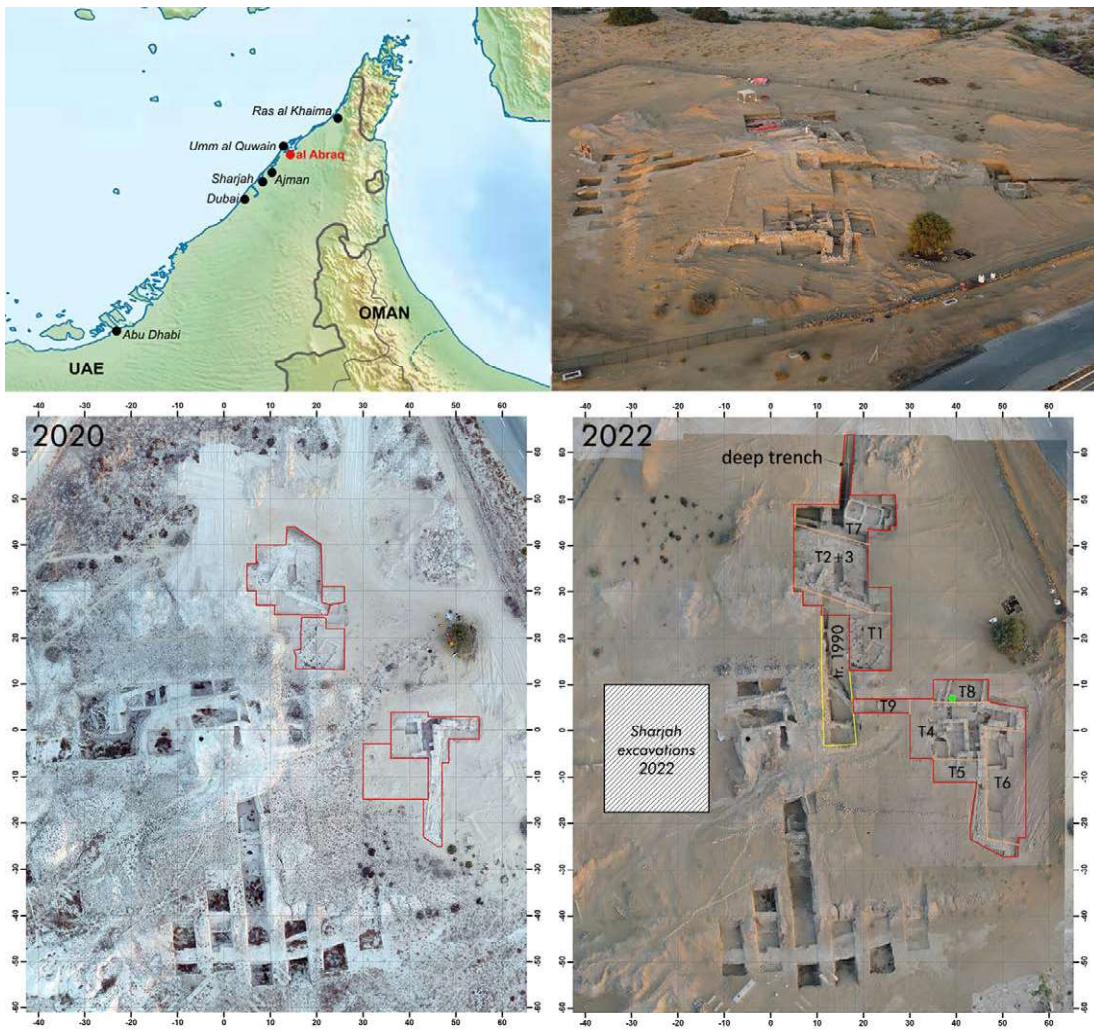


Figure 1: Top, the location of Tell Abraç along the western coast of the UAE and a bird's-eye view of the site, November 2022, looking west. Bottom, work progress from 2020 to 2022 and indication of the trench layout. The green dot indicates the position of Grave 5. North on top. (Photos F. Borgi)

a field of research that is still quite new within the broader discipline of Near Eastern Archaeology. While early, very limited trenching by an Iraqi expedition in 1973 left almost no record (Salman 1974), the results of the multi-year project directed by Daniel T. Potts (e.g. Potts 1990; 1991; 1993a and 2000) were essential in building up a first broad chronological sequence for the region, spanning the period from the second half of the third millennium to the first millennium BCE and extending to the early centuries CE, especially when combined with the information being collected at nearby Ed-Dur (Boucharlat *et al.* 1989; Haerincq 2001 and 2011). Later, a new multi-year project directed by Peter Magee focused on the excavation of several long trenches in the western (Sharjah) side of the mound, as well as re-documenting earlier exposed sections and providing archaeological surveillance during the placement of a water pipe near the mound by the Sharjah Municipality (Magee *et al.* 2015; 2017 and 2018). In 2022, the Sharjah Archaeology Authority restarted excavations on the western side of the mound, opening a large

squared trench just south of the Umm an-Nar tomb excavated in the 1990s (Potts and Weeks 1999). The results of this new project will surely be of great relevance to the reconstruction of the site's evolution.

The works of the IAMUQ started in 2019 with a three-week season carried out with a small team, essentially intended to evaluate the condition of the stepped trench excavated by D. Potts in 1990, as well as to select the main areas of excavation for the new project (Degli Esposti and Borgi 2020). In the following years (2020 to 2022), the team was enlarged, and a five-week field season took place between October and November of each year (Hussein Kannouma, Degli Esposti and Borgi 2021). Throughout the project, the IAMUQ could rely on the invaluable support of the TAD for both logistics and fieldwork.

Nine trenches were established at the site and these comprise two main areas, one to the north/north-east of the mound, in physical continuity with the 1990s stepped trench, the other on the eastern side of the mound. The first area comprises Trench 1, Trench 2/3 and Trench 7, while the second area comprises Trenches 4, 5, 6, 8 and 9, with only the uppermost, windblown and reworked deposits having been so far removed from Trenches 5 and 9.¹

Not all of these trenches bear witness to the same phases within the long-lasting occupation of the site that spans c. 2500 BCE to 300 CE. Indeed, the IAMUQ excavation did not, so far, hit contexts dated earlier than c. the mid-2nd millennium BCE, with the exception of a very small, deep sounding excavated in Trench 2 (Degli Esposti *et al.* 2022: 144-145 and Figure 5). In this account, therefore, the new data will be presented in chronological order rather than as a report of the results for each individual trench, as it is considered to be clearer for the reader.

The second half of the second millennium BCE

In Trench 1, an L-shaped room (Room A) was discovered, dated to the mid/third quarter of the 2nd millennium BCE (Degli Esposti *et al.* 2022: 142-144) interestingly associated with the grit grey ware that is now being more and more recognised as characteristic of a period extending much earlier than the so-called Iron Age I (1300-1100 BCE) and reaching at least the mid-2nd millennium (Magee *et al.* 2017: 226-227; Karacic *et al.* 2018: 25; Degli Esposti *et al.* 2022: 151). Work was not continued in this trench after 2020 and, therefore, it will not be discussed further here.

Downslope of this room, work in Trench 2/3 brought to light a large portion of what is apparently a substantial terrace, on top of which a stone wall (Stratigraphic Unit [SU] 12) was erected that framed an upper, smaller terrace or at least an open area, accessible through a single-flight, stone staircase

¹ These deposits can, however, be quite substantial and range from c. 30 cm in Trench 5 to almost 1 m in the upper (westernmost) part of Trench 9.



Figure 2: View of Trenches 7, 2/3 and 1, with the massive wall SU173 in the foreground. In the left inset, a detail of wall SU173; right inset, the flight of stairs providing access to the terrace delimited by the stone wall SU12. (Photos F. Borgi, M. Degli Esposti)

discovered in 2019 (Figure 2). Previous excavation south of wall SU12 had revealed the presence of several floors, some of which were associated with postholes (Potts 1991: 36 and Figure 36) suggesting the presence of *barasti*-like dwellings in this area, as it was the case further upslope and in our Trench 1 as well (Potts 1991: Figures 27, 37; Degli Esposti *et al.* 2022: 142 and Figure 2a).

Already in 2020, it was evident that this huge terrace was contained by a remarkably thick wall, comprising several “skins” built one against the other and with different techniques, involving the combined use of stone and mudbricks (but notably not eolianite slabs). During the last two seasons, it has been finally possible to reveal a 15 m stretch of its outer face, setting it free from its own massive collapse. It survives to a height of more than 2 m.

This wall, listed in the IAMUQ’s archives as SU173 (Figure 2), can be recognised to be the same exposed in several trenches by the international mission working in the Sharjah portion of the site, named as wall Set 52 and dated to the final quarter of the 2nd millennium (Magee *et al.* 2017). From the start, the stratigraphic data from IAMUQ’s excavation indicated a relative chronology for SU173 in broad agreement with this date, as it covered Wadi Suq deposits and was buried under Early Iron Age ones, the latter including its own massive collapse.

Most recent excavation provided further dating evidence for its construction. Once the base of this wall was reached, Trench 7 (see Figure 1 bottom right) was extended north and another structure built with remarkably hard bricks and mortar (SU361) was discovered below the terrace wall, the nature of which still has to be understood (Figure 3). At this stage, two interpretations of this wall can be considered. The first sees it as the retaining wall of an earlier terrace or open area; the second option is that it could be the lining of the outer



Figure 3: Wall SU361 discovered in Trench 7, which predates wall SU173. The dumped burnt matter layer SU429, running under wall SU173, provided a *terminus post quem* for its construction and *ante quem* for the construction of wall SU361. (Original photos F. Borgi)

side of a ditch (of which one would thus be seeing the outer face intended to stand against the sand and not the one towards the inside of the ditch), possibly the so-called ditch Set 10 discovered in the southwestern portion of the site, on top of which the huge wall Set 52 was built (Magee *et al.* 2017: 220). Indeed, the lining wall of ditch Set 10 is made with a different technique than SU361, implying the use of aeolianite slabs, but it would not be surprising if

Table 1: New radiocarbon dates for different contexts at Tell Abraç

LAB CODE	Sample	Trench	Context (Stratigraphic Unit)	¹⁴ C Date (BP)	Calibrated date (2σ) *
LTL22008	SMP 100	4	267, deposit above the threshold between Building Ia - Room 1 and Room 2	3143 ± 45	1503BC (73.1%) 1366BC 1360BC (22.3%) 1290BC
LTL22009	SMP 104	4	274(=SU204), anthropogenic deposit above the earliest floor in Building Ia - Room 2, SU281	3165 ± 45	1516BC (85.2%) 1374BC 1349BC (10.2%) 1302BC
LTL22015	SMP 114	2	309 Lens with abundant burnt matter and charcoal, sloping down inside the backfilled ditch north of huge wall SU 173.	2381 ± 45	749BC (10.0%) 686BC 665BC (4.4%) 639BC 569BC (80.9%) 382BC
LTL22016	SMP 115	2	310 Layer with abundant pulverised charcoal and ash, visible in the section above Room B, associated with postholes. Occupational level.	2124 ± 35	349BC (10.4%) 309BC 206BC (85.0%) 44BC
LTL22665	SMP 62	4	204, anthropogenic deposit above the earliest floor in Building Ia - Room 3 (SU170) - INTRUSIVE	2925 ± 45	1264BC (95.4%) 969BC
LTL31044	SMP 178	4	252, burnt lens in Building Ia - Room 1 north	3064 ± 35	1415BC (90.0%) 1254BC 1249BC (5.4%) 1224BC
LTL31045	SMP 182	4	261, anthropogenic deposit in Building Ia - Room 1 north	3028 ± 35	1401BC (92.4%) 1195BC 1172BC (1.3%) 1162BC 1142BC (1.6%) 1131BC
LTL31046	SMP 204	7	429, dumped burnt matter below wall SU173	3022 ± 35	1397BC (89.5%) 1191BC 1178BC (3.0%) 1158BC 1145BC (3.0%) 1127BC
LTL31047	SMP 209	4	204, anthropogenic deposit above the earliest floor in Building Ia - Room 3 (SU170) with smashed pot	3163 ± 35	1505BC (90.3%) 1385BC 1339BC (5.1%) 1317BC

* Calibrated using OxCal v4.4.4 (Bronk Ramsey 2009) and the INTCAL20 atmospheric curve (Reimer *et al.* 2020).

different construction methods were used for the different parts of such a large structure, as is the case with the huge surrounding wall SU173=set 52 itself. Possibly more significant, the wall discovered in our trench would be too low to be lining a ditch unless one envisages that it was razed to provide a flat area for the later construction of wall SU173 or that only the upper part of the ditch had been lined.

Whatever the case, this lower wall constitutes the north boundary of a thick charcoal-rich lens — SU429 — which runs below wall SU173.² This context was sampled and the radiocarbon determination provides a *terminus post quem* for the construction of SU 173 between 1397-1127 BCE (2σ), thus in agreement with previous hypotheses (Table 1, lab code LTL31046).³

² The layout of this lens would be consistent with the presence of a backfilled depression (the ditch?) delimited by wall SU361 and covered by wall SU173.

³ This, however, means that the late Wadi Suq date for wall SU12 proposed by Potts, and meant to be framed between 1600-1300 BCE (1991: 36), has to be rejected.



Figure 4: Rectified orthophoto of Building I (a and b) at the end of the 2022 season (N to the right), and a view looking south. The walls in the foreground (in Trench 8) belong to later structures. (Photos F. Borgi).

To the second millennium is also dated what is arguably the most unexpected discovery made so far during our renewed excavations, located in Trench 4. That some substantial structure should be present in this area was rather clearly indicated by its flat morphology (Degli Esposti *et al.* 2022: 145, 147 Figure 6 top), which could only be explained by the presence of structures creating a sort of “box” which prevented the erosion of the archeological deposits along the mound’s slope.

Here, the remains of an impressive building, currently identified as Building I, were discovered, to our knowledge an *unicum* in the whole South East Arabia and also remarkable for its preservation, with walls reaching 1.8 m in height (Figure 4). The building surely underwent numerous modifications during several construction phases, many of which will need further excavation to be understood. Building techniques also changed significantly from one phase to the other, and walls comprising segments made with different

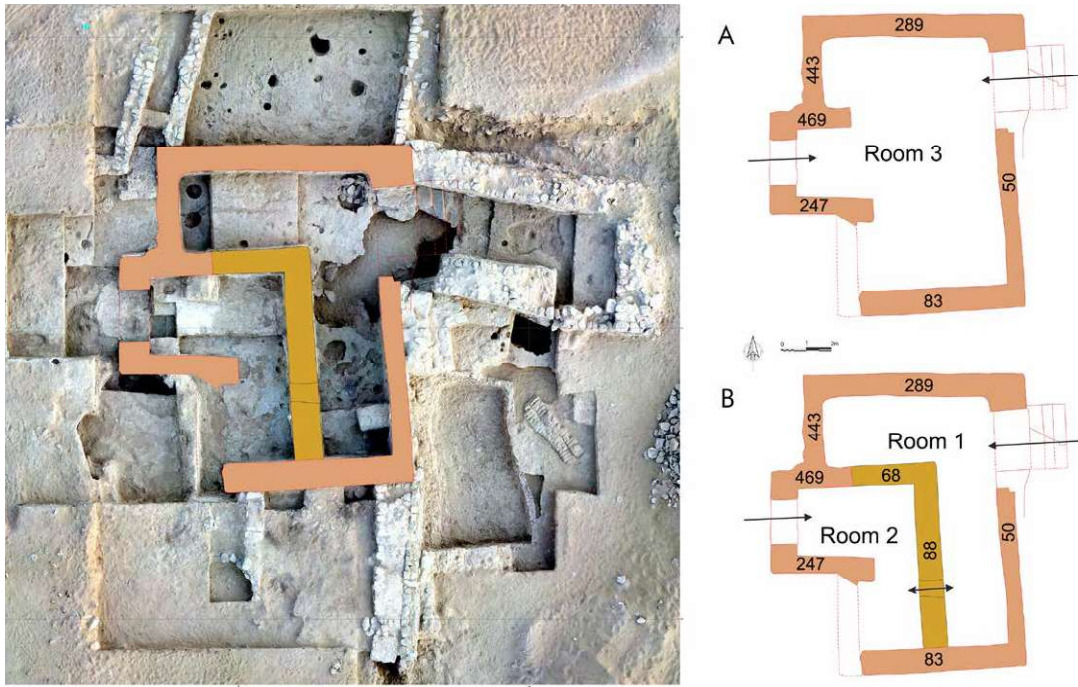


Figure 5: The plan of Building Ia outlined on the rectified orthophoto and a detail of its two construction phases. (Elaboration M. Degli Esposti)

techniques are not uncommon, which makes reconstructing the building’s evolution even more complicated.

Nevertheless, during the 2022 campaign, the original plan of the earlier portion of this building was revealed (Figure 5). It actually represents an independent building in itself that will be henceforth referred to as Building Ia, as opposed to Building Ib meant to indicate the larger structure comprising the later modifications and additions.

Building Ia originally comprised a single large hall with two entrances, named as Room 3, later subdivided into two rooms (1 and 2). This first construction made use of a peculiar building technique, especially for what concerns the cement-hard mortar used to bind the beachrock blocks of the wall (Figure 6a). This kind of mortar is not found in the later walls erected against this original building, nor in the walls built to separate Room 1 and Room 2. At the same time, it is witnessed in a few other walls at the site, including the later extension of the 2nd millennium platform that occupied the top of the mound (Potts 1993a: 118), part of which sits within UAQ territory. If the presence of this peculiar mortar has a chronological value will have to be verified but it seems plausible at this stage.

Characteristic of Building Ia is also the presence, on all the surviving perimeter walls, of triangular ventilation slits that recall those still visible today in traditional houses (Figure 6b).

Building Ia could be accessed both from the east and the west. The eastern door was unfortunately largely dismantled by a late, huge pit that removed



its southern side and part of the wall forming the northeast “tower” of later Building Ib. This entrance, which is tempting to describe as a gate, was accessed via a flight of shallow steps made in the same hard mortar used to bind the walls and create the original floor surfaces (Figure 6c). Noteworthy is the presence of a door socket still in situ, just inside the threshold (Figure 6c inset). A second door socket was discovered near it, slightly displaced. Interestingly, it showed the traces (and actually was still associated with the extremely decayed remains) of a bronze item that was likely applied to the bottom of the doorpost to facilitate its rotation on the socket.

The western entrance appears to be less monumental, although framed by two half pilasters tied to the side walls (Figure 6d).

The whole building was paved with the stone-hard plaster floor mentioned above, SU170, which showed traces of burning at least in its south-eastern portion, where the walls’ plaster is also blackened.

When it comes to establishing a date for Building Ia, recently obtained radiocarbon dates have changed the picture originally proposed. In fact, the first radiocarbon date that we had available came from a sample collected right above the original floor SU170 (Deposit SU204) in the area of Room 3 later modified into Room 1 (eastern part), and provided a date between 1200 and 950 BCE (Degli Esposti *et al.* 2022: Table 3, lab code LTL20649), confirmed by a second sample from the same context (Table 1, lab code LTL22665).

Figure 6: Building Ia: a) Detail of the wall masonry (wall SU50); b) Triangular ventilation slits in the northern perimeter wall (wall SU289); c) The east entrance, with detail of the door socket; d) The west entrance. (Photos M. Degli Esposti)

However, dates from contexts that are stratigraphically later than SU204 were not consistent with these two. An example is provided by SU267, a deposit covering the threshold of the passage connecting Rooms 1 and 2 through wall SU88 (therefore, surely later than SU204, see Figure 5) for which the radiocarbon determination indicates a date into the third quarter of the 2nd millennium (Table 1, lab code LTL22008).

Given this incongruity, it was deemed useful to obtain another date from SU204. During the 2022 field season, one further portion of this deposit was excavated, undoubtedly framed between the original floor SU170 and the later plaster floor SU99 that replaced it when rooms 1 and 2 were realised. Here, a vessel smashed on the floor (F497) was associated with some charcoal. This was sampled to get an additional date (Table 1, lab code LTL31047) that turned out to be in agreement with those from the adjacent area but not with the more recent ones previously obtained for SU204. Further confirmation comes from another sample collected from deposit SU274 inside Room 2. This anthropogenic accumulation lies directly above the original stone-hard floor of the early Room 3, here identified as SU281 but equal to SU170 (Figure 7), so that SU274 itself can be equated with SU204. The obtained date (Table 1, lab code LTL22009) is consistent with the new one from context SU204 and with the one from SU267.

This strongly indicates that the samples previously collected and associated with SU204 have actually to be correlated with some of the later pits, dumps and reworked deposits that buried the eastern part of Room 1.

Figure 7: The original, stone-hard plaster floor of Room 3, as exposed in the area of later Room 1, top left, and Room 2, top and bottom right. Bottom left, the smashed pot F497 above SU170. (Original photos F. Borgi, F. Barchiesi, M. Degli Esposti)



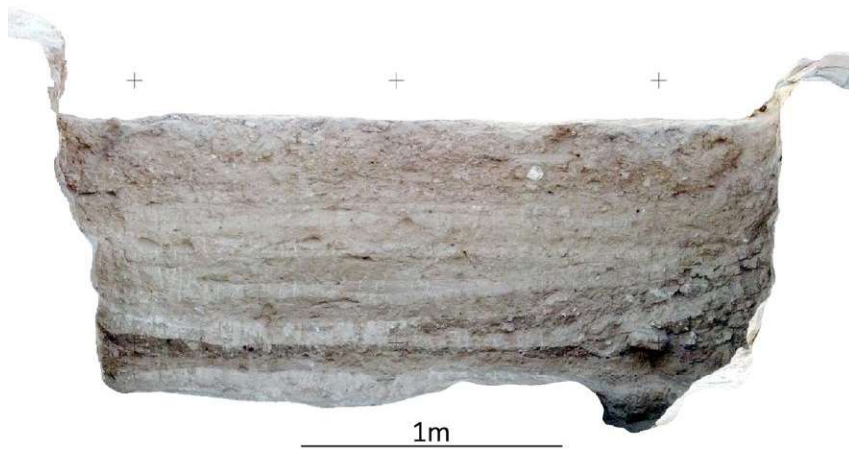


Figure 8: The stratigraphic sequence in the northern part of Room 2, with a succession of hard-packed floors and thin anthropogenic deposits. (Elaboration F. Borgi)

Furthermore, excavation during the 2022 field season showed that the stratigraphy in the eastern part of Room 1 is completely different from that in its northern part. The latter comprises a sequence of floors and thin anthropogenic accumulations arranged in an orderly succession (Figure 8). From this sequence, a series of samples were collected, two of which have already been dated, others pending. Unfortunately, the archaeological material associated with these layers is quite scarce, as the surfaces were likely to have been clean, but one can underline here the presence, again, of vessels made in the gritty grey ware discussed above. The two dates cover the period between the late 15th century and the 12th century BCE (Table 1, lab codes LTL31044, LTL31045) and are consistently slightly later than those obtained for the earliest deposits on top of Room 3's floor. Despite other ASM analyses pending, the available data now rather convincingly indicate a date for the construction of Building Ia between 1500-1300 BCE. This also means that this impressive structure could have coexisted, at least partially, with the significantly humbler Room A discovered in Trench 1 (see above), and calls for further excavation aimed at investigating the stratigraphic correlation between the two areas.

Incidentally, this revised chronology better fits the presence, in a dump layer associated with the decommissioning of Building I, of several large, so-called trumpet base jars, two of which bore the impression of two different cylinder seals. These were discussed elsewhere (Majchrzak and Degli Esposti 2022), primarily focusing on the seals' iconography and more generally on the diffusion of similar jars, pointing out their probable provenance from south-eastern Iran or southern Mesopotamia. More work is needed, hopefully including archaeometric studies that could support the proposed provenance. When discussing their possible date, morphological parallels and the available radiocarbon dates — which are now known to be too recent — were used to balance the indication obtained from iconographic comparisons. It is now clear that the narrower chronological frame indicated by the iconography, that is, the third quarter of

the 2nd millennium, has to be favoured against the broader range or actually even a later date previously suggested and mainly based on the absolute dates and morphological comparisons (Majchrzak and Degli Esposti 2022: 166).

Parallels for the plan of Building Ia will have to be sought for, to trace possible external influences. It is again the iconography of the mentioned seal impressions that might guide the search. In fact, it indicates a possible provenance from southern Mesopotamia or the Elamite area (Majchrzak and Degli Esposti 2022: 165). The latter would be consistent with the discovery of a faience seal from Tell Abraq with parallels in the Middle Elamite (1500-1100 BCE) glyptic of the 14th/13th century BCE (Potts 1990: 122-123 and Figures 150-15). At the same time, it has been speculated that this side of the Arabian Gulf was under the Kassite sphere of influence, respected by the Elamites, who were consolidating their control over the opposite coast, within the context of an inter-dynastic alliance (Potts 2006).

Early Iron Age (Iron Age II)

Apart from investigating the huge surrounding wall SU173, the deep trench excavated to the north-east of the mound (in the area of Trench 7) had another aim, namely to verify the possible presence of a second, later ditch, previously discovered in the south-western part of the site and considered coeval with wall Set 52 (Magee *et al.* 2017).

Indeed, a possible ditch (SU465) was identified, although its bottom was not reached and the lower infill remains to be excavated (Figure 9). From what can

Figure 9: View of the possible ditch SU465 at the bottom of the deep trench in Trench 7, opposite views. (Photos F. Borgi)





Figure 10: The setting of the small bridge-spouted jar F372, nested inside different potsherds in a small pit in Trench 7, and the gold wire it contained. (Photos M. Degli Esposti, drawing N. Gilbert)

be seen at this stage, its lower part could have also been lined with stones (at least on one side), which would be consistent with the fact that it was cut through clean sand. In fact, in this place, there is no evidence of the aeolianite formations reported from other areas of the site (Magee *et al.* 2017: 222, Figure 18).

All the materials so far collected from the upper fills of this possible ditch can be dated to the 1st millennium BCE with the occasional occurrence of Iron Age III material. Radiocarbon dates support such a chronology (e.g., Table 1, lab code LTL22015). No built structure belonging to the Iron Age II period was discovered.

From a context buried beneath the massive collapse of the huge wall SU173 (that contains the large terrace surrounding the site), inside which Early Iron Age material was exclusively collected, another interesting find was that of a small bridge-spouted vessel, rather crudely made, that contained gold wire and was hidden in a small pit, further nested inside the large sherds of a few different pots (Figure 10). The gold wire immediately brings to mind connection with Saruq al Hadid (Weeks *et al.* 2017: Figure 22/SF 28523 and SF22231), further supported by the shape of the small vessel itself, which finds parallels at the same site (Weeks *et al.* 2017: Figure 3/SF 30192), including some specimens used to store copper scrap (Valente *et al.*: Figure 10).

Structures dated — again by means of the associated materials as well as by radiocarbon dating — to the first half of the 1st millennium were discovered in Trenches 4 and 5, above the buried remains of Building I. While the presence

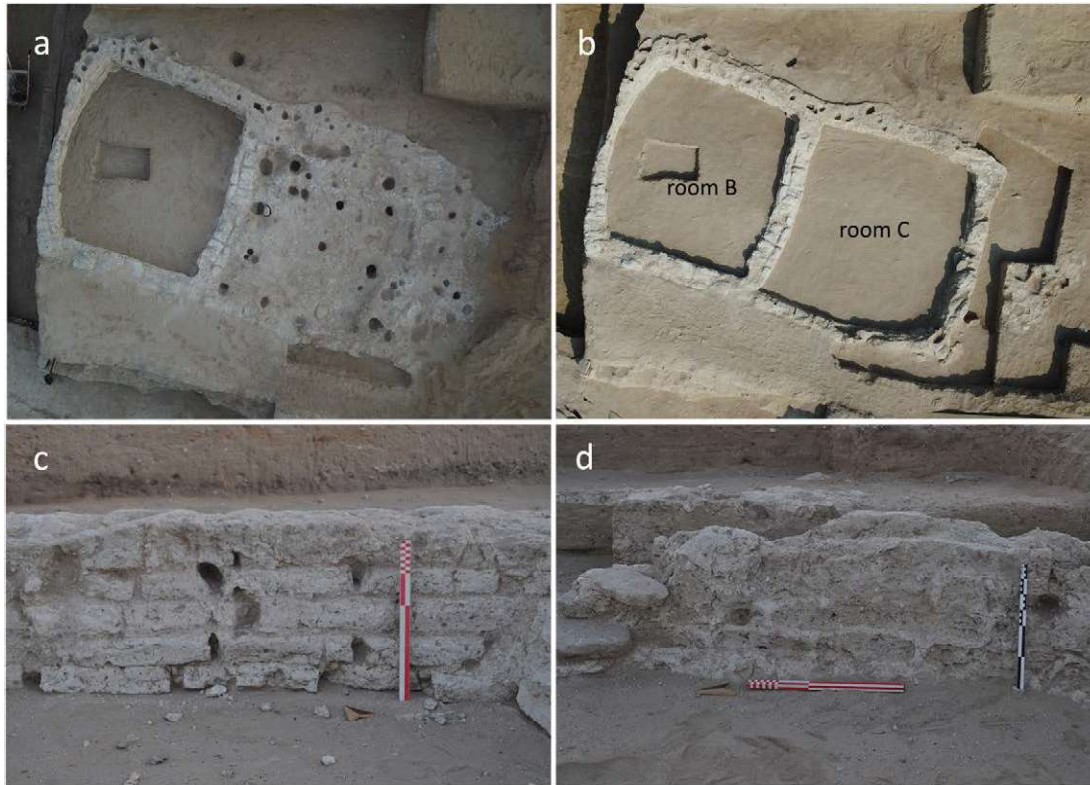


Figure 11: Zenithal view of Trench 5 (N at the bottom) with wall SU272, pillar SU465 (and detail), and a picture of the smashed storage jar F344 before removal. (Photos F. Borgi, M. Degli Esposti)

of a use-surface associated with a hearth and a *tannour* jar in Trench 4 was reported elsewhere (Degli Esposti *et al.* 2022), the extension of the excavated area to the south by means of Trench 5 revealed other features connected to this phase of occupation (Figure 11). These include the stretch of a straight N/S stone wall (SU272), a large storage jar smashed in situ near it (F344), and a particular square pillar base (SU465). Wall SU272, with a preserved height of three courses of stones, abuts the surviving crest of wall SU83, that is, the southern perimeter wall of the earlier Building Ia. It seems conversely to have no actual correlation with the pillar base as they have inconsistent orientations. At this stage of the work, the outline of the building to which wall SU272 could pertain cannot be identified, nor the context of pillar SU465 specified.

Iron Age III

Above the backfilled ditch in Trench 7, another structure was discovered that represents an addition to the rich site's history. This two-room building, named Building II, can be dated to the Iron Age III period, for which no other structure was reported from the site as far as we are aware (Figure 12). Its presence is all the more remarkable in the general paucity of remains of this period in the region, with the notable exception of Al Madam. The peculiar whitish mudbricks, in all likelihood made by mixing clay with the gypsum-rich



substratum typical of the coastal sabkha environments (Evans *et al.* 1969), are also worth mentioning and recall the technique witnessed in the Mud Working Area at Al Madam 1 / Thuqeibah, dated to the Iron Age II/III (Córdoba 2013: 144-147). Although the two rooms of the building seem to have been erected at the same time, one has to point out their different masonry. While for the western room the whitish mudbricks just described were used, the eastern room was built with softer, brown mudbricks with a sandy fabric. However, the same white, gypsum-base mortar was used as a binder in both rooms.

Two radiocarbon dates help frame the construction of this two-room building. One was obtained from SU309, a charcoal lens filling the ditch SU465 that runs below Building II, the other from SU310, one of several occupation surfaces associated with postholes developed above the abandoned structure (Table 1, lab code LTL22015, LTL22016).

The Late Pre-Islamic period

With the possible exception of a new grave discovered during the 2022 season (see below), which adds to the extremely ruined features brought to light previously by the IAMUQ and only tentatively interpreted as burials (Degli Esposti *et al.* 2022: 144-145 and Figure 6a-c), no structure has so far been discovered in the IAMUQ's excavation that can be dated to this period. At the same time,

Figure 12: Building II in Trench 7, with an image of later postholes cutting through it and connected to later occupational surfaces (N on top). Bottom left and right, detail of the different masonry in Room B and Room C respectively. (Photos F. Borgi, M. Degli Esposti)



Figure 13: Camel figurines, copper-alloy figurines and stone statues from the reworked deposit SU43 in Trench 4. (Photos F. Borgi, M. Degli Esposti, C. Abric)

however, a surprisingly rich assemblage of artefacts was discovered scattered through the topmost 50 cm of loose sand accumulation on top of Trench 4 (SU43), stratigraphically unrelated, therefore, to any safe context.

A few camel figurines had already been discovered in this area during the 2020 season (Degli Esposti *et al.* 2022: 153 and Figure 10/2), but the remarkable number of new specimens found mainly in 2021 actually came as a surprise.

All the figurines coming from this area can be dated to the Late Pre-Islamic (LPI) period. A first discussion of these figurines, using a pottery-technology approach that also helps in attributing a date to the loose fragments, has recently been presented at a conference in Mainz and will be published in the related proceedings (Abric, Pellegrino and Degli Esposti 2022).

Among the LPI examples, a figurine (F72), which could be largely reconstructed from detached fragments, stands out (Figure 13a). Its peculiarity is the saddle (F244), shaped separately and then fixed on the hump with a thin patch of clay, above which the rider was also represented. Unfortunately, the rider's body is lost and only the hips and legs survive together with the saddle.

The neck displays an incised decoration, likely to be representing the harness, comprising straight lines and tiny dots. Similar figurines are known from several sites over the whole Arabian Peninsula, such as Tayma (Al Hashash 2006: pl. 3.10/c), Dadan (Al Saeed *et al.* 2011: pl. 2.8/c) and Thaj (Eskoubi and al-Alaa 1985: plate 35.A-B) among others, all with the same dots and line decoration.

Another fragmentary figurine (F1) discovered in Trench 2 provides a perfect example of the difference between the fabric used to shape the LPI figurines and that used for Early Iron Age (Iron Age II) examples (Figure 13b).⁴ F1 lacks the neck, head and tail, and only the upper part of the legs survives. However, it still comprises a squarish, flat saddle decorated with dark red-brownish strokes, the latter also visible along the body. The best parallel surely is the almost-complete, painted figurine discovered at Muweilah together with other fragments including a detached square saddle (Magee 1996a: 207 and Figure 28; Magee 2007: Figure 30), but these figurines are also widespread and other painted examples are known, for example, from Rumeilah (Boucharlat and Lombard 1985: plate 65/4-6) and farther afield, Salut in central Oman (Degli Esposti 2021: Figure 27). The preference for painted decoration over an incised one seems another potential chronological indicator in addition to the material used.

From the same disturbed context also come a few bronze figurines. The most interesting two, a standing naked man and an ibex, illustrate the reception and re-elaboration of external motifs and iconographies (Figure 13e-f). While the ibex immediately recalls South Arabian productions, for the human figure the interpretation as a crudely and partially misunderstood representation of the motif of the resting Heracles can be suggested (Pavan and Degli Esposti 2023).

If these figurines were actually not much expected, the most remarkable finds from this surprisingly rich context are two fragmentary human statues made in bio-calcarene (Figure 13g-h). While in one way they recall the eagle statues discovered in the large fortified building in Chantier F (Lecomte 1993: Figure 2; Boucharlat *et al.* 1989: 38-39, Figures AE, AF) and less so the ruined example from the Shamash temple (Haerinck 2011: 10 and pl. 54/1) at Ed-Dur, they are, however, unique in the region as they portray human figures.⁵ On the one hand, the raw material can be found along the emirates' coast; on the other, at first sight, they recall the statuary from Hatra or Palmira, the influence of which reached Southeast Arabia in the period when the kingdom of Characene prospered and exerted its control over the sea routes through the Gulf (Gregoratti 2011). In this perspective, the discovery of coins from Characene at the nearby site of Ed-Dur can be mentioned here, underlining the fact that they constitute the larger group among the foreign issues (Haerinck 1998).⁶

⁴ See also the difference between the LPI example in Figure 13c and the Iron Age one in Figure 13d.

⁵ Only a fragmented figurine of much smaller dimension from Mleiha is known to the authors (Méry and Mouton 2018/2013: 53).

⁶ A detailed iconographic analysis of these statues is currently being carried out and its publication is in preparation by I. Bucci and M. Degli Esposti.



Figure 14: Grave 5.
Note the bunch of iron
arrowheads to the left
of the body, below the
LPI grey ware potsherd.
(Photo M. Degli Esposti)

A new Late Pre-Islamic (or Sasanian?) grave

A new grave was discovered in November 2022 in Trench 8, that is, the explored area to the north of Building I. The burial, identified as Grave 5, was placed in a simple pit right against its northern wall, suggesting the latter was still visible (Figure 14). The body is west-east oriented, with the head turned to the right and thus facing south. The individual lies mainly on its back but is slightly turned on the right shoulder. The left arm is flexed at 90 degrees with the forearm on the abdomen. The right forearm is largely missing due to late disturbance, but it was probably flexed with the hand almost in front of



the mouth. The lower limbs are flexed in a semi-crouched position.⁷ The grave contained no funerary goods except for a bunch of five iron arrowheads fused together by corrosion, probably originally contained in a quiver or small bag.

The dating of this burial remains hypothetical. Several graves dated to the LPI period were identified by the team of D. Potts on this same slope of the mound (Potts 1991: 105–119), and it is tempting to add Grave 5 to that group. At the same time, a date later into the Sasanian period cannot be ruled out, especially considering the discovery of a drachm of Shapur II near the surface of the site not far from Trench 8 (Potts 2000: 115). A possible indication of such a date for the burial might come from the retrieval, inside the pit, of the sherd of a large storage jar in the thick grey ware typical of the LPI at Ed-Dur, possibly providing a *terminus post quem* for the excavation of the pit.

Figure 15: The western profile of the deep trench in Trench 7, showing the layout of the possible natural dune that was cut to realise ditch SU465. (Elaboration F. Borgi, M. Degli Esposti)

A window on past climate change

The excavation of the deep trench targeting the possible outer ditch in Trench 7 not only exposed the structures discussed above but also provided a view of the stratigraphic record spanning the end of the second millennium to the current surface. Of great interest, and currently under study by our geomorphologists,⁸ is the sand formation exposed by the deep trench (Figure 15). This seems to pertain, at least in its upper portion, to a natural dune, the bottom of which was possibly deepened artificially to realise the actual ditch (cut SU465). It is clear that, if confirmed, the existence of an episode of dune formation during the lifetime of the site would be of great interest for the reconstruction of past climate changes at a discrete scale. To establish the chronology of this possible event, however, understanding the nature of wall SU361 (see above) will be essential. In case it is proved to constitute the lining of an earlier ditch, the presence of at least the lower part of the dune would

⁷ The anthropological study of the remains has already been completed by T. Nicolosi (University of Bologna) and samples were collected for isotopic and proteomic study. It is hoped that radiocarbon dating will also be possible.

⁸ The geomorphological investigation at Tell Abraq is part of the collaboration between the IAMUQ and the Department of Earth Sciences “A. Desio” of the University of Milan and is carried out by L. Forti, M. Cremaschi and A. Zerboni.

predate it; conversely, should SU361 be the containing wall of an ancient terrace, the dune would have accumulated against it at some point between the 14th/12th centuries BCE (when final activity on the possible terrace is witnessed by the radiocarbon-dated dumped material of SU429, see Table 1, lab code LTL31046) and broadly the beginning of the 1st millennium BCE (as indicated by the Iron Age II material collected from the fills of cut SU465, the possible ditch).

Discussion and final remarks

Tell Abraç is arguably one of the most extensively investigated sites of Southeast Arabia, with a history of research beginning almost 50 years ago. Due to their massive quantity, only part of the collected data has found its way to publication (e.g., Potts 1990, 1991, 2000; Magee *et al.* 2017), yet it sufficed to make the site a key reference for the archaeology of the region thanks to the comprehensive stratigraphic sequence and the evidence for long-distance connections with surrounding regions (Potts 1993b and 2000).

Although imbalanced towards the south and eastern sides of the site, located in Sharjah's territory, previous excavations provided the basis for the reconstruction of the general evolution of the site, outlining the original existence of an impressive Early Bronze Age tower and associated grave(s) and the later development of a large terrace system over the buried remains of the tower, topped during the 2nd millennium by the construction of a massive mudbrick platform and surrounded by two ditches excavated at different moments and not simultaneously active (Potts 1993a; Magee *et al.* 2017). Occupation extended beyond the limits of the lowermost terrace, where evidence for light-material structures was collected, mainly dated to the late 2nd millennium BCE, and the site is likely to have represented a landmark in a vast and sparse anthropic landscape developing along the coast (Magee *et al.* 2017: 210-211).

The new excavation project started by the IAMUQ along the east/north-eastern slope of the mound was originally set to verify this general model and to proceed to the swift publication of the results. Admittedly, however, the results are characterised by adding previously unreported aspects to the site's history rather than merely confirming the proposed reconstruction, even though our excavation has not reached so far the levels predating c. the mid-2nd millennium BCE.

In the north-eastern part of the mound, remains of the terrace system were actually documented, although remarkably truncated by erosion in the upper slope. Notwithstanding this, an L-shaped room with mudbrick and stone walls (Room A), datable to the third quarter of the 2nd millennium BCE, was brought to light, which should have occupied one of the terraces (the layout of which is currently not identifiable). This structure already represented an

unprecedented discovery at least in its scale and completeness, although it can be compared with loci 16 and 17, two structures partially revealed in the 1989's stepped trench and dated by the excavator to the Iron Age (Potts 1990: 96-98). Such a date was based on the collected pottery, which notably included several sherds in the gritty grey ware that was later isolated as a possible leit-fossil for the Iron Age I (1300-1100 BCE) period (Magee 1996b) but is now reckoned to span a longer chronology going back at least to the mid-2nd millennium BCE (see above). As such, we cannot exclude the possibility that Room A could have coexisted with loci 16 and 17 on the opposite slope of the mound.

Also consistent with previous results, a new stretch of the massive wall surrounding the site (SU173 in the IAMUQ's archive) and containing the widest terrace was exposed to the north of the mound, and one or two possible ditches were located, which could correspond to those identified by the team lead by P. Magee (Magee *et al.* 2017). These cut features have been only exposed over a very limited extent, and further excavation is needed to assess their nature, possibly alongside a thorough geomorphological study of their fills aimed at the reconstruction of ancient climate.

Unprecedented, conversely, is the discovery of Building II, dated to the Iron Age III period but unfortunately associated with a very limited pottery assemblage that is, moreover, extremely mixed due to the continuous reworking of the sediments linked to the repeated occupation of the area. In the paucity of coeval structures in Southeast Arabia in general, and in the absence of them at Tell Abraç, this discovery will open the way to a discussion of this period at the site and more broadly in the Umm Al Quwain coastal area, where it has not been previously documented.

The most astonishing discovery was, however, that of the impressive remains of Building I, here meaning both the original, self-standing Building Ia and the later, composite structure of Building Ib. Not only does the presence of this building compel an investigation of the possible influences behind its construction, as outlined above, but its scale also calls into question the general layout of the whole eastern/south-eastern part of the mound. Its dimensions, in fact, imply that to provide space for its construction, a large swathe of the earlier deposits had to be removed. Our first assumption was that the building replaced part of the mentioned terrace system of the 2nd millennium BCE, including the possibility that the impressive building enterprise represented by the erection of the surrounding wall SU173 might have been functional to the creation of a large flat area where Building I could be accommodated. The new radiocarbon dates presented here, however, indicate this was an oversimplified reconstruction. Building I appears, in fact, to be more ancient than wall SU173 and to have been first erected in a period when several terraces with numerous floors and light-material structures were in use (Magee *et al.* 2017), including Room A in our Trench 1. On the one hand, this provides a first hint

of a possible hierarchy among the built structures at the site in the second half of the 2nd millennium BCE (possibly linked to a different provenance of the builders?); on the other, it underlines the need for further excavation aimed at clarifying the stratigraphic connections between Building I and the surrounding terraced areas.

In this paper, only brief mentions have been made of a few particular artefacts from the site.⁹ By way of a general point, one can say that pottery is not as abundant as one would expect, largely due to the situation in the area of Building I. There, in fact, the stratigraphy is heavily disturbed by large pits, inside which little ancient materials were re-dumped. Moreover, there are areas where successions of ancient floors were preserved, but the interlaying deposits are very poor in artefacts, likely mirroring the fact the surfaces were kept clean. The discovery of the rich LPI assemblage from the topsoil in Trench 4 represents an exceptional finding for the area but raises the impelling question of which structure(s) they could be associated with. As discussed elsewhere, two options present themselves: graves or a cultic building (Pavan and Degli Esposti 2023). In the absence of structural remains of this date, the grave goods interpretation has been favoured (*ibid.*), but a more extensive investigation of the upper eastern slope is necessary to exclude the presence of buried structures. Indeed, in Trench 9, the small portion of what seems to be a platform made with unhewn beach-rock blocks, was discovered at the end of the 2022 season. Its stratigraphically late collocation and its appearance are reminiscent of the structures currently visible at Ed-Dur and demands for a complete excavation to try and ascertain its nature, although it would surely be nothing comparable with the unique temple of Shamash discovered there (Haerinck 2011).

One final point deserves mention, even if it goes beyond the subject of archaeological investigation. In fact, the continuation of our work at Tell Abraq is aimed not only at answering the archaeological questions we have (and raising new ones as shown above) but also at enhancing the ‘usability’ of the site for the wider public, a paramount goal for the Tourism and Archaeology Department. Surely, the discovery of outstanding structures such as wall SU173 and Building I will strongly contribute to making the site a new pole of attraction for the interested local community and for international tourists, integrated into the broader network of sites of primary importance that constitute the ancient heritage of Umm Al Quwain. Moreover, the completion of the new national museum, currently under construction, will enrich the offer and will provide a perfect display for the findings from Tell Abraq.

⁹ A thorough discussion of the Late Bronze Age and Early Iron Age pottery is in preparation by M.P. Pellegrino and M. Degli Esposti.

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