Ancient Akrotiri Project, Cyprus

Dreamer's Bay (*Nisarouin*) Excavation & Survey, 2017

Interim Report

Simon James & Vicki Score

with contributions by:

Lucy Blue, Ferréol Salomon, Anna Walas & Mireya González Rodríguez

UNIVERSITY OF LEICESTER

SUPPORTING MARITIME ARCHAEOLOGY IN THE EASTERN MEDITERRANEAN

UNIVERSITY OF Southampton

Contents

On the cover: excavating an eroding building foundation at the water's edge in Area 2.

Summary

A third season of fieldwork was conducted on the ancient port at Dreamers Bay (*Nisarouin*), Akrotiri, at the southern tip of Cyprus during March 2017. This involved a campaign of excavation and survey by the University of Leicester Ancient Akrotiri Project team, which further investigated the sea-threatened shoreline remains of port buildings, and a broadly contemporaneous complex of structures on the hilltop overlooking the area. The shoreline excavations confirmed initial indications in 2016 that at least some of the buildings had collapsed, probably in an earthquake, likely the same which devastated the nearby city of Kourion in the mid-fourth century A.D. while some excavated buildings appear never to have been subsequently disturbed, others were apparently rebuilt, continuing in use during the early Byzantine era. The extent of the hilltop complex was further elucidated, but more information is required before it can be properly understood.

During the season, our colleagues in the University of Southampton returned to continue their geomorphological and archaeological work on understanding the nature of the harbour, and its setting in the context of the peninsula as a whole.

This year also saw an expansion of the project outreach programme, including a public open day and planning for future collaborations with local schools and the Akrotiri Environmental Education Centre.

Introduction

From 5th to 26th March 2017 a team of archaeologists from the School of Archaeology & Ancient History, University of Leicester (UoL), UK, supervising a number of students, conducted fieldwork at and around Dreamer's Bay, RAF Akrotiri (Figs 1 and 2). This work was conducted with the approval of both the UK Sovereign Base Areas Administration, and the Republic of Cyrus Department of Antiquities; with active support from the UK Ministry of Defence's Defence Infrastructure Organisation; and with generous assistance from RAF Akrotiri, and the President of the Western Sovereign Base Areas Archaeological Society, Maj. Frank Garrod (ret.).

The work was conducted by University of Leicester staff Prof. Simon James (project director), Vicki Score (excavation director), Steve Baker, Andy Hyam, Andy McLeish, Donald Clark and Drs Mireya Gonzalez Rodriguez and Anna Walas.

The field season was designed to continue and develop work undertaken over the previous two years (James & Score 2015 & 2016), to investigate and record threatened archaeological remains along the shoreline at Dreamer's Bay (*Nisarouin* in Greek), to seek to understand them as components of the wider ancient port, and to put these into the context of the settlement history of the Akrotiri peninsula as a whole.

During the field season, colleagues from the University of Southampton Department of Archaeology again came to Akrotiri to undertake further investigation of the geomorphology of the peninsula (Dr Ferréol Salomon), and (Dr Lucy Blue) to discuss the underwater archaeological potential.

With regret, it had been decided not to include an Operation Nightingale exercise involving injured military personnel as part of the project this year. This was largely a result of experience in 2016, which highlighted issues including the high number of potential PTSD trigger factors inherent in the dig location. Op Nightingale exercises will continue at Akrotiri, but embedded in another project outside the airbase perimeter, Eleni Procopiou's church dig at Katalymata ton Plakoton.

However, in place of Op Nightingale involvement, the project's wider public outreach programme was considerably expanded, to maximise the social value of the archaeological fieldwork to local communities, both military and local civilian.

The Landscape context of Dreamer's Bay

Figure 1: The location of Dreamer's Bay on the Akrotiri peninsula, Cyprus (Google Earth).

Dreamer's Bay as it is known to Anglophones, or *Nisarouin* to Greek Cypriots, lies on the southern coast of the Akrotiri peninsula (*akrotiri* meaning 'promontory': Fig. 1). The peninsula is a unique and, by comparison with much of the rest of coastal Cyprus, exceptionally well-preserved block of coastal land, famed for its wildlife. It also contains extensive and important archaeological remains, most famously the Aetokremnos site with pygmy hippo bones and the earliest evidence of human activity on Cyprus (c.12,000 cal. BP: Simmons 2001, 2013).

Since the Republic of Cyprus gained independence from British rule in 1960, under the Treaty of Guarantee Akrotiri has been part of the UK's Western Sovereign Base Area (SBA), one of two military base areas retained indefinitely (the other being the Eastern SBA of Dhekelia, east of Larnaca). The peninsula comprises a rocky former island, 9.6km long from Cape Zevgari in the west to Cape Gata in the east, and about 3.5km north-south. The land rises gently from north to south, reaching only a modest 50m above sea level, and terminating on its southern edge in cliffs, except for a stretch of low shoreline at Dreamer's Bay. Akrotiri is now connected to Cyprus proper on the west side by a massive tombolo beach of large pebbles, and on the east side by a broad sand beach which runs into the outskirts of Limassol. The beaches frame a salt lake, famed for its flamingos.

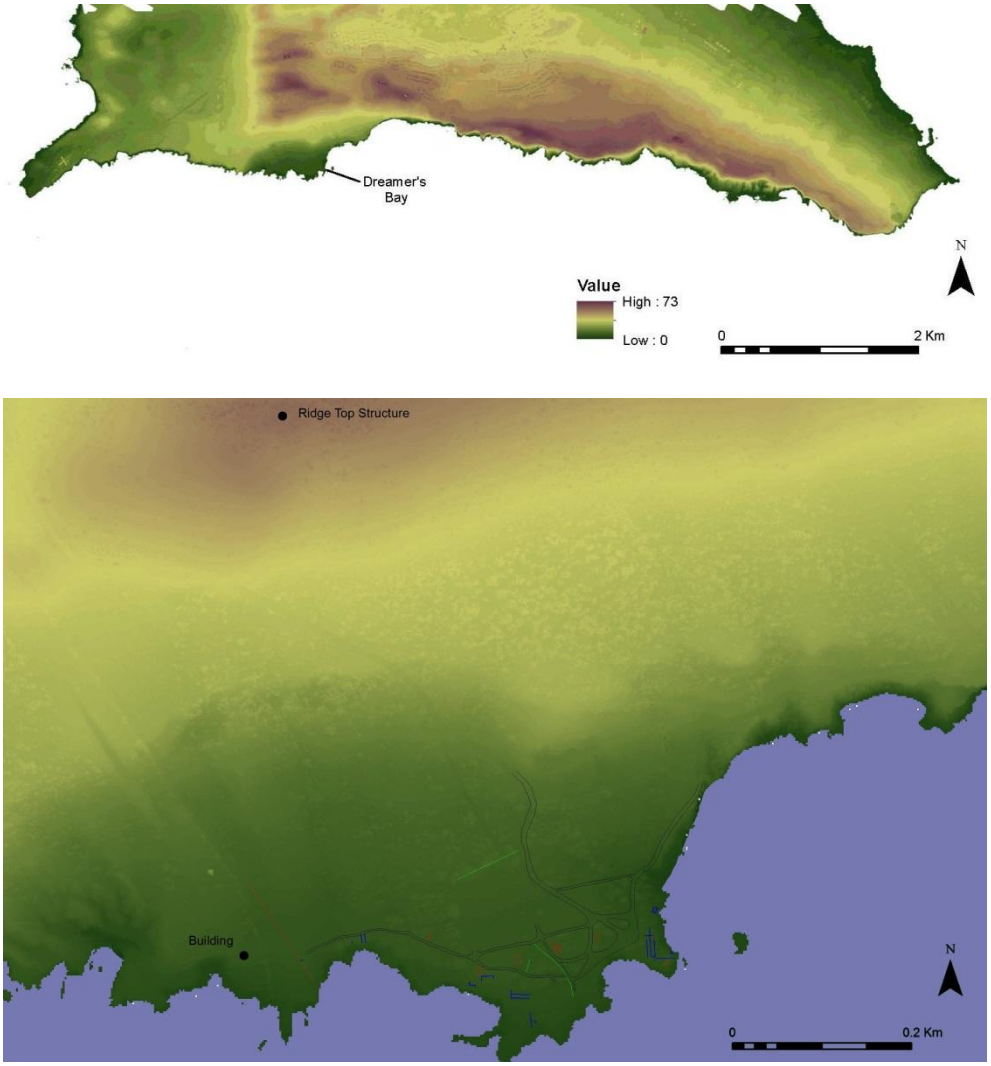


Figure 2: Digital terrain model of the Dreamers Bay locality, with low ground at left, and the ancient anchorage in the bay itself at right.

The southern coast of the peninsula (Fig. 2) consists of high cliffs or very steep eroding slopes except for one area about 600m long in the west, where a broad area of lower-lying land projects somewhat into the sea. Here, around Dreamer's Bay, the shoreline stands nowhere more than about 5m above sea level, with eroding rocky ledges and inlets, some of which have accumulated tiny sandy beaches. In this area human communications between sea and land are practicable, especially as the bay immediately to the east formed a practicable natural anchorage, its use confirmed by the ancient artificial breakwater, anchors and other archaeological remains known on the sea floor.

This part of the southern coast has been largely protected from human interference by its location within the UK RAF base security perimeter, but in an area away from the main airfield complex and residential zone. With the exception of a few recent and current vehicle tracks and surface features, it is largely undisturbed. However, its location on the coast and

the soft sandstone bedrock has resulted in erosion and many of the walls are visible in wave-scoured surfaces and cliff edges eroding into the sea.

Previous work at Dreamer's Bay

Remains of masonry buildings along the shoreline at Dreamer's bay were reportedly first exposed during heavy rains *c.*1973-4 (Heywood 1982**,** p.167). The remains visible on the surface at the start of the project in 2015 comprised masonry wall foundations and scatters of pottery and other material at various points along the east-west shoreline.

In the 1980s, in the cliff-lined bay east of the known shoreline buildings, a submerged artificial breakwater, built on an existing area of reef, was spotted from the air, and subsequently captured by aerial photography. It was subject to preliminary survey work by local avocational archaeology workers which identified ancient anchors and ceramic concentrations thought to attest wrecks (Leonard and Demesticha 2004). The breakwater remains undated, but is thought likely to be Hellenistic (Leonard *et al.* 2007), and may have been initially built from the stone in the cliff-top quarries above, material apparently well suited to the purpose and perhaps also exported from here to build other harbour works elsewhere. The breakwater may have provided an anchorage sheltered from westerly winds for centuries after construction.

Since 2000, survey work conducted by John Leonard and Stella Demesticha (Leonard and Demesticha 2004) led to a wider US/Canadian project at Dreamer's Bay. This was unfortunately cut short due to funding problems and the tragic early death of Danielle Parks, leaving it to Brad Ault of the University of Buffalo to complete (Leonard *et al.* 2006; Leonard *et al.* 2007; Ault 2010; Ault and Leonard forthcoming). Work at the site was largely confined to cleaning and recording of some of the remains, limited experimental geophysical survey work, and a start on survey of the submerged archaeology. Examination of the onshore evidence indicated that the buildings appeared to be associated with extensive quantities of overwhelmingly late Roman/early Byzantine ceramics, although some Hellenistic and earlier Roman material was also noted. The structures were identified as probably warehouses (*horrea*) rather than residential.

Previous University of Leicester work

Archaeological remains inside RAF Akrotiri and the wider UK Sovereign Base Areas in Cyprus are the responsibility of the Sovereign Base Areas Administration, and are monitored by DIO's archaeology team, specifically Philip Abramson. His inspection of the exposed shoreline remains confirmed they were under immediate threat, due to intense rainfall runoff and waves during winter storms eroding them into the sea. The School of Archaeology & Ancient History has broad expertise in Mediterranean archaeology, although not previously in Cyprus. Following a request from Maj Gen Cripwell, the then commander British Forces Cyprus, for an Operation Nightingale exercise in the SBAs, the School entered discussions with DIO regarding undertaking the urgent archaeological rescue work at

Dreamer's Bay as the potential first stage of a wider university research fieldwork scheme on the peninsula (the Ancient Akrotiri Project).

The initial 2015 season involved a small team to undertake the inspection and recording of the remains visible on the surface along the shoreline from around the road head to just within the firing range. A number of areas were cleaned and small trial trenches opened. It became evident that the archaeological remains were more extensive than had been appreciated, and towards the end of the season what appeared to be intact floor levels were encountered in one area. It was evident that, to fully document the immediately threatened remains, to discover the full extent of the harbour settlement, and to place it into its landscape and maritime context, further work would be needed.

The SAAH has also for several years been in partnership with the Defence Archaeology Group which runs Operation Nightingale, a programme to help injured UK Service personnel and veterans recover through engaging them in archaeological fieldwork. The 2015 season laid the groundwork for larger-scale fieldwork, with Operation Nightingale participation in 2016.

Eight areas of archaeology were recorded in 2015 of which were six were identified for further work during the 2016 season (Fig. 3). In addition permanent stations were located around the area by Differential GPS to provide a fixed grid for recording.

Area 1: Containing Structure 1, fully cleaned and selectively excavated during the 2015 season. No further work was undertaken in this area.

Area 2: Lying on the coast to the west of Area 1, this contained 3 possible structures (Structures 3-5) which were cleaned and sample excavated by hand.

Area 3: This area comprised three walls eroding out of the cliff face (Structure 6) recorded during the 2015 season. No further work was undertaken in this area.

Area 4: Identified and recorded in 2015, it contains a building (Structure 2) and areas of burning. In 2016, the scrub and topsoil was cleared by JCB and the area hand excavated.

Trench 5: A single trench was machine excavated to determine if archaeology in Area 2 continued northwards.

Trench 6: Two trenches were machine excavated to try north of the coastline to try and find the extents of the walls identified in Area 3 and further possible buildings.

Area 7: On top of the hill overlooking Dreamers Bay (Fig. 2), this comprises a building with at least one room, covered in stone rubble (presumably much of this demolition rubble). This area was cleared by machine to identify the lines of the walls and its potential extent.

Area 8: Within the Rifle Range Area, west of the fence. A building (Structure 7) had been identified previously and this was surveyed and photographed in 2016.

The 2017 Excavations

Areas investigated

Four areas were identified for further work during the 2016 season (Fig. 3). At the end of the 2016 season Areas 1 and 3 and Trenches 5 and 6 were completed. The work on Areas 2 and 4 identified deeper, more extensive and better preserved archaeology than previously thought and the need for further work was identified. Further work was also needed in Areas 7 and 8.

Area 2: Lying on the coast to the west of Area 1, this contained 3 structures (S3-5). Trial pits were excavated at certain points of Structure 4 to attempt to identify the plan of the structure. Full excavation of Structure 5 was undertaken using a JCB to clear the overburden with hand excavation of the interior of the building

Area 4: The area excavated in 2015 was reopened and expanded by JCB and excavation continued to try and determine the character, date and extent of the structure (S2).

Area 7: This area lies on top of the hill overlooking Dreamers Bay (Fig. 2). The wall lines and floor levels of a building had been identified and cleaned in 2016. In 2017 two small trenches were opened outside the main building by machine to determine if the structure continued to the north and west.

Area 8: Structure 7 lies within the Rifle Range Area, west of the fence. The intention was to clear the surface and record the structure which was thought to be badly eroded.

Methodology

Excavation was conducted manually, although a JCB was used where scrub over or surrounding the planned trench areas needed to be cleared, and also where necessary to remove colluvium, modern redeposited material and rubble overlying the archaeological levels.

Recording was conducted using the standard context-sheet-based system employed by University of Leicester Archaeological Services, which is designed to cope with both simple and complex, deeply stratified sites. While the students were trained using conventional manual recording to help them understand the principles, Surface from Motion (SfM) technology was also used to produce high-precision 3D photogrammetric models.

All excavations were tied into the previous work using a Total Station and the permanent stations created the previous year using DGPS.

Figure 3: Areas and structures identified 2015-2017 overlain on Google Earth.

Objectives

The main objective for 2017, building on the work of the previous seasons, was to complete as far as possible the identification and recording of archaeological remains that were in danger of erosion, and to set them in context so that they could be fully understood. Previous observations had shown that erosion, mostly caused by storm wave action but exacerbated by human action such as vehicles driving over the area is a major problem on the site. The identification, recording and excavation of these areas was the main priority, while at the same time DIO instigated traffic control measures to try to confine visiting vehicles to the road-head. The specific aims of the fieldwork were:

- To identify archaeological features and elucidate as far as possible the nature, form, function, date and condition of remains identified during previous season
- To determine the best methods and equipment for further survey and excavation
- To determine the extent of the buildings at Dreamers Bay, by investigating whether structures like those partially exposed close to the water's edge also extend inland, in areas behind the shoreline still under scrub-covered colluvium
- To provide a report and archive of the results
- To use the excavations to engage with the wider community, in particular local schools, regarding the peninsula's Cultural Heritage

Research Aims

A number of research questions were identified that the excavations had the potential to contribute to. These include:

- What is the nature and extent of the settlement? It clearly involved harbour works and apparently had peripheral cemeteries, but how large was the built-up area, and what can we discover about its layout?
- When was it founded, and how and why did it develop? Was it indeed a Hellenistic foundation as has been posited? Was its flourishing related to the silting up of the channel which turned Akrotiri from island to peninsula, creating a need or opportunity for a harbour at the site? Did the earthquake and possible tsunami which devastated Kourion and its region c.AD365 play any role?
- What trading function did the port have, and with which Mediterranean trade routes did it engage?
- Did it have a military dimension: was it at some stage a naval station, a possibility arising from our own work (James and Score 2015) and recent publications (Procopiou 2014, 2015)?
- How did it meet its end?
- What might be done to preserve the archaeological remains, and to present the evidence to public audiences?

Excavation and Survey Results

Area 2

Three structures were identified in this area in 2016 (Fig. 3). Structure 3 was orientated north – south close to the coast and comprised two parallel lines of stone (approximately 4m apart). The area is characterised by uneven bedrock and cleaning and trial excavation of the area suggests that the rest of this structure has eroded into the sea.

The structure in the centre (Structure 4: Fig. 4) had been partially cleaned and recorded in 2016. Previous work at the site had indicated that it comprised two abutting units each approximately 4m wide orientated east-west**.**

A small area was excavated to the east to attempt to fix the eastern extent of the structure (Fig. 5). The supposedly central wall (33) was traced eastwards and an area of tumbled stone was identified that appeared to be the badly eroded eastern back wall (124). This area had apparently been damaged by a deep vehicle rut.

The line of the northern wall to the supposed layout of two identical long narrow rooms was examined, and determined to be spurious. The western wall (31) proved to run much further to the north, and a hand dug trench confirmed its continuation (Fig. 6). The northern extent of the structure could not be determined due to thick scrub in this area.

A hand-dug trench was excavated over the junction of the west and centre walls to look at their relationship (Fig. 7). Wall 31 formed a neat right angle with Wall 33. To the south of this the wall continued (128) but was slightly wider and different in construction with smaller blocks. Wall 128 appears to abut the corner of 31 and 33 and is probably a later addition to the main structure. Structure 4 therefore appears to form a large single walled area, probably a courtyard rather than a roofed building, approximately 25m wide by at least 12m with a small annex (extension to the court? Roofed building?) approximately 4m wide added on at a later date.

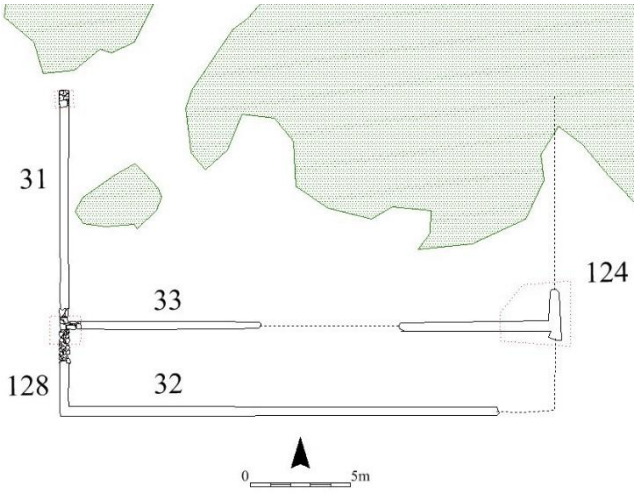


Figure 4: Area 2, plan of Structure 4

Figure 5: Structure 4, east wall revealed looking west.

Figure 6: Structure 4, west wall looking south. The figure is standing on corner 32/128

Figure 7: Structure 4, west wall looking north showing the junction of 31, 128 and 33.

To the north-west of Structure 4 lay Structure 5 (Fig. 8). The main building was identified in 2016, and comprises a rectangle approximately 26m long x 75m wide orientated east-west, with a number of north-south walls forming a series of smaller rooms each approximately 4m wide, with a zig-zag wall along the coastline to the south. The identification of the complete bases of amphorae apparently still *in situ* within in the building suggested that this building had collapsed inwards crushing the contents. The 2017 season aimed to excavate the western end of the building to determine the plan and a possible scenario for its destruction.

Most of the northern walls and the interior of the structure were covered with a fine silty colluvium obscuring the structure (Fig. 9). The eastern part of the building was mostly eroded and barely visible (Fig. 10). However the 2016 excavations had indicated that western end and in particular the two westernmost rooms were better preserved beneath a depth of colluvium and excavation was focussed here.

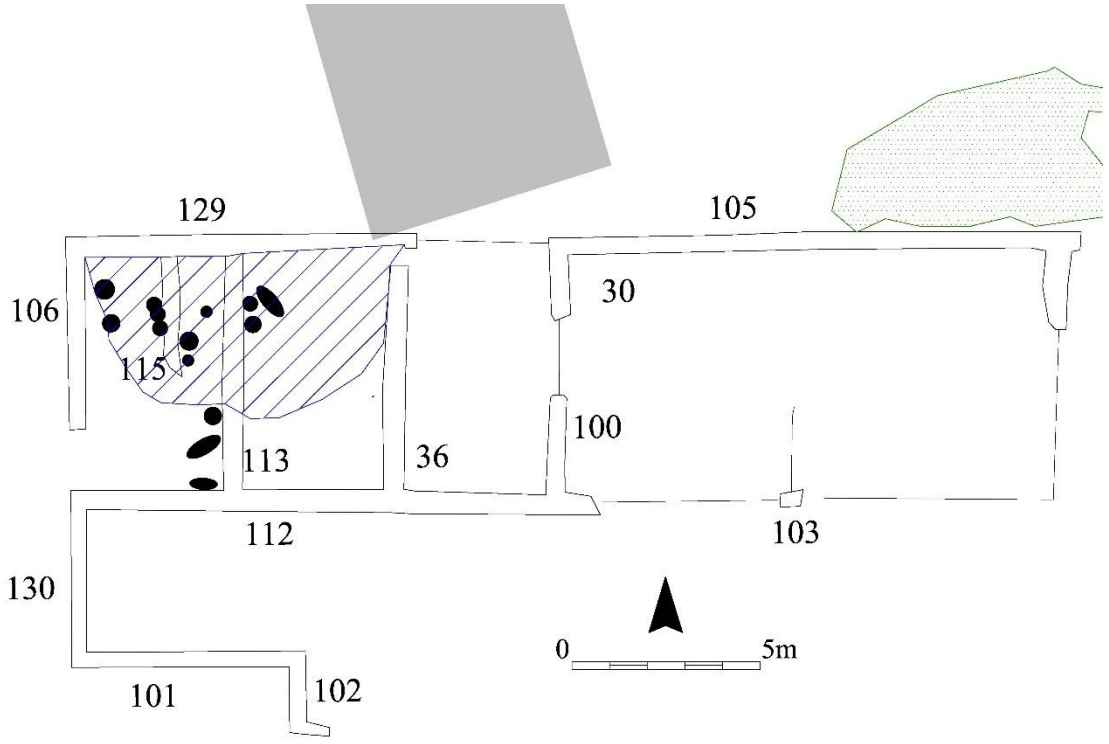


Figure 8: Structure 5 showing location of pottery vessels in the western excavation area and the area of tumbled stone blocks (shaded blue).

Figure 9: Structure 5 prior to excavations showing the covering of sand colluvium in the interior.

Figure 10: Structure 5, eastern end showing eroded wall fragments.

In the north of the excavation area, a large tumble of stone blocks suggested that the building had fallen inwards to the west and south, sealing the deposits beneath (Fig. 11). Removal of this tumbled stone revealed a number of pottery vessels, mostly with their bases still intact, which appeared to be *in situ* (Fig. 12). The vessels were mostly lying close to walls suggesting they had been leant against them. Within the westernmost room, a short section of wall running just half the length of the room was recorded (115) and a fragment of slat marble suggested that this might have been some kind of counter. Several smaller vessels close to this wall were upside down or on their sides suggesting that possibly they had fallen from the 'counter' (Fig. 13).

Figure 11: Tumbled stone in the north-east corner of Structure 5. Looking south

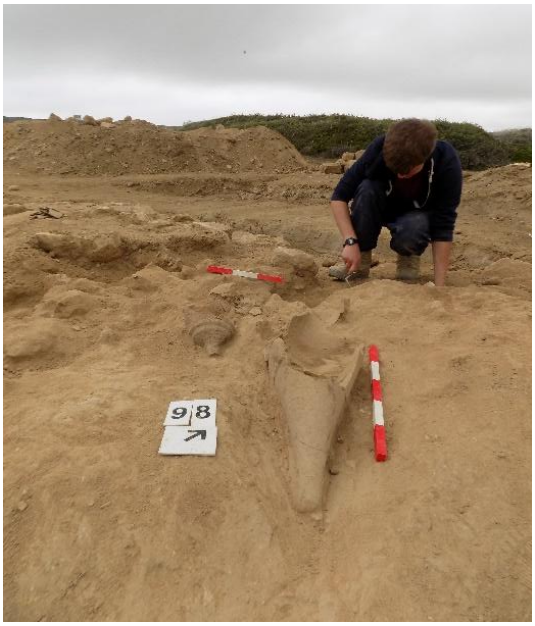


Figure 12: Some of the in-situ pottery vessels in Structure 5.

Figure 13: Upside down pottery vessel.

The external walls were all of a similar thickness and made of stone blocks constructed on top of the natural bedrock with a fine sand layer presumably used to level the ground before construction, with no obvious construction cuts for the foundations (Fig. 14). This was virtually identical to the walls of Structure 1 in Area 1. However, the western wall (106) appeared to be constructed slightly differently to the rest with tile fragments used to fill the smaller gaps of the wall (Fig. 15). This wall construction technique is similar to that seen at Kourion where ceramic fragments were used extensively in one of the rooms of the Earthquake House destroyed in the 4th century. It was suggested that the use of ceramic represents rapid repairs to walls following an earlier seismic event (Costello 2014, 36-37, Fig 4.7). There was no obvious indication that this wall was a different phase to the rest of the structure – in particular the north-west corner appeared to be of a single construction, so perhaps this suggests repairs or a rebuild of part of this wall. Interestingly however, the short interior section or 'counter' contained interlocking stones, although whether these were reused from elsewhere is unknown (Fig. 16).

Figure 14: Interlocking stones in Structure 5.

A gap in the south-west side of the building is large enough to be an entranceway; however the function of a small gap in the north-east is more problematic (Fig. 17); possibly it could be related to drainage. No floors were identified, although there was a fine layer of sand overlying the levelling layer which may be a trampled surface.

Figure 15: Detail of the southern wall of Structure 5 showing the make-up used to level the bedrock.

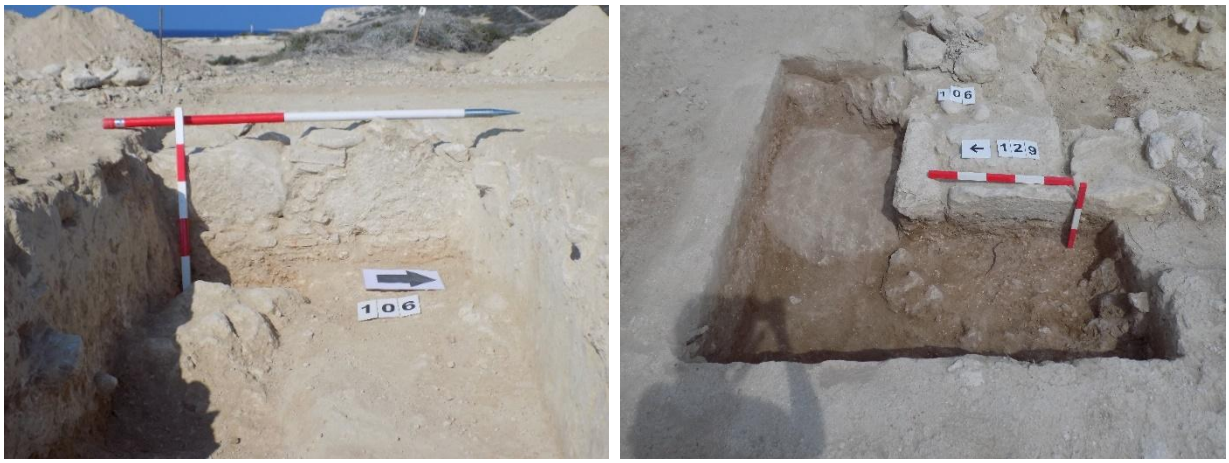


Figure 16: Detail of the western wall of Structure 5 and the north-west corner.

Figure 17: Detail of the small gap in the north-east corner

The western part of the building contained a variety of pots and bowls many of which were still *in situ* and which suggests that this was some kind of storage room. Some of the smaller bowls found upside down appear to have been placed on a counter within the western room. The large amount of stone rubble in the northern part of this building suggests a collapse of some kind, possibly from an earthquake (Fig 17). The direction of the tumble suggests that the walls fell to the south and west, and the building was abandoned, becoming filled with sand and buried by colluvium over time. It was obvious that the building was abandoned subsequent to its collapse with no effort made to clear or rebuild it. An area of burning in the courtyard area against the external side of the southern wall might attest industrial activities associated with the use of the building.

Figure 18: Structure 5. Aerial view (with thanks to 84 Sqn, RAF) showing the tumble in the north-east corner (top) and 3D photogrammetry (bottom), north at the top.

Area 4

At the end of the 2015 season in Area 1 the central and eastern walls of Structure 1 were seen to continue northwards. Some 25 m to the north another building was visible on the eastern shoreline. The area was quickly cleaned and recorded and appeared to reveal a previously unrecorded rectangular structure at least 7m x 3.5m (only partially uncovered) and running westwards under an area of scrub. In 2016, the scrub and the thin topsoil were removed by JCB and the area cleaned. This was shown to be a much larger structure than previously identified, with complex stratigraphy within the interior (Figs 19-20).

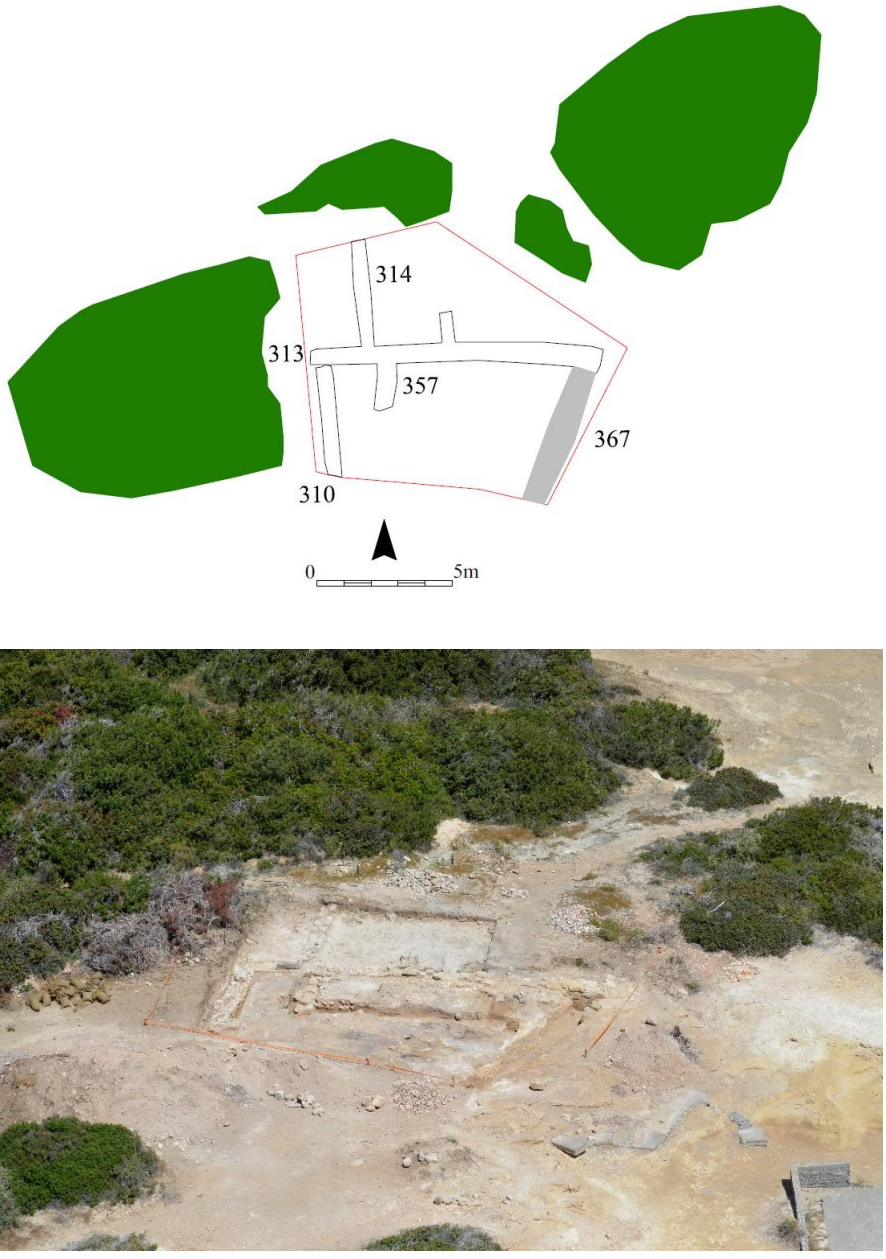


Figure 19: Plan of Structure 2 (top) and aerial shot (bottom) looking north.

Structure 2 comprised a building approximately 9m wide (east-west) and at least 4m north-south, although the southern area had been lost to erosion and modern disturbance (Fig. 19).

A north-south wall (310) was identified running on exactly the same alignment as the eastern wall of Structure 1 (although the area in the middle on the edge of the coast was eroded). A second wall (313) was recorded perpendicular to this running towards the coast although it appears to abut wall 310 rather than forming a corner (Fig. 20).

Figure 20: Area 4 showing the walls looking west (top) and south-west

Walls were also recorded running north and south from the east-west wall (357 and 314). These seem to be narrower than and are probably interior walls. A very short section of wall running north may also be part of an interior construction. Wall 314 continues under the scrub to the north and the northern extent of the building was not identified. The eastern boundary was marked by a U-shaped ditch with steep sides, possibly suggesting it could be a palisade although no post-holes were identified. Interestingly it appears to be earlier than wall 313 and therefore belongs to an earlier phase (Fig. 21).

Figure 21: Area 4 north-south ditch along the eastern edge of Structure 2

Across the whole of the excavated area were layers of burning and possible trampled surfaces. The depth of stratigraphy and large quantities of material culture suggests not only that the area was used for domestic and other purposes (e.g. cooking, food production and possibly small scale industrial or commercial use), but that it was in use for an extended period of time.

Structure 2 appears to be another building on the same alignment as Structure 1 and possibly part of the same complex, sharing one or two north-south orientated walls (Fig. 23). If they were part of one complex, this would make it more than 65m long, although the northern extent was not found. Structure 2 however, appears to be very different in nature to the other excavated structures. It seems to be a multi-phased building preserving possible intact surfaces.

Figure 22: Structure 2 post-excavation, looking south.

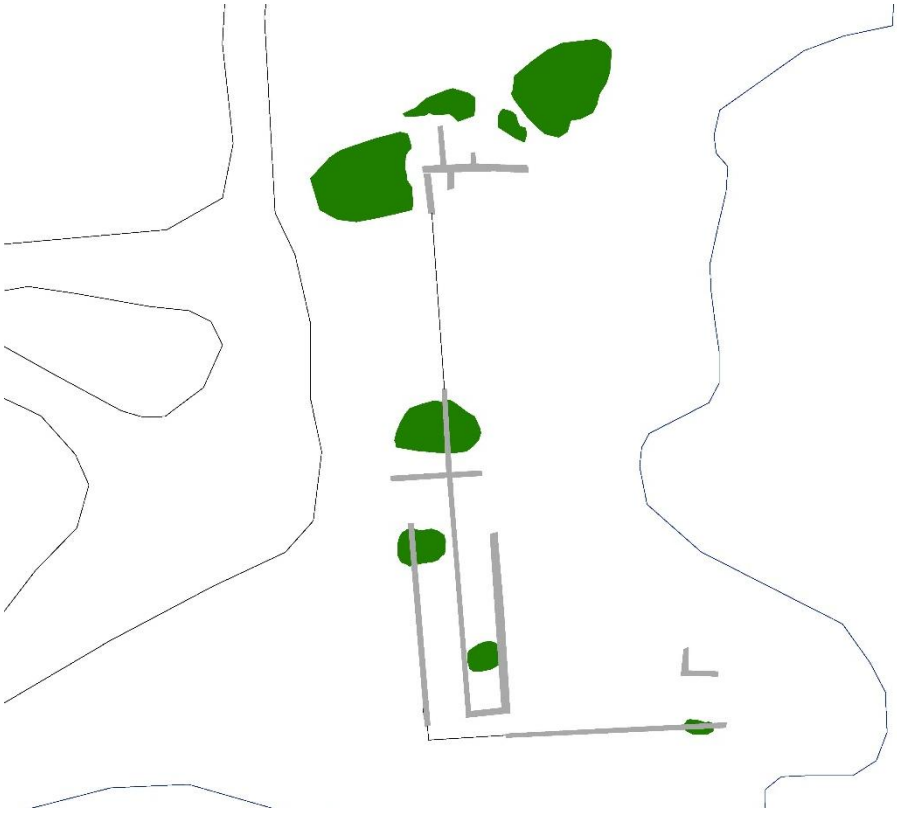


Figure 23: The relationship between Structures 1 and 2

Area 7

In 2016, the building remains identified by the earlier Buffalo Project were cleaned and recorded (Fig. 24). In 2017 two small trenches were excavated, one to the west and one to the north, to try to determine the extent of the structure(s) (Fig. 25).

Figure 24: The south-east corner of the hill-top structure.

The western trench traced the line of the southern wall down-slope. Unfortunately this section was quite badly disturbed by modern activity, however, a junction was identified with a possible corner and wall running north (Fig. 25). Further west bedrock was uncovered suggesting that this wall represents the westernmost limit of the building.

The northern trench was located to try to identify the northern extent of the building. Although a wall was revealed, it did not seem to be associated with the main building. Rather it was curving westwards across the trench (Fig. 26). On the south side was a plaster floor laid over a layer of pea-grit gravel. The features in this trench seem more likely to represent a separate building or room structure on the northern side of the main building and its function remains unknown.

Figure 25: Area 7: tracing the line of the southern wall to the west.

Figure 26: Area 7 northern trench showing the curved wall and floor looking west.

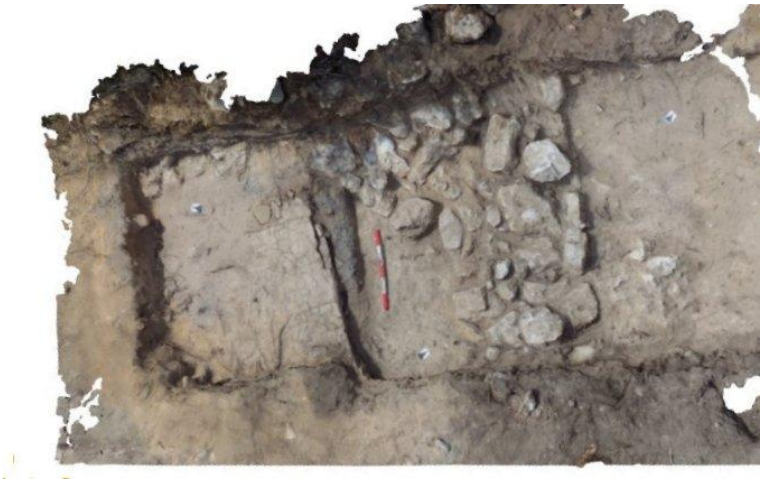


Figure 27: Area 7, 3D Photogrammetry model looking west

Area 8

A structure had previously been identified in the rifle range to the west of the fence line (Structure 7). This had appeared to be similar in size to Structure 5 – a rectangular building with rooms approximately 4m wide but on a north-south alignment, although the full extent of the building was unknown (Figs 28-29). Further cleaning identified that not only was the building more extensive than previously thought with walls identified to the east but that like Structure 5, the walls had been preserved beneath the sands and rubble. It was determined that further excavation would be needed on this building in future seasons in order to record the plan and possibly determine its nature and function.

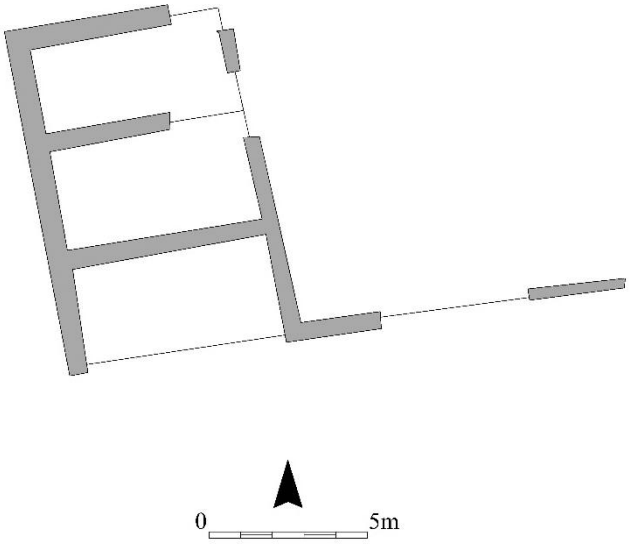


Figure 28: Structure 7 in the Rifle Range (top).

Figure 29: Structure 7 in the Rifle Range. Looking south-west

Backfilling

Following the completion of the 2017 season all areas were backfilled with a JCB, to protect the archaeological remains and to avoid potential hazards to visitors to the shoreline. Visible markers were used in Areas 2 and 4 before backfilling making it easier to re-excavate in future seasons (Fig. 30).

Figure 30: Area 2 (left) and Area 4 (right) following backfilling.

The tombolo of Akrotiri and potential harbours: Sea-level indicators and the maritime landscape

Dr Ferréol SALOMON
Geomorphologist/Geoarchaeologist
University of Southampton

Dr Lucy BLUE
Maritime archaeologist
University of Southampton

In the context of the *Ancient Akrotiri Project*, directed by **Prof. Simon JAMES** (University of Leicester), and the *PortusLimen Project*, directed by **Prof. Simon Keay** (University of Southampton)

Funded by *Honor Frost Foundation*

This geoarchaeological report is the third part of a study of the coast of the Akrotiri Peninsula, the primary focus of which is to place Dreamers' Bay in context and identify other potential harbours that may have functioned around the Peninsula in antiquity. In September 2015, a survey of Dreamers' Bay allowed us to determine the harbour potential in the bay taking into account the morphology of the coast and the modern bathymetry (Salomon et al., 2015). A year later, in September 2016, we had the opportunity to drill four cores with the company Geoinvest in the Salt Lake of Akrotiri with the support of the Sovereign Base Areas Administration of Akrotiri (SBAA and Akrotiri Environment and Education Center - AEEC) and the Geological Survey Department of Cyprus. This second phase of the project aimed to reconstruct the formation of the two tombolo beaches, to establish the date by when Akrotiri Island became connected to mainland Cyprus, and to evaluate the potential location for harbours between Akrotiri Island and mainland Cyprus with respect to the available water column and the degree of closure of the water body. Analyses of these cores is still ongoing. The *Honor Frost Foundation* is supporting the multi-proxy palaeo-environmental analyses of the sedimentary cores currently being undertaken at the University of Southampton[1].

In April 2017, in order to complete estimation of potential harbours located across the Akrotiri Peninsula, we undertook a palaeo-coastline survey examining (1) evidence for **early historic period relative sea-level indicators**, (2) coastal archaeological evidence and related (3) harbour potentialities.

[1] http://honorfrostfoundation.org/dr-ferreol-salomon-geoarchaeology-of-the-akrotiri-peninsula-cyprus-2016/

The field survey was organised in two phases over a 6-day period: (1) a systematic survey of the shore with basic GPS material (4-5 days); (2) the measurement of the most representative sea-level indicators with a DGPS (1-2 days).

1. Physical description, meteorological factors and geomorphological processes

Before undertaking the survey, we established a summary of the main current parameters affecting the coast of Akrotiri, i.e. the winds mainly from the west but also occasionally from the east and the estimated sea-level variation due to tides (0.4m, with abnormal values up to 0.6). These parameters control coastal erosion (winds, storms), but also the variability of sea level (tides, splash etc.) (see supplementary material).

The western shore is characterized by successive small coves and pocket beaches *(Fig. 40).* Active meteo-marine erosion is visible on the western shore of the Akrotiri Peninsula, with accumulation of sediments at the bottom of cliffs. The coastline is currently protected from erosion due to the formation of beachrock, which extents some distance into the sea (20 to 50m). Some beachrocks contain archaeological material. Long coastal platforms have also formed especially around the headlands in between the coves.

Fig. 40. *– Example of a cove on the western shore. Beachrocks formed all along the current seashore and in the infralittoral zone.*

Undercutting is more active on the southern shores and no beachrock has formed in these regions. The southern shore has a variable coastal morphology. In the west, the shore is made up of low cliffs with visible undercutting (from Cape Zevgari to Dreamer's Bay). In the east, the shore is made of a succession of high active cliffs, ancient cliff tops with debris slopes, or debris slopes connecting the seashore to the cliff top above (from Dreamer's Bay to Cape Gata) *(Fig. 32).*

Fig. 32. *– Example of an active cliff erosion with a wavecut platform in the first foreground, and a debris slope in the background.*

On the eastern shore, there is a low slope toward the sea and beachrock locally develops in a similar manner as along the western shore. This area is better protected over the course of the year, but strong winds and waves can affect this area (*Fig. 33, on the left*).

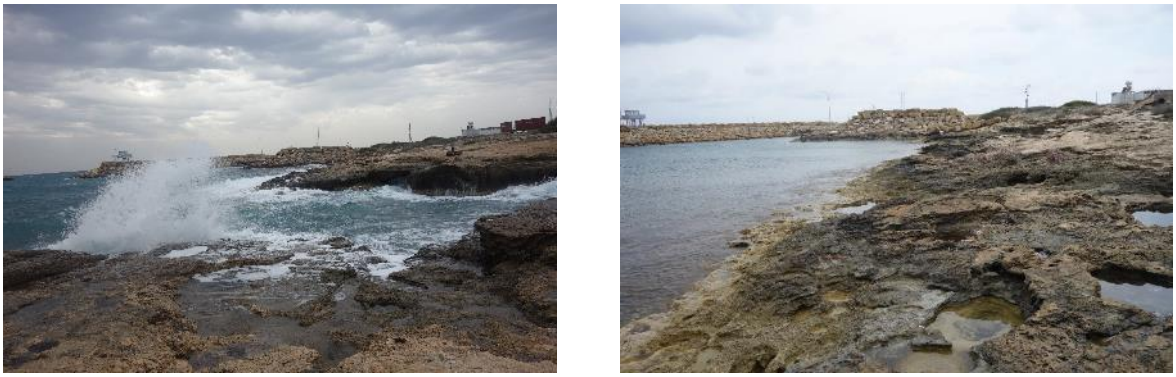


Fig. 33. *– Example of active supralittoral pools formed along the eastern coast.*

No clear evidence of natural sea-level indicators were identified. The interlayered beachrock on the western shore would require a detailed study employing thin sectioning and OSL dating to provide more informed results. On the eastern shore evidences of notches in some supralittoral areas may be inherited either from uplifted notches from a notched formed in a supralittoral pool now partly eroded (*Photos 3 and 4*).

Fig. 34. *– Notch indicating either a palaeo-sea level uplifted or inherited from a supratidal pool now partly eroded (see Fig. 33, on the right) – Bottom of the notch at 1.25 m above current sea level.*

Finally, a survey was conducted on the southern edge of the Salt Lake. The survey revealed the existence of a small promontory towards the north-western side of the Akrotiri Island. This promontory may continue northward under the tombolo deposits. This inherited topography could have had an influence on the formation of the western tombolo, being a strong support for its formation, perhaps accelerating the formation of this tombolo.

Towards the east, just north of the Monastery of St Nicholas of the Cats, a few outcrops of the substratum appear extending north into the Salt Lake but not with a particularly distinctive relief in the current topography. However, as noted previously this palaeotopography may have played a role in the formation of the second tombolo beach.

If these observation are confirmed, the formation of the double tombolo of Akrotiri could be considered as a combination of factors; a classical tombolo formation, formed as a result of diffraction of the swells and the related sedimentation between the Island and the mainland, but also like a structurally driven double tombolo, a product of the natural topography of the Island. This could explain the specificity of this unique feature.

2. Archaeological survey of the coast

Several archaeological structures were identified near the current shore as part of a coastal archaeological survey that was conducted simultaneously with the palaeo-coastline survey. However, at this point very few of the features identified can be dated but do exhibit a clear relationship with respect to the current sea-level position.

a. Western shore of the Akrotiri Peninsula

The western shores as indicated above, are extremely exposed to prevailing winds during all seasons of the year but particularly so during the summer period, the so-called ancient sailing season. Thus, this lee shore (McKee 1983) is therefore hazardous to shipping and generally would not have offered a great deal of shelter. This fact was verified by the modern shipwreck we observed offshore of a large exposed bay on the northern reaches of the west coast. To the south of this bay was a modern jetty and a watch tower, and the bay was backed by large dunes (described above) with only a small eroded promontory to the north offering any potential shelter.

To the south, some indication of activity in the past was noted along the cliffs to the southwest of the Early Byzantine site of Katalimata Ton Plakaton (Procopiou 2015), seaward of Site AK0039 - *see Supplementary data map from the WSBA and ESBA – Archaeological Condition Survey*. Presumably these ceramic scatters are associated with coastal activity relating to the Early Byzantine settlement. Whilst the coastline here is still quite exposed, a small headland eroded and partially submerged, extending to the southwest towards Cape Zevgari, offers some shelter on its southern side. As noted above, this coastline is heavily eroded so identifying specific features in the landscape was problematic. However, all along these eroding cliff tops as the survey continued towards the south, ceramic scatters and shell midden deposits were observed. The ceramic coverage reduced as we approached Cape Zevgari but a series of rock-cut features were noted at the base of a more resilient section of limestone cliff, to the south of which was a large heavily eroded bay that was covered with posidonia sea grass. The rock-cut features were located just at the current waterline and comprised a series of channels, scooped out hollows, and two upright bollards (*Photos 5 and 6) - (34°34'36.29"N; 32°56'18.71"E)*. They did not appear to be linked with quarrying but perhaps channelling or mooring facilities – further investigation of these features to determine their function and relationship to relative sea-level at the time of construction, is recommended. Further inland, to the northwest, ceramic coverage resumed, and appeared to date to an earlier period, perhaps Late Hellenistic / Early Roman.

Fig. 35. *– Platform on the west shore (34°34'36.29"N ; 32°56'18.71"E) with cuts and column bases.*

R

Height of

cm

Cuts are between 50cm and 80 cm wide and several meters long with a depth down to 60cm below the top of the platform

Fig. 36. *– Platform on the west shore (34°34'36.29"N; 32°56'18.71"E) with cuts and column basements.*

b. Eastern shore of the Akrotiri Peninsula

Survey commenced from the northern reaches of the eastern shoreline, south of Ladies Mile, and extended south towards Cape Gaeta. The coast south of the Beach Sailing Club was heavily eroded and disturbed by modern construction and bulldozing, and in sections covered by coastal sand dunes. However, small amounts of ceramics were visible in patches both along the shore and some distance inland (Site AK018). Intermittent and indeterminable rock-cut channels and ponds, just submerged along the waters edge, were also observed in the area of the Akrotiri Beach Hut. These, together with what appear to be ancient fish-traps or quarries further south along this stretch of the coast, warrant further survey (*Fig. 37*).

Fig. 37. *–Possible quarry on the eastern shore*

The number and scale of coastal sand dunes increased towards the south, and ceramic scatters were still noted in association with these features. Further examination of these features is recommended and perhaps would benefit from a terrestrial geophysical survey. This would hopefully provide more insight into the relationship of this coastal area with the settlement of Arkosykia (AK019; Law Site B) identified at the southern end of an open bay protected by a peninsula that extends to the east (*Fig. 38*). Whilst the waters of this bay are currently quite shallow, potential higher sea levels in this region could have accommodated a sheltered anchorage in support of the ancient settlement. The larger Roman-Early Byzantine settlement of Shiliastasia (AK020) is located some 700 metres inland and this coastal anchorage could have provided shelter to smaller vessels approaching the coast and the larger inland settlement. Again a more intensive marine survey of this southern bay would no doubt be productive.

Fig. 38 *– view of Arkosykia Bay from the north*

As we approached Cape Gaeta, the modern harbour and slipway facilities were visible, but also a potentially more ancient slipway was noted, just to the north of the modern slipway. Rock-cuttings along the southern entrance of the modern slipway also present features that warrant further investigation both with regards their function (AK035) and with respect to what they can tell us about previous sea-levels (*Fig. 39*).

Fig. 39 *– Rock cutting on the north of the current slipway*

c. Southern shore of the Salt Lake

Finally, an investigation was conducted of the north side of the Akrotiri Peninsula, with the objective of determining if any archaeological sites were present or potential harbours or anchorages may have been feasible when the Peninsula was still an island or when it was still exposed to the open sea. The survey was conducted from the southern extend of the Ladies Mile to the northwest along the break of the slope of the nature topography of the former island. A small tell-like feature was noted just on the inland edge of the coastal marshes and dunes, east of the modern track. Scatters of pottery were clearly visible including some black-glazed ceramic. Survey continued towards the north and west and a small settlement was noted with low, stone walls further up the north-eastern slopes, to the southeast of the Sanctuary of the Cats, Ayios Nikolaos. This could equate to the site of Anthrobos (Site 16). The ploughed fields in this region all revealed signs of pottery scatters now heavily disturbed.

To the north of the Sanctuary of the Cats, as noted above, the natural topography extends in a northerly direction into the modern day Salt Lake. Substantial remains of a stone wall had previously been noted in this region, and along with the natural inclination of the rock outcrops, this area potentially provides a natural promontory now surrounded by marshy land, that prior to siltation, could have provided shelter to vessels at anchor on either side. Further more intensive survey in this region would no doubt be fruitful.

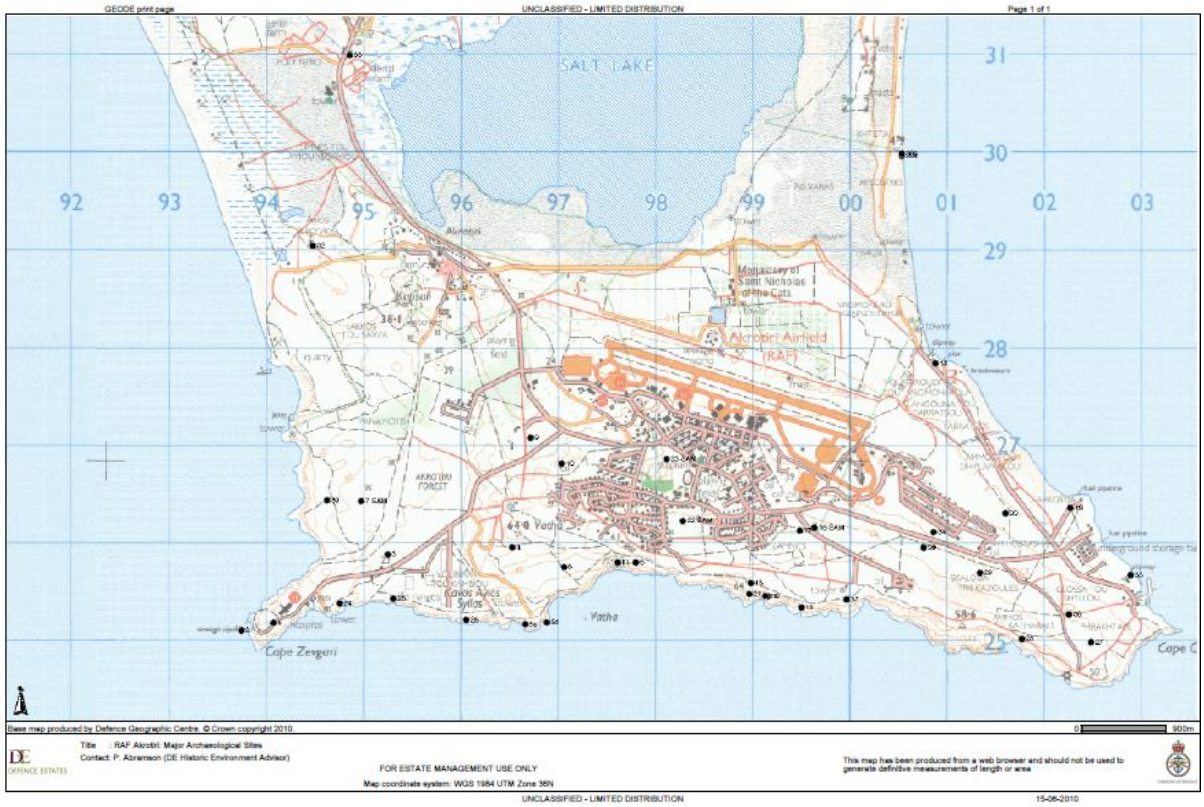
3. Perspectives

A number of potential anchorages connected with coastal archaeological sites were identified, the most promising of which were Arkosykia Bay on the east coast and the area to the north of the Sanctuary of the Cats on the south side of the Salt Lake. Other features of interest included the rock-cuttings on the west coast (*Fig. 36*) and on the east coast (*Photos 7 & 9*). Hence, the following recommendations are made for future work:

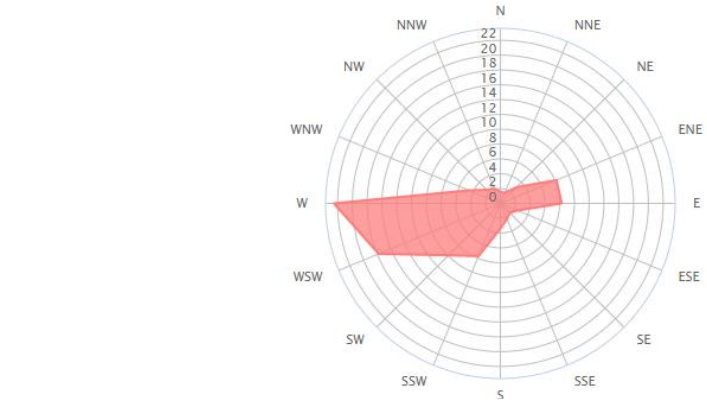
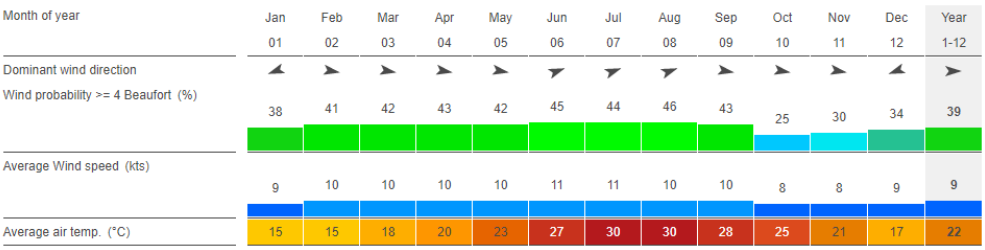
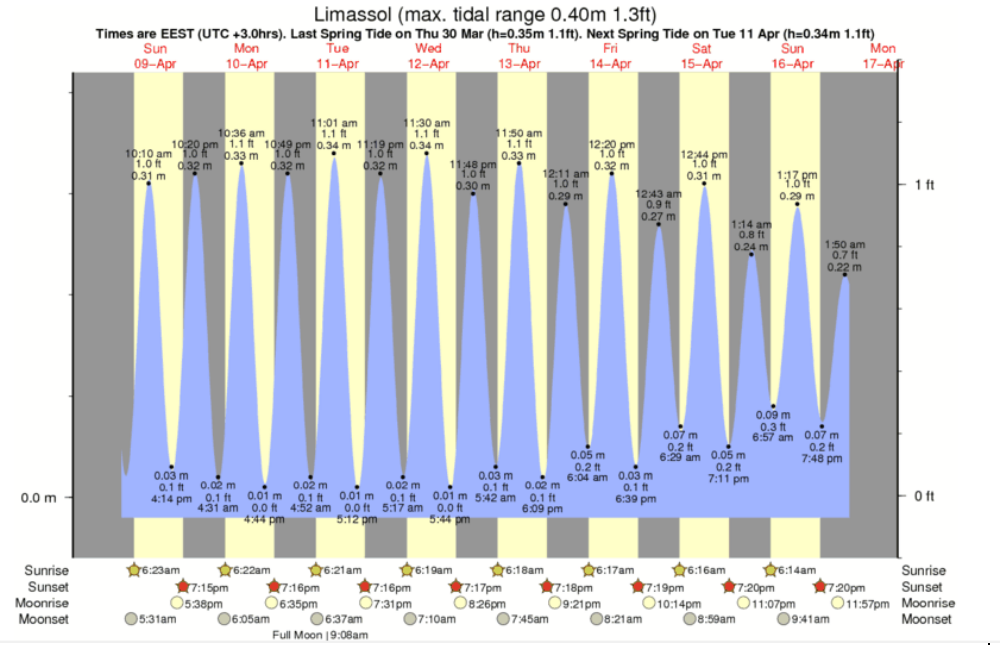
(1) Conduct an underwater archaeological survey, especially on the more sheltered eastern coast;
(2) Further examination of the rock-cut features on the east and west coast;
(3) Detailed record the jetty at Dreamers Bay, identification and dating of sea-level indicators of the structure (*Balanus*);
(4) Creation of a computer model to identify shelters over time using the LiDAR dataset.

Supplementary data

Document A - WSBA and ESBA – Archaeological Condition Survey



Document B – Weather conditions

Winds	Wind direction distribution for one year[2]   November to February West and East winds March to October = mainly from West
Mean tidal levels	Mean spring range about 0.4 m, mean neap range about 0.2 m[4]  Limassol : https://www.tide-forecast.com/locations/Limassol/tides/latest

[2] https://www.windfinder.com/windstatistics/akrotiri; Cyprus Ports Authority - Οδηγίες προς Ναυτιλλόμενους: http://www.cpa.gov.cy/CPA/page.php?pageID=42

	See also "Paphos": http://www.psmsl.org/data/obtaining/stations/2159.php http://www.ioc-sealevelmonitoring.org/station.php?code=paphos
Abnormal levels	0.60m[4]
Waves	http://www.oceanography.ucy.ac.cy/cycofos/
Local weather	"The prevailing summer wind is a sea breeze that normally blows in from the W. It gets up about midday, blows between 3 and 6 and dies down at night. Away from the coast the wind tends to be SW but closer in it follows the contours of the coast so that at Larnaca it blows from SSW-S. Gales can blow from all directions, but most frequently blow from S or E. In the summer there is frequently a sea fog in the early morning which can reduce visibility to less than a mile. It is usually dispersed by midday. Port operations may be interrupted but the fog usually clears by 08.30L, 10.00L latest. Southeast desert winds bring dust to the area, but normally is not a problem. During the summer the prevailing W winds sometimes reach gale force in the afternoon, making boat work uncomfortable at Limassol harbour" [4]
Groundwater levels	http://www.moa.gov.cy/moa/wdd/wdd.nsf/resources_en/resources_en?OpenDocument&print
Map data	http://portal.dls.moi.gov.cy/en-us/Pages/The-Department-of-Lands-and-Surveys-Web-Portal.aspx

Outreach

Anna Walas & Mireya González Rodríguez

A key part of the project is the outreach programme which aims to raise awareness of the cultural heritage of the area among both the military community and the civilian Cypriot population, provide information packs and activities to the local schools and inform policy changes regarding the protection of cultural heritage in the area.

While the 2016 season focused on work with schools, the 2017 season, due to its timing coinciding with the Easter Break, focused on engagement with the public: military personnel, their families and local Cypriots working within the base. The main vehicle of engagement was the Open Day which aimed at promoting knowledge and interest in the site, underlining the importance of its protection, the basic principles of looking after heritage (i.e. not driving over the buildings, not picking up pottery from the sea) and encouraging the local communities to engage with archaeology and history of Akrotiri more generally.

Figure 40: Outreach activities during the 2017 Open Day. Top Left, visit from the WSBA Archaeological Society. Other pictures: visits from base community families, and their comments.

The Open Day took place on 19th April and attracted around 150 visitors. This was a good result considering that the Open Day fell on Easter Saturday. Both Area 2 and Area 4 were open to visitors with a range of interactive activities for children and adults taking place in tents near the excavation trenches and with tours of each trench delivered by the excavators on site. The activities included site tours and handling of archaeological materials, activities around chronology (working on timelines and the interaction of ancient Mediterranean civilisations), identity (understanding archaeological thinking processes through the analysis of modern materials), ancient slavery and an opportunity for the youngest to draw and decorate paper cut outs of pottery.

The team surveyed 47 participants (just under 33% of the visitors; children were not surveyed). Of these 79% knew nothing or had only heard about the Roman archaeology on the base prior to visiting the site, and 38% had previously never been to an archaeological site on the base with further 20% only having been once. These figures indicate that the Open Day attracted audiences which would not normally visit heritage sites on the base or had never had the opportunity to do so. 97% of the surveyed indicated that the Open Day increased their understanding of the importance of protecting the heritage on the base, with 95% being interested in learning more about the archaeological sites in the area and 93% feeling that following the Open Day they think that more should be done to protect the archaeology on the base. 95% also agreed that following the experience of the Open Day, they would visit archaeological sites on the base again. These results indicate that the Open Day was a great success and fulfilled its objectives. Non-serving personnel were more likely to be interested in archaeology with 8% of the non-serving respondents saying they knew a lot or quite a lot about the site as compared to 0% of the serving personnel. Non-serving personnel were also three times as likely to often visit archaeological sites on the base as compared to the serving personnel. This indicates that there is scope for further activities with both groups, but also that the military personnel is less likely to engage with archaeology on site.

Throughout the whole seasons there was a steady stream of visits from passers-by, dog walkers, people swimming in the nearby bay, and families (including of children who had previously visited the site, or were unable to visit it as part of the programme of engagement in September). Our staff and undergraduate students offered site tours, provided answers to questions and showed finds excavated on the day. This was an important part of the activity in the build up to the Open Day, and particularly in the effort to raise awareness of the archaeological heritage of Dreamers' Bay among the people who visit it regularly. The local Archaeological Society consisting of retirees and veterans also visited the excavation.

Following a successful bid to the Impact Development Fund, a package of further educational activities will be developed in the academic year 2017/2018. This programme will be developed by Mireya González Rodríguez, archaeologist and former Teacher of Classics. The materials will comprise lesson plans with topic outlines, teaching and

homework activities as well as consolidation resources, including PowerPoints and starters and plenaries. These will be done in collaboration with our partner schools in Cyprus and, if requested, can be translated into Greek. A separate suite of activities will be developed for the Environmental Centre, with an activity centred around Dreamers Bay as a pilot project. The activities will be incorporated into the Environmental Centre's offering of educational activities and translated into Greek, thus extending the reach of the Ancient Akrotiri Project's educational influence to thousands of students of all backgrounds every year. A scoping visit for the development of the first pack is planned for the autumn/winter 2017.

Archive, and storage of finds

All finds from the season have been bagged, boxed and placed in secured storage at the Kourion Museum in Episkopi village, pending further study.

The site archive is held by University of Leicester under the site code ADB.2015 and comprises the following:

- 185 context sheets
- 27 A2 Drawing sheets
- High resolution digital site photos and working shots.
- 7 x environmental samples (retained at the stores in Cyprus)
- 19 x boxes of pottery, 2 boxes of metal and 1 box of glass small finds (retained at the stores in Cyprus). See Appendix 2
- Survey data processed into CAD drawings and a GIS.

Discussion, conclusions and prospect

The 2017 excavations have confirmed the previous seasons' findings, that the structural remains along the coast at Dreamer's Bay are more extensive, more varied and in some areas much better preserved than originally thought. There appear to be a number of long narrow buildings originally identified as warehouses (Area 1, Structure 1; Area 2, Structures 3, 4 and 5; Area 3, Structure 6 and possibly Structure 8). Most seem to be contemporary with similar methods of construction, and common orientation. However, further excavation has suggested that at least some of these buildings are multi-phased with evidence for rebuilding of walls and structural additions. At least two of the buildings (Structures 2 and 8) had internal partitions divided them into smaller rooms approximately 4m wide.

The excavation of Structure 5 also provides hints of a function with the presence of *in-situ* pottery vessels suggesting that parts of the building were used for storage. The range of ceramics encountered also included used cooking pots, although a relative dearth of other domestic occupation debris (e.g. food debris and personal items) perhaps indicates that people were not actually living in these buildings, at least for any great length of time. A number of copper alloy nails and what may be a sail needle likely to be from boats or ships were also found here. These last finds, and the brunt areas outside some of the structures perhaps hinting at industrial activities, suggest that alongside cargo handling and trading indicated by the weight found in 2016, maintenance and repair of vessels, sails, rigging and other tackle was likely undertaken here, as would be expected at a port. However, occupation may have been for only part of the year, during the main, weather-limited ancient sailing season from spring to early autumn. The relative dearth of domestic debris may also be explicable by the proximity of the port to the known contemporaneous substantial 'village' settlements of Pano and Kato Katalymata to the northeast, and Katalymata ton Plakoton to the north west. These were close enough for most port workers to have lived in them, walking to and from Dreamers Bay each day.

The tumbled stone in Structure 5 clearly indicates some kind of building collapse crushing many of the pots where they stood. The building was evidently abandoned following the collapse with no attempt to recover the contents. This building shows similarities to that from the 'earthquake house' at Kourion (Costello 2014) and it is hypothesised that this, and possibly others of the Dreamers Bay shoreline buildings, had been destroyed in the same earthquake as Kourion, i.e. during the AD360s.

Structure 2 appears to be a different type of building with stratified deposits including burning and large amounts of pottery, again including cooking pots and it is clear from the material culture that there was a domestic function to this building. It may be that the shoreline housed a number of similar buildings that had different functions related to the harbour and trade including occupation areas, storage and possibly industry such as ship repairs, and perhaps commercial activities. Interestingly there is also evidence for later use

of the strictures with a number of areas of burning suggesting hearths found externally against the walls in Structures 1 and 5 may indicate industrial activities in the courtyards outside the buildings.

The hilltop structures in Area 7 were clearly of some significance, with plastered walls, high quality flooring, ceramic tile roofing, and the enigmatic semi-circular structure which might be a small tower or perhaps spiral stair foundation. Although the western extent is now identified, to the east and south are substantial piles of large stones cascading down the hill slopes which it had been suggested might attest defensive walls. The 2017 work suggested that the hilltop complex did have an enclosure wall, although this does not look substantial enough to be considered defensive. The location of the site, while not the highest point in the area, is one which affords the best viewpoint overlooking the sea, commanding the horizon from Limassol Lighthouse near Cape Gata in the east, right around to Cape Zevgari to the west, to Kourion in the north and as far as Pissouri Bay in the northwest. The hilltop remains appear to be of broadly similar age to the coastal buildings, i.e. late Roman to early Byzantine, but as yet more precise dating evidence is lacking and currently there is no evidence of the relationship between the hilltop complex and the shoreline facilities. This site clearly requires further work to elucidate its nature, extent, dating and purpose.

Funding permitting, further fieldwork is projected at Dreamers Bay for 2018-2019, to develop our understanding of the nature and dating of the identified remains, and to place them in their wider historical landscape context. The objective, by the end of the current project in 2019, is to document and investigate all the remains relating to the ancient port, including the quarries on the clifftops above the anchorage, and to understand it as a working entity in relation to the peninsula, the region, and the neighbouring ancient cities of Kourion and Amathous.

Acknowledgements

The project team would like to express their gratitude to the UK Sovereign Base Areas Administration and the Republic of Cyprus Department of Antiquities for enabling the fieldwork to take place. The Chief Officer of the Sovereign Base Areas Authority Dr Philip Rushbrook continues to take a personal interest in the expedition, and his support and encouragement is very much appreciated. We would also like to thank the Republic of Cyprus Department of Antiquities for their support and advice, especially the Director Dr Marina Solomidou-Ieronymidou, Eleni Procopiou, Demetra Aristotelous and the staff of Kourion Museum.

We are especially grateful to the Honor Frost Foundation for their support in generously funding the 2017 field season.

SBAA officials, notably Antonis Antoniades, also provided indispensible assistance in preparing and running the expedition, an effort also relying on support from DIO Environmental staff, both in the UK with archaeologist Philip Abramson playing a key role, and in Cyprus, David Reynolds. RAF Akrotiri station commander Group Captain Mike Blackburn offered warm support, and Maj Steven 'Smudge' Smith provided vital practical help with security clearances, equipment, and valuable guidance. Many thanks also to 84 Sqn for kindly taking some air photos of our trenches.

Maj Frank Garrod (ret.), Chairman of the WSBA Archaeological Society, once again offered us generous hospitality, gave us the use of the Society's well-equipped club house, provided key equipment, helped us secure excellent accommodation, and by no means least provided access to cheap vehicle hire.

We were also delighted to welcome once more our University of Southampton colleagues, Drs Lucy Blue and Ferréol Salomon, for their initial reconnaissance to Dreamer's Bay, and look forward to future collaboration with them.

By no means least, we are grateful to our excellent University of Leicester staff archaeologists Steve Baker, Andy McLeish, Andy Hyam, Donald Clark, Mireya Gonzalez Rodriguez, and likewise to Anna Walas for looking after the finds side while, with Mireya, running an excellent outreach programme. Thanks also for all their impressive hard work and loud (sometimes, *very* loud!) enthusiasm to University of Leicester student participants, Daisy Bradford, Chloe Bratherton, Hannah Clover, Grace Cutbill (returning for a second season), Emily Elsmore, Emma-Jane Horrigan, and Tom Millington.

Bibliography

Ault, B.A. 2010. *The Akrotiri-Dreamer's Bay Ancient Port Project (ADBAPP) Final Report, 2010,* unpublished archive report.

Ault, B.A. and J.R. Leonard forthcoming. 'The Akrotiri-Dreamer's Bay Ancient Port Project: Ancient Kourias Found?' in E. Herscher, Ed., *The Ancient Kourion Area: Penn Museum's Legacy and Recent Research in Cyprus. Proceedings of a conference held at the University of Pennsylvania Museum of Archaeology and Anthropology, Philadelphia, Pennsylvania, March 27–29, 2009*, Philadelphia, University Museum Publications.

Costello, B.C. 2014. *Architecture and Material Culture from the Earthquake House at Kourion*, Cyprus, Oxford, BAR Int. Series 2635.

Heywood, H.C. 1982. 'The archaeological remains of the Akrotiri peninsula', in H.W. Swiny, Ed., *An Archaeological Guide to the Ancient Kourion Area and the Akrotiri Peninsula*, Nicosia, Department of Antiquities, Cyprus, 162-175.

James, S.T. and V. Score 2015. *Ancient Akrotiri Project: Dreamer's Bay excavation & survey, September 2015, Interim Report*.

James, S.T. and V. Score 2016. *Ancient Akrotiri Project: Dreamer's Bay excavation & survey, September 2016, Interim Report*.

Leidwanger, J. and D.S. Howitt-Marshall 2006. 'Episkopi Bay and beyond: recent collaborative fieldwork and new prospects on Cyprus,' *Institute of Nautical Archaeology Quarterly* 33: 13–22.

Leonard, J.R., B.A. Ault and S. Demesticha 2007. *Report 2007 Akrotiri-Dreamer's Bay Ancient Port Project*, Cyprus**:** 13pp.

Leonard, J.R. and S. Demesticha 2004. 'Fundamental Links in the Economic Chain: Local Ports and International Trade in Roman and Early Christian Cyprus', in J. Eiring and J. Lund, Eds, *Transport Amphorae and Trade in the Eastern Mediterranean. Acts of an International Colloquium at the Danish Institute of Athens, 26-29 September 2002 (= Monographs of the Danish Institute at Athens, Vol. 5)*, Aarhus, Aarhus University Press, 189-202.

Leonard, J.R., D.A. Parks and B.A. Ault 2006. *Report 2006 Akrotiri-Dreamer's Bay Ancient Port Project,* unpublished archive report 3pp. (unpag.).

Procopiou, E. 2014. 'The Katalymata ton Plakoton: New Light from the Recent Archaeological Research in Byzantine Cyprus', in A.W. Carr, T.W. Davis and C.A. Stewart, Eds, *Cyprus and the Balance of Empires: Art and Archaeology from Justinian I to the Coeur de Lion*, Boston, American Schools of Oriental Research, 69-98.

Procopiou, E. 2015. 'The excavations at Akrotiri-*Katalymata ton Plakoton* 2007-2014', in S. Rogge and M. Grünbart, Eds, *Medienval Cyprus: A Place of Cultural Encounters*, Münster, Waxman, 185-218.

Salomon, F., L. Blue and H. Farr 2015. *The tombolo of Akrotiri and the harbour of Dreamer's Bay: Geomorphological and underwater archaeology report 2015*. *Portus Limen* project, University of Southampton, archive report, pp.21.

Salomon, F., and L. Blue 2016. *Geoarchaeology of the Salt Lake of the Akrotiri Peninsula. Coring Campaign: Report 2016*, University of Southampton, archive report, pp.18.

Simmons, A.H. 2001 'The First Humans and Last Pygmy Hippopotami of Cyprus', in S. Swiny, Ed., *The Earliest Prehistory of Cyprus. From Colonization to Exploitation*, Boston, Cyprus American Archaeological Research Institute Monograph Series, Vol. 12. American Schools of Oriental Research Reports, No. 5, 1-18.

Simmons, A.H. 2013 'Akrotiri-Aetokremnos (Cyprus) 20 Years Later: An Assessment of its Significance,' *Eurasian Prehistory* 10: 139-155.

Appendix 1: Survey stations

Station	East	North	Height	Description
STN01	196881.954	326535.021	19.257	Area 1: Original RO02 - middle concrete block, SW facing Area 1 (mid point)
STN02	196848.828	326548.705	17.897	Area 1: Immediate west of
STN03	LOST			
STN04	LOST			
STN05	196599.384	326520.408	17.195	Area 2: Western coast directly west of STN06
STN06	196673.129	326520.408	19.240	Eastern concrete base survey point
STN07	196533.637	326558.570	19.291	Area 3: Southern coast NE of STN08 next to metal peg
STN08	196474.255	326532.422	18.884	Far west against Range fence nail in wall stub
STN09	196708.514	326502.948	18.612	Area 2: Red Concrete SE of CB3, Old Buffalo STN3
STN10	196717.254	326535.304	19.198	Centre west concrete base survey point
STN11	196760.755	326547.713	18.942	Eastern concrete base survey point
STN12	196804.549	326560.923	18.786	Centre east concrete base survey point
STN13	196812.556	326486.991	16.495	Area 1: Red Concrete peg close to shore SW
STN14	196876.205	326598.398	15.431	Area 4: NE corner red concrete peg
STN15	196448.707	327133.147	66.715	Area 7: top of site South of excavation red concrete peg
STN16	196438.125	327105.882	63.534	Area 7: bottom of site South of excavation close to fence around dump red concrete peg
STN17	196076.632	326614.186	37.813	Ranges: Southern side of track Red concrete peg c. 10m back
STN18	195972.510	326601.826	38.842	Ranges: Southern side of track top of hill overlooking Bay Red concrete peg

STN19	196173.303	326639.508	29.187	Ranges: Northern side of track Red concrete peg
STN20	196410.388	326541.585	20.103	Area 8: Buffalo peg NE of building Red concrete peg
STN21	196400.372	326537.874	19.828	Area 8: NW corner of grid Red concrete peg
STN22	196399.591	326522.992	17.694	Area 8: South of STN22 Red concrete peg
STN23	196866.975	326561.800	17.460	Area 1:Original RO01:SE corner of concrete plinth of bench between Area 4 and 1
STN24	196866.556	326563.942	17.453	Area 1: NE corner of concrete plinth of bench between Area 4 and 1

Appendix 2: List of all finds stored at the Kourion Museum

BULK FINDS								
Season	**Trench/Area**	**Context**	**Cut**	**Material**	**Object/Date**	**Amount**	**Location**	**Stored Location**
2016	1	01		Pot		1 x bag		Box 1
2016	1	01		Pot		1 x bag		Box 7
2016	1	02		Pot		1 x bag		Box 1
2016	1	03		Pot		1 x bag		Box 7
2016	1	04		Pot		1 x bag		Box 5
2016	1	04		Pot		1 x bag		Box 7
2016	1	09		Pot		1 x bag		Box 1
2016	1	19		Pot		2 x bags		Box 1
2016	1	24		Pot		1 x bag		Box 1
2016	1	25		Pot		1 x bag		Box 1
2016	1	26		Pot		2 x bags		Box 1
2016	1	27		Pot		1 x bag		Box 1
2016	1	28		Pot		1 x bag		Box 1
2016	1	44		Pot		1 x bag		Box 1
2016	2	50		Pot		1 x bag		Box 1
2016	2	51		Pot		4 x bags		Box 1
2016	2	52		Pot		1 x bag		Box 1
2016	2	52		Pot		1 x bag		Box 5
2016	2	53		Pot		1 x bag		Box 1
2016	2	58		Pot		1 x bag		Box 1
2016	2	108		Pot	fine ware	2 x crystal boxes		Box 5
2016	2	108		Pot	fine ware	2 x crystal boxes		Box 5
2016	2	108		CBM	Roof tile	1 x bag		Box 5
2016	2	108		Shell	Murex & others	1 x bag		Box 5
2016	4	108		Pot		4 x bags		Box 5
2016	4	108		Pot		3 x bags		Box 5
2016	4	109		Pot		1 x bag		Box 5
2016	4	110		Pot		1 x bag		Box 5
2016	4	201		Pot		1 x bag		Box 1
2016	4	208		Pot		1 x bag		Box 1
2016	4	212		Pot		1 x bag		Box 1
2016	4	302		Pot		1 x bag		Box 4
2016	4	302		Pot		1 x bag		Box 7
2016	4	303		Pot		1 x large bag		Box 7
2016	4	304		Pot		2 x bags		Box 4
2016	4	305		Pot		4 x bags		Box 4
2016	4	305		Pot		1 x bag		Box 7

2016	4	307		Pot		4 x bags		Box 4
2016	4	307		CBM		1 x bag		Box 4
2016	4	308		CBM		2 x bags roof tile		Box 1
2016	4	308		Pot		1 x bag		Box 4
2016	4	308		CBM		1 x bag		Box 7
2016	4	309		CBM		2 x bags roof tile		Box 1
2016	4	309		Pot		1 x bag		Box 4
2016	4	310		Pot		1 x bag		Box 4
2016	4	311		Pot		1 x bag		Box 4
2016	4	318		Pot		1 x bag		Box 4
2016	4	321		Pot		1 x bag		Box 5
2016	4	322		Pot	Pottery handles	1 x bag		Box 5
2016	6	500		Pot/CBM		1 x bag		Box 5
2016	7	526		Pot		1 x bag		Box 5
2016	7	US		Pot		4 x bags		Box 1
2016	7	US		Pot		1 x bag	Surface finds	Box 1
2016	8	US		Pot		1 x bag		Box 1
2016	6A	US		Pot		1 x bag		Box 4
2016	6B	US		Pot		1 x bag		Box 5
2016	6B	US		Pot		1 x bag		Box 5
2017	2	333		CBM	Tile/brick	5 x bags		Box 09
2017	2	347		CBM	Tile	1 x bag		Box 09
2017	2	355		CBM	Tile	1 x bag		Box 09
2017	2	366/367		CBM	Tile	1 x bag		Box 09
2017	2	305		Pot		1 x bag		Box 10
2017	2	330		Pot		2 x bags		Box 10
2017	2	331		Pot		1 x bag		Box 10
2017	2	332		Pot		8 x bags		Box 10
2017	2	333		Pot		1 x bag		Box 11
2017	2	335		Pot		3 x bags		Box 11
2017	2	336		Pot		1 x bag		Box 11
2017	2	337		Pot		1 x bag		Box 11
2017	2	338		Pot		1 x bag		Box 11
2017	2	340		Pot		1 x bag		Box 11
2017	2	341		Pot		1 x bag		Box 11
2017	2	342		Pot		2 x bag		Box 11
2017	2	343		Pot		1 x bag		Box 11
2017	2	344		Pot		1 x bag		Box 11
2017	2	347		Pot		1 x bag		Box 11
2017	2	351		Pot		1 x bag		Box 11
2017	2	353		Pot		1 x bag		Box 11

2017	2	358		Pot		1 x bag		Box 11
2017	2	352		Pot		13 x bag		Box 12
2017	2	123		Pot		1 x bag	99.1, 104.4	Box 13
2017	4	123		Pot		1 x bag	95.96, 106.47	Box 13
2017	4	355		Pot		1 x bag		Box 13
2017	4	361		Pot		1 x bag		Box 13
2017	4	364		Pot		1 x bag		Box 13
2017	4	366		Pot		3 x bag		Box 13
2017	4	108		Pot		1 x bag		Box 14
2017	4	108		Pot		1 x bag		Box 14
2017	4	120		Pot		1 x bag		Box 14
2017	4	123		Pot		4 x bags	98.7, 104.3	Box 14
2017	4	123		Pot		1 x bag	98.97, 104.65	Box 14
2017	4	123		Pot		1 x bag	101.23, 108.4	Box 14
2017	4	123		Pot		1 x bag	98.05, 103.43	Box 14
2017	4	123		Pot		2 x bags	100,107.05	Box 14
2017	4	123		Pot		1 x bag	96.5, 104.95	Box 14
2017	4	123		Pot		4 x bags	101.64, 108.5	Box 14
2017	4	123		Pot		3 x bags		Box 14
2017	4	123		Pot	beneath 92?	1 x bag	95.97, 106.94	Box 14
2017	4	123		Pot		1 x bag	100.14, 105.9	Box 14
2017	4	123		Pot		1 x bag	103.2, 108.11	Box 14
2017	4	123		Pot	beneath 92?	1 x bag	96.2, 107.4	Box 14
2017	4	123		Pot		1 x bag	100, 107.05	Box 14
2017	4	123		Pot	Fine wear bowl	1 x bags	99.05, 103.43	Box 14
2017	4	125		Pot		1 x bag	100, 101.5	Box 14
2017	4	126		Pot		1 x bag	100.5, 101.3	Box 14
2017	4	126		Pot		1 x bag	100.5, 101.3	Box 14
2017	4	120		CBM	Brick/Tile	1 x bag		Box 15
2017	4	123		CBM	brick	1 x bag	over SF90	Box 15
2017	4	123		CBM	Brick/Tile	1 x bag	100.14, 105.9	Box 15
2017	2C	123		Marble	sample	1 x bag	100, 107.05	Box 15
2017	2D	331		CBM	Tile	3 x bags		Box 15

Small Finds

Season	Find number	Area/ Trench	Context	Cut	Material	Description	Condition	Measurement (mm)	EDM File/Drawing	location	Photo?	checked by	Special instructions
2015	**1**	1	19	20	Fe	Object x 2	Very corroded	400/300mm		SF metal objects box	Yes	AW	
2015	**2**	1	1		Cu alloy	cu alloy nail	corroded	560mm			Yes	AW	
2015	**3**	1	1		glass	vessel frag-curved					Yes	AW	
2015	**4**	1	US from cleaning		glass	frag					Yes	AW	
2015	**5**	1	9		Cu alloy	object					Yes	AW	
2015	**6**	1	51		Fe	Object x 2	corroded				Yes	AW	
2015	**7**	1	3		Fe	Object - nail?	corroded		P2.01		Yes	AW	
2015	**8**	1	3		Cu alloy	frag			P2.01		Yes	AW	
	9	**NOT USED**											
2016	10	2	100	T/S	Cu alloy	coin	corroded	20mm dia	16-09-16A	SF metal objects box	Yes	WR	
2016	11	4	US from cleaning		Cu alloy	nail	bent, patinated and slightly	85mm		SF metal objects box	Yes	WR	
2016	12	4	US from cleaning		Cu alloy	alloy nail	bent and corroded	65mm		SF metal objects box	Yes	WR	
2016	13	4	US from cleaning		Fe	nail	corroded fragment	50mm		SF metal objects box	Yes	WR	

2016	14	4	US from cleaning		Fe	object	corroded	25mm		SF metal objects box	Yes	WR	
2016	15	4	US from cleaning		Fe	nail	corroded fragment	64mm		SF metal objects box	Yes	WR	
2016	16	2	US from cleaning		Glass	frag	fragmentary	42mm thin		SF glass box	Yes	WR	
2016	17	4	US from cleaning		Glass	bottle neck and rim	fragmentary	30mm dia, 38mm high		Triple bagged in SF glass box	Yes	WR	
2016	18	4	US from cleaning		Cu alloy	nail head	fragmentary	32mm		SF metal objects box	Yes	WR	
2016	19	4	US from cleaning		Fe	nail	corroded fragments	longest fragment 30mm		SF metal objects box	Yes	WR	
2016	20	-	found on track between		Cu alloy	coin	corroded	13mm dia	16-09-16A	SF metal objects box	Yes	WR	
2016	21		US from cleaning		Fe	nail	corroded fragmentary	42mm		SF metal objects box	Yes	WR	
2016	22		US from cleaning		Fe	nail	corroded fragmentary	45mm		SF metal objects box	Yes	WR	
2016	23		302		Charcoal	2 x frags		ca 10mm each		SF metal objects box		WR	
2016	24		302		Fe	nail	complete but corroded	44mm		SF metal objects box	Yes	WR	
2016	25		302		Glass	frag	fragmentary	15mm thin		SF glass box	Yes	WR	
2016	26		302		Cu alloy	coin	corroded	12mm dia		SF metal objects box	Yes	WR	
2016	27		302 (sieving)		Cu alloy	coin	corroded	12mm dia		SF metal objects box	Yes	WR	
2016	28		302 (sieving)		Pb	fragment	corroded and folded backon itself	42mm		SF metal objects box	Yes	WR	

2016	29		304 (sieving)		Glass	frag	Fragmentary	26mm, 6mm thick		SF glass box	Yes	WR	
2016	30		304 (sieving)		Glass	frag	Fragmentary	27mm thin		SF glass box	Yes	WR	
2016	31		107		Cu alloy	coin	corroded	27mm dia		SF metal objects box	Yes	WR	
2016	32		108		Cu alloy	nail point	corroded fragment	33mm		SF metal objects box	Yes	WR	
2016	33		305		Fe	Nail	corroded fragments	longest piece 50mm		SF metal objects box	Yes	WR	
2016	34		303		Fe	nail	corroded but complete	110mm l, 29mm head		SF metal objects box	Yes	WR	
2016	35	7	500		Glass	frag	Fragmentary	45mm thin		SF glass box	Yes	WR	
2016	36		502		Pottery	small cup	broken but about 80% present	Ca 120mm h, 100mm dia			Yes	AW	
2016	37		107		Pottery	Amphora Vessel A	2 x vessels close together -			Boxes 2 & 3	Yes	AW	
2016	38	4	307		Cu alloy	nail point	corroded fragment	45mm l, 7mm w		SF metal objects box	Yes	WR	
2016	39	4	307		Cu alloy	nail point	Corroded fragment	47mm l, 4mm w		SF metal objects box	Yes	WR	
2016	40	4	307		Cu alloy	nail point	Corroded fragment	39mm l, 6mm w		SF metal objects box	Yes	WR	
2016	41	4	307		Fe	nail	Corroded fragment	66mm l, 16mm w		SF metal objects box	Yes	WR	
2016	42	4	309		Cu alloy	nail head	corroded fragment	4mm l, 11mm w		SF metal objects box	Yes	WR	
2016	43	7	US - spoil heap		Fe	nail head	Corroded fragment	55mm l, 27mm head		SF metal objects box	Yes	WR	

2016	44		305		Fe	nail	Corroded fragment	45mm l, 23mm w		SF metal objects box	Yes	WR	
2016	45		305		Fe	flat object	fragmentary	22mm l, 14mm w, ca 3mm thick		SF metal objects box	Yes	WR	
2016	46		US - in surface rubble		Stone	saddle quern	about 80% complete	315x250x110mm		Currently on desk	Yes	AW	
2016	47		108		Stone	Spherical worked stone -	complete	64mm dia			Yes	AW	
2016	48		108		Fe	nail head	fragmentary	74mm l, 40mm head		SF metal objects box	Yes	WR	
2016	49	4	309		Cu alloy	nail point	fragmentary	45mm l, 4mm w		SF metal objects box	Yes	WR	
2016	50	4	310		Pb	sheet frag	corroded fragments	largest piece 100x30 mm ca 1mm thick		SF metal objects box	Yes	WR	
2016	51	**NOT USED**											
2016	52	4	305		Fe	Tip of nail	corroded fragment	33mm l, 5mm w		SF metal objects box	Yes	WR	
2016	53	4	310		Fe	Iron door catch	complete but corroded	115mm l, 64mm h, 22mm w		SF metal objects box	Yes	WR	
2016	54	4	310		Fe	Two iron nail heads	Corroded fragments	40mm l, 40mm head & 30mm head		SF metal objects box	Yes	WR	
2016	55	4	321/308		Fe	Nail					Yes	AW	
2016	56		321		Pottery	Large ceramic pithoi?				Box 6, 5 BAGS	Yes	AW	
2016	57	**NOT USED**											
2016	58	4	305		Cu alloy	object	Corroded	37mm l, 12mm w		SF metal objects box	Yes	WR	Needs stabilising to prevent

2016	59	2	109		Cu alloy	pin or nail point	Corroded	26mm l, 6mm w		SF metal objects box	Yes	WR	Originally mislabelled as find 32
2016	60	2	108		Glass	frag	fragment	22x8mm thin		SF glass box	Yes	WR	Originally mislabelled as find 32
2016	61	2	107		Pottery	Amphora Vessel B	2 x vessels close together -			Boxes 2 & 3	Yes	AW	
2016	62	4	305		Fe	Fe nail shank	corroded fragment	60mm l, 6mm w		SF metal objects box	Yes	WR	
2016	63	4	US - spoil heap		Cu alloy	nail head	corroded fragment	43mm l, 17mm head		SF metal objects box		WR	
2016	64	2	108		Fe	Fe nail shank	corroded fragment	60mm l, 9mm w		SF metal objects box	Yes	WR	
2016	65	4	305		Metal?	metallic fragments or slag	corroded fragments	largest 68x45x28mm		SF metal objects box	Yes	WR	
2016	66	4	311		Glass	frag	fragments	largest ca 8x10mm thin		SF glass box	Yes	WR	
2016	67	2	107		Pottery	Small flagon with handle	broken but mostly complete			Finds Tray	Yes	Amc	mnj a
2017	68	4	US		Cu alloy	Cu nail shank	small corroded fragment	16x5mm		SF Box A Metals	yes	CMLB	
2017	69	4	US		Cu alloy	Cu nail head	corroded fragment	21x13mm		SF Box A Metals	Yes	CMLB	
2017	70	2	Cleaning		Cu alloy	Cu nail and Cu nail shank	Both the whole nail and the	L 62x13mm		SF Box A Metals	Yes	CMLB	
2017	71	2	US		Metal	Metal object	corroded fragment	48x8mm		SF Box A Metals	yes	CMLB	
2017	72	2	US		Cu alloy	Cu nail shank	corroded fragment	69x7mm		SF Box A Metals	yes	CMLB	
2017	73	2	Cleaning		Cu alloy	Cu nail shank	bent and corroded fragment	19x12mm		SF Box A Metals	Yes	CMLB	

2017	74	2	Cleaning		Cu alloy	Cu nail head	corroded fragment	56x11mm		SF Box A Metals	Yes	CMLB	
2017	75	2	Cleaning		Cu alloy	Cu nail	bent and corroded fragment	37x12mm		SF Box A Metals	Yes	CMLB	
2017	76	2	Cleaning		Cu alloy	Cu nail	corroded fragment	16x11mm		SF Box A Metals	Yes	CMLB	
2017	77	**NOT USED**											
2017	78	4	333		Cu alloy	Cu nail	bent and corroded fragment	16x11mm		SF Box A Metals	Yes	CMLB	
2017	79	4	330		Cu alloy	metal fragment	small corroded fragment	9x8mm		SF Box A Metals in a crystal box	Yes	CMLB	
2017	80	4	334		Pottery	Burnt frags	fragment	200x130x150mm		SF plastic Box 17	Yes	CMLB	
2017	81	4	334		Pottery	Burnt frags	fragment	200x120x140mm		SF plastic Box 17	Yes	CMLB	
2017	82	2	120		Cu alloy	Cu nail	corroded and bent tip	129x16mm		SF Box A Metals	Yes	CMLB	
2017	83	2	Cleaning		Cu alloy	Cu coin	heavily corroded	23x24mm		SF Box A Metals	Yes	CMLB	
2017	84	4	US		Cu alloy	Cu nail head	corroded fragment	12x12mm		SF Box A Metals	Yes	CMLB	
2017	85	4	UD		Cu alloy	Cu nail	corroded fragment	37x18mm		SF Box A Metals	Yes	CMLB	
2017	86	4	US		Metal	Metal object	small corroded fragment	24x15mm		SF Box A Metals in a crystal box	Yes	CMLB	
2017	87	2	Cleaning		Fe	Fe nail head	corroded fragment	23x18mm		SF Box A Metals	Yes	CMLB	
2017	88	2	120		Cu alloy	Cu nail shank	corroded fragment	26x4mm		SF Box A Metals	Yes	CMLB	

2017	89	2	US		Cu alloy	Cu nail	corroded nail missing tip	99x6mm		SF Box A Metals	Yes	CMLB	
2017	90	2	120/123		Pottery	Amphora	fragments	L 274x187x10mm		SF plastic Box 17 (4 bags)	Yes	CMLB	
2017	91	2	120/123		Pottery	Flagon	fragments	L 212x296x18mm		SF Plastic Box 19 (5 x bags)	Yes	CMLB	
2017	92	2	120/123		Pottery	Flagon	fragments	L 240x95x2mm		SF plastic Box 8 (3 x bags)	Yes	CMLB	
2017	93	2	120		Cu alloy	Cu nail	two corroded fragments	L 33x13mm		SF Box A Metals	Yes	CMLB	
2017	94	2	120		Cu alloy	Cu nail	small corroded nail	17x8mm		SF Box A Metals	Yes	CMLB	
2017	95	2	120		Cu alloy	Cu needle	corroded large needle	177x8mm		SF Box A Metals	Yes	CMLB	
2017	96	2	120/123		Pottery	Bowl	large piece of base surviving but	223x187x9mm		SF plastic Box 8 (1 x bag)	Yes	CMLB	
2017	97	2	120		Cu alloy	Cu nail shank	corroded fragment	60x8mm		SF Box A Metals	Yes	CMLB	
2017	98	2	120/123		Pottery	Amphora	surviving base	323x896x18mm		SF plastic Box 18 (3 x bags	Yes	CMLB	
2017	99	2	120		Cu alloy	Cu nail shank	corroded fragment	44x8mm		SF Box A Metals	Yes	CMLB	
2017	100	2	120/123		Pottery	Bowl/Flagon	fragments	168x122x10mm		SF plastic Box 8 (3 x bags)	Yes	CMLB	
2017	101	4	336		Cu alloy	Cu nail shank	corroded fragment	23x8mm		SF Box A Metals	Yes	CMLB	
2017	102	4	332		Cu alloy	Cu nail shank	corroded fragment	45x13mm		SF Box A Metals	Yes	CMLB	
2017	103	2	121		Cu alloy	Cu nail shank	corroded fragment	53x6mm		SF Box A Metals	Yes	CMLB	

2017	104	2	120		Pb	Pb object	flat corroded object	151x72mm		SF Box A Metals	Yes	CMLB
2017	105	2	122		Cu alloy	Cu nail	small corroded nail	16x6mm		SF Box A Metals	Yes	CMLB
2017	106	2	122		Cu alloy	Cu nail	corroded fragment	29x16mm		SF Box A Metals	Yes	CMLB
2017	107	2	120/123		Pottery	Bowl/Jar red fabric	whole but damaged	210x108x2mm		SF Box 16	Yes	CMLB
2017	108	2	120		Fe	Fe nail	corroded nail	79x28mm		SF Box A Metals	Yes	CMLB
2017	109	4	340		Cu alloy and Fe	Cu weight with corroded Fe	corroded objects	46x27mm		SF Box A Metals in a crystal box	Yes	CMLB
2017	110	4	344		Cu alloy	Cu nail	corroded fragment	21x16mm		SF Box A Metals	Yes	CMLB
2017	111	4	352		Fe	Fe nail	corroded fragment	44x23mm		SF Box A Metals	Yes	CMLB
2017	112	4	355		Cu alloy	Cu nail	corroded fragment	52x16mm		SF Box A Metals	Yes	CMLB
2017	113	4	355		Cu alloy	Cu nail	corroded fragment	43x26mm		SF Box A Metals	Yes	CMLB
2017	114	4	355		Cu alloy	Cu tack	small corroded fragment	7x5mm		SF Box A Metals in a crystal box	Yes	CMLB
2017	115	2	120		Cu alloy	Cu nail shank	corroded fragment	72x5mm		SF Box A Metals	Yes	CMLB
2017	116	2	120		Cu alloy	Cu nail	corroded nail	73x14mm		SF Box A Metals	Yes	CMLB
2017	117	2	120		Cu alloy	Cu nail	corroded fragment	38x3mm		SF Box A Metals	Yes	CMLB
2017	118	2	120		Glass	glass fragments	small glass fragments	L 21x13mm		SF Box	Yes	CMLB

2017	119	2	120/123		Pottery	storage vessel	entire vessel upside down	Dia 168mm		SF Box 16	Yes	CMLB	
2017	120	2	120/123		Pottery	storage vessels	Two different bowls	L 230x150x7mm		SF Plastic Box 17 (4 x bags)	Yes	CMLB	
2017	121	2	120/123		Pottery	storage vessel	fragments	L 262x195x1mm		SF Plastic Box 19 (3 x bags	Yes	CMLB	
2017	122	2	120/123		Pottery	crushed vessel	fragments	257x254x23mm		SF plastic Box 18 (7 x bags)	Yes	CMLB	
2017	123	4	355		Fe	Fe nail shank	heavily corroded fragment	31x13mm		SF Box A Metals	Yes	CMLB	
2017	124	4	355		Cu alloy	Cu nail	corroded fragment	36x19mm		SF Box A Metals	Yes	CMLB	
2017	125	4	355		Fe	Fe nail	corroded fragment	155x31mm		SF Box A Metals	Yes	CMLB	
2017	126	4	357		Cu alloy	Cu object nail?	heavily corroded fragment	66x7mm		SF Box A Metals	Yes	CMLB	
2017	127	2	120		metal	metal object	corroded fragment	40x25mm		SF Box A Metals	Yes	CMLB	
2017	128	4	337		Fe?	Fe Nail?	corroded fragment	22x17mm		SF Box A Metals	Yes	CMLB	
2017	129	2	123		Cu alloy	Cu nail	corroded fragment	47x17mm		SF Box A Metals	Yes	CMLB	
2017	130	2	123		Cu alloy	Cu nail	corroded with bent tip	72x10mm		SF Box A Metals	Yes	CMLB	
2017	131	4	340		glass	glass fragments	small fragile glass fragments	L 20x16mm		SF Crystal Box	Yes	CMLB	Currently being kept in a SF bag
2017	132	4	340		Fe?	Fe nail shank?	corroded fragments	L 39x14mm		SF Box A Metals	Yes	CMLB	
2017	133	2	124		Fe	Fe object	large corroded object	202x96mm		SF Plastic Box	Yes	CMLB	

2017	134	2	120/123		Pottery	Bowl	Whole but damaged	Dia 213mm		SF Box 20	Yes	CMLB	
2017	136	2	123		Fe	Fe Nail	Corroded fragment	19x14mm		SF Box A Metals	yes	CMLB	
2017	137	2	US		Cu Alloy	Cu Nail	corroded fragment	28x13mm		SF Box A Metals	yes	CMLB	
2017	138	2	123		Fe	Fe nail	corroded fragment	52x14mm		SF Box A Metals	Yes	CMLB	
2017	139	2	123		Fe	Fe nail	corroded fragment	59x22mm		SF Box A Metals	Yes	CMLB	
2017	140	4	347		Fe	Fe object nail?	heavily corroded fragment	83x33mm		SF Box A Metals	Yes	CMLB	
2017	141	4	347		Fe	Fe nail	heavily corroded fragment	79x19mm		SF Box A Metals	Yes	CMLB	
2017	142	4	347		Fe	Fe nail	heavily corroded fragment	60x34mm		SF Box A Metals	Yes	CMLB	
2017	143	4	347		Fe	Fe nail	heavily corroded fragment	54x36mm		SF Box A Metals	Yes	CMLB	
2017	144	4	347		Fe	Fe nail	heavily corroded fragment	56x26mm		SF Box A Metals	Yes	CMLB	
2017	145	2	123		Cu alloy	Cu nail	corroded fragment	32x17mm		SF Box A Metals	Yes	CMLB	
2017			NOT USED									CMLB	
	135	2	123		metal	large lump	coroded			SF plastic Box 16 (1 x bag)		CMLB	

Coins

Find no.	Area/ Trench	Context	Cut	Material	Description	Condition	Measurement (mm)	EDM File/Drawing	location	Photo ?	checked by	Special instructions
10	2	100	T/S	Cu alloy	coin	corroded	20mm dia	16-09-16A	SF metal objects box	Yes	WR	
20	-	found on track between areas 2 & 4		Cu alloy	coin	corroded	13mm dia	16-09-16A	SF metal objects box	Yes	WR	
26	4	302		Cu alloy	coin	corroded	12mm dia		SF metal objects box	Yes	WR	
27	4	302 (sieving)		Cu alloy	coin	corroded	12mm dia		SF metal objects box	Yes	WR	
31	2	107		Cu alloy	coin	corroded	27mm dia		SF metal objects box	Yes	WR	
83	2	Cleaning		Cu alloy	coin	corroded	24mm dia		SF Box A metals	Yes	CMLB	