ALMA MATER STUDIORUM - UNIVERSITÀ DI BOLOGNA
DIPARTIMENTO DI STORIA CULTURE CIVILTÀ

OrientLab

Series Maior

Vol. 4

Ante
Quem

EXCAVATIONS AT KARKEMISH
II

THE INNER WEST GATE
IN AREA N

by
Simone Mantellini and Sara Pizzimenti

with a contribution by
Elena Maini

OrientLab Series Maior
Series editor: Nicolò Marchetti
www.orientlab.net/pubs (Open Access)

Editorial Board:
Pascal Butterlin (Université Paris 1 - Panthéon Sorbonne)
Nicolò Dell'Unto (Lund University)
Tim Harrison (University of Toronto)
Gianni Marchesi (University of Bologna)
Nicolò Marchetti (University of Bologna)
Roger Matthews (University of Reading)
Augusta McMahon (University of Cambridge)
Adelheid Otto (Ludwig Maximilian University Munich)
Hasan Peker (Istanbul University)
Mark Weeden (SOAS London)

Text and images are licenced under the Creative Commons Atttribution CC BY-NC-SA 4.0 of the Authors and Ante Quem S.r.l., if not credited otherwise

This publication was financed with the contribution
by the Italian Ministry of Education, University and Research through
the PRIN project prot.2015JMPLF_003

Ministero dell'Istruzione, dell'Università e della Ricerca

This publication was supported by the Italian
Ministry of Foreign Affairs and International Cooperation

Ministero degli Affari Esteri e della Cooperazione Internazionale

Published by Ante Quem S.r.l.
Via Senzanome 10, 40123 Bologna - tel. and fax +39 051 4211109, www.antequem.it
Printed in March 2021

ISBN 978-88-7849-130-4
ISBN 978-88-7849-152-6 (e-Pdf)
doi: 10.12878/orientlabsm4

Table of Contents

S. Mantellini wrote §§ 2.1, 3.1.1, 3.2.1, 4.1.1, 5.1, 5.2.1, 6.1.1; S. Pizzimenti wrote §§ 3.1.2, 3.1.3, 3.2.2, 3.2.3, 4.1.2, 4.1.3, 5.2.2, 5.2.3, 6.1.2. Introduction (Chapter 1) and Conclusions (Chapter 7) were written jointly.

ACKNOWLEDGMENTS

The present final report is the result of a joint effort by several Expedition members along with other colleagues. We therefore wish to express our gratitude to all the people who contributed to making this work possible.

First and foremost, we would like to thank Nicolò Marchetti (University of Bologna), Director of the Turco-Italian Archaeological Expedition at Karkemish, who invited us to work in a stimulating research environment and at a fascinating archaeological site such as Karkemish on the Euphrates. We thank him for his help, support and suggestions on the field and during the planning and implementation of this publication. Thanks are also due to Hasan Peker (Istanbul University), Deputy Director of the Expedition, for his dedication and friendly support.

Area N was excavated by Simone Mantellini in 2013 and 2014 with the assistance of Okan Birinci, to whom goes our gratitude for his help in the daily field and logistic activities. The pictures of the excavations were mostly taken by S. Mantellini, pictures and drawings of pottery were made by Khalil Al Hamid, Kevin Ferrari and Valentina Gallerani, while the pictures of the objects are by Francesco Prezioso. We would also like to acknowledge the constant assistance and support of small-finds and samples registrars Claudia Cappuccino, Giulia Scazzosi and Silvia Di Cristina. Our gratitude goes to Federico Zaina, Gabriele Giacosa and Kevin Ferrari for useful discussions on the pottery assemblages from Area N. Thanks are also due to Silvia Bernardoni, Kevin Ferrari, Giampaolo Luglio, Cristian Tassinari and Raffaele Trojanis, who took care of the digital acquisition and processing of topographical data during those two field seasons, as well as to Marco Valeri for his post-processing. We are especially grateful to Giampaolo Luglio for the UAV topographical survey and for his masterful final plans, sections and profiles. Elena Maini and Eleonora Serrone were in charge of the study of faunal remains, while Italo Riera and Eugenio Tamburrino provided an important contribution for the understanding of the Roman water conduit. One more word of thanks also to Stefano Bassetto and Luciano Cuccui, who gave us very useful assistance on several logistic issues and operational phases of the fieldwork.

The financial sponsors for 2013 and 2014 seasons were the Alma Mater Studiorum - University of Bologna and the Italian Ministry of Foreign Affairs and International Cooperation - MAECI, with its Sixth Office of the "Direttorato Generale per la Promozione del Sistema Paese." In 2013, we also benefited from a conservation grant

from the J.M. Kaplan Fund in New York, while it has been thanks to the support of the Sanko Holding that conservation of the city gate could be carried out in subsequent years.

The Turkish Ministry for Culture and Tourism has supported our project since its inception, and we are grateful for its rewarding collaboration. With reference to the years 2013 and 2014, we express our warmest gratitude to the colleagues of the Directorate General for Museums and Cultural Heritage in Ankara, especially the then Director General, Abdullah Kocapınar, the then Deputy Director General, Zülküf Yılmaz, the Director of Excavations and Research, Melik Ayaz, and then the Head of the Excavations Branch, Umut Görgülü. We are also indebted towards our representatives and colleagues, Mehmet Alkan (2013) and Mustafa Metin (2014), to the then Acting Provincial Director for Culture and Tourism of Gaziantep, Ergün Özüslü, to the then Gaziantep Museum director Yusuf Altın, to Gaziantep Heritage Conservation Committee directors Asuman Aslan and then Ahmet Demir, all of whom helped us in every possible way.

Also during those two years, we have been immensely grateful to two Metropolitan Mayors of Gaziantep, first Asım Güzelbey and then Fatma Şahin, who both constantly strove to meet our needs, provided facilities and promoted the construction of the Archaeological Research Centre in the village of Türkyurdu near Karkamış. We are also obliged to the then Governor of Gaziantep, Erdal Ata, and to the Mayor of Şahinbey, Mehmet Tahmazoğlu, for the attention with which they have been following the progress of the excavations. The enthusiasm of the late owner of the Gaziantep Sabah newspaper, Aykut Tuzcu, and of its editor-in-chief, Nurgün Balcıoğlu, has been unfailing. In the village of Türkyurdu, the muhtar Hüseyin Aksoy and Bekir Aksoy, then a member of Gaziantep Metropolitan City Council, assisted us in every possible way at the dig house.

In Karkamış, the then Mayor, Nuh Kocaslan and the then Local Governors, first Mustafa Gül and then Yusuf Osman Diktaş, constantly helped the Expedition during its stay. The fact that our work could be smoothly carried out depended, among other things, on the sympathy which the local commanding military officers always showed us. Although we are not allowed to mention them by name, they are the commanders of the 5th Armoured Brigade and of the Border Regiment in Gaziantep, and those of the Battalion in Oğuzeli and the border posts in Soylu and Karkamış.

The visit on the field in 2014 by the then Italian Ambassador in Turkey, Gianpaolo Scarante, represented a great honor for the Expedition. Jonathan Tubb, Keeper of the Middle East Department at the British Museum, was kind enough to grant N. Marchetti permission to study the archival holdings on the old excavations at Karkemish kept there. Nigel Tallis, Alexandra Fletcher, Jon Taylor, Angela Grimshaw, Dean Baylis, Stephanie Clarke and Stephanie Alder were very helpful during those study visits and they are gratefully acknowledged here, too.

Our workers from the villages of the Karkamış province, who worked hard during the two campaigns at the Inner West Gate, deserve much praise for their commitment.

The Authors

Chapter 1
INTRODUCTION

The site of Karkemish is one of the most important urban centers and political entities of the ancient Northern Levant. As such, it attracted the attention of several scholars and travelers during the last centuries. Archaeological investigation at Karkemish began in 1878, when P. Henderson, the British Consul in Aleppo, was appointed by the British Museum to carry out a first excavation campaign at the site that lasted intermittently until 1881.[1] A new season of investigation was then arranged in 1911 under the direction of D. G. Hogarth (Hogarth 1914; Woolley 1921: v; 1975: 60–81). Thereafter, five campaigns between 1912 and 1914 were conducted by C. L. Woolley with the assistance of T. E. Lawrence (Woolley 1921; Woolley and Barnett 1952). Then, World War I caused the interruption of works. Because of its strategic location on the Euphrates and the height of its citadel, dominating the surrounding flat landscape, the site was then occupied by the French army. In the Spring of 1920, still under the French mandate, Woolley obtained permission by General H. Gouraud to carry out a sixth campaign. However, in the Summer of the same year, the Turkish conquest of this region during the Independence War against the French troops made the continuation of further work impossible.[2] As a further consequence of the Turco-French conflict, the site was divided between Turkey (55 ha) and Syria (35 ha). The border between the two countries corresponded to the railroad Aleppo-Baghdad constructed by the Germans a few years earlier. The site of Karkemish became a military base and closed to archaeological research. It was

1 A summary of the archaeological research at Karkemish may be found in Hogarth 1914: 3–12; Hawkins 1976–1980: 434–435; Marchetti 2012: 134; 2013: 349–350; Benati 2014; Di Cristina 2014: 71–72; Marchetti 2014a; 2014b.

2 The wars caused not only the end of the works at the site but also the loss of documentation and finds from the excavation (Woolley and Barnett 1952: Preface).

not until the beginning of this century that the area of Karkemish-Jerablus was available for new archaeological research programs. The Land of Carchemish Project - LCP, directed by E. Peltenburg, T. J. Wilkinson, and E. Barbanes Wilkinson, started in 2006 and ended in 2010 due to the Syrian civil war. The LCP focused its attention on the Syrian part of the site, which mainly corresponds to the ancient Outer City, and Tell Jerablus Tahtani with a landscape perspective and activities aimed at investigating the environment surrounding the site (Peltenburg 2007; Wilkinson, Peltenburg and Barbanes Wilkinson 2016 and references inside). Since 2011, the Turkish part of Karkemish, including the citadel, the Inner Town, the rampart and a part of the Outer Town, was instead the subject of a systematic and long-term project of excavation, topographical mapping, conservation, restoration, and touristic development by a Joint Turco-Italian Archaeological Expedition under the direction of N. Marchetti (Alma Mater Studiorum - University of Bologna, Department of History and Cultures) with H. Peker (Istanbul University) as Deputy Director (Marchetti 2012; 2013; 2014b; 2014c; 2015a: 19; 2015b: 43; 2016). This new investigation program was crucial in providing fresh data on the history of this important settlement, which "since those [British] old excavations … has remained archaeologically inaccessible" (Peltenburg 2010: 539).

The aim of the Turco-Italian Archaeological Expedition at Karkemish was thus to implement a long-term integrated research strategy seeking to elucidate the history of the town, explore its urban layout and cultural sequence through the ages, contextualizing the site within the landscape, and conserving the present site to the public (Marchetti 2012; 2015a). In this regard, the new investigations are of importance to further explore the role of the city, especially during the Late Bronze Age II (hereafter LB) as the capital of the imperial Hittite vice-reign, Iron Age I and II (hereafter IA) as the capital of a Neo-Hittite kingdom, and in IA III as part of the Neo-Assyrian Empire (Pl. I).

One target of the Turco-Italian research program at Karkemish was to resume investigation at the West Gate of the Inner Town, or simply Inner West Gate (Pl. II). This area was already partially researched by Woolley, who rightly argued that its historical reconstruction was particularly difficult because of the several damages endured through time (Woolley 1921: 73). As a consequence, a general interpretation of this area still left many questions open at the end of the British work. In line with the Turco-Italian research strategy on the site (Marchetti 2015a:19; 2015b: 43), works

were addressed to: i) provide a complete stratigraphy and an updated historical account of this area after Woolley's first chronological assessment; ii) fully expose the LBA gate; iii) restore the major architectural features, such as the Roman aqueduct, the two towers and the mud-brick walls; and, iv) prepare this area as the first station of the archaeological park at Karkemish.

In this Introduction we illustrate the general organization of this volume, the topography of Area N and its previous investigations, as well as the methodology we employed in both excavation and study of material culture. Chapters 2 to 6 will provide a full description of both stratigraphic and architectural features from Area N, according to the major occupational phases attested at the Inner West Gate. In this part we also report pottery assemblages and small finds discovered during 2013-2014 seasons. Chapter 2 focuses on the Middle Bronze Age (hereafter MB) rampart; Chapter 3 concerns the LB I gateway and the LB II "early blocking wall"; Chapter 4 describes the three phases of the IA I occupation that ended with the construction of the monumental blocking wall; Chapter 5 deals with the Roman cement conduit, and Chapter 6 regards the post-Roman period and the abandonment of the Inner West Gate. Finally, Chapter 7 is a brief overview of the discoveries at the Inner West Gate and their historical interpretation in relation to the urban history of Karkemish. A first appendix at the end of the volume reports the original letter, and its transcription, written by Woolley to F. Kenyon in 1914 and reporting his excavation at the West Gate of the Inner Town. A second appendix, authored by Elena Maini, is dedicated to the study of the zooarchaeological remains from the excavation of Area N in 2013-2014.

1.1 TOPOGRAPHY OF INNER WEST GATE - AREA N

The West Gate is one of the three gates of the Inner Town that were part of the system of ramparts that defended Karkemish as early as the MBA (Woolley 1921: 72; Marchetti 2012: 133; 2015a: 19; 2015b: 45; 2016: 364) (Pl. III). According to Woolley, depending on the natural conditions, the site was protected by "a combination of [stone] built walls and earthwork" (Woolley 1921: 43). The ramparts enclosed an area of ca. 35 ha and still today they rise up to 22 m from the ground, dominating the flat plain around the site (Pls. I, II).

The Inner West Gate lies ca. 500 m West of the Acropolis and it is aligned longitudinally with the Water Gate, which is located on the Euphrates ca. 600 m East on the opposite side of the settlement. The South Gate of the Inner Town is about 550 m from here, while the West Gate of the Outer Town is at 325 m.

The Inner West Gate is orientated WSW-ENE and covers ca. 1,000 sqm (0.1 ha) between the northern and the southern ramparts. If, after 1920, the general morphology of Karkemish did not change much (Marchetti 2014b: 25), the topography of Area N certainly endured significant modifications due to both archaeological and military operations conducted here since the early 20th century. The topographical perception of the Inner West Gate at the beginning of the Turco-Italian excavation was therefore different from the artistic view left to us by George Smith (Pl. IV), who visited the site in 1876 and first put forward the identification of the "Grand site: vast walls and palace mounds" of Jerablus with the ancient Karkemish.[3] Before Woolley's excavation began, the gateway appeared as a deep hollow within the line of the earthen ramparts (Woolley 1921: 74). Nonetheless, the central part of this area remained rather well preserved thanks to the massive mud-brick construction identified by Woolley as blocking wall (Woolley 1921: 73-74), which is still today the main architectural feature dominating this area (Pl. V). Its top is attested at 352.94 m and its bottom, which corresponds to the top of its stone foundation and to the ground level at the time of its construction, is at 349.30 m (Pl. VI).[4] With the exception of the blocking wall, today the average elevation of the ground surface of Area N is still attested at around 349 m. The latitudinal profile of the rampart at North is regular, with the elevation ranging from 347.77 m to 359 m and a maximum slope of ca. 36° (Pl. VI.1). Although the rampart at South has a similar elevation range, its profile looks irregular with a maximum slope of ca. 50° because of the blocking wall on its northern border. At North, a ca. 4 m wide cut in the blocking wall allows passing between Inner and Outer Towns. According to Woolley, this passage was realized in the Roman period (Woolley 1921: 80), however, to this day, its chronology is highly debatable (see § 5.2.1).

The other anthropic features characterizing this area at the beginning of the Tur-

3 Cit. in Hogarth 1914: 6. See also Panayotov 2014.

4 Elevation is expressed in meters above the sea level (m asl). They refer to the main topographic network realized in Karkemish by the Turco-Italian Expedition and based on the UTM WGS 84 system, Zone 37 N (Bitelli et al. 2014).

co-Italian works were those already exposed by Woolley. The vault's outer top of the concrete Roman water conduit was attested between 348.60 and 348.89 m while the top of the three orthostats of the LBA towers were recorded at 348.80-88 m.

1.2 PREVIOUS RESEARCHES

The first investigation by the British Consul P. Henderson at Karkemish did not include the Inner West Gate.[5] First works date back to Woolley, who started operating on both the Inner West Gate and the Inner South Gate in 1912. He continued in 1913 and completed the work there after the end of World War I in 1920 (Woolley 1921: 52; Benati 2014: 60-61). Nonetheless, in a letter dated May 31st 1914 to F. Kenyon, at the time Director of the British Museum, Woolley recounts the results achieved in both the South and the West gates of the Inner Town and that the workers engaged there were moved to clean in front of the King's Gate (see Appendix 1). The assumption that efforts at the West Gate were almost already accomplished at that time is confirmed by another letter written by Woolley to Kenyon on May 1st 1920:

> "The excavation of the West Gate of the Inner Town has been carried further and has brought to light new details of its plan, notably a stone staircase leading from the recess behind the second buttress to the chambers in the upper storey of the gate tower: it has also enabled me to correct and to amplify my views as to the dating of the various periods of construction."[6]

As it had occurred in other sectors of Karkemish, the investigation conducted in the West Gate by Woolley "… left us with a coherent array of monuments exposed but also with many chronological and historical issues unsolved" (Marchetti 2012: 134). Nevertheless, Woolley had the great merit of exposing the most relevant architectural remains in this area, including the late phase of the gate (LB I), the Hittite blocking wall and stone conduit (both IA I), as well as the Roman aqueduct. He published the

5 This is confirmed by the site map published by Hogarth (1914: 11, fig. 4) and showing the areas excavated between 1878 and 1881. It must be noted that also Hawkins (1976-1980: 436-438) strangely omitted the West Gate of the Inner Town from his account on the buildings and the fortifications of Karkemish.

6 Unpublished manuscript kept in the archives of the Middle East Department of the British Museum: C.L. Woolley, The British Museum Expedition to Carchemish. Report for April 1920, dated May 1st 1920, p. 3 (transcription by Silvia Di Cristina). Although not explicated by Woolley, the tower he mentioned was the northern one.

result of this work, including an accurate description of architectural remains, stratigraphy, and the most remarkable artefacts, in the second volume ("Town Defenses") of the series dedicated to the activities of the British Museum at Jerablus (Woolley 1921: 73–81). In general, Woolley's account deserves special attention to integrate our results and achieve an updated and complete interpretation of the major phases of the Inner Western Gate, which would be otherwise a very difficult task. Alongside two pictures (Woolley 1921: figs. 15-16, Pl. VII) illustrating some details of the excavation, four plates at the end of the volume well illustrated Woolley's work there (Woolley 1921: pl. 10a-c and pl. 11a.): pl. 10a (Pl. VIII.1) is a composite plan of the Inner West Gate at the end of his work; pl. 10b (Pl. VIII.2) is a stratigraphic representation of the main discoveries projected on an East-West profile; pl. 10c is a hypothetical reconstruction of the second stage of the Inner West Gate advanced by Woolley on the basis of his discovery; finally, pl. 11a (Pl. IX.1 and Pl. IX.2 with the same view at the end of the 2014 season) is a picture taken from the West and framing the northern tower, a part of the Roman cement conduit and, in the background, the Hittite stone conduit and blocking wall (Pl. IX.2 shows the same area at the end of the Turco-Italian excavation in 2014). In addition, some unpublished material has been retrieved in the archives of the British Museum. Although out of focus, a picture taken from the top of the blocking wall is useful because it is the only image of the southern tower with the second recess and the MB retaining wall of the northern rampart (Pl. X.1). A second picture is a detail of the Roman conduit and the Hittite one in proximity of the blocking wall (Pl. X.2). This is very similar to another photograph (Pl. VII.2) but the subjects are zoomed out. The third is a schematic reconstruction of the Inner West Gate in its original phase, i.e. the gateway that disappeared because of later changes. The Hittite blocking wall and stone conduit are the only later features represented there.

Describing the Inner West Gate, Woolley (1921: 75) emphasized how its original gateway, i.e. that one coeval with the "Middle Hittite" ramparts, was difficult to envisage because of the later alterations and refurbishments. Most of the remains brought to light by Woolley belong to the second phase of the gateway, which he dated to the early "Late Hittite" period and it was built slightly offset from the axis of the ramparts as represented in his pl. 10c (Woolley 1921: 75; Pl. VIII.1). The architectural evidence concerns two C-shaped towers, one to the North and one to the South, surrounding a ca. 3.5 m wide passage between them. Woolley described the road surface being made "of very hard beaten gravel only" and he stated that no threshold, hinge-stone

or doorstep was found (Woolley 1921: 76). His picture in pl. 11a (Pl. IX.1) suggests that Woolley reached the floor only at the base of the western orthostat of the southern tower, where he exposed the pier supporting the buttress. The discovery of the door socket and the blocking stone in 2014 (see § 3.1.1) confirmed that he actually found the gateway's floor only in a limited portion of his excavation, and certainly not between the two towers. The construction technique of the towers was similar, with a stone foundation still in place, while the upper mud-brick walls were almost completely destroyed. Each tower was equipped with an outer buttress-tower, an upper-story chamber, and two recesses as guard-chambers (Woolley 1921: 84). The first recess, inside the tower, raised for ca. 0.5 m from the ground level had a cobbled floor that was still well preserved in the southern tower. A second recess, East of the first one, was some meters long and ca. 1 m high; it also had a cobbled floor, and a large amount of ash discovered, thus Woolley suggested the presence of a fireplace used by the guards during their hours of duty (Woolley 1921: 76). A staircase, stone-made in the northern tower and earthen-made in the southern tower, located in the second recess allowed the access to the upper rooms behind each tower. Some chambers with stone walls were located between the second recess and the early MB retaining wall and possibly filled up to reinforce the base of each rampart (Woolley 1921: 74-75, 77). At South there was only one long room (ca. 8 x 2 m), running parallel to the second recess, whereas at North there were six chambers, each one with a different shape and size (overall size 21 x 3 m). Eastward, Woolley hypothesized the presence of a second/inner gateway, exactly the same as the other in shape and size, which was later buried by the blocking wall.[7]

The 5.5 m deep rubble of limestone chippings and earthen bricks on both sides of the blocking wall – well shown in the profile of Woolley's pl. 10b (Pl. VIII.2) – was interpreted by Woolley as the breaching of the retaining wall low down (Woolley 1921: 74, pl. 10b). Since such a mass of debris was spread elsewhere in the gateway, Woolley connected this evidence to some architectural failures in the retaining wall of both ramparts. Hence, after several attempts at hopeless repairs, this gateway was abandoned and "the men of Carchemish had decided to do without a western gate and had blocked up the entry with a mass of brickworks [blocking wall] as high as the mound [rampart] at either side …" (Woolley 1921: 73). As a result, the blocking wall

7 This hypothesis was possibly based on the comparison with the West Gate of the Outer Town (Woolley 1921: pl. 4).

filled the gap between the ramparts, thus giving to the West Gate a sort of uniform general plan and forming an unbroken mound from the South Gate to the Citadel (Woolley 1921: 76, 78-79). In particular, Woolley identified three different sections of the blocking wall, which had differences in bricklaying and direction, hence arguing that each section had a different origin and date (Woolley 1921: 76) and that it was built "hurriedly and in time of stress" (Woolley 1921: 79). At the same time, the people of Carchemish also built a stone water conduit, by reusing some paving-stones of the earlier gateway (Woolley 1921: 76). On the basis of the Late Hittite wares discovered inside the trench dug to set up the stone conduit, both the blocking wall and the stone conduit were dated by Woolley to his "Late Hittite period".[8]

The latest occupation of the Inner West Gate is placed in the Roman Age. Based on the large presence of Roman potsherd and tiles, and especially a mass of pottery above the flat top of the blocking wall, Woolley (1921: 80) hypothesized the presence here of a strong point. A cemented fresh water conduit tunneling the blocking wall and the partial breach in the blocking wall itself to ensure the passage between the town and the suburbs are dated to that period too (Woolley 1921: 80).

1.3 EXCAVATION METHODOLOGY

The excavation of the Inner West Gate, or Area N according to the code assigned within the Turco-Italian Expedition, was carried out in two seasons: 2013 (24th August - 15th October) and 2014 (14th September - 21st October). Although the main goal was investigating this area as extensively as possible, archaeological operations had to deal with the impossibility to work in the ca. 4 m wide zone at the foot of the northern rampart because it is being also a walkway.

The blocking wall was a clear marker that divides the Area N in two distinct sectors, which were accordingly distinguished as Area N.E. and Area N.W. respectively to the East and West of the blocking wall. Based on the results achieved while excavation was under way, five targeted soundings (s.N.1-5) were done to recover an almost complete stratigraphy for the main periods attested in this area (Pl. LVIII):

8 Woolley (1921: 79-80) hypothesized that the end of the gateway, and accordingly the construction of the blocking wall, was later than the conquest of Carchemish by Sargon in 717 BC because, unlike the Citadel, bricks stamped with the name of Sargon were not found in the Inner West Gate. For the dating of the blocking wall after the Turco-Italian excavation see chapter 4.

Sounding no. 1 – s.N.1 (1.40 x 1.10 m; top 348.63 m, bottom 347.09 m), at the western base of the blocking wall, South of the Roman water conduit D.2600;

Sounding no. 2 – s.N.2 (2.0 x 1.0 m; top 348.66 m, bottom 346.63 m), at the south-eastern base of the blocking wall;

Sounding no. 3 – s.N.3 (2.60 x 2.0 m; top 348.60 m, bottom 346.81 m), at the western base of the blocking wall, North of the Roman water conduit D.2600;

Sounding no. 4 – s.N.4 (1.7.0 x 1.0; top 348.20 m, bottom 346.95 m), between the Roman water conduit and the western orthostat of the northern tower;

Sounding no. 5 – s.N.5 (2.80 x 1.90 m; top 349.74 m, bottom 347.32 m), is the easternmost sounding, ca. 9 m East of the excavation border, addressed to exposing the Roman aqueduct D.2690.

At the end of the work, the area under investigation dealt with 520 sqm, including the sounding no. 5 (Pl. LVII). Each significant evidence, either anthropic or natural, was recorded according to the system used in other areas of excavation at Karkemish, where each "stratigraphic unit" or "context" is defined according to its interpretation and marked with an initial capital letter as follows:

Bench (B):	Any kind of seat or installation located in an open or closed space;
Drain (D):	An open or closed structured channel or pipe that carries in/off water (supply, sewage etc.);
Fill (F):	Any deposit (or sequence of deposits) accumulated on a floor or other structural evidence, or any filling of a pit;
Hearth (H):	Any open fire installation. Generally designating a circular, free-standing, unstructured fireplace;
Kiln (K):	Medium or large structure for burning, baking or drying something, especially one for firing pottery or baking bricks;
Locus (L):	Inner or outer floors and doorsteps corresponding to a room (rooms are hence identified by the Locus number instead of a progressive number, such as 1, 2 or 3);
Pit (P):	The physical action of digging/cutting any kind of pit/hole;
Tannur (T):	The typical Near Eastern domed oven for cooking food.
Wall (W):	Any brick- (baked or unbaked) or stone-made structure.

Each layer is then identified by one of the above-mentioned letters, depending on its function, followed by a progressive number (e.g. F.2604, L.2605, W.2606). The

first numbers in Area N were assigned to those anthropic features already opened by Woolley and visible at the beginning of works in 2013 (Pl. XI.1). Hence, the Roman water conduit became D.2600, the southern C-shaped tower W.2601, the northern C-shaped tower W.2602, etc. Stratify v. 1.5 software was used as the database to describe each layer and to produce the stratigraphic sequence and phasing of Area N, where a structural/archaeological phase corresponds to a group of layers representing a coherent and contemporary set of actions (Pl. LIX).

In consideration of both the thin anthropic deposit and, conversely, the significant architectural remains that characterized this area, all the archaeological operations were done by hand. Loosened soil was collected near the excavation border and then moved by wheelbarrow or excavator to the dumps located in the moat outside the rampart at South. During the digging, and especially in the backfilling at the end of each campaign, the area of excavation was preserved with targeted operations. Jute bags (çuval) filled with the loosened soil resulting from the excavation were used to protect the sections and to reinforce the excavation upper border. Large and resistant plastic sheets, fastened by stones and loose soil, were instead used to preserve walls, water conduits and other minor architectural features. Due to the safety precautions adopted in all the areas under excavation by the Turco-Italian Expedition, a team of deminers had constantly monitored the archaeological digging up to 1 m below the surface (Marchetti 2014b: 23, 36).

Documentation was done by daily topographical survey and aerial photogrammetry in order to record any architectural and stratigraphical evidence. All the topographic data were georeferenced within the GIS platform established for Karkemish to make possible intra-site analyses and comparisons over a large scale (Marchetti 2012: 135; Bitelli et al. 2014; Zanfini 2014; see also footnote 4).

The stratigraphy and the original setting of the Area N certainly suffered the changes occurred in the rest of the site since ancient times. In his short survey on the buildings of Karkemish, Hawkins (1976-1980: 436-438) remarked how the whole settlement had been affected by frequent rebuilding. According to him, for example, in the Inner Town "much of the remains of the Hittite period were badly disturbed or destroyed by Roman foundations" (Hawkins 1976-1980: 436).[9] Reuse of stone blocks and buildings of earlier periods used as quarry for new constructions were attested by Woolley across the whole site and often described in his volume on the town fortifi-

9 On this matter, see also Woolley 1921: 62.

cations.[10] Further causes of alteration of the archaeological stratigraphy at Karkemish prior to the Turco-Italian excavation were, both in the early 20th century, the British excavations themselves and then the occupation of Karkemish as a military stronghold (see § 6.1.1). According to Woolley, the despoliation acted by French and Turkish troops since World War I, "have in the last few years followed the classical example, and wellnigh [sic] completed the destruction" (Woolley 1921: 50).[11] In the same period, the construction of the Baghdad-Aleppo railroad by Germans in proximity of the Inner South Gate also caused the despoliation of archaeological materials,[12] as well as the attested use (actually destruction) of the basalt stones from the site by the local miller until the 60s of the last century (Hogarth 1914: 7, 10, 12; Woolley 1921: 105; Woolley and Barnett 1952: 158, 163, 272 sub A4a; Marchetti 2014b: 35).

A total of 11 phases were identified in the Inner West Gate (Area N) by the end of the work (Pl. LIX). Except for the modern-early 20th century occupation (phase 1), four different historical periods were recorded: MBA (phase 11); LBA, subdivided into LB I (phases 9-10) and LB II (phase 8); IA I (phases 4-7); and Roman Age (phases 2-3).

The bedrock is a light gray and soft limestone that was found, at a very similar elevation, in two different spots of Area N. The first (F.4903) came from a deepening in the sounding no. 4, between the Roman conduit D.2600 and the northern tower, at 346.95-347.16 m (Pl. XI.2). A small portion of bedrock (F.4933) was also discovered between the LB I towers at 347.29 m. In both cases it was covered by the cobbled floor of the LB I gateway. The bedrock F.4933 proved to be remarkably waterproof when, after a short rainfall in October 2014, water stagnated on the surface for a few days.[13]

10 Woolley (1921: 47) described the construction of the mound at the South-East corner of the Town as the result of a "scientific" reuse of material. On the contrary, the reconstruction of the Outer Town Wall after the destruction of 1220 BC was haphazardly and "ignominiously" (Woolley 1921: 48). See also Woolley 1921: 53 for the reuse of stone blocks from House A, and Woolley 1921:54 for the despoliation of the West Gate of the Outer Town.

11 The French military installations, such as the fort, barracks and machine-guns, were so remarkable that Woolley indicated them in the frontispiece at the beginning of his volume dedicated to the "Town Defences" (Woolley 1921). On the archaeological consequences connected with both French and Turkish military occupation of the site see Marchetti 2012: 132; 2014b: 33-35.

12 The case of the Roman mosaic found during the construction of the railroad and its reuse in the living room of the British excavation house is well-known (Di Cristina 2014: 68-70).

13 On the geological background of Karkemish see Woolley 1921: 33 and Wilkinson 2016.

1.4 MATERIAL CULTURE

In consideration of its defensive, and later hydraulic, function throughout its entire history, most of the evidence of the Inner West Gate refers to architectural structures rather than living levels with remains of daily-life activities. For this reason, already at the time of the British Excavation, Area N resulted particularly poor in both artefacts and bioarchaeological remains, especially when compared to the other areas under investigation in the proper Inner Town.[14] Alongside the problems connected with the altered upper stratigraphy and the uncertainty in ceramic assemblages, the absence of consistent biological remains proved to be an important gap in the perspective of absolute dating through ^{14}C analyses. For this reason, the periodization for the Inner West Gate was largely based on the chronology suggested by the pottery and, above all, on the stratigraphical relationships of the evidence found there.

We have divided material culture into two main groups: pottery and small finds/objects. Both are described, listed in appropriate tables, and discussed in a dedicated section at the end of their correspondent phase of occupation. As the aim of this volume is to provide a stratigraphic and chronological reconstruction of Area N together with (when possible) a functional analysis of the architectural evidence, any other kind of detailed analyses of the material culture are beyond the scope of this publication. Monographs targeted to in-depth studies on specific classes of pottery and other materials/finds, including typological, art historical, archaeometric study and so forth, are foreseen for this specific purpose.

Pottery

The pottery collection and recording methods applied at Karkemish are described below. Pottery sherds and complete shapes are collected in buckets associated with the stratigraphic unit of their provenance. One or more buckets can be associated with single layer (either due to the physical filling of the bucket capacity, or to distinguish particular clusters of sherds). The pottery collected on the excavation is then studied and selected, as following:

– Diagnostic selected sherds, which include either fragments of rims, bases and handles or complete shapes that are preserved enough to be drawn and chronologically diagnostic. These are drawn, photographed (sherds belonging to the same bucket together), record-

14 A description, including some drawing and pictures, of the most significant objects from the British excavation at the Inner West Gate is in Woolley 1921: 80-81.

ed (by filling in a pottery-sheet) and stored. An inventory code is given to each selected sherd using the following abbreviations: site code (KH, meaning Karkemish Höyük), year (13, meaning 2013), pottery find (P), bucket number (800), number of sherds (1) (e.g. KH.13.P.800/1).

– Diagnostic unselected sherds, which concerns any kind of sherds not preserved enough to be drawn, but having certain diagnostic characteristics - such as decoration, surface treatment etc. - that make them useful for future studies. These are only photographed (together) and then stored.

– Unselected sherds were counted, described and then discarded.

The pottery-sheet, used to record selected sherds, includes different types of information, most of which can be found in the tables next to the pottery plates. Information on pottery sherds is organized as follows:

– Identification and Context: 1. Area; 2. Phase; 3. Stratigraphic Unit/Layer; 4. Type of context;[15] 5. Bucket; 6. Sherd code.

– Sherds morphology: 1. Functional Class;[16] 2. Shape;[17] 3. Preservation.

– Sherds technology: 1. Production technique; 2. Type of inclusions; 3. Inclusions size (Fig. 1.1);[18] 4. Inclusions frequency (Fig. 1.1); 5. Firing;[19] 6. Inner and Outer fabric

15 We identified three types of contexts: Type 1 = layers that are highly diagnostic for chronological and functional interpretations; Type 2 = layers not immediately diagnostic for chronological and functional interpretations; Type 3 = layers which are undiagnostic for chronological purposes.

16 Our definition of functional classes follows the standard work by P. Rice (1987: 2008-9, table 7.2). Similar approaches have been also applied for Bronze and Iron Age pottery at Tell Mardikh (Mazzoni 1992), Tell Afis (Oggiano 1997; Venturi 2007) and Tell Tuqan (Baffi 2008) among others. On the contrary, further researches at Karkemish carried out in the frame of the Land of Karkemish Project (LCP) did not employ this classification, preferring to adopt a simplified system (Barbanes Wilkinson and Ricci 2016). For more details on three functional classes (Simple Ware, Kitchen Ware and Preservation Ware) used by the Turco-Italian Expedition in the Gaziantep region, included the excavation at Karkemish, see Zaina 2013.

17 We distinguish the following types of pottery shapes: platter, bowl, beaker, krater, juglet, jug, small jar, jar, pot, *pithos*, lid. For the criteria used to define each shape, see Zaina 2013.

18 For the definition of dimensions and frequency, we created a chart (Fig. 1.1) based on the framework proposed by S. Levi (2010). It is designed to produce an accurate and quick autoptical analysis of inclusions. Frequency is calculated as a percentage of the whole assemblage, according to four different ranges (<3%, 3-10%, 10-20%, >20%, from 1 to 4), while dimensions are in millimeters and divided into three different groups (>0.5 mm, 0.5-1 mm, 1- 2 mm, from a to c).

19 Three types of firings have been here identified: high (H), medium (M) and low (L). High firings have a single colour and are usually observed on fine wares. Medium firings may have two different colours, one for the inner, the other for the outer surface, or one for the inner and outer surfaces and another for the core. Low fired fabrics are generally characterized by a homogeneous dark colour due to over firing or continuous heating (cooking pots).

color;[20] 7. Core fabric color.

– Sherds decorations: 1. Type of surface treatment; 2. Type of decoration.

– Sherds dimensions: 1. Rim diameter; 2. Rim width; 3. Height; 4. Wall diameter; 5. Wall width; 6. Bottom diameter; 7. Bottom height.

The total amount of pottery sherds collected during the excavation in Area N was 3295 (Table 1.1). Of these, 398 sherds (ca. 12%) were drawn, photographed and recorded, while 213 sherds (ca. 6.5 %) were only photographed and set aside for study purposes. No vessels which are complete or with a completely preserved profile have been recovered. The percentage of diagnostic selected sherds has been influenced by the very bad state of preservation of the pottery recovered, quite entirely characterized by small preserved dimensions - very few big enough to be drawn - and an eroded surface. This is largely due to the modern anthropic interferences, especially in the upper layers.

	Selected diagnostic sherds	Unselected diagnostic sherds	Unselected sherds
LBA	78	37	437
IA	331	438	1768
Roman	-	10	26
Islamic	-	56	70
TOTAL	399	596	2301

Table 1.1. Number of pottery sherds from the 2013-2014 excavation in Area N.

In this volume we have subdivided the pottery assemblage by structural phase and by context. Chronological parallels for the most diagnostic shapes have been provided with the Upper and Middle Euphrates, Inland Syria and the Levant as well as the Assyrian core.

Small finds

We considered as small find any kind of object that is not pottery. Like pottery sherds, small finds are associated with the same bucket number of their stratigraphic

20 Colors have been defined according to the Munsell Color Soil Chart™.

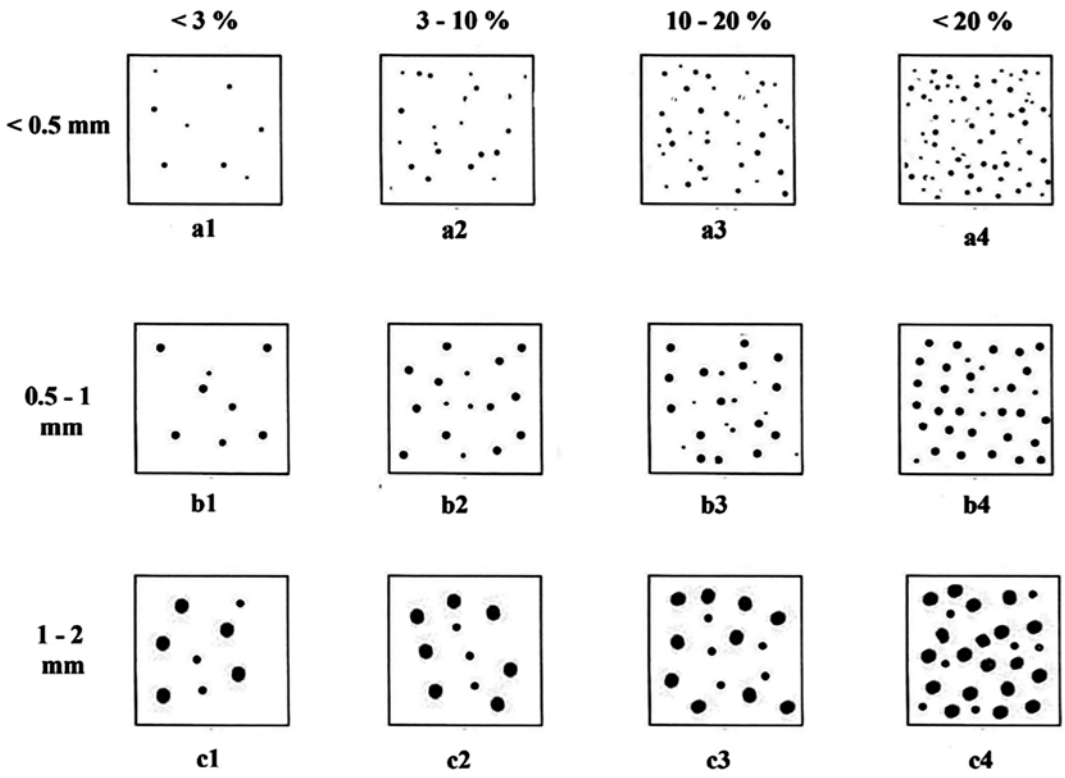


Fig.1.1 Pottery grit inclusions chart.

unit of provenance. On the field, a code is given to each small find using the following abbreviations: site code (KH, meaning Karkemish Höyük), year (13, meaning 2013), pottery find (P), bucket number (800), object (a) (e.g. KH.13.P.800/a). During the subsequent registration processes, small finds received a progressive inventory number, such as KH.13.O.0001, where the "O" stands for "object." Small finds are then stored, photographed and drawn by using this identification code.

The total number of small finds recovered during the excavation in Area N was 28. They include one small find from the LB I phase, one small finds from the LB II phases, 11 small finds from the IA I phases, four small finds from the Post-Roman phase, five small finds from the Modern phase and six from the surface. They belong to the following classes (Table 1.2): 1. Coins; 2. Figurines (Anthropomorphic and Zoomorphic); 3. Ornaments (Rings); 4. Tools (Blade; Bolt; Grinder; Grinding stone; Mortar; Pestle; Polisher; Stopper, Indeterminate); 5. Others (Indeterminate; Lamina and Plaque).

In this volume, small finds are subdivided by structural phase and context.

Period	Coins	Figurines	Ornaments	Tools	Others	TOTAL
LBA	-	1	-	1	-	2
IA	-	1	-	8	2	11
Roman	-	-	-	-	-	-
Post Roman	-	-	1	3	-	4
Modern	-	-	-	5	-	5
Surface	1	1	-	3	1	6
TOTAL	1	3	1	20	3	28

Table 1.2 Small finds from the 2013-2014 excavation in Area N.

1.5 BIOARCHAEOLOGY

Bioarchaeology consists only in faunal remains, since no botanical evidence have been recovered. Zooarchaeological remains are discussed in a paragraph at the end of the volume (Appendix 2).

ABBREVIATIONS USED IN THE TEXT, TABLES, FIGURES AND PLATES

Each layer is identified by a capital letter defining its function and a progressive number:
D. = drain;
F. = fill;
H. = hearth;
L. = floor;
P. = pit;
W. = wall.

Each find is registered according to the following system: site code (KH) years (11); pottery finds (P), small finds/objects (O) or sample (S); progressive number. Small finds receive the "O" during the study phase. Pottery finds are also provided with bucket number and sherds number.
In the pottery description the following codes have been used:
- Class: SW = Simple Ware; PW = Preservation Ware; KW = Kitchen Ware;
- Technique: W = wheel; WH = wheel-hand;
- Firing: H = high; M = medium; L = low;
- Inclusions type: M = mineral; V = vegetal; Y = vegetal and mineral;
- Inclusions size: a = <0.5 mm; b = 0.5-1 mm; c = 1-2 mm;
- Inclusions frequency: 1 = < 3%; 2 = 3-10 %; 3 = 10-20%; 4 = > 20%;
- Fabric color: I/O = inner/outer; C = core;
- Surface treatment: B = burnished; Gl = glazed; S = slip; SB = slip-burnish; SM smooth;
- Decoration: App = applied; Com = combed; Gro = grooved; Inc = incised; Imp = impressed; Pt = painted;
- Surface treatment and decoration colors: Bl. = blackish; Br. = brownish; Gr. = greenish; R. = reddish; W. = whitish.

Chapter 2
THE MIDDLE BRONZE AGE

2.1 MIDDLE BRONZE AGE (PHASE 11)

As mentioned above (§ 1.2) the MBA gateway was completely rebuilt already in ancient times and then replaced by the LB I and later structures (Woolley 1921: 73). Therefore, evidence for the Inner West Gate belonging to this period almost entirely refers to the rampart separating the Inner and the Outer Town of Karkemish.[21] No ceramic remains and small finds are associated with this phase.

2.1.1 Architectural Remains and Stratigraphy

The MBA rampart is a massive earthen structure and rubble that proved to be very hard and difficult to dig.[22] In Area N, a small portion of the MB rampart (W.2618) was exposed at 347.83 m only in the 1.5 m wide excavation West of the southern LB I tower (Pl. XII.1). This area was opened at its minimum requirement in order to avoid its possible structural failures. Remains of the rampart W.2618 came also South of the same tower, where its top was preserved between 349.00 m and 349.47 m.

---

21 According to Woolley (1921: 72), the first half of the Middle Hittite period (Marchetti 2012: 133; Marchetti 2015a: 19; Marchetti 2015b: 45; Marchetti 2016: 364). According to the recent results of the sounding in Area G and the reanalysis of the evidence from Pit 1, Marchetti (2018: 365) confirmed the dating of the rampart to the MBA period as following: "no sooner than the earliest documented occupation phase in the central inner town, i.e. MB I".

22 To remark on the impressive robustness of the rampart, Woolley (1921: 71) wrote the following: "The mixture of broken chalk, lime dust, and brick earth of which the mound is built becomes under pressure a very solid mass. In the excavation of the West Gate in 1914, above the south retaining-wall we exposed a vertical face of rubble filling 5.50 m high, and though it is vertical and unsupported, by 1920 hardly a stone had fallen from it."

Minor evidence belongs to the southern foundation of the six chambers that reinforced the retaining wall of the northern rampart. The stone wall W.2624 was exposed East of the LB I northern tower, just below the topsoil (here at 348.43 m) at 348.29 m. It is made of four courses of medium-sized pebbles with a characteristic fishbone layout and a SW-NE orientation (Pl. XII.2). The wall was followed for 2.30 m, then the walkway prevented its further investigation.

Chapter 3
THE LATE BRONZE AGE

Evidence for the LBA in the Inner West Gate concerns both LB I and LB II, with some layers testifying to a temporary abandonment of that area.

3.1 LATE BRONZE AGE I (PHASES 9-10)

This is the best attested phase in terms of anthropic remains from the Inner West Gate. The major feature is the gateway (phase 10), which was already largely unearthed by Woolley (Woolley 1921: 73-79, pl. 10a [Pl. VIII.1], pl. 10c). The new excavation West of the blocking wall led to the full exposure of the gateway, including its cobbled floor, door socket and blocking-stone (Fig. 3.1). A part of the eastern section of the blocking wall was also cut in order to validate the hypothesis put forward by Woolley on the presence of a second gateway buried below it (Woolley 1921: 75, pl. 10c; see also § 4.1.1).

3.1.1 Architectural Remains and Stratigraphy

Major LB I evidence in the Inner West Gate concerned the two C-shaped towers preserved only in their stone foundation (Pl. XIII.1). Some features look different from the time of their discovery by Woolley, hence testifying to significant changes occurred in this area throughout the last century.

Both towers were built according to a dry-stone rubble masonry technique, with courses of large-size squared stones on their border and filled inside with small-sized stones. They are WSW-ENE oriented and their size is very similar: 9.30 m x 5.50 m for the northern tower W.2601; 9.30 m x 5.30 m for the southern tower W.2602.

The northern sector appeared worse preserved than the southern one. There is no trace of both the squared bastion hypothesized by Woolley outside this tower and the second recesses. Furthermore, the passage at the base of the MBA northern rampart partially flattened and buried the six chambers strengthening it (Woolley 1921: pl. 10a [Pl. VIII.1]).[23] As already stated by Woolley, the western orthostat removal and the damage to the western and southern walls dated to ancient times. It is unclear whether it was a direct consequence of the installation of Roman conduit D.2600 (see § 5.1.1) or it occurred earlier.[24] The size of the three walls shaping the northern tower W.2602 are as follows: 5.10 x 2.15 m East; 9.30 x 2.00 m North; 3.50 x 2.15 m West. The eastern orthostat measures 2.20 x 0.60 x 1.46 m. The top of these structures is attested between 348.22 m and 348.88 m, the latter corresponding to the top of the eastern orthostat (Fig. 3.2). Only the first, or inner, recess L.2686 survived later changes. It is of beaten mud preserved in the northern half of the tower for 4.90 x 1.20 m at 348.20 m. The southern half, including the low wall closing the tower internally, was instead largely damaged in ancient times. Another wall (W.2607) made of large-sized stones divided the first recess almost symmetrically.[25] It has the same WSW-ENE orientation of the tower; it is preserved for 4.00 x 0.60 m and its top is attested at 348.21/28 m.

East of the northern tower, a layer of reddish clay (F.2623) was possibly the preparation of the cobbled floor in this outer recess. However, the open space already opened by Woolley was so largely damaged during the military occupation (see § 6.1.1) that no significant archaeological remains endured there. The excavation at the base of the eastern wall of the tower W.2602 opened another stone structure (L.4922) running parallel to it (Pl. XIII.2). It is made of large-sized roughly squared stones, preserved for 2.00 x 0.50 m and its top was recorded at 347.55 m. Woolley (1921) overlooked its description but in pl. 10a (Pl. VIII.1) and pl. 10c he drawn and interpreted it as a possible staircase accessing a room located upstairs. Although its building technique differs considerably from the earthen staircase L.2609 on the opposite tower (Pl. XIV.1, see also Pl. VII.1), the confirmation that it was a stone staircase accessing the upper chamber is included inside the report written by C.L. Woolley to F. Kenyon in 1920 (see § 1.2 and footnote 6).

---

23 See also Woolley's unpublished picture showing the southern part of the gateway (Pl. X.1).

24 The western orthostat was not found by Woolley or us so it was possibly reused elsewhere on the site. On the reuse of the architectural material at Karkemish see also § 1.3 and footnote 10.

25 The wall W.2607 was not mentioned, perhaps because not excavated, by Woolley.

The architecture of the southern tower W.2601 is very similar to the northern tower W.2602 but it is more preserved because it was not interested by the construction of the Roman conduit D.2600 in the ancient time and the military operations in the last century (Pl. XIV.2). Moreover, this tower was built rightly leaning against the retaining wall of the MBA southern rampart so there was no empty space in between them. This tower, for example, had the wall (the northern one) closing the first recess still preserved. It is made of one course of squared stones measuring 4.95 m and attested between 348.00 m and 348.25 m (Pl. XV.1). Moreover, both orthostats are still in place but one of them, the eastern one, was so dangerously inclined that it was straightened through a very accurate restoration in the 2014 season (Pls. XV.2, XVI).[26] The orthostats are 2.05 x 0.55 x 1.55 m the western one and 2.26 x 0.52 x 1.43 m the eastern one. The measurements of the three walls of the tower are: 5.30 x 2.00 m East; 9.20 x 1.90 South; 5.00 x 2.10 West. The top of these walls is actually preserved between 348.10 m and 348.87 m, the latter corresponding to the top of the eastern orthostat. Likewise, the northern tower, the first -or inner- recess is only half-preserved; the northern half is a cobbled floor (L.2605), 5.10 x 1.30 m, made of small pebbles at an elevation of 348.10-25 m; the southern half is a regular beaten mud (F.2613), 5.10 x 1.15 m, also attested at 348.25 m. Almost in the middle of the southern wall of the tower, at 348.87–349.18 m, were the remains of reddish and light brown mud-bricks (W.2606) that belong to the earthen body of the tower (Pl. XV.1). Although the erosion after Woolley's opening, it was still possible recognizing three courses of mud-bricks with a gray mortar filling the interspace between them. South of this wall, where Woolley placed the upper chamber, the tower wedged inside the MBA rampart W.2618 (see § 2.1.1), thus the wall W.2606 seems to have been built specifically to reinforce the rampart behind it. East of the southern tower, the excavation exposed the earthen staircase (L.2609) already discovered by Woolley (Pl. VII.1; Woolley 1921: pl. 10a [Pl. VIII.1], pl. 10c). Its preservation changed little since then and only few out of the ca. ten stairs can be recognized today. The staircase is located between 348.39 m and 349.17 m and it ensured access to a small room, drawn by Woolley (1921: pl. 10a [Pl. VIII.1], pl. 10c), which was delimited West by the quadrangular earthen wall W.2612, partially preserved as well. Another, L-shaped, earthen wall (W.2611), also reported by Woolley (1921: pl. 10a [Pl. VIII.1], pl. 10c), was found running along the eastern side of the staircase L.2609 (Pls. VII.1, XIV.1). Since its

26 To compare this buttress before and after the restoration see also Pls. IX.

preservation was partially affected after Woolley's excavation, and it corresponded to our excavation limit as well, this wall was opened only 0.50 m West. West of the tower there was no evidence of the L-shaped wall interpreted by Woolley as part of the outer buttress (1921: pl. 10a [Pl. VIII.1], pl. 10c).

The floor of the gateway (L.4902) was unearthed in a very limited part of sounding no. 4 North of Roman conduit D.2600, at 347.20 m, and largely between the same conduit and the southern tower (L.2652 and L.2657). The latter was found for ca. 4 m East of the towers, then it gradually disappeared and there is no evidence of it in soundings no. 1 and 3. In both cases, the cobbled floor was discovered just above the natural bedrock: F.4903 below floor L.4902 and F.4933 below floor L.2652-L.2657 (Pl. XVII.1). The floor was a regular and almost flat pavement made of very small-sized pebbles mixed with a gray mortar. It was first found in 2013 in a limited L-shaped deepening (2.75 sqm) around the eastern orthostat of the southern tower (L.2652), at 347.28-34 m, and also in a slightly larger rectangular area (10.35 sqm) around the western orthostat of the same tower (L.2657) at 347.23-41 m.[27] Due to the unstable condition of the eastern orthostat, and the need to preserve a walkway for daily operations in this part of Area N, the complete exposure of the floor occurred only at the very end of the 2014 season. South of Roman conduit D.2600, in proximity of the excavation border, the removal of fillings F.4929, F.4930 and F.4931 unearthed the pier (W.4932) that once supported the western orthostat of the northern tower (Pl. XVII.2). The pier is shaped by three squared stones of different sizes but with a very similar elevation: 1.20 x 0.85 m the western one (top at 347.67 m); 1.05 x 0.61 the central (top at 347.66 m); 0.69 x 0.64 the eastern (top at 347.68 m). Exactly at the southeastern corner of the pier, there was a door socket (L.4939) made with a reused stone vessel and reinforced with small stones at North.[28] In the middle of the gate, a socketed stone (L.4938) must have blocked the wooden gates (Marchetti 2016: 366- 377; Pl. XVII.2). The stone measures 0.66 x 0.35 m (top at 347.48 m) and it was partially broken in its northeastern corner. There were no remains of the door socket on the other side, but only its trace in the ground.

In the attempt to validate Woolley's hypothesis (1921: 76) that "an inner gate-tower of the same type and the same width as the outer gate-tower is *a priori* not improb-

27 The highest elevation recorded for the cobbled floor L.2652-L.2657 was 347.49 m right West of the western orthostat of the southern tower.

28 The door socket L.4939 has an elliptical shape (0.40 x 0.30 m) and it is 0.15 m deep.

able" and hidden under the blocking wall, a limited portion (23 sqm) of its eastern section was cut (see also § 4.1.1). The major cut (SSE-NNW) was done following the interspace (F.2651) between the walls W.2628 and W.2683. Below, at 348.98-349.07 m, was found only the massive platform (W.2655) of the eastern blocking wall without any trace of the supposed second gateway. Afterwards, operations were stopped to avoid structural failure and collapse (Pl. XVIII.1).

Finding possible remains of a second gateway would therefore require an almost complete destruction of the blocking wall. Since the large stones of the foundation W.2655 continue westward, it is likely that a second tower, if it ever existed, was already largely destroyed in ancient times. Further confirmations came West of the blocking wall. First, excavation at the point where the Roman conduit D.2600 entered inside the blocking wall, at an elevation (348.89 m) very similar to the top of the platform W.2655 on the other side (348.98-439.07 m), did not provide any architectural evidence of the second gateway. Secondly, in soundings no. 1 and 3 evidence of the collapsed MBA rampart and the LB II "early blocking wall" was found (see § 3.2.1 and § 4.1.1), but nothing testifying the presence of the LB I gateway because the floor L.2652-L.2657 stopped before (see above).

The partial abandonment (phase 9) of the Inner West Gate after the LB I occupation is testified by some fillings (F.4915, F.4921, F.4923-4928) resulting from natural decays. In particular, three of them (F.4921, F.4923, and F.4928) provided homogeneous ceramic assemblage dated to the LB I (see § 3.1.2; Figs. 3.4, 3.5). These layers came from an area of ca. 18.50 sqm, South of the Roman conduit D.2600 and West of the southern tower, which can be considered still in a stratigraphic primary context at the time of our excavation. Woolley's picture in pl. 11a (1921: pl. 11a [Pl. IX.1]) shows how he stopped his excavation at an almost regular level between the towers and toward the blocking wall. Since he did not discover the stone conduit D.4934 built up above the gateway floor L.2652 (see § 4.1.1, phase 7), it is arguable that he did not even touch the layers at that same elevation. Accumulation raised for ca. 50 cm from the top of the LB I floor L.2652-L.2657 (here at 347.30 m) to the top of F.4923, which is the highest of these fillings, 1.10 m North of the excavation southern border, at 347.79 m. The largest of these fillings is a compact mud layer (F.4915) that was found below fillings F.2632, F.2648 and F.4918 at 347.51-79 m. East of F. 4915, at 347.36-.59, was a brown/gray plastic clay (F.4923) with some small stones and also quite difficult to dig that released LB I ceramics. Together, F.4915 and F.4923 form a sort of narrow

strip in the middle of this area (Pl. XVIII.2). Due to their compactness and pattern, they seem to pertain to the collapse/decay of an earthen structure. Similar to F.4923, filling F.4921, at 347.54-64 m, was a plastic clay with many limestone chippings and LB I pottery that resulted very hard and difficult to dig. This is possibly the same layer partially excavated by Woolley and described "as hard as concrete, which sorely tried the picks and the patience of the excavators" (Woolley 1921: 73). A soft light brown soil (F.4924) was opened between F.4915-F.4923, and the southern excavation border. Instead, between F.4915-F.4923 and Roman conduit D.2600, at 347.41-69, was a cluster of limestone chippings (F.4925) typical of the rampart that collapsed already in ancient times and it is clearly visible in the excavation eastern section. West of F.4925, at 347.42, was also a rather compact clay layer (F.4926). At the base of the southern excavation border, fillings F.4915, F.4923 and F.4924 covered a plastic brown clay (F.4927) at 347.36-347.59, and a very soft brown soils (F.4928) with limestone chippings, small stones and few pottery sherds.

3.1.2 Pottery

The LB I pottery assemblage from Karkemish can be fit within the "North-western-Syrian pottery tradition",[29] with sites such as Tell Bazi (Einwag 2007; Otto 2014; Enwag and Otto 2018; Coppini 2018), Tell Hadidi (Dornemann 1981), Tell el-Qitar (McClellan 1984-85; 1986; 2007), and Emar (Caubet 2014; Sakal 2018) as the best comparisons, and the Inner Syria pottery traditions, with Tell Mardikh/Ebla (Colantoni 2010; 2014) and Tell Afis (Venturi 2007; 2014) as the best parallels. It also presents a general continuity of traits with the previous MB II and the following LB II ceramic horizons.[30] The evidence from Area N has parallels in other excavation areas of Karkemish and also in neighbouring sites (Pizzimenti and Scazzosi 2017; Pizzimenti 2018).

The most represented ware type is Simple Ware (61% of the total collection), followed by Preservation Ware (20% of the total collection), and Kitchen Ware (19% of the total collection).

29 For a definition and analysis of the "Northwestern-Syrian pottery tradition" see McClellan 2007 and Pfälzner 2007: 257.

30 The same trend has been identified in the deep sounding from area G (Pizzimenti 2018).

Surface treatments are present on the 66% of the sherds recovered, and include mostly White Slip[31] (22%), while burnishing is quite limited (11%) (Pl. LII). Only one sherd is decorated with grooved motifs.

About 67% of the Simple Ware LB I pottery assemblage have fine homogeneous fabric with a low occurence (<3%) of small (<0.5 mm) mineral inclusions, followed by a slightly coarser fabric with a medium-low occurence (3-10%) of small (<0.5 mm) mineral inclusions (17%). Two different fabric types can be distinguished for the LB I Preservation Ware: about 60% of the collected diagnostic sherds have a fine fabric with a medium-low frequency (3-10%) of small (<0.5%) inclusion, while 40% has a medium-high frequency (10-20%) of medium (0.5-1 mm) mineral inclusions. Among fabric colors, pinkish (5YR 7/4, 8/3-4; 7.5YR 7/3-4, 8/3-4), reddish yellow (5YR 7/6-8; 7.5YR 6/6, 7/6, 8/6) and very pale brown (10YR 7/3-4, 8/3-4) are the most frequently attested.

Due to the scarcity of the pottery sherds recovered, the morphological and functional repertoire is limited.

The open shapes include shallow bowls with internally swollen rounded and thickened rim (Fig. 3.4.3) or in-turned rim (Fig. 3.4.1). The former type can be regarded as characteristic of the LBA period, appearing since the end of the MBA,[32] and then becoming a hallmark of the LB I and early/middle LB II (Iamoni 2012: 125). It appears, in fact, in LB I layers in Nebi Mend (Bourke 1993: 186-187), Qashish, where similar forms come from Level VII A,[33] Hadidi (Dornemann 1981: 40, fig. 10.5, 43, fig. 13.32), and Tell Bazi (Coppini 2018: fig. 7.6), while at El- Qitar and Hazor it might be slightly later (McClellan 1984-85: 47, fig. 5.1-8; Ben-Tor and Bonfil 1997: 44, fig. II.14.15, 56, fig. II.18.5, 67, fig. II.25.1). On the contrary, this type is well attested at Khamid el-Loz throughout the LBA (Metzeger 1993: pl. 95.3-4). The bowls with in-turned rim (Fig. 3.4.1) are also well attested since the end of the MB II, with a

31 The term White Slip is used here to designate a whitish surface on a reddish, beige or pinkish fabric. This term has already been used in other studies on the pottery assemblage from the Turco-Italian expedition at Karkemish (Bonomo and Zaina 2014, Pizzimenti and Zaina 2016: 2018), based on the same definition. Other terms such as Self-Slip used in contemporary and neighboring contexts (Barbanes Wilkinson and Ricci 2016: 143) have not been preliminary included in the discussion of the pottery assemblage of Area N. This issue will be properly tackled by future studies.

32 This can be observed also in other contexts at Karkemish, such as area G (Pizzimenti 2018: 21), as well as at Hama and Emar (Sakal 2018: fig. 5.1-6), where the use of this kind of bowl apparently begins earlier (Fugmann 1958: 95, fig. 117.3B320, 98, fig. 120.932).

33 Level VII A of Qashish can be dated to the final LB I (Bonfil 2003: 259, fig. 104.3, 264).

persistence through the entire LBA period. A strong presence of this type is in fact attested in the LBA layers from Qatna (Iamoni 2012: pl. 36.1-2 4-8, 11; pl. 68.1), where it also occurs in context of the Royal Hypogea (Paoletti 2011), and at Tell Mardikh/Ebla (Colantoni 2010: 666-667, fig. 5.1-2). Bowls with a short upright rim are also attested (Fig. 3.4.2). As with the other type previously described, this one also appears in the late MBA and continues to be produced during the LBA period,[34] along with its carinated equivalent (Smith 1988: 473, pl. 147. 34; Iamoni 2012: pl. 37.10-13), which appears to be more diagnostic of the LBA period, becoming more frequent. Kraters with an out-turned oblique squared (Fig. 3.4.7) or rounded rim (Fig. 3.5.3) have also been recovered. A strong presence of this shape is also attested in other LB I contexts at Karkemish, such as area G (Pizzimenti 2018: figs. 2.33.3, 2.35.1, 2.35.5, 2.35.7-8, 2.37.3-7, 2.38.1, 2.38.12-13, 2.38.16, 2.38.11, 2.44.1-3, 2.44.5, 2.48.3), where it represents one the most attested shape of the LB I phases (Pizzimenti 2018: 21). Parallels are known from Tell Nebi Mend (Bourke 1993: 187), Qatna (Iamoni 2012: pl. 55.3-4, 11-12), Hazor (Ben-Tor and Bonfil 1997: 64. fig. II.22-23), and Tell Bazi (Einwag and Otto 2018, fig. 5.11).

Closed shapes include jars with an out-turned rolled rim (Fig. 3.4.5), or flared molded rim (Fig. 3.4.6). They both are attested at Karkemish at the very end of the MB II period in area G, increasing their presence during the following LB I and LB II periods (Pizzimenti 2018: 25), as confirmed also by evidence from Tell Afis (Mazzoni 1998: 89, fig. 26), Tell el-Qitar (Mc Clellan 1986: 96, fig. 8.12-13), Tell Nebi Mend (Bourke 1993: 178, figs. 21.12, 179, 22.5, 188), and Tell Bazi (Einwag and Otto 2018: fig. 5.24).

Preservation Ware consists only in closed shapes, which includes jars with thickened rounded rim (Fig. 3.5.1-2).

The bases show little variation. Flat (Fig. 3.4.8), disk (Fig. 3.4.9) and ring bases (Figs. 3.4.10-14, 3.5.4) are attested, although the ring one is prevalent (Pl. LIII.1).

34 Parallels can be found both in the assemblage of Hammam at-Turkman, Period VIII, in the LBA assemblage at Qatna (Smith 1988: 465, pl. 143.2; Iamoni 2012: 125, pl. 37.4, 6; 67, 11-12), and Tell Bazi (Coppini 2018: fig. 9.13).

3.1.3 Small Finds

No small finds were discovered in context with the gateway (phase 10), as it was largely unearthed already by Woolley. One limestone mortar, however, was recovered from the filling F.4923 of its abandonment (phase 9) (Pl. XLVII.1).[35]

Catalogue of small finds from phase 9:

KH.14.O.1256, Mortar (Pl. XLVII.1)
Material: limestone
Dimensions: h. 5.8 cm; l. 16 cm; w. 10+ cm
SU: F.4923
Bucket: KH.14.P.1219
Preservation: fragmentary

3.2 LATE BRONZE AGE II (PHASE 8)

Traces of the LB II were poor in comparison to the previous occupation (Fig. 3.3). They come from both West of the blocking wall, soundings no. 1 and no. 3, and East of the blocking wall, especially from sounding no. 2. They belong to architectural remains that witnessed the first attempt of closing the Inner West Gate.

3.2.1 Architectural Remains and Stratigraphy

West of the blocking wall, a gray compact mud-brick wall (W.2693) with a stone foundation (W.2699) was found in sounding no. 3 (Pl. XIX.1 and XLIII.2). The structure is preserved for ca. 1.20 m in height, from the top of mud-bricks at 348.82 m to the bottom of the stone foundation at 347.63. This foundation was made of a single layer of approximately arranged rough squared stones, which apparently shaped a right-angle corner North. However, the later construction of the blocking wall and the present walkway made it impossible to confirm this hypothesis. Foundation W.2693 was realized above a preparation made of a hard dark brown clay with limestone chippings (F.2677) belonging to the collapsed MB rampart and attested from 347.60 m to 347.10 m. This layer covered two fillings, which were similar to each other and yielded LB II pottery. The upper was a soft, light brown clay (F.2678), which below turned into loose clay (F.2679) with also fragments of mud-bricks, whose shape

35 On the major objects found during the British excavation see Woolley 1921: 80–81.

and size was impossible to recognize, until reaching the bottom of the sounding at 346.81 of the Roman water conduit D.2600 (see § 5.1.1).

A wall very similar to W.2693-W.2699 was found also in sounding no. 1, at the southwestern base of the blocking wall on the opposite side of Roman conduit D.2600 (Pl. XIX.2 and Pl. XLIII.2). It has a gray mud-brick wall (W.2697) and a foundation (W.2698) made of roughly-worked stones. The structure is preserved for ca. 1.30 m from the top of the earthen wall W.2697 (348.77 m) to the bottom of the stone foundation W.2698 (347.50 m). Like the structure in sounding no. 3, it was built over the flattened hard limestone chippings of the collapsed MB rampart (F.2655), which was exposed up to the bottom of the sounding at 347.09 m.

Although the wall W.2697-W.2698 in sounding no. 3 is better preserved than wall W.2693-W.2699 in sounding no. 1, they share several architectural features. First, the bottom of their stone foundation was found at the same elevation (347.60-63 m). Secondly, they were flattened for the construction of the later blocking wall. Thirdly, both protrude ca. 0.50 m westward from the blocking wall. Finally, they were built by adapting and flattening the remains of the collapsed MB rampart.

It is therefore evident that these two walls belonged to the same architectural feature, whose total length can be assessed today at just 5.50 m and for a height of 1.30 m (sounding no. 1) to 1.50 m (sounding no. 3). This structure was then damaged by later constructions: the IA I stone conduit D.2636 (see § 4.1.1, phase 5); the blocking wall (see § 4.1.1, phase 4); and, finally the foundation trench P.2680 of the Roman conduit D.2600 cut the fillings F.2677, F.2678, and F.2679 in sounding no.3.

LB II remains were found also East of the blocking wall. Although this area was largely damaged by the 20th century military installations (see § 6), evidence concerns a dark brown mud-brick wall (W.2666) well preserved for ca. 15 sqm between the blocking wall and the eastern and southern borders of the excavation (Pls. XX and XLIII.1). The top of the mud-brick wall was recorded at 348.65 m. The stone foundation (W.2672) was found at the bottom of the sounding no. 2 at 346.63 m. It was made of roughly-squared big stones but the narrow size of the sounding made it possible to expose only two levels of them (Pl. XXI.1). The overall height preserved of this wall, including foundation, is therefore 2.00 m and its pattern of brown/reddish and gray mud-bricks is well clear in the southern and northern sections of the sounding no. 2. Evidence of the same wall W.2666 was found, at a very similar elevation (348.57-73 m), in three fillings North of the Roman conduit D.2637 (Pl. XXI.2).

The upper one, under the topsoil F.4900, is a gray/reddish clay (F.4904) that covers, at 348.08-36 m, a dark brown clay soil with few pottery sherds and mud-brick fragments (F.4908). Below, filling F.4908 turned into a softer and less compact soil very easy to dig (F.4920). The three fillings F.4904, F.4908 and F.4920 certainly belonged to the same earthen structure that was damaged by later events. In consideration of the homogeneous ceramic assemblages dating to the final LB II, with some intrusive IA I sherds (see § 3.2.2), and the absence of significant occupation of the Inner West Gate until the Roman Age, it is arguable that damage to the wall W.2666 occurred partially for the construction of the blocking wall foundation (see § 4.1.1, phase 4) and largely later for the tunneling of the Roman conduit D.2600-D.2637 (see § 5.1.1). Finally, further possible remains of this wall came also at the northern base of the blocking wall, where two levels of gray mud-bricks (W.4905) were found, at 348.95-349.12 m, again just below the stone foundation W.2626 of the blocking wall.

Although more impressive and denoting a more accurate construction skill, wall W.2666-W.2672 on the eastern side of the blocking wall shares a similar building technique with walls W.2693-W.2699 and W.2697-W.2698 on the other side of the blocking wall. Elevation are also similar: the top of the mud-bricks is attested at 348.77 m in sounding no. 1, 348.82 in sounding no. 3, and 348.65/349.12 East of the blocking wall. It is therefore arguable that these three walls were part of the same engineering plan, a sort of "early blocking wall", made for closing the Inner West Gate after the abandonment of the LB I gateway and before the construction of the blocking wall. The gray and brown/reddish mud-bricks of wall W.4905 and the remains of mud-bricks inside fillings F.4904, F.4908 and F.4920 North of the Roman conduit D.2636 were almost certainly part of the same attempt. A further confirmation is also given by the fact that all the walls above mentioned were later reemployed in the construction of the "proper" blocking wall (see § 4.1.1, phase 4).[36] LB II sherds found in fillings F.2678 and F.2679 in sounding no. 3 (Figs. 3.6.4,8,10, 3.7-9), as well as those mixed in the mud-bricks of the W.2666 (Fig. 3.6.1-3,5-7,9,11-13) on the eastern side of the blocking wall give us only a *terminus post quem* for its construction. From a stratigraphic perspective, it was built exactly aligned with the LB I gateway and it is higher than the LB I floor, thus this wall was certainly built when the gateway was no longer used. The stone conduit D.4934 dated

36 At the very beginning of its discovery, in soundings no. 1 and 3, this structure was wrongly interpreted as the lower part of the blocking wall. Only the presence of a second earthen wall below the stone foundation W.2633 of the blocking wall, proved the presence of two different structures.

to the IA I (see § 4.1.1, phase 7), whose presence would be contradictory with the attempt to close the Inner West Gate, suggesting the very final LB II for the construction of this "early blocking wall". Finally, it is worth noting that the pottery inside the mud-bricks of the wall W.2666, and the rough building technique of the western/outer side, also indicate that this effort was done with haste in an attempt to make this part of the site inaccessible from outside.

3.2.2 Pottery

The LB II pottery assemblage from Area N denotes a strong continuity with the previous LB I, both in the repertoire of shapes as well as its connection with the Middle Euphrates and Inner Syria ceramic horizons.

Simple Ware is the most attested ware type (61% of the total collection) and it includes a wide range of both open and closed shapes, with a prevalence of the latter.

Among open shapes, platters with thickened rim and rounded lip make their appearence (Fig. 3.6.1), as one of the most important types of the LB II, together with shallow and hemispherical bowls with thickened rounded rim (Fig. 3.7.1-2). The presence of the former in chronologically certain contexts from Qatna,[37] as well as LBA assemblages from Ugarit (Schaeffer and Chenet 1949: fig. 117), Kamid el-Loz (Adler and Penner 2001: pl. 88.9; Penner 2006: 226, fig. 135, type 1.4b, pl. 28, 30, type 1.4b), strengthens its correlation with the period and makes it one of the hallmarks of the LB II horizon.[38]

Shallow and hemispherical bowls with internally swollen rounded and thickened rim (Figs. 3.6.4, 3.7.3-5) or with in-turned rim (Figs. 3.6.2-3, 3.7.6-7) continue to be attested, the latter being the most popular. They appear as early as the LBA in the Middle and Upper Euphrates valley and endure until the IA II period,[39] while at Karkemish they are largely attested in the IA I-II transition in area G (Zaina 2018: 117). Lightly carinated bowls with slightly flaring plain rim (Fig. 3.10.1) or with thickened rounded rim (Fig. 3.7.8) have also been recovered, as well as bowls with thickened

37 I.e., the destruction layers of the Royal Palace (Du Mesnil du Boisson 1928: pl. XVI.98; Iamoni 2012: 127).

38 This can be observed in other LB II contexts at Karkemish, such as in area G (Pizzimenti 2018: fig. 2.53.1-5).

39 Parallels for the IA Middle and Upper Euphrates are attested at Lidar Höyük (Müller 1999: pl. 2.AA01), while similar specimens have been found in inland Syria at Tell 'Ain Dara (Stone and Zimansky 1999: fig. 70, Type 100), Tell Afis (Mazzoni 1987: figs. 21.20-21) and Tell Tuqan D (Mazzoni 1992: fig. 26.5).

squared rim (Fig. 3.7.9). Although carinated bowls cannot be considered a real LB II diagnostic form,[40] they are largely attested on LB II contexts, such as Qatna (Iamoni 2012: pl. 40), Hama (Fugmann 1958: 125, fig. 153.5A551 and 5A556), Sukas (Buhl 1983: 34, fig. LIV.82), Ugarit (Courtois and Courtois 1978: 267, fig. 24.12), Terqa (Kelly-Buccellati and Shelby 1977: 45, fig. 21.TPR4 48), Tell Mumbaqa (Czichon and Werner 2008: pl. 156.7274; 171.7380), and Tell Bazi (Coppini 2018: fig. 9.14).

Kraters continue to be attested. The out-turned oblique squared rim ones are still present (3.10.2),[41] while kraters with expanded squared rim (Figs. 3.7.10, 3.10.8)[42] and expanded rounded rim (Fig. 3.10.9) make their first appearance.

Among the Simple Ware closed shapes, necked jars and jugs with flared molded rim continue to be attested (Figs. 3.6.6, 3.8.2-3), while necked jars with thickened externally flat rim (Fig. 3.10.5) as well as jars and jugs with thickened rim (Fig. 3.10.3-4), jars with thickened and in-turned rim (Fig. 3.10.7) and jars with flared squared rim (Fig. 3.6.5) make its first appearance. The latter is attested since the MBA period (Iamoni 2012: 132), as well as in various LBA contexts, such as el-Qitar (McClellan 1984-85: 54, fig. 8.5), Dan (Biran and Ben Dov 2002: 83, fig. 2.56: 24) and Qatna (Iamoni 2012: pl. 52.8). Furthermore, its appearance in the Level 10 of Tell Afis (Mazzoni 2002: 139, fig. LXI.48), at Khamid el Loz (Adler and Penner 2001: pl. 56.4) and in the Stratum VIII of Hazor (Ben-Tor and Bonfil 1997: 64, fig. II.22.27) furnishes evidence for its continuations into the LB II.

Short necked jars with out-turned squared rim (Figs. 3.7.11, 3.8.1),[43] and globular jars with out-turned thickened squared rim (Fig. 3.10.6),[44] or with oblique squared rim (Fig. 3.6.9) are barely attested.

---

40 In Northern Levant carinated bowls occur, with different variants, since the MB II as attested by their recovery both in Qatna (Iamoni 2012: 129), Alalakh (Mullins 2010: 64; fig. 3.1.1) and Tell Mardikh/Ebla (Nigro 2002: 126; fig. LIV.82) and continue to be attested during the entire LBA.

41 Comparisons from LB II contexts can be found at Tell Afis (see Venturi 2007: fig. 52.8).

42 Parallels from LB II contexts can be found at Tell Afis (Venturi 2007: fig. 49.6-8, Type CR1A), Qatna (Iamoni 2012: pl. 55.4-6, Type K5) and Hama (Fugmann 1958: 120, fig. 143.N996).

43 Similar specimens can be found in the LBA assemblages from Qatna (Iamoni 2012: pl. 47.2-13) and Tell Mumbaqa (Czichon and Werner 2008: pl. 191.7638; 198.7691).

44 In Northwestern Levant they make their first appearance in the MB II period, as attested in Qatna, although in minor percentage (Iamoni 2012:131, pl. 44.5-12), but they start being largely attested in the following LBA period, as shown by the pottery assemblages from el-Qitar, Tell Hadidi and Kamid el Loz, as well as Tell Afis, where they occur in Levels 11 and 12, both dated to the LB II period.

Kitchen Ware shapes are scattered througout the LB II sequence (20% of the total collection). Very few shapes have been recovered, consisting in platters with thickened rounded rim (Fig. 3.6.8-9), cooking pots with out-turned triangular rim (Fig. 3.10.10-11) and short necked cooking pots with out-turned squared (Fig. 3.6.10-11) or rolled rim (Fig. 3.6.12).[45] The cooking pot with out-turned triangular rim and globular body can be considered typical of the LB II period, as it was found in Tell Afis Level 10 (Mazzoni 2002: 140, fig. LXII.55; Venturi 2010: 23, fig. 9.9), Hama G (Fugman 1958: 125, fig. 153.5A521) and LB II contexts at Qatna (Iamoni 2012: pl 58.8-13), Kamid el-Loz (Adler and Penner 2001: pl. 44.4, 7) and Hazor (Ben-Tor and Bonfil 1997: 64, fig. II.22.5). This shape is also attested in other LB II contexts at Karkemish, such as in Area G (Pizzimenti 2018: fig. 2.53.6).

Preservation Ware (13% of the total collection) is represented by jars and *pithoi* with out-turned rounded rim (Fig. 3.10.14),[46] upper-grooved out-turned expanded rim (Fig. 3.9.2-3), thickened triangular rim (Fig. 3.6.13), out-turned grooved rim (Figs. 3.9.4, 3.10.12), oblique squared expanded rim (Fig. 3.10.13) or expanded horizontal squared rim (Fig. 3.9.1).

The bases show little variation. Flat (Fig. 3.8.7), ring (Fig. 3.8.4-5) and disk bases (Fig. 3.8.6) are attested, although the ring type is prevalent (Pl. LIII.1).

Surface treatments are present on 56% of sherds recovered, and include mostly White Slip (33%), while Red Slip (5%), and burnishing are quite limited. Two sherds presents a combination of White Slip and burnishing (Pl. LII). Decorations are present on two of the sherds recovered and include only incised (Fig. 3.9.4) and combed decoration in wavy lines (Fig. 3.9.3).

The study of the pottery fabrics revealed a substantial continuity with the LB I tradition. The majority of Simple Ware LB II pottery assemblage (about 90%) continue to have fine homogeneous fabrics with a low occurence (<3%) of small (<0.5 mm) mineral inclusions, while two main different fabric types can be distinguished for the Preservation Ware. About 43% of the collected diagnostic Preservation Ware sherds have a coarse fabric with high-medium frequency (3-10%) of medium size (0.5-1 mm) mineral inclusions, while 29% have a coarser fabric with high frequency (10-20%) of medium (0.5-1 mm) mineral inclusions. Finally, even for Kitchen Ware two different fabric have been identified: a coarse fabric with high-medium frequency

45 For parallels see Iamoni 2012: pl. 58.7.

46 Parallels can be found in the LBA assemblages from Qatna (Iamoni 2012: pl. 59.2).

(3-10%) of medium size (0.5-1 mm) mineral inclusions, and a finer one with low frequency (<3%) of medium size (0.5-1 mm) mineral inclusions. Among fabric colors pinkish (5YR 7/4, 8/3-4), reddish yellow (5YR 7/6-8; 7.5 YR 6/6, 7/6, 8/6) and very pale brown (10YR 7/3-4, 8/3-4) continue to be the most frequently attested.

3.2.3 Small Finds

One fragmentary zoomorphic figurine[47] has been recovered from the filling F.2678 (Pl. XLVII.2):

Catalogue of small finds from phase 8:

KH.13.O.1167, Zoomorphic figurine (Pl. XLVII.2)
Material: clay
Dimensions: h. 5.3+ cm; l. 8.8+ cm; w. 3.4+ cm
SU: F.2678
Bucket: KH.13.P.844
Preservation: fragmentary

47 For a detailed analysis of clay figurines from the British expedition and the Turco-Italian (2011-2015) excavations at Karkemish see Bolognani unpublished PhD thesis.

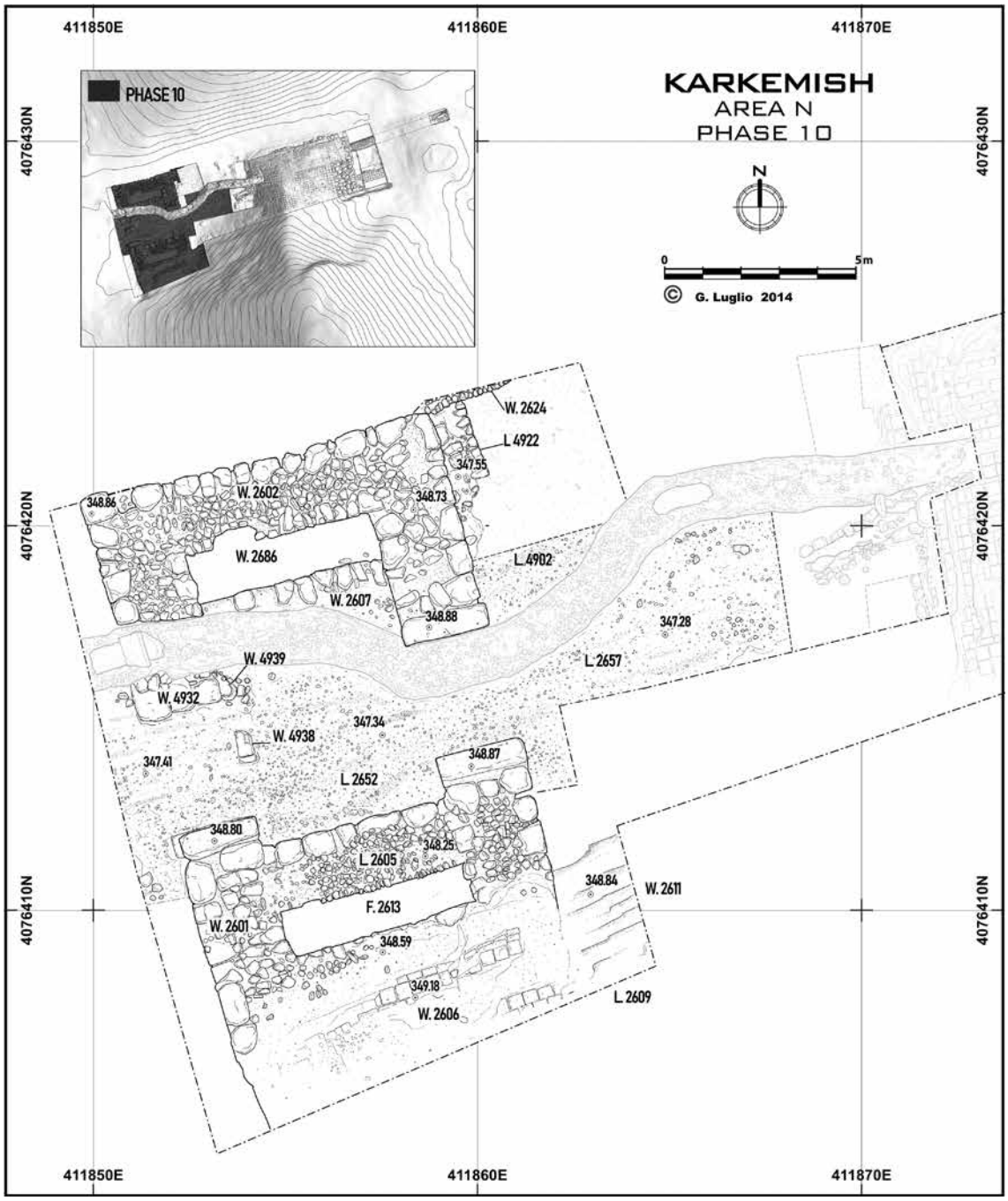


Fig. 3.1. Plan of phase 10, Late Bronze Age I.

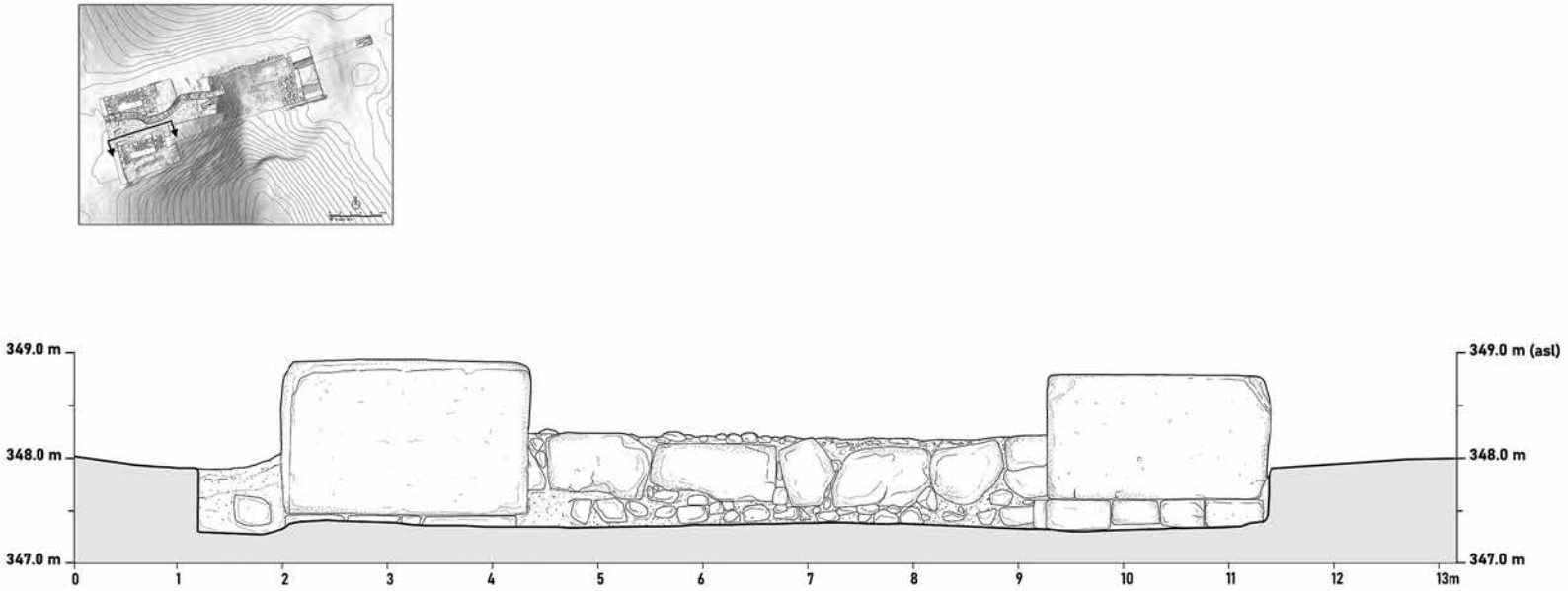


Fig. 3.2. Late Bronze Age I northern tower: northern section.

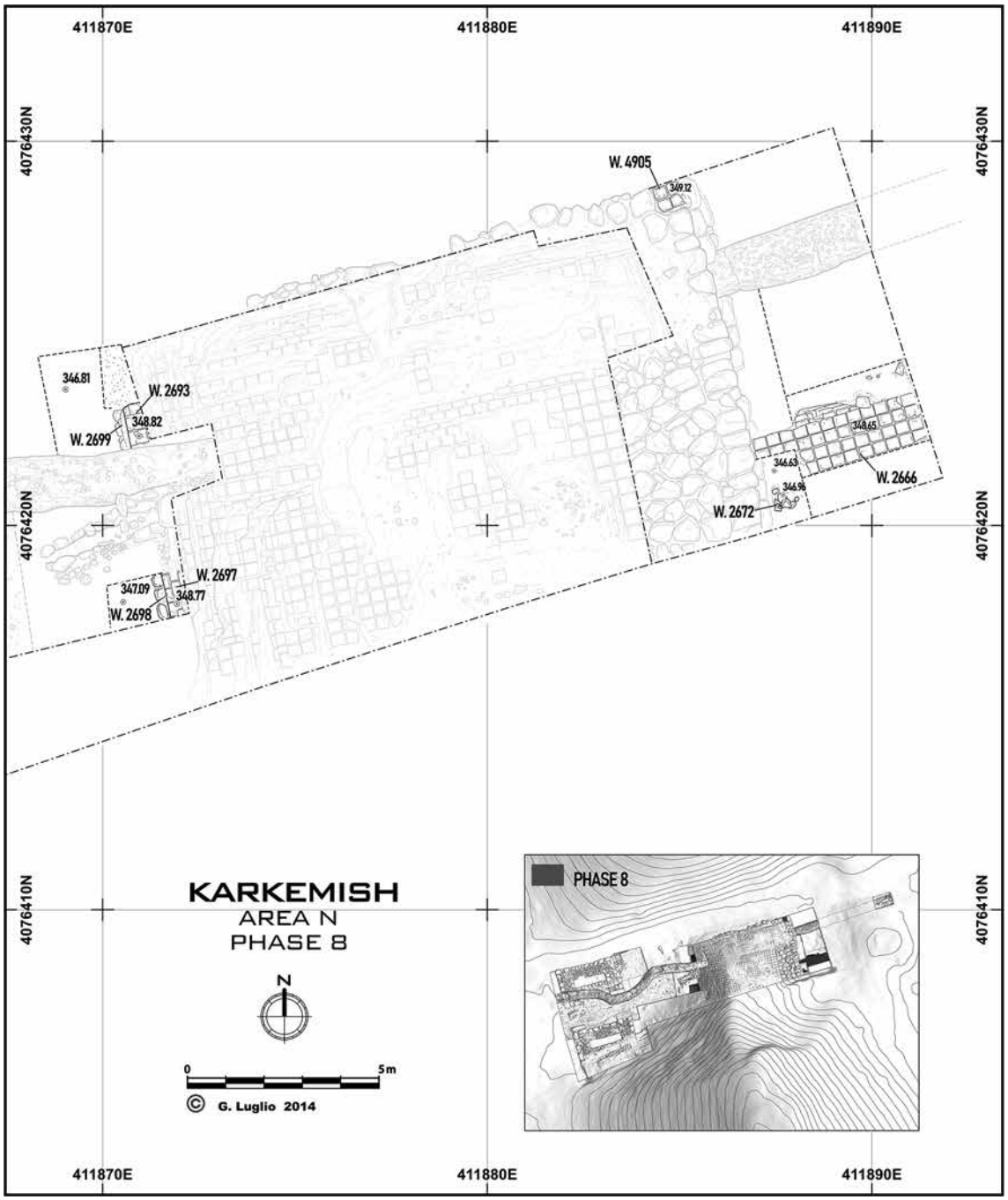


Fig. 3.3. Plan of phase 8, Late Bronze Age II.

No.	Pottery No.	Phase	Context	Techn.	Firing	Inclusions	Fabric color	Surf treat.
1	KH.14.P.1216/1	9	F.4921	W	H	Ma1	7.5YR 7/4 (C-I/O)	Slip Whitish
2	KH.14.P.1219/1	9	F.4923	W	H	Ma1	10YR 6/3 (C) 2.5Y 8/2 (I/O)	Slip Whitish
3	KH.14.P.1220/1	9	F.4928	W	H	Ma1	5YR 6/4 (C) 7.5YR 8/1 (I/O)	Slip Whitish Burnish
4	KH.14.P.1219/2	9	F.4923	W	H	Ma1	7.5YR 6/4 (C)	-
5	KH.14.P.1221/1	10	L.2652	W	M	Ma2	2.5YR 5/6 (C) 7.5YR 5/4 (I/O)	-
6	KH.14.P.1221/2	10	L.2652	W	M	Ma2	2.5YR 5/6 (C) 7.5YR 5/4 (I/O)	-
7	KH.14.P.1219/3	9	F.4923	W	H	Ma1	5YR 7/6 (C) 10YR 8/2 (I/O)	Slip Brownish
8	KH.14.P.1216/5	9	F.4921	W	M	Ma2	5YR 6/4 (C-I/O)	Slip Reddish
9	KH.14.P.1220/3	10	F.4928	W	H	Mb1	10YR 7/4 (C) 7.5YR 8/1 (I/O)	Slip Whitish
10	KH.14.P.1221/3	9	L.2652	W	H	Ma1	5YR 6/4 (C) 7.5YR 7/4 (I/O)	-
11	KH.14.P.1220/2	9	F.4928	W	H	Ma1	2.5YR 6/8 (C) 10YR 8/1 (I/O)	Slip Whitish
12	KH.14.P.1216/2	10	F.4921	W	H	Mb2	7.5YR 6/4 (C-I/O)	Slip Reddish
13	KH.14.P.1221/4	9	L.2652	W	H	Ma1	5YR 7/4 (C-I/O)	Slip Whitish Burnish
14	KH.14.P.1216/6	9	F.4921	W	M	Mb2	5YR 6/6 (C-I/O)	Slip Reddish

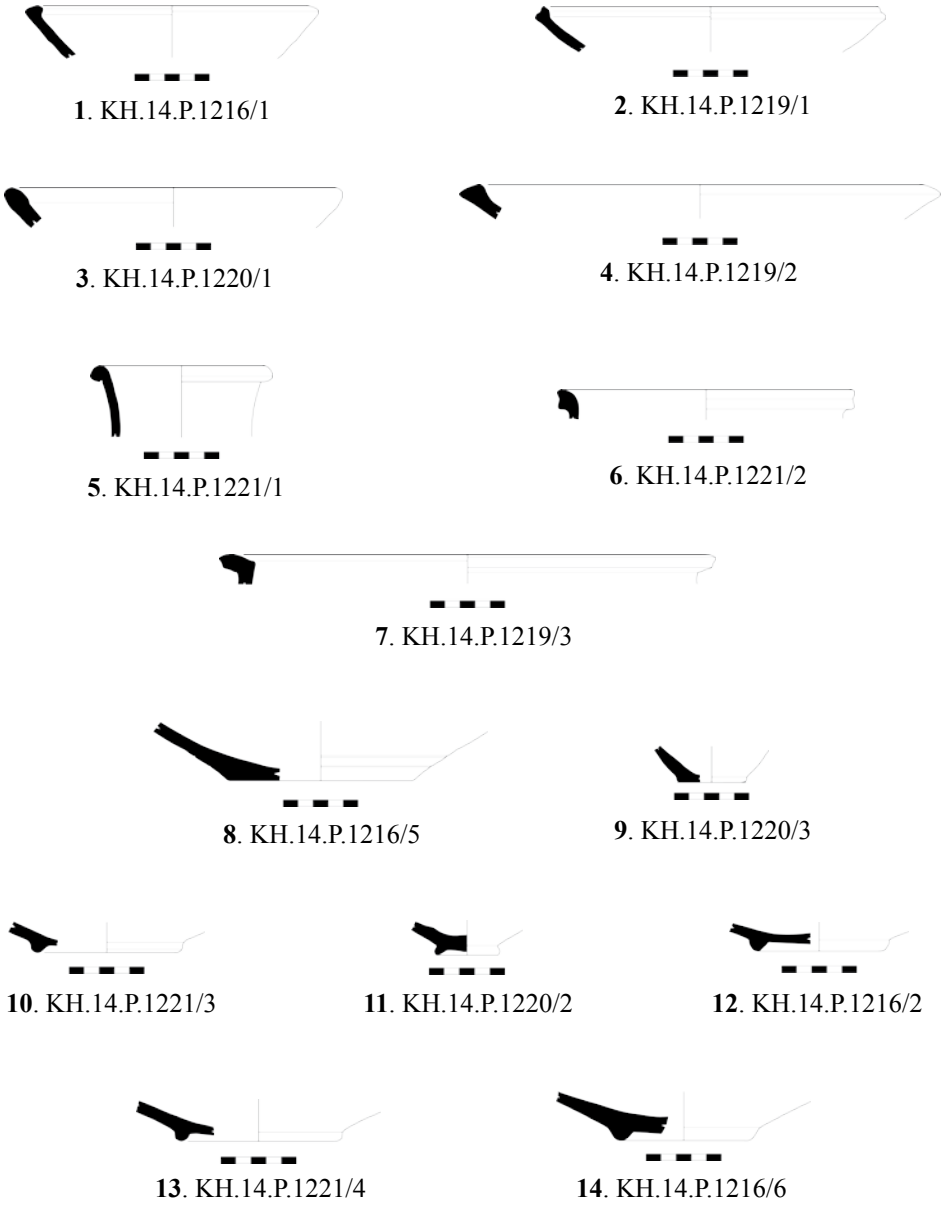


Fig. 3.4. Pottery assemblage from F.4921, F:4923, F.4928 and L.2652, phases 9 and 10, Late Bronze Age I.

No.	Pottery No.	Phase	Context	Techn.	Firing	Inclusions	Fabric color	Surf treat.
1	KH.14.P.1216/3	9	F.4921	W	M	Mb3	7.5YR 6/4 (C-I/O)	Slip Reddish
2	KH.14.P.1216/4	9	F.4921	W	M	Mb3	5YR 6/6 (C-I/O)	-
3	KH.14.P.1219/4	9	F.4923	W	H	Ma1	2.5Y 7/3 (C) 2.5Y 8/2 (I/O)	Slip Brownish
4	KH.14.P.1220/4	9	F.4928	W	M	Ma3	10YR 6/3 (C) 5YR 7/4 (I/O)	-

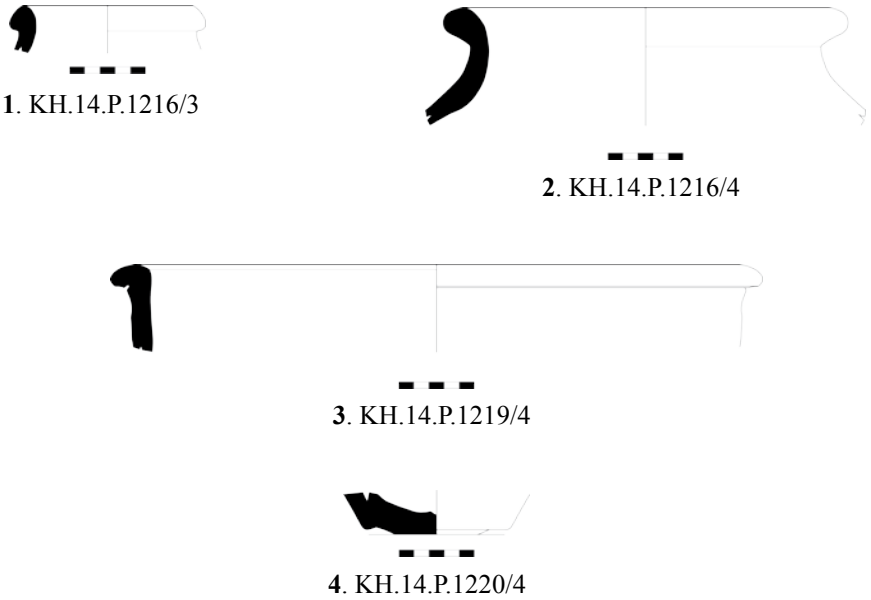


Fig. 3.5. Pottery assemblage from F.4921, F:4923 and F.4928, phase 9, Late Bronze Age I.

No.	Pottery No.	Phase	Context	Techn.	Firing	Inclusions	Fabric color	Surf treat.
1	KH.13.P.836/5	8	W.2666	W	L	Mb1	7.5YR 5/4 (C-I/O)	-
2	KH.13.P.836/8	8	W.2666	W	H	Ma1	7.5YR 8/3 (C-I/O)	Burnish
3	KH.13.P.836/9	8	W.2666	W	M	Ma1	7.5YR 5/1 (C) 7.5YR 7/2 (I/O)	-
4	KH.14.P.1204/1	8	F.2679	W	H	Ma1	2.5YR 6/1 (C-I/O)	Burnish
5	KH.13.P.836/7	8	W.2666	W	H	Ma1	7.5YR 7/3 (C-I/O)	Slip Whitish
6	KH.13.P.836/2	8	W.2666	H-W	H	Mb1	7.5YR 6/3 (C-I/O)	Slip Whitish
7	KH.13.P.836/1	8	W.2666	W	H	Ma1	7.5YR 7/2 (C-I/O)	Slip Whitish
8	KH.13.P.836/3	8	W.2666	W	L	Mb1	7.5YR 6/2 (C-I/O)	-
9	KH.13.P.836/6	8	W.2666	W	L	Mb1	7.5YR 7/3 (C-I/O)	Slip Whitish
12	KH.14.P.1204/3	8	F.2679	W	L	Mb3	7.5YR 6/4 (C-I/O)	-
11	KH.14.P.1204/2	8	F.2679	W	L	Mb3	10YR 5/3 (C-I/O)	Slip Reddish
10	KH.13.P.836/10	8	W.2666	W	L	Mb1	7.5YR 7/4 (C) 5YR 7/4 (I/O)	Slip Whitish
13	KH.13.P.836/4	8	W.2666	W	M	Yb2	7.5YR 6/1 (C) 7.5YR 8/3 (I/O)	-

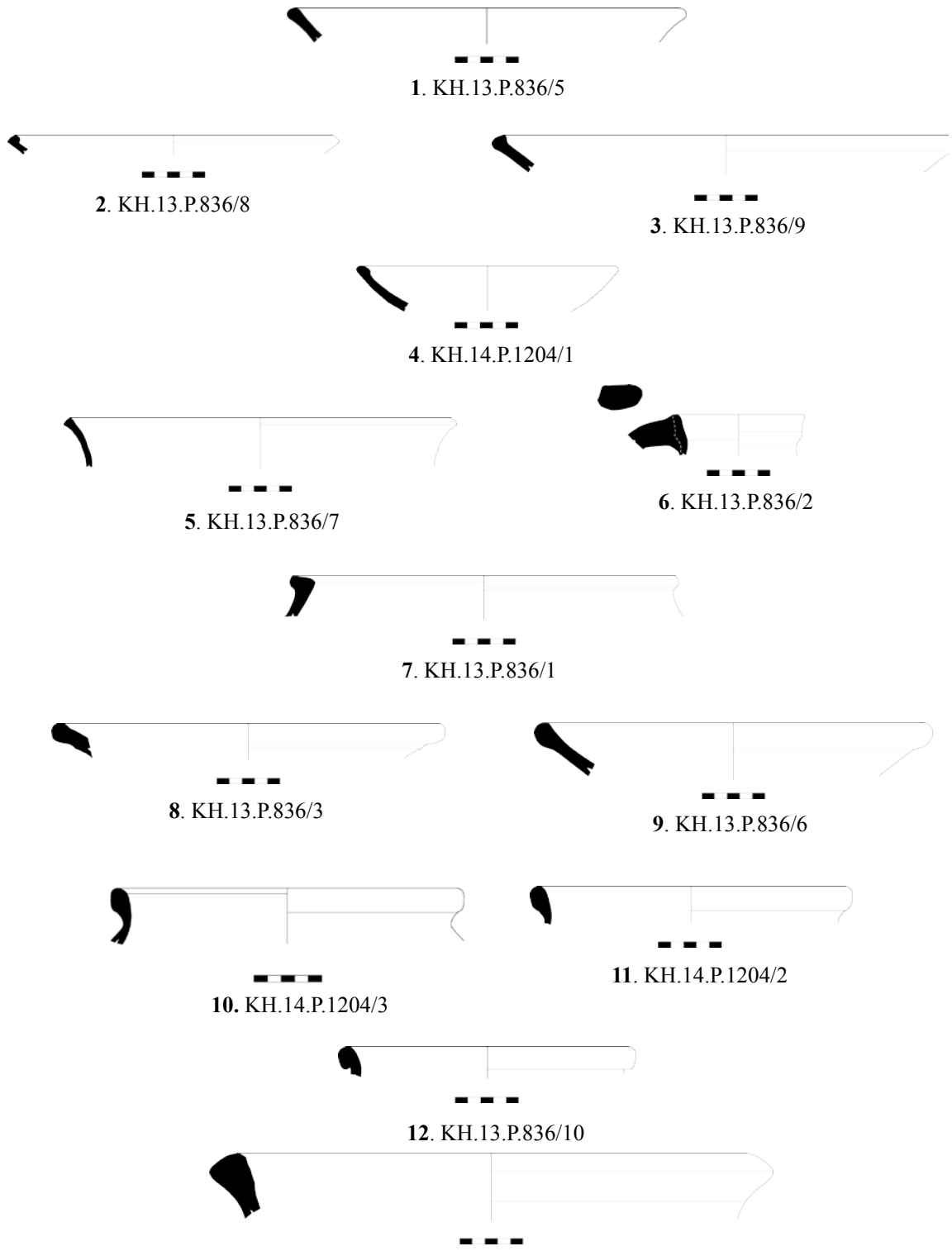


Fig. 3.6. Pottery assemblage from W.2666 and F.2679, phase 8, Late Bronze Age II.

No.	Pottery No.	Phase	Context	Techn.	Firing	Inclusions	Fabric color	Surf treat.
1	KH.13.P.844/1	8	F.2678	W	H	Ma1	2.5Y 7/3 (C-I/O)	Burnish
2	KH.13.P.844/2	8	F.2678	W	H	Ma1	5YR 7/6 (C-I/O)	Slip Whithish Burnish
3	KH.13.P.844/6	8	F.2678	W	H	Ma1	5Y 7/1 (C-I/O)	Slip Whitish
4	KH.13.P.844/3	8	F.2678	W	H	Ma1	5YR 7/6 (C-I/O)	Slip Whitish Burnish
5	KH.13.P.844/5	8	F.2678	W	H	Ma1	5Y 8/2 (C-I/O)	Slip Whitish
6	KH.13.P.844/4	8	F.2678	W	H	Ma1	7.5YR 8/6 (C-I/O)	-
7	KH.13.P.844/7	8	F.2678	W	H	Ma1	2.5Y 7/1 (C-I/O)	Slip Whitish
8	KH.14.P.1205/1	8	F.2678	W	H	Ma2	5YR 6/6 (C) 10YR 7/2 (I/O)	Slip Whitish
9	KH.13.P.844/8	8	F.2678	W	H	Mb1	10YR 7/3 (C-I/O)	Slip Whitish
10	KH.13.P.844/9	8	F.2678	W	H	Ma1	7.5YR 7/4 (C-I/O)	-
11	KH.13.P.844/19	8	F.2678	W	H	Mb1	7.5YR 5/3 (C) 7.5YR 5/3 (C-I/O)	Slip Whitish

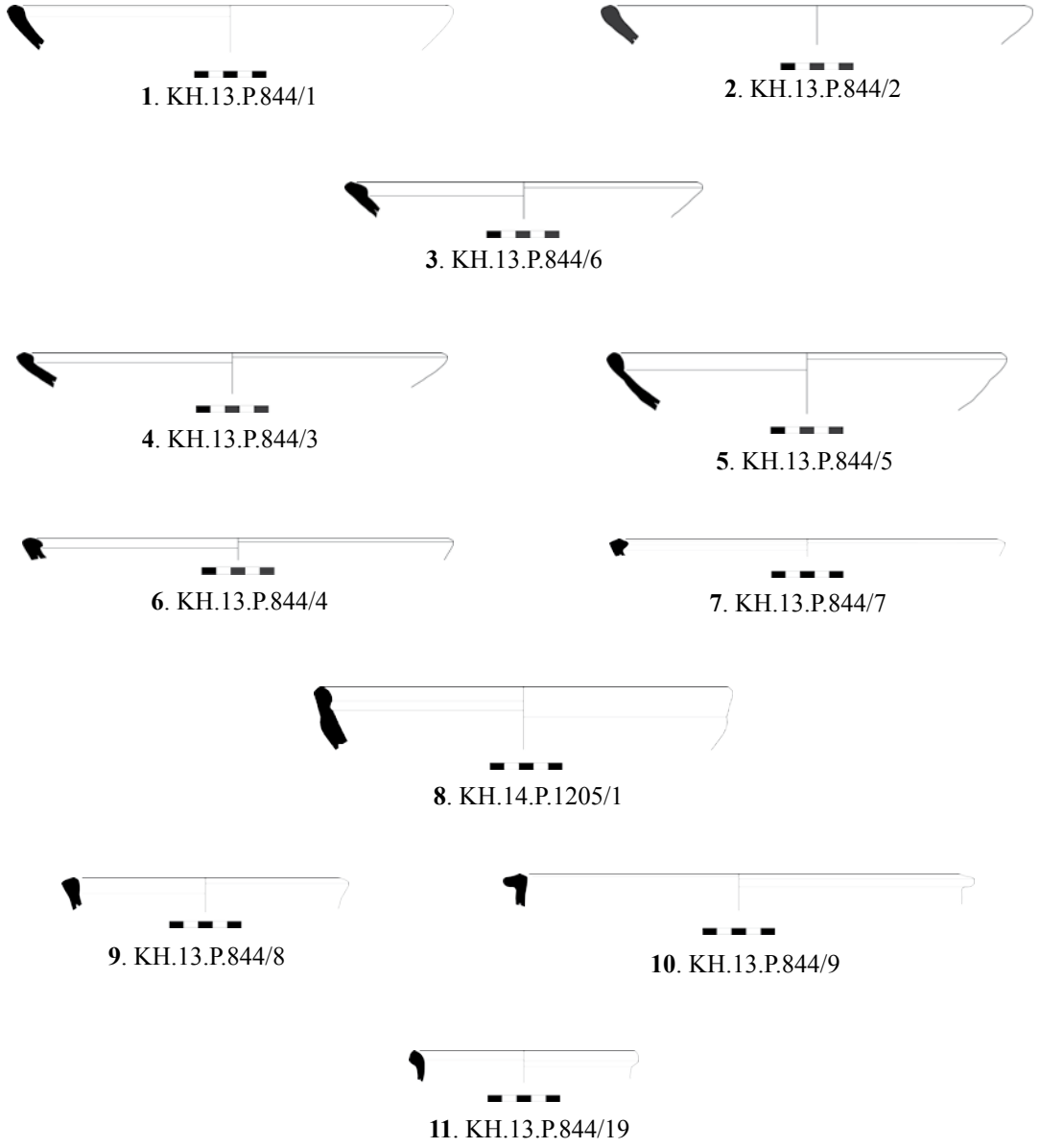


Fig. 3.7. Pottery assemblage from F.2678, phase 8, Late Bronze Age II.

No.	Pottery No.	Phase	Context	Techn.	Firing	Inclusions	Fabric color	Surf treat.
1	KH13.P.844/22	8	F.2678	W	L	Mb1	5YR 5/1 (C) 2.5YR 7/8 (I/O)	Burnish
2	KH13.P.844/11	8	F.2678	W	H	Ma1	10YR 8/4 (C-I/O)	-
3	KH13.P.844/10	8	F.2678	W	H	Ma1	10YR 8/6 (C-I/O)	Slip Whitish
4	KH13.P.844/13	8	F.2678	W	H	Ma1	5YR 7/6 (C-I/O)	-
5	KH13.P.844/14	8	F.2678	W	M	Ma1	7.5YR 7/2 (C) 7.5YR 7/3 (I/O)	-
6	KH13.P.844/12	8	F.2678	W	M	Ma1	10YR 7/3 (C) 7.5YR 8/6 (I/O)	Burnish
7	KH13.P.844/15	8	F.2678	W	H	Ma1	2.5Y 8/3 (C-IO)	-

1. KH.13.P.844/22

2. KH.13.P.844/11

3. KH.13.P.844/10

4. KH.13.P.844/13

5. KH.13.P.844/14

6. KH.13.P.844/12

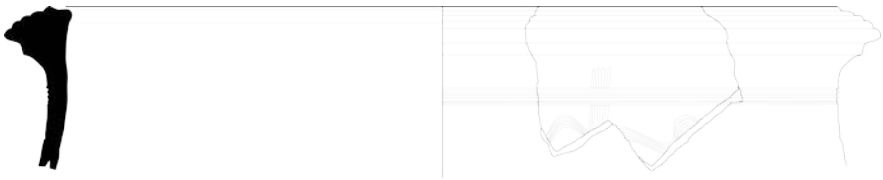
7. KH.13.P.844/15

Fig. 3.8. Pottery assemblage from F.2678, phase 8, Late Bronze Age II.

No.	Pottery No.	Phase	Context	Techn.	Firing	Inclusions	Fabric color	Surf treat.
1	KH.13.P.844/21	8	F.2678	W	L	Mb2	7.5YR 4/3 (C) 7.5YR 4/2 (I/O)	-
2	KH.13.P.844/17	8	F.2678	W	M	Mb1	10YR 7/3 (C) 5YR 7/6 (I/O)	-
3	KH.13.P.844/16	8	F.2678	W	M	Mb2	7.5YR 7/6 (C) 5YR 7/6 (I/O)	-
4	KH.13.P.844/18	8	F.2678	W	M	Ma1	2.5Y 8/1 (C) 2.5Y 8/2 (I/O)	-

1. KH.13.P.844/21

2. KH.13.P.844/17



3. KH.13.P.844/16

4. KH.13.P.844/18

Fig. 3.9. Pottery assemblage from F.2678, phase 8, Late Bronze Age II.

No.	Pottery No.	Phase	Context	Techn.	Firing	Inclusions	Fabric color	Surf treat.
1	KH.14.P.1208/1	8	F.4908	W	H	Mb2	10YR 6/3 (C-I/O)	-
2	KH.14.P.1214/1	8	F.4920	W	H	Ma1	5YR 6/4 (C) 7.5YR 8/2 (I/O)	Slip Whitish Burnish
3	KH.14.P.1214/3	8	F.4920	W	L	Ma2	2.5YR 5/6 (C-I/O)	Slip Reddish
4	KH.14.P.1208/5	8	F.4908	H-W	M	Mb3	7.5YR 6/2 (C) 7.5YR 6/4 (I/O)	-
5	KH.14.P.1208/2	8	F.4908	W	H	Mb2	10YR 6/3 (C-I/O)	-
6	KH.14.P.1208/6	8	F.4908	W	H	Ma1	10YR 6/4 (C-I/O)	Slip Reddish
7	KH.14.P.1214/2	8	F.4920	W	H	Ma2	2.5YR 5/6 (C) 5YR 7/6 (I/O)	Slip Reddish
8	KH.14.P.1208/4	8	F.4908	W	M	M-Vb3	10YR 6/4 (C-I/O)	Slip Reddish
9	KH.14.P.1208/3	8	F.4908	W	M	Mb3	10YR 6/2 (C) 10YR 7/3 (I/O)	Slip Reddish
10	KH.14.P.1208/9	8	F.4908	W	L	Mc	5YR 5/4 (C-I/O)	-
11	KH.14.P.1208/10	8	F.4908	W	L	Mb2	7.5YR 7/4 (C-I/O)	-
12	KH.14.P.1208/8	8	F.4908	W	M	Mb2	10YR 7/3 (C-I/O)	Slip Reddish
13	KH.14.P.1214/4	8	F.4920	W	H	M-Va1	7.5YR 6/4 (C) 5YR 7/4 (I/O)	Slip Whitish
14	KH.14.P.1208/7	8	F.4908	W	M	Mb2	10YR 7/3 (C-I/O)	Slip Whitish

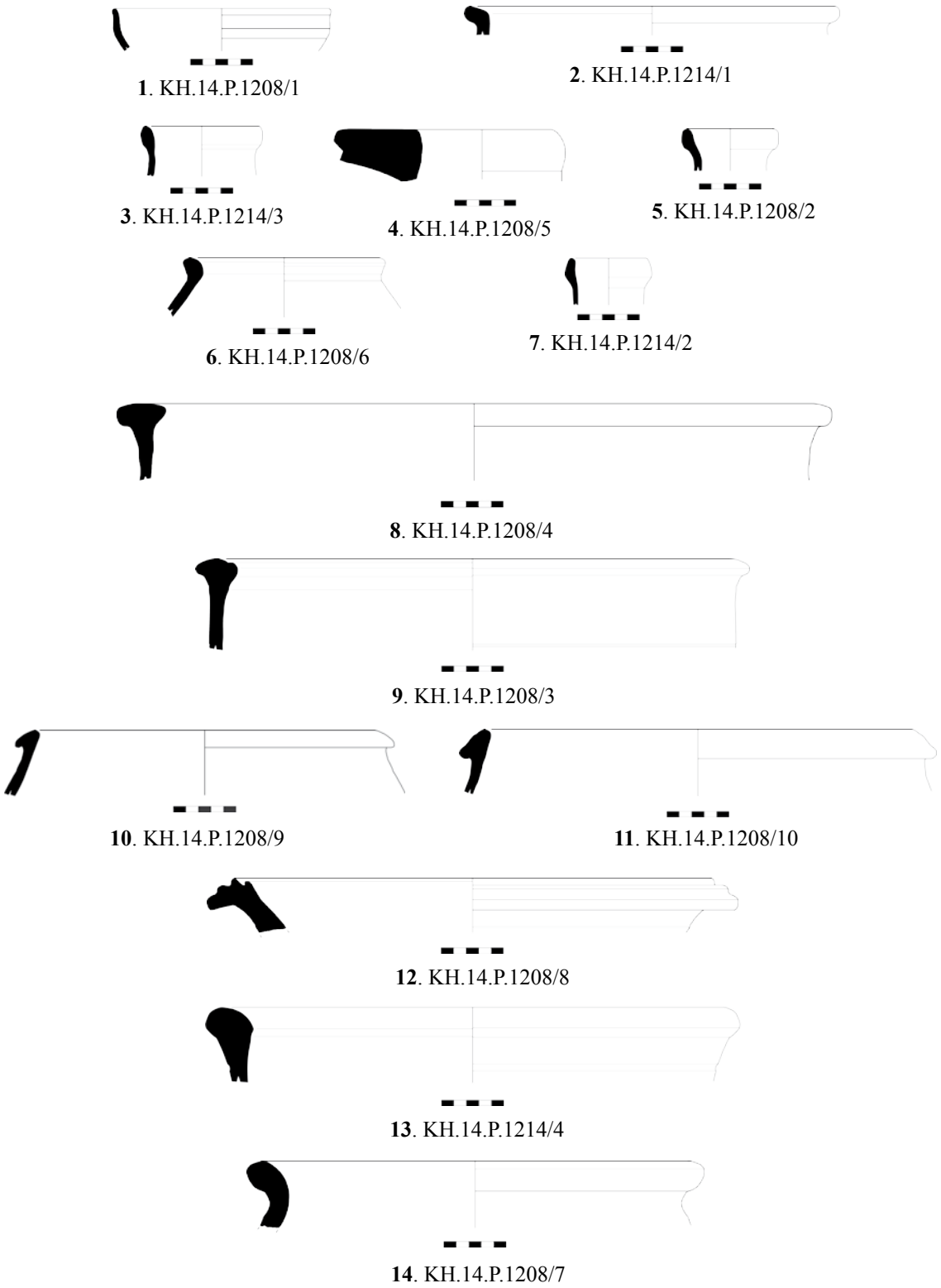


Fig. 3.10. Pottery assemblage from F.4908 and F.4920, phase 8, Late Bronze Age II.

Chapter 4
THE IRON AGE

4.1 IRON AGE I (PHASES 4-7)

After the abandonment of the LB I gateway and the construction of the "early blocking wall" at the end of LB II, the topography of the West Gate is dominated by the monumental earthen blocking wall. Starting the description of his work in the Inner West Gate, Woolley stated that the excavation resulted particularly complicated due to the presence of this structure (Woolley 1921: 50, 73). We decided to cut the eastern section of the blocking wall in order to: i) better understand its building technique; ii) provide a more accurate chronology for its construction; and, iii) test Woolley's hypothesis of a second LB I gateway (see § 3.1.1). Other remains of the Iron Age in the Inner West Gate concerned two stone conduits for water supply (Fig. 4.1).

Three main phases (4, 5, and 7) and a temporary abandonment (phase 6) have been distinguished within the IA I period. Again, the attribution to the three phases has been more based on stratigraphical relationships rather than on their association with pottery types. The ceramic assemblages from these layers are, however, basically homogeneous and they date to the IA I, with a few exceptions to the late IA I.

4.1.1 Architectural Remains and Stratigraphy

Phase 7

The earliest Iron Age evidence in the Inner West Gate concerned a first hydraulic installation (Fig. 4.1). The remains of a stone-lined drain (D.4934), with a WSW-ENE orientation were found between the western orthostats of the LB I towers ex-

actly over the pebble floor L.2652-L.2657 (Pl. XXII.1). The drain was built with roughly squared medium-sized stones and it was preserved only for 2.10 m. It is possible that the blocking-stone W.4938 of the LB I gateway was also reused for this purpose (Pl. XXII.2). The preparation below the bottom is a compact light brown clay mixed with very small limestone chippings (F.4936). Few pottery sherds discovered in this preparation layer allow to date this water device to the IA I (see § 4.1.2). Westward, until the western border of the excavation, filling F.4936 turned into a layer with a similar pattern and a dark brown color (F.4935). Although orientation and building technique are similar to stone conduit D.2636, which Woolley dated as coeval to the blocking wall (see § 1.2 and § 4.1.1, phase 5), these structures belong to different hydraulic systems and even periods. The bottom of stone-lined drain D.4934 is recorded at 347.61 m, i.e. ca. 50 cm lower than the bottom of the conduit D.2636 (348.12 m). Such a similar difference in elevation cannot be justified by engineering reasons in consideration of the short distance - ca. 15 m - between the two hydraulic structures, as well as that water likely run inside the city, i.e. from West (D.4934 = lower elevation) to East (D.2636 = higher elevation). This therefore suggests that D.4934 was built earlier than D.2636. The removal of the structure D.4934 and its bottom F.4936 opened a layer of a dark brown and compact mud (F.4937) that was very difficult to dig. It covered the LB I floor L.2652 and it has been interpreted as a preparation for water conduit D.4934.

Phase 6

Some accumulations found South of the Roman conduit D.2600 testify to a transition between phase 7 and phase 5 (Pl. XXIII.I). As seen above for the abandonment after the LB I (see § 3.1.1, phase 9), this sector of Area N was certainly untouched by Woolley. This is confirmed by the homogenous ceramic assemblages found in many of these fillings (F.2610, F.2620, F.4919, and F.4929) and dated to the IA I. The uppermost layer, at 347.83-348.25 below F.2650, was a compact and hard reddish mud that was unearthed in proximity of the first loop of the Roman aqueduct. It was in a bad state of preservation possibly because damaged by the construction of the Roman conduit itself. South of it, and below the stones of F.2616, was a hard layer of dark brown/reddish clay (F.4929) also very difficult to dig. This filling, covering the brown clay with small pebbles and no pottery (F.4930), was found near the western

border excavation just above the stone conduit D.4934 at 347.62-70 m.[48] West of the LB I towers, below the recent deposits F.2632 and F.2648 were two layers of dark red/brown mud, which were contiguous and shared a similar elevation (347.61-91) but one (F.4918) had more inclusions and pottery than the other (F.4914). South of them, at 347.79-348.07 m, was a soft light brown clay (F.4919) very easy to dig and with small stones and few ceramic sherds. The only abandonment layer found North of Roman conduit F.2600 was a layer (F.2620) very similar to F.2610 on the other side but slightly lower (347.21-31) than it. The bad state of preservation of most of these accumulations, due to the cut for the later construction of Roman conduit D.2600, and their prevailing mud consistency suggest that they were the results of the collapse/decay of an earthen structure, possibly the mud-brick body of the previous LB I towers.

Phase 5

This phase is represented by a second stone conduit (D.2636) (Fig. 4.2). Woolley already unearthed this conduit and placed its construction as coeval to the blocking wall on the basis of the typical Late Hittite ware found in the trench dug for its construction (Woolley 1921: 80). At that time, Woolley found this conduit on either side of the blocking wall: ca. 7 m West and ca. 3 m East and he actually reported it as embedded inside the blocking wall itself (Woolley 1921: pl. 10a,b [Pl. VIII]). Today, it is preserved for 3.35 m only on the western side of the blocking wall, while the eastern side was completely replaced by the digging of the pit P.2644 and the large stones collapse F.2641 pertaining to the military occupation (see § 1.3).

Stone conduit D.2636 had a WSW-ENE orientation (Pl. XXIII.2). Its structure was very simple, made of one row of large slabs used as lateral walls and one as coverage, while small-sized stones, pebbles and even limestone chippings shaped its bottom (Pl. XXIV.1). Later on, likely before Roman Age, the structure partially collapsed and the small stones and pebbles of its structure scattered on its sides at 348.18-25 m (F.4916). No coating or waterproofing system was preserved. The width inside is 0.40 m and outside 1.10 m. Elevation on the top of the roof, exactly

48 This filling was higher than the filling (F.2635) possibly associated with the bottom of the IA I conduit D.4934. It is therefore arguable placing this layer in the abandonment after the IA I occupation rather than the abandonment after the LB I occupation.

in correspondence of the blocking wall,[49] is 349.28 m.

As it occurred for the other architectural features of the Inner West Gate, establishing an accurate chronology for the water conduit D.2636 proved very difficult because there are no artefacts directly associated with it. Some hints came from the fillings under it and referring to the transition/abandonment of Phase 6 (see above) excavated South of the Roman conduit D.2600 and East of the LB I towers. The same chronological issues concern also its collapse (F.4916). The construction of the stone conduit D.2636 should be hence framed somewhere in the IA I between the earliest stone conduit D.4934 (IA I suggested by the ceramic sherds from its bottom F.4936) and the later blocking wall (Late IA I on the basis of the pottery found in its foundation and interspaces filling).

Woolley's argument on its contemporaneity with the blocking wall are instead questionable. It is likely that Woolley based his theory only on the presence of the stone conduit on either side of the blocking wall, and possibly on a parallelism with the later Roman conduit D.2600 that tunneled the blocking wall. The cut made in the 2013 season in the eastern section of the blocking wall, however, demonstrated the absence of any remains of this conduit inside the blocking wall itself (see § 3.1.1). It suggests that the stone conduit was already largely removed during the construction of the blocking wall, if not earlier. Woolley's pl. 10a (1921 [Pl. VIII.1]) reported only a part of the conduit survived after that destruction. On the western side, the conduit was instead partially left by the builders of the blocking wall. Two photographs (Pls. VII.2, X.2) show very clearly that the stones used as the roof of the conduit were partially collapsed at the time of the construction of the blocking wall and it is in line with the poor attention paid to the construction of its outer (western) side. This suggests that this conduit was no longer used at that time. This is not surprising in consideration that, as it occurred earlier for the LB II "early blocking wall", the construction of its outer side resulted less accurate than the inner side. On this matter it must be also taken into account the basic task accomplished by the stone conduit, i.e. the supply of fresh water to the city, which would have been inconsistent with the decision of closing the Inner West Gate for defensive purposes. The presence of such an empty conduit at the base of the blocking wall would have affected the solidity of this earthen structure, and it would have also been a good target for enemies in case of siege.

49 One of the stones used as roof is still half inside the blocking wall W.2684.

Phase 4

This phase is characterized by the construction of the blocking wall (Fig. 4.3). It was built up to close off the Inner West Gate between the ramparts, thus in origin it had a major SSE-NNW orientation (Pl. XXIV.2). Today it is preserved for ca. 16 m x 12 m with a prevailing WSW-ENE orientation (Pl. XXV.1). Its original length is however difficult to establish because it was not exposed fully at South, as well as the northern section was cut, in Roman Age according to Woolley, to create a passage between the Inner and Outer Towns (Woolley 1921: 80). The profile is irregular, with a remarkable slope from Southeast to Northwest and almost overhanging on either side (Pl. VI). Elevation ranges from 352.94 m at its top, where it joins with the southern rampart, to ca. 349.10 m that corresponds to the average elevation of its top foundation (Pl. XXV.2). The maximum height of the blocking wall is therefore of 3.80 m. Its construction technique is clearly marked by the following features: presence of more sections built with mud-bricks of different sizes and textures and separated by narrow interspaces; preparation layers; and stone foundation (Pl. XXVI.1).

Except for the northern side, which was demolished to allow passing between the Inner and the Outer Town, the state of preservation of the blocking wall is quite good. It was damaged West, by the tunnel dug for the Roman conduit D.2600, and East, where the earthen wall W.2628 was found ca. 1.00-1.30 m behind the limit of the stone foundation W.2655-W.4901 (Fig. 4.3).

The scraping of the topsoil (F.2614 for central and western sections, F.2630 for eastern section) exposed the mud-bricks and the mortar binding them. First operations also allowed the identification of the narrow interspaces (5-10 cm wide) filled with loose soil and heterogeneous material which mark the different sections: W.2628 East; W.2683 in the center; W.2684 West. The latter was partially damaged in the past for the construction of the Roman water conduit D.2600 (see § 5.1.1). Although limited to a small portion of 1.10 m (WSW-ENE) x 0.60 m (SSE-NNW), a fourth section (W.2682) was unearthed West of interspace F.2651 and South of interspace F.2653.

In the 2013 season the eastern section W.2628 of the blocking wall was cut up to the interspace (F.2651) with the central section W.2683. The interspace was filled with small pebbles, gravel, soil, and even some Late Iron Age I pottery sherds (Pl. XXVI.2). It is interesting to note that the complete removal of section W.2628

showed how interspace F.2653 was an elongated vertical V-shaped crack in that section stopping ca. 1 m above the stone foundation W.2655 (Pl. XXVII.1). This suggests that these interspaces were fractures in the mud-brick wall caused by some structural failure, while the chronology of the pottery inside them (see below) indicates that this occurred soon after the construction of the blocking wall or even during it. On the other side of the blocking wall, the interspace (F.4911) between the central (W.2683) and the western (W.2684) sections was opened in the 2014 season up the point where the Roman conduit D.2600 entered inside the blocking wall (Pl. XXVII.2). The filling is made of small rounded pebbles, without pottery, and its width differs from 10 cm South to 15-18 cm North. It is also worth noting that, unlike the other interspaces F.2651 and F.2653, this filling was sealed on top by a ca. 10 cm thick layer of mud (F.4910) which made possible the identification of this interspace only because it is visible in the sections.

The prevailing size of mud-bricks employed in the construction of the blocking wall is quadrangular: 35 x 35 x 12 cm (Pl. XXVIII.1).[50] However, the cut in eastern section W.2628 demonstrated the presence of rows of mud-bricks alternating each other and differing in size, color and texture (Table 4.1; Pl. XXVIII.2). This difference formed a sort of patchwork that was particularly clear only under specific light conditions, such as the grazing light coming from East in the very early morning/sunrise (Pl. XXIX.1).

Mud-bricks from the Inner West Gate differ in size from other areas of Karkemish. In the Middle Hittite Northern Fort, Woolley found mud-bricks with the following measures:[51] ca. 40 x 22 x 11 cm and 35 x 26 x 11 cm (Court A) (Woolley 1921: 66); 41 x ? x 11 cm (Chamber G) (Woolley 1921: 67); 28 x 25 x 10-12 cm (Chambers E and F) (Woolley 1921: 68).

50 This size recalls the bricks measured by Woolley in the south section: 37 x 35 x 11/12 cm. He also reported some rectangular bricks from the central section, west face, measuring 40 x 20 14 cm (Woolley 1921: 76).

51 See also an overview on brickworks in Woolley 1921: 90-91.

Locus	Color	Texture	Length	Width	Height
W.2628	Light gray	Compact clay	35 cm	35 cm	12 cm
W.2628	Dark gray	Compact clay	35 cm	35 cm	12 cm
W.2628	Reddish/ brown	Soft sandy clay	32 cm	32 cm	12 cm
W.2628	Gray/greenish	Loamy clay	36 cm	36 cm	12 cm
W.2628	Gray/greenish	Silty clay	36 cm	36 cm	12 cm
W.2628	Light gray	Silty clay	30 cm	30 cm	12 cm
W.2628	Light gray	Loamy clay	32 cm	32 cm	12 cm
W.2628	Light brown	Silty clay	40 cm	40 cm	12 cm
W.2628	Light brown	Silty clay, gravel	40 cm	40 cm	12 cm
W.2628	Dark brown	Silty clay, gravel	35 cm	35 cm	12 cm
W.2683	Light brown	Silty clay	35 cm	35 cm	n/a
W.2683	Light brown	Silty clay	40 cm	40 cm	n/a

Table 4.1. Size of the mud-bricks used in the eastern section of the blocking wall (W.2628).

The foundations of the blocking wall also differ according to the single sections. The most relevant evidence came from its eastern side, where an impressive stone foundation was found below the mud-brick wall W.2628. This is made of two rows of dry stones (W.2655), most of them arranged horizontally and some others placed vertically, without any mortar binding (Pl. XXIX.2). Its top is attested at 349.07 m. Sounding no. 2 opened a lower part of this foundation (W.4901), which is shaped by three levels of big squared stones that are jutting out for ca. 20 cm from the upper foundation W.2655 (Pl. XXX.1). The stones of the uppermost course are well-squared, while those of the second and third courses are only roughly worked. The lower foundation W.4901 was recorded from its top at 348.26 m to the bottom of sounding no. 2 at 346.63, where it lays on the foundation of the previous LB II "early blocking wall" (W.2666) (Pl. XXI.1). The overall height of the foundation is therefore ca. 2.50 m. Instead, the height of 2.80 m reported by Woolley is unclear (1921: 79) since he did not reach such a depth during his excavation and the top of the blocking wall was similar to present-day. Except for one stone missing in the upper course of both W.2655 and W.4901, their state of preservation is excellent. The same

sounding also evidenced two cuts clearly visible in its southern (P.2673) and northern (P.2674) sections (Pl. XXX.1). They were done to arrange the foundation W.2655-W.4901 of the eastern section W.2628 of the blocking wall inside the LB II "early blocking wall" W.2666. Different preparation layers were recorded between wall W.2628 and the foundation W.2655-W.4901 (Pl. XXX.2). The first (F.2638) was a light brown mud with Late IA I pottery (Pl. XXX.2). A very similar layer (F.2642) was found also in the northeastern corner of the blocking wall, between wall W.2628 and foundation W.2626. In that case it was found right under the upper filling F.2617 but the homogenous Late IA I ceramic assemblage suggests that it still was in a primary context. Under filling F.2638 there was a levelling layer (F.2654) of fine light clay, mixed with small- and medium-sized pebbles and rocks, as interface between the large stones of the foundation W.2655 and the earthen wall W.2628. Preparation F.2654 was found only above the central part of foundation W.2655 and the pottery inside dated to the Late IA I (Pl. XXXI.1). Below the excavation southern section and below the eastern façade of the central section of the blocking wall exposed after the cut, the preparation is made of very soft mud-bricks or simply mud, which together form a unique and regular layer with a light brown color (F.2659). Where this layer is damaged, it was possible to see a second preparation (F.2658), which was a soft soil very easy to remove, with many small stones and pebbles, gravel, pottery sherds, and animal bones. As the other preparation layers of the blocking wall F.2642 and F.2654, this layer released Late IA I pottery. In the other parts where preparation F.2654 was missing, foundation W.2655 was covered by a thin layer of small pebbles and light brown mud (F.2660).

On the northern side, where the blocking wall is largely damaged and it slopes abruptly to the ground surface, just below the topsoil F.2630 and the thin filling F.2627, the foundation is made of a stone wall (W.2626) with the same WSW-ENE orientation of the LB I gateway (Pl. XXXI.2). Although opened for only 10.60 m, it is interesting to note that stones used in this foundation change their dimension from small size West (below wall W.2684) to medium size in the center (below wall W.2683), to big size East (below wall W.2628). The top changed accordingly from 349.22 m (West) to 349.55 m (East). Under the northern section of the blocking wall (W.2628 East and W.2683 in the middle), between the mud-bricks and the stone foundation W.2626 there was only a preparation layer, made of a gray loamy clay with small pebbles and pottery (F.2676). This is comparable in size, pattern and material to the preparation

F.2660 opened in the central part of the eastern section of the blocking wall.

On the western side, under section W.2684, the foundation was a single course of small- and medium-sized roughly squared stones (W.2633) discovered in primary context only inside sounding no. 1 at 349.01 m (Pl. XIX.2). The construction of the IA I stone conduit D.2636 and the Roman conduit D.2600 damaged significantly the foundation W.2633 and the stones removed were grouped nearby (F.2694, see also § 5.1.1, phase 3). A similar situation was attested South of stone conduit D.2636, but in this case the stones seem to be leaning against this side of stone conduit D.2636 itself. In some parts of this side, it also seems that the blocking wall was built - without any foundation - directly over the mud-bricks of the "early blocking wall".

The different sections, materials, and techniques employed in the construction of the blocking wall confirmed Woolley's hypothesis that it was built "hurriedly and in time of stress" (Woolley 1921: 79). If the inner/eastern side, i.e. inside the town, reflects a clear architecture plan where a massive and heavy double stone foundation (W.2655-W.4901) and more preparation levels (F.2636, F.2642, F.2654, F.2658 and F.2659) supported the earthen wall (Pl. XXXII.1), the outer/western side (W.2684) seems built over a very rough foundation, with medium-sized stones arranged irregularly, almost by chance (Pl. XXXII.2). The later construction of the Roman conduit D.2600 also evidenced this difference because the western (outer) side of the blocking wall is remarkably more damaged than the eastern (inner) one. This peculiar building technique recalled somehow the architecture of the LB II "early blocking wall": extremely accurate East (inside the town), approximately doneWest (outside the town).

The homogeneous ceramic assemblage seems to constrain the construction of the blocking wall to the Late IA I. Late IA I sherds were in fact discovered in preparations F.2642, F.2654 and F.2658 of eastern section W.2628, inside mud-bricks of the wall itself (W.2628), as well as in interspace F.2651.

Except for the partial collapse of the stone conduit D.2636, which would be however placed soon after the end of phase 2 (see above), abandonment layers after the Iron Age occupation were possibly already unearthed by Woolley.

4.1.2 Pottery

The IA I pottery from Area N shows a low degree of standardization and a remarkable continuity with the previous periods, with parallels in other excavation area of

Karkemish, such as Area C (Pizzimenti and Zaina 2016) and Area G (Zaina 2018), and in neighboring sites.[52] Furthermore, the presence of shapes that can be considered typical of the last part of the Early Iron Age allows to date phases 4 of Area N to the Late IA I period.

Simple Ware is the most represented ware type (71% of the total collection) and it includes a wide range of both closed and open shapes.

The majority of the IA I open shapes are platters or bowls with plain rounded rim. The former (Fig. 4.5.1) is a very common shape of the last part of the LBA, as shown by parallels from Qatna (Iamoni 2012: 127), Kamid el-Loz (Adler and Penner 2001: 14.13) and Tell Afis (Venturi 2010: 22, fig. 8.11), as well as Sheikh Hamad in the Jezirah (Pfälzner 2007: 287, pl. XXXIX.332), enduring until the IA II. At Karkemish, these bowls make their first appearance in the LB II contexts, such as in Area G (Pizzimenti 2018: figs. 2.49.1, 3-6, 2.53.1-5), but they are mostly attested during the IA I-II transition (Zaina 2018: 117, figs. 3.22.2-5, 3.24.3-4, 3.24.6, 3.27.1-5, 3.27.7).[53] Plain rounded rim bowls (Figs. 4.7.3-16, 4.17.3-4) are also well attested in IA I-II contexts at Karkemish (Zaina 2018: 117), as well as in the Middle and Upper Euprates Valley, such as at Tille Höyük (Blaylock 2016: figs. 4.5-6), Tell Jurn Kabir B (Eidem and Ackermann 1999: fig. 6.7) and Tell Sheikh Hassan (Schneider 1999: pl. 4.1.1). Small bowl with plain rounded rim are also attested (Fig. 4.7.1-2), as well as hemispherical bowls with rounded thickened rim (Fig. 4.8.10), hemispherical bowls with rounded sqared rim (Fig. 4.8.9), small carinated bowls with out-turned rounded rim (Fig. 4.18.1), and platters with squared rim (Figs. 4.4.1, 4.5.2, 4.8.3-4).

Small hemispherical bowls with plain rim (Figs. 4.8.2, 4.17.1)[54] or with plain rim and a high carination (Fig. 4.8.1)[55] are also attested, together with bowls with squared rim (Figs. 4.8.6, 4.17.2).[56]

---

52 For a more detailed analysis of the IA I and IA II pottery assemblage from Karkemish see Giacosa and Zaina in press.

53 Parallels for the early IA are attested at Lidar Höyük (Müller 1999: pl. 2.AA01), Tell 'Ain Dara (Stone and Zimansky 1999: fig. 70, Type 100), Tell Afis (Mazzoni 1987: figs. 21.20-21) and Tell Tuqan (Mazzoni 1992: fig. 26.5).

54 Parallels can be found in the IA I assemblage from Tell Afis (Venturi 2007: fig. 59.11).

55 Parallels can be found in the IA I assemblage from Tell Afis (Venturi 2007: fig. 59.12).

56 This type is recorded within ceramic assemblages of Lidar Höyük (Müller 1999, fig. 4:AA02) and of several Syrian sites: mainly, Tell Afis E1 (Mazzoni 1998: fig. 22.4; 24.3-4), and E22a (Degli Esposti 1998: fig. 10.1), and Hama F2 (Riis and Buhl 1990, fig. 74.526).

Shallow and hemispherical bowls with internally swollen rounded and thickened rim (Figs. 4.4.2, 4.5.3-7, 4.8.7-8) and bowls with in-turned pointed rim (Figs. 4.18.5-6), one of the most popular type of previous LB phases, continue to be attested, although decreasing in percentage.[57]

Late IA I open shapes, which have been recovered, include carinated bowls with squared rim (Fig. 4.8.11), a type which found parallels in the Inland Syria assemblage, such as at Tell Afis (Mazzoni 1998: figs. 24.7, 25.1-2), carinated bowls with out-turned rim (Figs. 4.4.3, 4.5.8),[58] as well as platters with out-turned thickened rim (Figs. 4.8.5, 4.18.2-4). The latter found comparisons in late IA I strata at Tell Afis (Degli Esposti 1998: fig. 7.2).

Kraters with out-turned squared rim (Figs. 4.16.1, 4.19.1), and with out-turned rounded rim (Fig. 4.9.1-6) are well attested. References for the former type can be found within the pottery assemblages of Arslantepe, Period III (Manuelli 2013: fig. 5.10-11), Lidar Höyük (Müller 1999: fig. 4:AE02; 18:CB02), Tell Jurn Kabir B (Eidem and Ackermann 1999: fig. 7.16), Tell Sheikh Hassan (Schneider 1999: fig. 3.3), Tell Abou Danné IId (Lebeau 1983: pls. XLI.4; XLII.7)and Tell Afis E19a (Venturi 1998: fig. 6.3) and D5 (Mazzoni 1987: fig. 20.13), while the latter has good comparisons in the ceramic repertoire of Tell Mardikh E4b (Mazzoni 1992: fig. 17.6) and Hama E1 (Riis and Buhl 1990: fig. 65.437).

Kraters with out-turned molded rim are also present (Figs. 4.9.7, 4.17.5).

Closed shapes include a wide range of jars and jugs. The former include jars with-rounded thickened rim (Figs. 4.10.1-2, 4.18.8), jars with thickened everted rim (Fig. 4.18.7), [59] jars with everted plain rim (Fig. 4.6.5), jars with out-turned oblique rim (Fig. 4.17.6), jars with out-turned squared rim (Figs. 4.4.8, 4.9.8-11), jars with out-turned rounded rim (Figs. 4.4.5-7, 4.6.6, 4.9.12), jar with out-turned triangular rim (Figs. 4.9.13, 4.18.9), and jars with in-turned thickened rim (Fig. 4.4.9-10).

Jugs include jugs with plain rim (Fig. 4.11.8-11), jugs with thickened rim (Figs. 4.6.4, 4.11.12-13), jugs with thickened rounded rim (Figs 4.10.4-11,14, 4.17.7), jugs

57 The same trend can be seen in IA I contexts from Area G at Karkemish (Zaina 2018: 117), as well as at Arslatepe (Manuelli 2010) and in the Hittite-controlled Syria (Venturi 2010: figs. 10.1-7).

58 Parallels can be found in the IA I assemblage from Tell Afis (Venturi 2007: fig. 75.9).

59 This type is quite widespread in all the Northern Levant: besides, it seems that it could be part of a earlier LB pottery horizon, as attested, alongside with Karkemish, by evidence from Tell Afis E110 (Venturi 1998: 7.10; 2007, pl. 50.1-2). Anyhow, it is part of the IA repertoire of Lidar Höyük (Müller 1999: fig. 3.CB01; 18:DB10), Tell Sheikh Hassan (Schneider 1999: fig. 14.3), 'Ain Dara (Stone and Zimansky 1999: fig. 71-Type 402/406), Tell Tuqan D7 (Mazzoni 1992: fig. 25.12).

with in-turned thickened rim (Fig. 4.11.2-7,14) and jug with straight neck and triangular rim (Fig. 4.10.12-15).[60]

Jars and jugs with molded rim (Figs. 4.6.1-3, 4.10.16) continue to be attested.

Kitchen Ware is poorly attested (14% of the total collection). Very few shapes have been recovered, consisting mainly in platters (Figs. 4.13.1-4, 4.19.2-3) or bowls with plain rim (Fig. 4.13.5-9) and bowls with out-turned thickened rim (Figs. 4.13.10-12, 4.17.9, 4.19.4-5). Bowls with thickened rounded rim (Fig. 4.14.1-3) are also attested. Cooking pots include pots with out-turned squared rim (Fig. 4.6.8), as well as pots with in-turned triangular rim and globular body (Figs. 4.6.7, 4.19.6). The former is an early IA type which seems to be shared with Upper Euphrates region, where it is attested in the LBA assemblage of Arslantepe, Period IV (Manuelli 2013: fig. 4.10), while the latter is recorded in the ceramic repertoire of Lidar Höyük (Müller 1999: fig. 12:CA03/CA05), Tell Afis E18 (Venturi 1998: fig. 8.2), Tell Tuqan D (Baffi 2008: fig. 26.10) and Tell Mardikh E4-3 (Mazzoni 1992: fig. 11.1,3,7; 14.1).

Cooking pots of the previous LBA tradition continue to be attested, such as pots with out-turned rolled rim (Fig. 4.4.11-12) and pots with out-turned triangular rim (Fig. 4.14.4-7). Finally, pots with out-turned triangular molded rim are also present (Fig. 4.14.8-9).

Preservation Ware shapes are scattered throughout the IA I sequence (15% of the total collection). They consists only in closed shapes, which include *pithoi* with out-turned squared grooved rim (Figs. 4.4.13, 4.15.2-3) *phitoi* with out-turned rounded rim (Fig. 4.15.1), *pithoi* with out-turned squared rim (Fig. 4.15.6-7) and *pithoi* with thickened rounded rim (Fig. 4.15.4-5).

The bases show very little variation. Both flat (Figs. 4.6.9,11, 4.12.3, 4.16.3, 4.18.10), rounded (Figs. 4.12.1-2, 4.16.2,4), disk (Fig. 4.6.10) and ring bases (Figs. 4.6.12, 4.12.4-14, 4.16.5-7, 4.17.8, 4.18.11) are attested, although the ring one is prevalent (Pl. LIII.1).

Surface treatments decrease in the IA I sequence (25% of the sherds recovered), and include mostly White Slip (19%), while Red Slip (2%) and burnishing (2%) are barely

60 In the Middle Euuphrates region this type is recorded at Arslantepe, Period III (Manuelli 2013: figs. 4.7; 5.13), Lidar Höyük (Müller 1999: fig. 3,7,14,16,18:DB06), Tell Jurn Kabir A-B (Eidem and Ackermann 1999: figs. 5.16; 7.12) and Tell Sheikh Hassan (Schneider 1999: fig. 15.6). In inland Syria this type of jug is attested at 'Ain Dara (Stone and Zimansky 1999: fig. 71-Type 410), Tell Afis E19-4 (Venturi 1998: fig. 7.6-7; Mazzoni 1998: fig. 20.2; 22.2), E24 (Degli Esposti 1998: fig. 8.5), GE4b-3 (Cecchini 1998: fig.14.5; 15.1-2), Tell Mardikh E4 (Mazzoni 1992: fig. 14.3), Tell Tuqan D3 (Baffi 2008: fig. 26.6) and Tell 'Acharneh (Cooper 2006: fig. 9.10-11).

attested (PL. LII), following a trend already seen at Karkemish in the IA I levels from Area G (Zaina 2018: 119). Early occurrence of Red Slip is also recorded at Upper Euphrates sites such as Arslantepe (Manuelli 2010: 76-77).[61]

The study of pottery fabric revealed a change compared with the previous LBA phases, with a low degree of standardization. About the 46% of the Simple Ware IA I pottery assemblage have a fine homogeneous fabric with a low occurence (<3%) of small (<0.5 mm) mineral inclusions, mainly followed by two different coarser fabrics: low occurrence (<3%) of medium (0.5-1 mm) mineral inclusions (14%) and medium-low frequency (3-10%) of medium (0.5-1 mm) mineral inclusions (12%).

The same low degree of standardization can be noticed for Preservation Ware, which is mainly characterized (28%) by a slightly coarser fabric with a medium-low frequency (3-10%) of small (<0.5 mm) mineral inclusions. Two different fabric can be distinguished for the Kitchen Ware, with a finer-grained fabric, characterized by medium-low frequency (3-10%) of small (<0.5 mm) mineral inclusions (50%), prevailing on a coarser one with medium-low frequency (3-10%) of medium (0.5-1mm) mineral inclusions (30%). On the contrary, IA I fabrics colors are consistent with the general trend of low degree of standardization and continuity with the previous periods. Pinkish (7.5YR 7/4), reddish yellow (5YR 7/6) and very pale brown (10YR 7/3-4) continue to be the most frequently attested.

4.1.3 Small Finds

The excavation of the IA I phases in Area N yielded 11 small finds: 1 from phase 6 and 10 from phase 4. More than a half of them are stone tools.

Phase 6

One anthropomorphic clay figurine (Pl. XLVII.3) was found in F.2654.

Catalogue of small finds from phase 6:

61 The early presence of Red Slip in IA I levels of several sites is still controversial and under debate. Red Slip is in fact considered by many scholars to be a marker for the beginning of the IA II (Braemer 1986), although this earlier evidence seems to contradict this assumption.

KH.13.O.1245, Anthropomorphic figurine (Pl. XLVII.3)
Material: clay
Dimensions: h. 4.6+ cm; w. 2.7+ cm; th. 1.6+ cm
SU: F.2620
Bucket: KH.13.P.849
Preservation: fragmentary

Phase 4

Ten objects came from phase 4: five bronze fragments of indeterminate objects (Pl. XLVII.4), and four fragments of an iron lamina (Pl. XLVII.5) were found respectively in W.2628 and F.2654. From the latter comes also a variety of stone tools, which include two basalt (Pl. XLIX.2-3) and one pebble polishers (Pl. XLIX.1), one limestone mortar (Pl. XLIX.4) and three grinding stones in basalt (Pl. XLVIII.1-3). Finally, one more basalt grinding stone has been found in F.2648 (Pl. XLVIII.4).

Catalogue of small finds from phase 4:

KH.14.O.998, Grinding stone (Pl. XLVIII.4)
Material: basalt
Dimensions: l. 3.6 cm; w. 6.1+ cm; th. 7.2 cm
SU: F.2648
Bucket: KH.14.P.1209
Preservation: fragmentary

KH.13.O.1005, Indeterminate (Pl. XLVII.4)
Material: bronze
Dimensions: 1 cm; 0,7cm; 1 cm; 1.9 cm; 2 cm
SU: F.2658
Bucket: KH.13.P.824
Preservation: fragmentary

KH.13.O.1019, Polisher (Pl. XLIX.2)
Material: basalt
Dimensions: h. 4.1 cm; l. 10+ cm; w. 3.6 cm
SU: F.2654
Bucket: KH.13.P.823
Preservation: fragmentary

KH.13.O.1025, Grinding stone (Pl. XLVIII.1)
Material: basalt
Dimensions: h. 3.7+ cm; l. 14.8+ cm; w. 12+ cm
SU: F.2654
Bucket: KH.13.P.824
Preservation: fragmentary

KH.13.O.1026, Grinding stone (Pl. XLVIII.2)
Material: basalt
Dimensions: h. 9.5+ cm; l. 16.5+ cm; w. 12 cm
SU: F.2654
Bucket: KH.13.P.823
Preservation: fragmentary

KH.13.O.1028, Grinding stone (Pl. XLVIII.3)
Material: basalt
Dimensions: h. 4.5 cm; l. 31.5+ cm; w. 16.5+ cm
SU: F.2654
Bucket: KH.13.P.823
Preservation: fragmentary

KH.13.O.1022, Polisher (Pl. XLIX.3)
Material: basalt
Dimensions: h. 6.3 cm; l. 11.3+ cm; w. 5.1 cm
SU: F.2654
Bucket: KH.13.P.823
Preservation: nearly complete

KH.13.O.1024, Mortar (Pl. XLIX.4)
Material: limestone
Dimensions: h.9.4 cm; l. 15.5 cm; w. 12.5+ cm
SU: F.2654
Bucket: KH.13.P.823
Preservation: fragmentary

KH.13.O.1082, Polisher (Pl. XLIX.1)
Material: pebble
Dimensions: h. 1.2 cm; d. 1.7
SU: F.2654
Bucket: KH.13.P.823
Preservation: complete

KH.13.O.1248, Lamina (Pl. XLVII.5)
Material: iron
Dimensions: l. 2+ cm; w. 2+ cm; th. 0.7 cm
SU: W.2628
Bucket: KH.13.P.817
Preservation: fragmentary

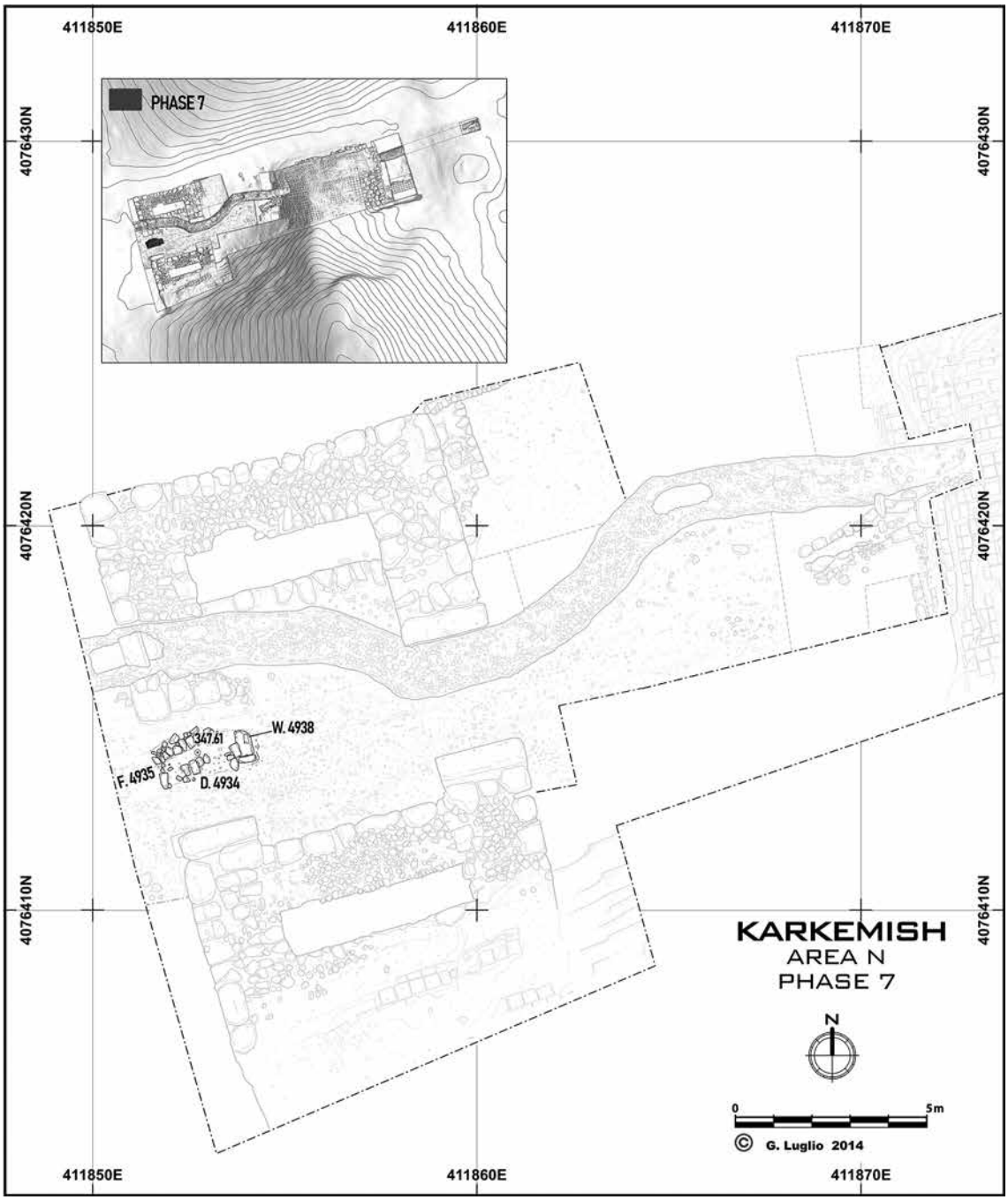


Fig. 4.1. Plan of phase 7, Iron Age I.

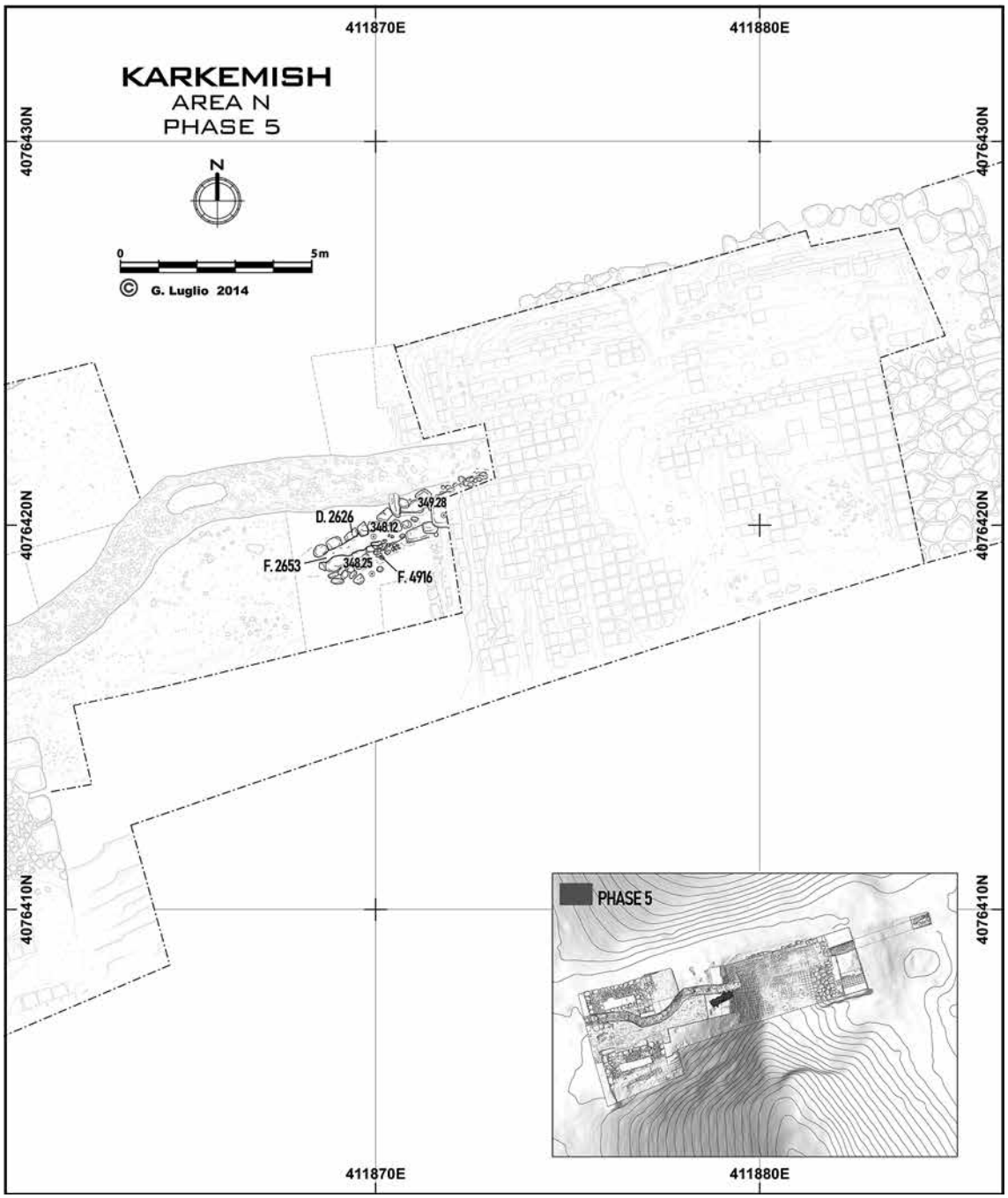


Fig. 4.2. Plan of phase 5, Iron Age I.

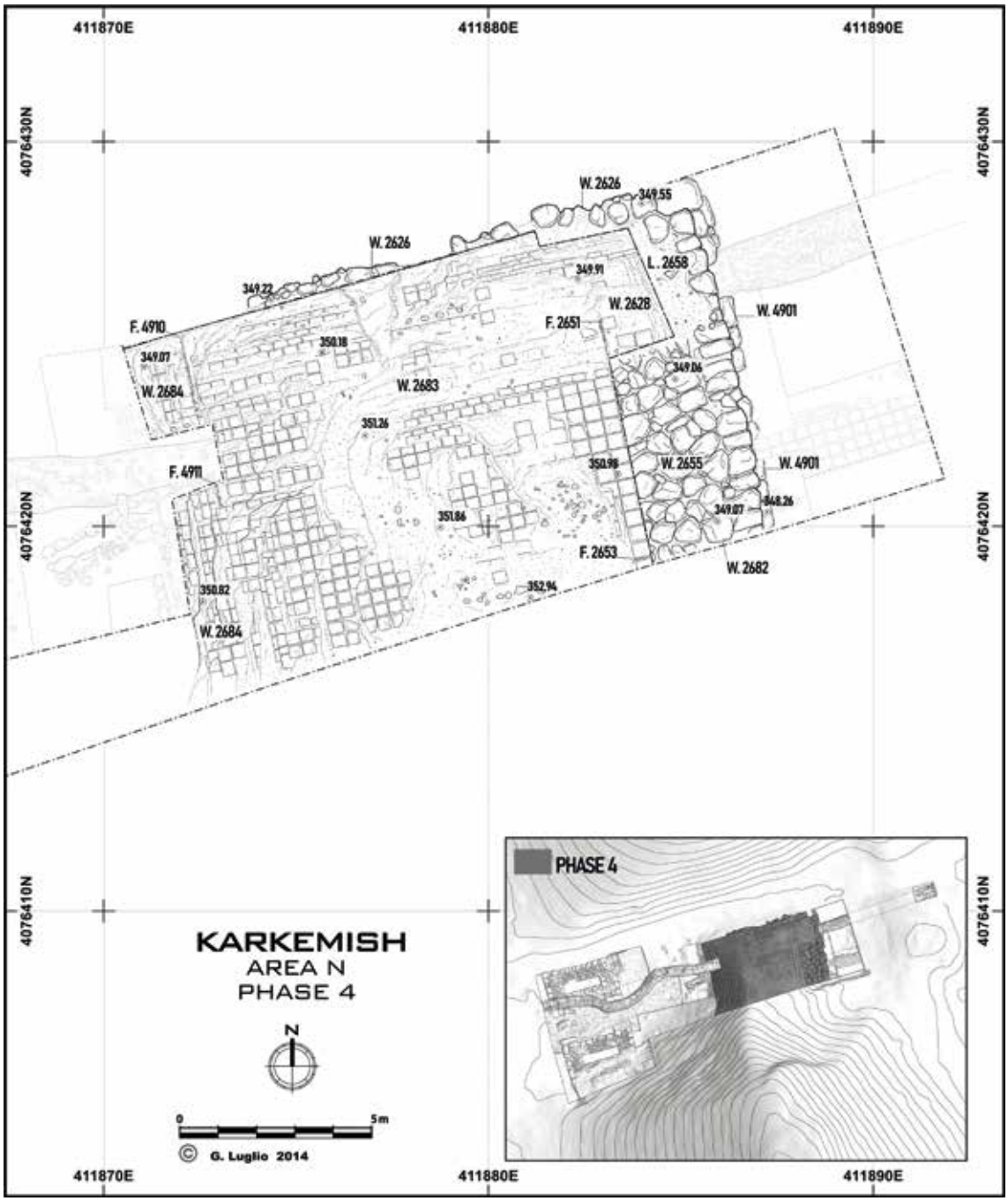


Fig. 4.3. Plan of phase 4, Iron Age I.

No.	Pottery No.	Phase	Context	Techn.	Firing	Inclusions	Fabric color	Surf treat.
1	KH.14.P.1212/1	6	F.4919	W	H	Ma2	10YR 7/4 (C-I/O)	Slip Reddish
2	KH.14.P.1222/1	6	F.4929	W	H	Ma1	7.5YR 7/4 (C-I/O)	Slip Brownish
3	KH.14.P.1207/4	6	F.2610	W	M	Mb3	10YR 7/3 (C) 10YR 6/2 (I/O)	-
4	KH.14.P.1207/1	6	F.2610	W	M	Ma1	5YR 7/4 (C) 2.5YR 5/6 (I/O)	-
5	KH.14.P.1222/3	6	F.4929	W	L	Ma2	5YR 5/6 (C) 5YR 6/6 (I/O)	-
6	KH.14.P.1207/2	6	F.2610	W	H	Ma2	7.5YR 7/4 (C-I/O)	-
7	KH.14.P.1207/3	6	F.2610	W	M	Ma2	5YR 6/4 (C-I/O)	-
8	KH.14.P.1222/2	6	F.4929	W	H	Ma1	7.5YR 6/4 (C) 7.5YR 8/4 (I/O)	Slip Whitish
9	KH.14.P.1222/7	6	F.4929	W	H	Ma1	7.5YR 8/3 (C) 7.5YR 7/1 (I/O)	Burnish
10	KH.14.P.1222/6	6	F.4929	W	M	Ma1	10YR 7/4 (C) 10YR 8/2 (I/O)	Slip Whitish
11	KH.14.P.1224/1	7	F.4936	W	L	Ma2	7.5YR 3/1 (C) 5YR 5/6 (I/O)	-
12	KH.14.P.1222/5	6	F.4929	W	M	Mb2	2.5YR 5/3 (C) 2.5YR 6/6 (I/O)	-
13	KH.14.P.1222/4	6	F.4929	W	H	Ma2	2.5Y 7/3 (C) 5Y 8/2 (I/O)	Slip Brownish

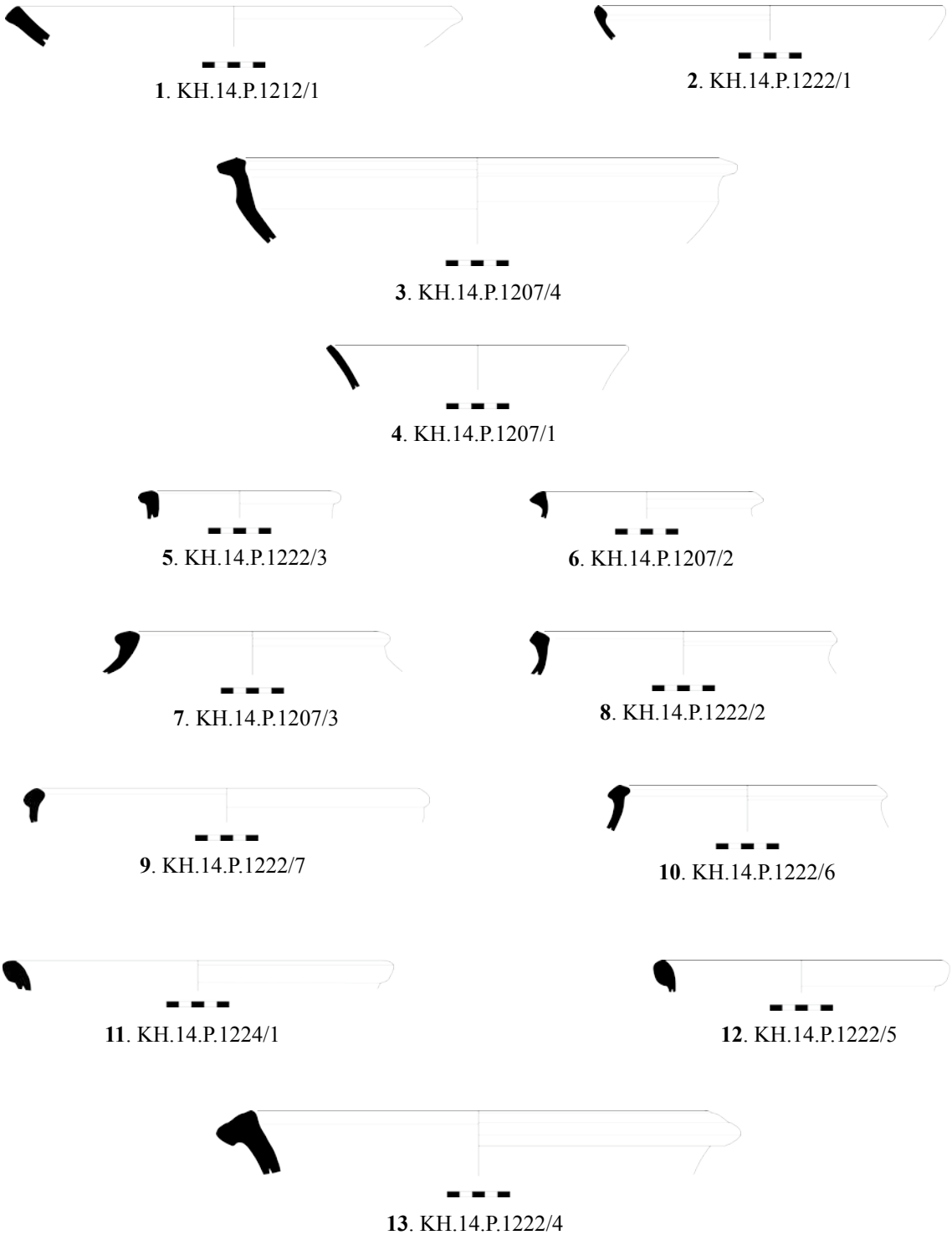


Fig. 4.4. Pottery assemblage from F.2610, F.4929, F.4936, phases 6 and 7, Iron Age I.

No.	Pottery No.	Phase	Context	Techn.	Firing	Inclusions	Fabric color	Surf treat.
1	KH.13.P.849/1	6	F.2620	W	H	Ma1	5YR 5/2 (C-I/O)	Slip Whitish
2	KH.13.P.849/10	6	F.2620	W	H	Mb1	7.5YR 7/3 (C-I/O)	Slip Whitish
3	KH.13.P.849/11	6	F.2620	W	H	Ma1	7.5YR 6/4	-
4	KH.13.P.849/14	6	F.2620	W	H	Ma1	10YR 5/2 (C-I/O)	Slip Whitish Burnish
5	KH.13.P.849/13	6	F.2620	W	H	MA1	7.5YR 4/1	-
6	KH.13.P.849/12	6	F.2620	W	H	Ma1	5YR 7/6 (C-I/O)	-
8	KH.13.P.849/15	6	F.2620	W	H	Ma1	5YR 7/4 (C-I/O)	Slip Whitish Burnish
8	KH.13.P.849/16	6	F.2620	W	H	Ma1	7.5YR 7/4 (C-I/O)	-

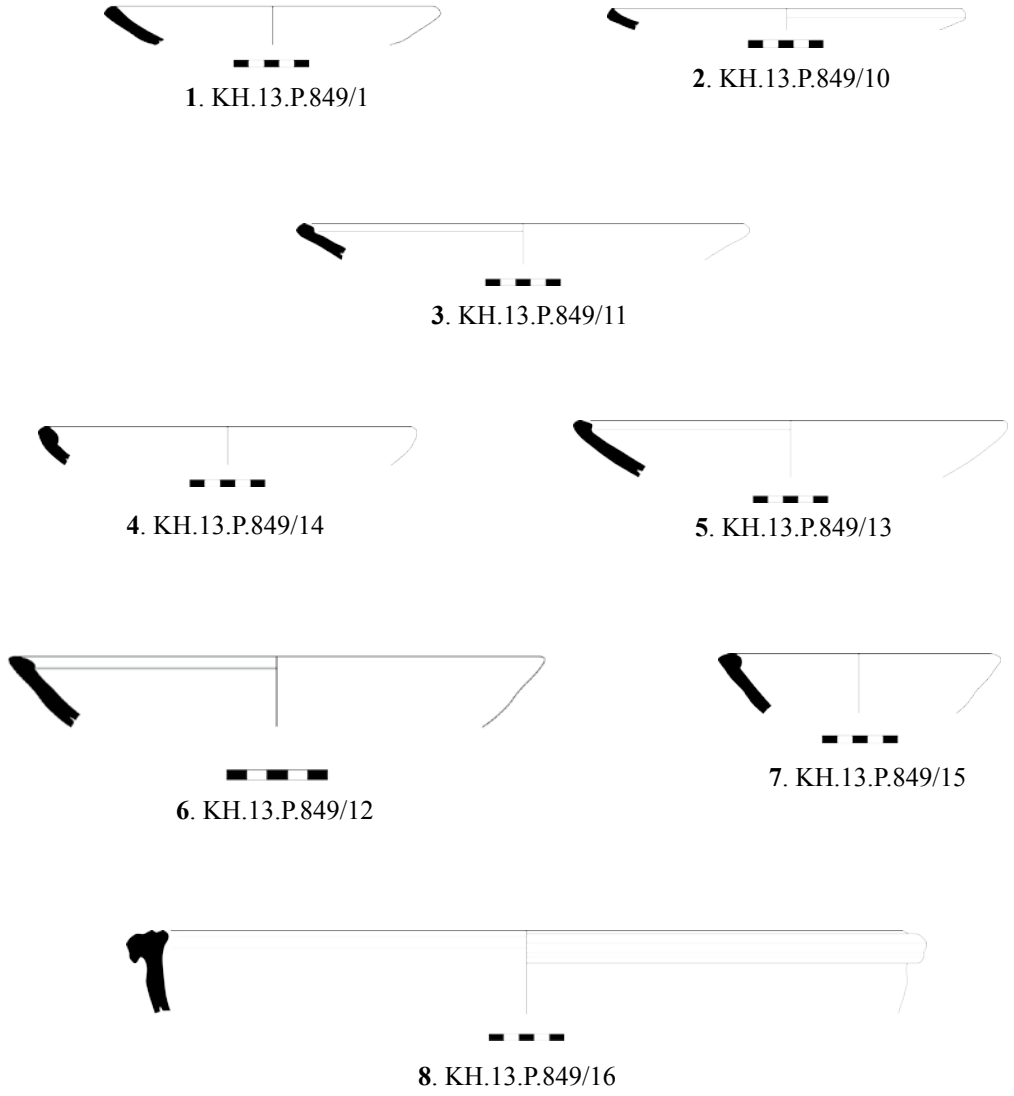


Fig. 4.5. Pottery assemblage from F.2620, phase 6, Iron Age I.

No.	Pottery No.	Phase	Context	Techn.	Firing	Inclusions	Fabric color	Surf treat.
1	KH.13.P.849/3	6	F.2620	W	H	Ma1	10YR 8/2 (C-I/O)	Slip Whitish
2	KH.14.P.1217/2	5	F.4916	W	H	Ma1	10YR 7/3 (C) 10YR 8/4 (I/O)	-
3	KH.13.P.849/4	6	F.2620	W	H	Ma1	10YR 7/3 (C-I/O)	Slip Whitish
4	KH.13.P.849/17	6	F.2620	W	L	Ma3	5YR 6/6 (C-I/O)	-
5	KH.13.P.849/9	6	F.2620	W	L	Ma3	7.5YR 7/4 (C-I/O)	Slip Whitish
6	KH.13.P.849/2	6	F.2620	W	H	Ma1	10YR 7/3 (C-I(O)	Slip Whitish
7	KH.14.P.1217/1	5	F.4916	W	L	Ma2	5Y 3/1 (C) 7.5YR 6/4 (C/O)	-
8	KH.13.P.849/18	6	F.2620	W	H	Ma1	5YR 5/3 (C-I/O)	-
9	KH.13.P.849/5	6	F.2620	W	H	Mb1	2.5Y 7/4 (C-I/O)	Slip Whitish
10	KH.13.P.849/7	6	F.2620	W	H	Ma1	10YR 7/4 (C-I/O)	Slip Whitish
11	KH.13.P.849/6	6	F.2620	W	H	Ma1	10YR 7/3 (C-I/O)	Slip Whitish
12	KH.13.P.849/8	6	F.2620	W	H	Ma2	2.5YR 7/2 (C-I/O)	Slip Whitish

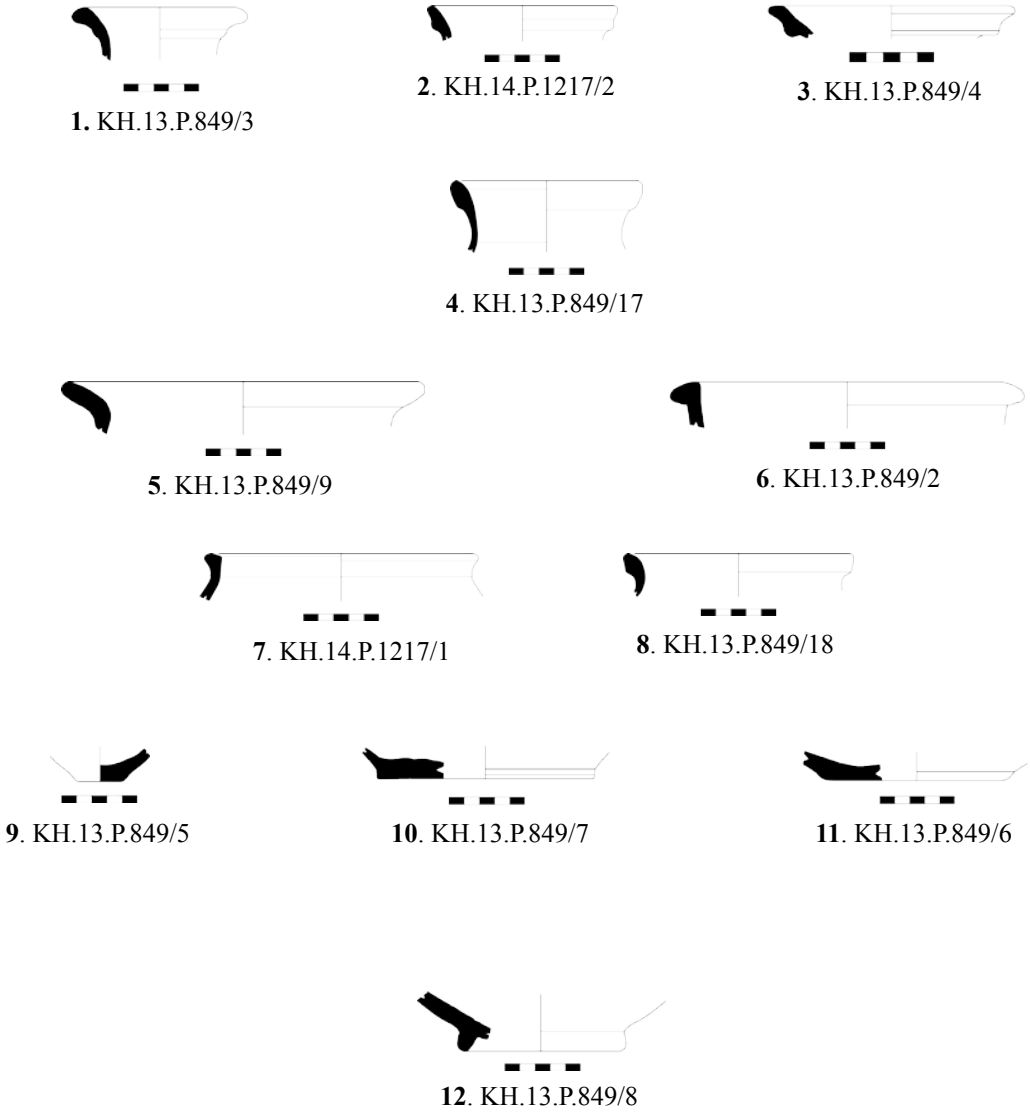


Fig. 4.6. Pottery assemblage from F.2620 and F.4916, phases 6 and 5, Iron Age I.

No.	Pottery No.	Phase	Context	Techn.	Firing	Inclusions	Fabric color	Surf treat.
1	KH.13.P.822/4	4	F.2658	W	H	Ma2	5YR 7/4 (C) 7.5YR7/4 (I/O)	-
2	KH.13.P.828/1	4	F.2658	W	H	Ma1	7.5YR 6/4 (C-I/O)	-
3	KH.13.P.825/4	4	F.2658	W	H	Mb2	5YR 6/4 (C-I/O)	-
4	KH.13.P.828/3	4	F.2658	W	M	Mb2	7.5YR 6/2 (C) 7.5YR 7/3 (I/O)	-
5	KH.13.P.822/28	4	F.2658	W	M	Ma1	7.5YR 6/4 (C) 2.5YR 6/6 (I/O)	-
6	KH.13.P.824/2	4	F.2658	W	M	Ma1	7.5YR 7/3 (C) 7.5YR 8/3 (I/O)	-
7	KH.13.P.828/2	4	F.2658	W	M	Ma3	7.5YR 7/3 (C-I/O)	-
8	KH.13.P.826/1	4	F.2658	W	H	Mb2	7.5YR 7/3 (C-I/O)	Slip Whitish
9	KH.13.P.824/4	4	F.2658	W	M	Ma1	7.5YR 7/3 (C-I/O)	-
10	KH.13.P.826/2	4	F.2658	W	H	Ma1	7.5YR 6/4 (C) 5YR 6/6 (I/O)	-
11	KH.13.P.825/8	4	F.2658	W	H	Ma1	5YR 6/6 (C-I/O)	-
12	KH.13.P.822/3	4	F.2658	W	H	Ma3	5YR 7/4 (C-I/O)	-
13	KH.13.P.825/7	4	F.2658	W	H	Ma1	7.5YR 6/4 (C-I/O)	-
14	KH.13.P.822/15	4	F.2658	W	H	Ma1	5YR 7/6 (C-I/O)	-
15	KH.13.P.832/7	4	F.2658	W	M	Ma3	7.5YR 5/3 (C-I/O)	Slip Whitish
16	KH.13.P.828/14	4	F.2658	W	M	Ma2	7.5YR 7/4 (C-I/O)	-

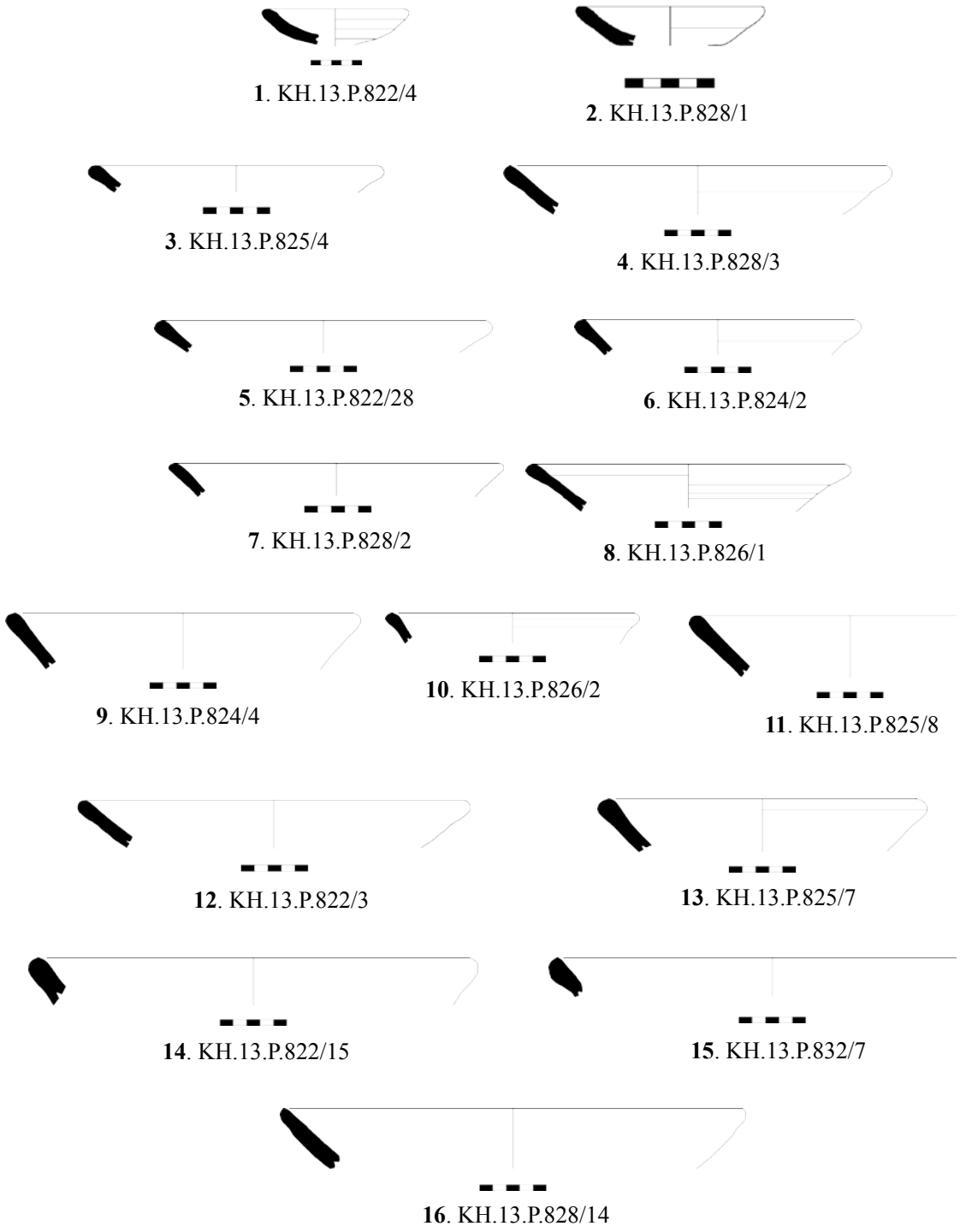


Fig. 4.7. Pottery assemblage from F.2658, phase 4, Iron Age I.

No.	Pottery No.	Phase	Context	Techn.	Firing	Inclusions	Fabric color	Surf treat.
1	KH.13.P.822/1	4	F.2658	W	H	Ma2	5YR 6/6 (C-I/O)	-
2	KH.13.P.824/1	4	F.2658	W	H	Mb1	7.5YR 7/4 (C-I/O)	Slip Whitish
3	KH.13.P.825/3	4	F.2658	W	M	Ma1	10YR 6/4 (C) 2.5YR 5/6 (I/O)	-
4	KH.13.P.825/2	4	F.2658	W	M	Ma1	10YR 7/2 (C) 2.5Y 7/2 (I/O)	-
5	KH.13.P.825/5	4	F.2658	W	H	Mb2	10YR 7/4	Slip Whitish
6	KH.13.P.824/3	4	F.2658	W	H	Ma1	7.5YR 7/6 (C-I/O)	-
7	KH.13.P.824/23	4	F.2658	W	H	Ma1	7.5YR 6/4 (C-I/O)	Slip Whitish
8	KH.13.P.824/22	4	F.2658	W	M	Ma1	7.5YR 7/4 (C-I/O)	-
9	KH.13.P.828/4	4	F.2658	W	M	Ma1	7.5YR 7/3 (C-I/O)	-
10	KH.13.P.832/3	4	F.2658	W	H	Mb2	7.5YR 6/3 (C-I/O)	Slip Whitish
11	KH.13.P.832/4	4	F.2658	W	M	Mb1	7.5YR 7/4 (C) 5YR 7/4 (I/O)	-

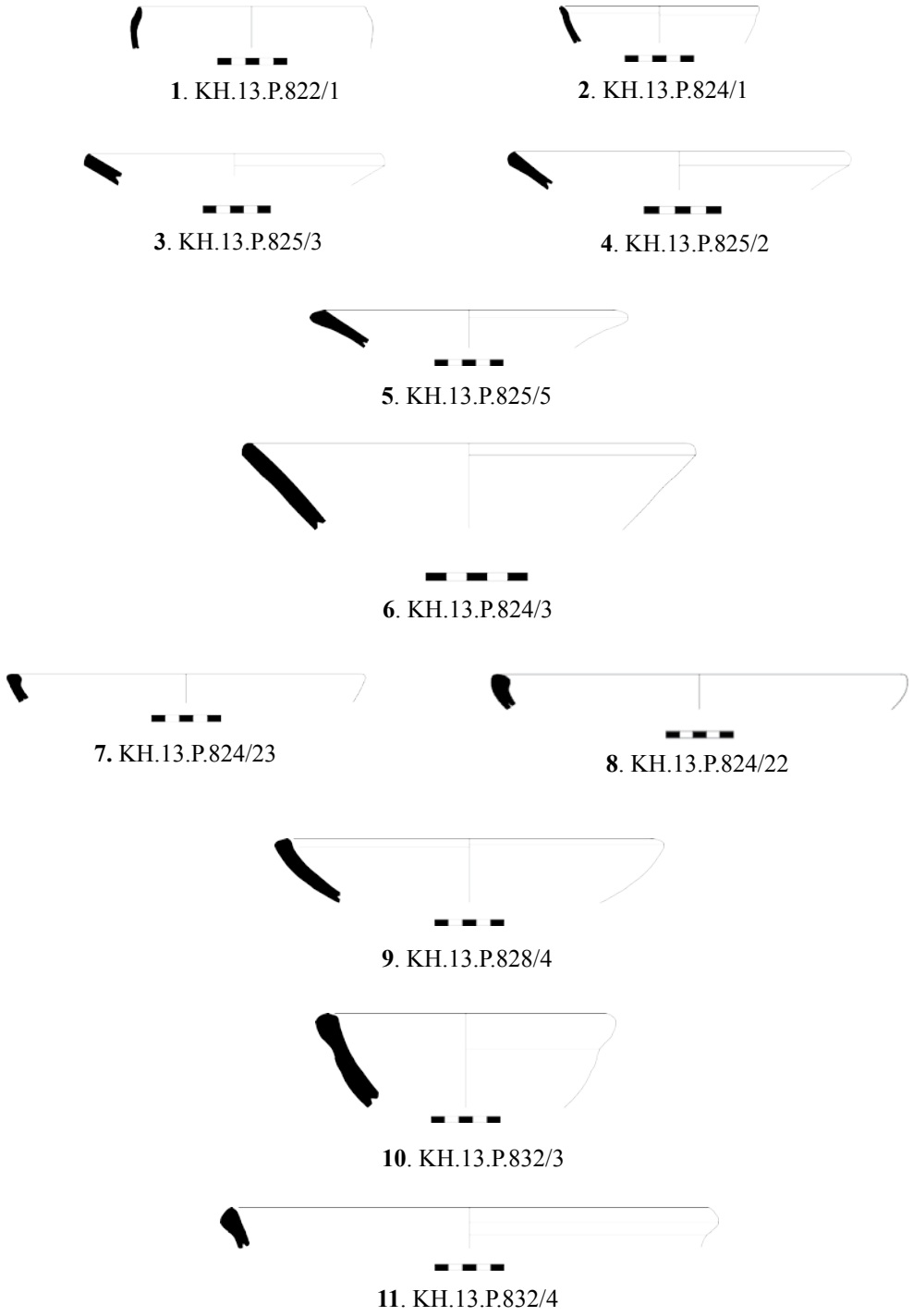


Fig. 4.8. Pottery assemblage from F.2658, phase 4, Iron Age I.

No.	Pottery No.	Phase	Context	Techn.	Firing	Inclusions	Fabric color	Surf treat.
1	KH.13.P.824/5	4	F.2658	W	M	Ma1	7.5YR 7/3 (C-I/O)	-
2	KH.13.P.828/5	4	F.2658	W	H	Ma1	7.5YR 7/4 (C-I/O)	-
3	KH.13.P.822/7	4	F.2658	W	H	Ma2	7.5YR 7/4 (C) 5YR 7/4 (I/O)	-
4	KH.13.P.825/9	4	F.2658	W	H	Ma1	10YR 7/4 (C-I/O)	-
5	KH.13.P.822/29	4	F.2658	W	L	Mb3	7.5YR 6/4 (C) 2.5YR 6/4 (I/O)	-
6	KH.13.P.828/7	4	F.2658	W	H	Mb3	7.5YR 7/4 (C-I/O)	-
7	KH.13.P.828/6	4	F.2658	W	M	Mb2	7.5YR 6/2 (C) 7.5YR 7/4 (I/O)	-
8	KH.13.P.826/3	4	F.2658	W	H	Ma1	10YR 7/1 (C-I/O)	-
9	KH.13.P.825/19	4	F.2658	W	M	Ma1	7.5YR 7/2 (C-I/O)	Slip Whitish
10	KH.13.P.822/19	4	F.2658	W	M	Mb3	7.5YR 6/4 (C) 5YR 7/4 (I/O)	-
11	KH.13.P.824/6	4	F.2658	W	H	Ma1	7.5YR 7/4 (C) 5YR 6/6 (I/O)	-
12	KH.13.P.825/20	4	F.2658	W	M	Ma1	7.5YR 6/2 (C) 5YR 5/6 (I/O)	-
13	KH.13.P.822/14	4	F.2658	W	H	Mb3	5Y 7/4 (C-I/O)	-

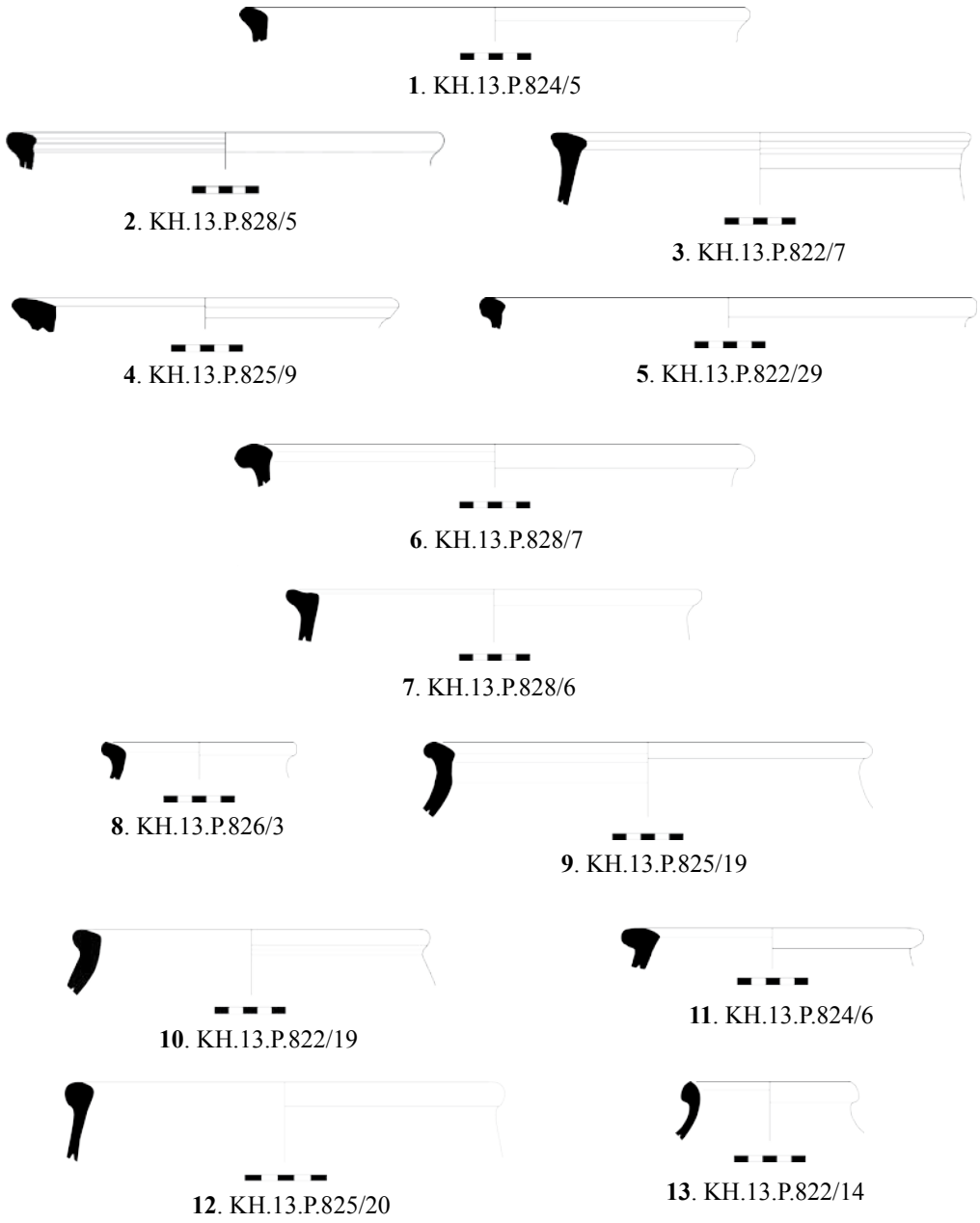


Fig. 4.9. Pottery assemblage from F.2658, phase 4, Iron Age I.

No.	Pottery No.	Phase	Context	Techn.	Firing	Inclusions	Fabric color	Surf treat.
1	KH.13.P.822/11	4	F.2658	W	H	Ma3	7.5YR 7/3 (C-I/O)	-
2	KH.13.P.822/6	4	F.2658	W	H	Ma1	5YR 6/4 (C-I/O)	-
3	KH.13.P.824/8	4	F.2658	W	M	Mb1	7.5YR 7/2 (C-I/O)	-
4	KH.13.P.824/7	4	F.2658	W	H	Ma1	7.5YR 7/4 (C-I/O)	Slip Whitish
5	KH.13.P.822/9	4	F.2658	W	H	Ma3	7.5YR 7/3 (C-I/O)	-
6	KH.13.P.824/10	4	F.2658	W	H	Ma1	5YR 6/6 (C-I/O)	-
7	KH.13.P.850/2	4	F.2658	W	H	Ma1	7.5YR 7/3 (C-I/O)	-
8	KH.13.P.832/5	4	F.2658	W	M	Ma3	5YR 6/4 (C) 2.5YR 6/6 (I/O)	-
9	KH.13.P.850/3	4	F.2658	W	H	Ma1	5YR 7/6 (C-I/O)	-
10	KH.13.P.850/4	4	F.2658	W	M	Ma1	7.5YR 7/3 (C) 5YR 7/4 (I/O)	-
11	KH.13.P.825/11	4	F.2658	W	H	Ma2	2.5YR 6/6 (C-I/O)	-
12	KH.13.P.825/10	4	F.2658	W	H	Ma3	10YR 7/4 (C-I/O)	Slip Whitish
13	KH.13.P.824/20	4	F.2658	W	H	Ma2	7.5YR 6/3 (C-I/O)	Slip Whitish
14	KH.13.P.828/9	4	F.2658	W	H	Ma2	2.5YR 5/6 (C-I/O)	-
15	KH.13.P.824/9	4	F.2658	W	H	Mb3	5YR 7/4 (C-I/O)	-
16	KH.13.P.828/8	4	F.2658	W	H	Ma1	7.5YR 7/4 (C-I/O)	Slip Whitish

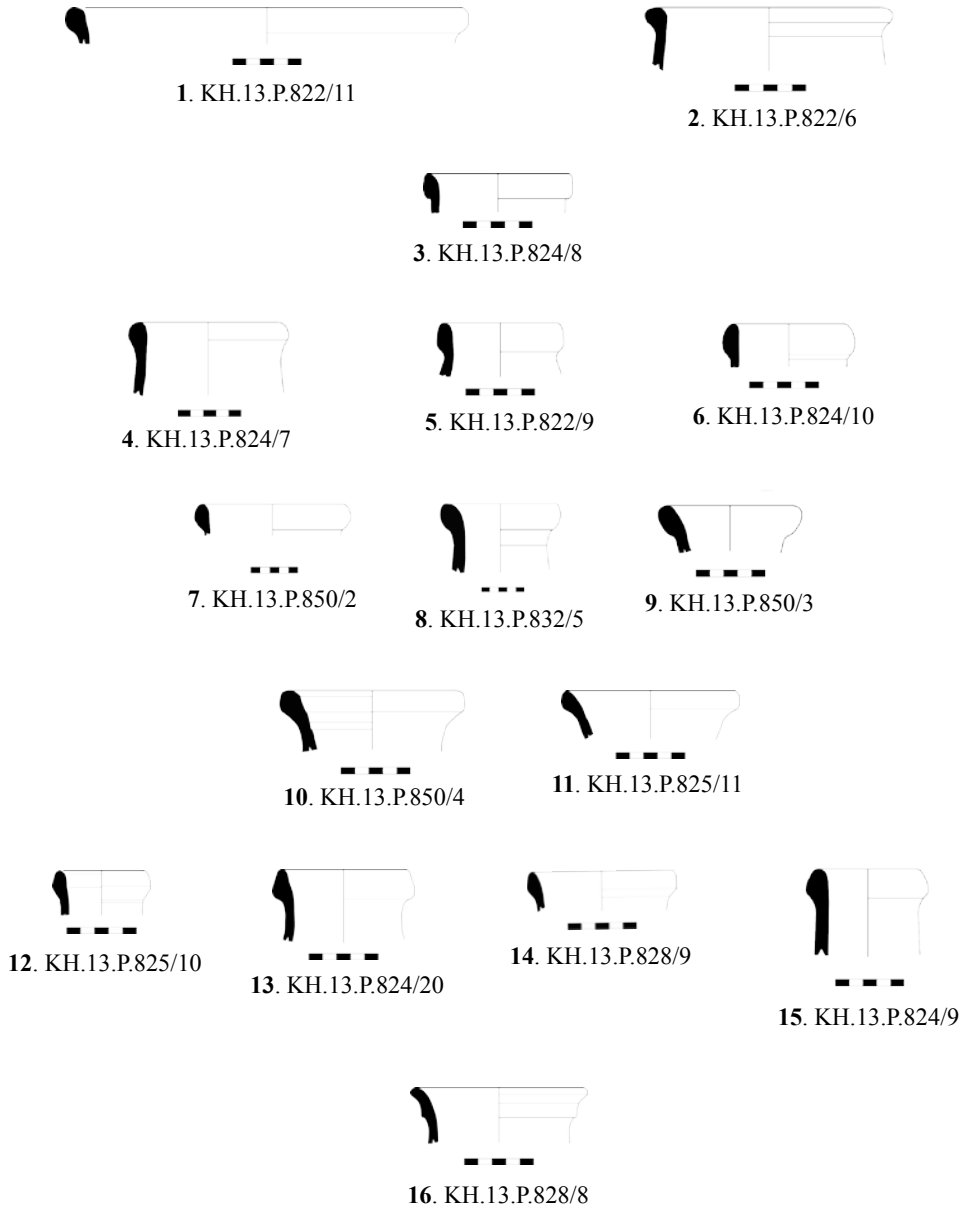


Fig. 4.10. Pottery assemblage from F.2658, phase 4, Iron Age I.

No.	Pottery No.	Phase	Context	Techn.	Firing	Inclusions	Fabric color	Surf treat.
1	KH.13.P.832/6	4	F.2658	W	M	Ma1	7.5YR 6/3 (C-I/O)	-
2	KH.13.P.832/23	4	F.2658	W	H	Mb3	5YR 6/6 (C-I/O)	-
3	KH.13.P.822/22	4	F.2658	W	M	Mb2	7.5YR 6/3 (C) 5Y 7/6 (I/O)	-
4	KH.13.P.825/16	4	F.2658	W	H	Ma3	7.5YR 7/4 (C-I/O)	-
5	KH.13.P.825/6	4	F.2658	W	H	Mb3	7.5YR 6/6 (C) 2.5YR 6/6 (I/O)	-
6	KH.13.P.822/ 10+12	4	F.2658	W	H	Mb2	7.5YR 6/6 (C-I/O)	-
7	KH.13.P.822/13	4	F.2658	W	H	Ma3	7.5YR 6/4 (C-I/O)	-
8	KH.13.P.824/14	4	F.2658	W	H	Mb2	7.5YR 7/3 (C-I/O)	Slip Whitish
9	KH.13.P.824/13	4	F.2658	W	H	Ma1	5YR 7/4 (C-I/O)	Slip Whitish
10	KH.13.P.824/11	4	F.2658	W	H	Ma2	7.5YR 6/2 (C-I/O)	-
11	KH.13.P.825/14	4	F.2658	W	H	Mb1	7.5YR 7/3 (C-I/O)	-
12	KH.13.P.822/20	4	F.2658	W	M	Ma3	7.5YR 7/3 (C-I/O)	-
13	KH.13.P.832/8	4	F.2658	W	H	Mb1	2.5YR 6/8 (C-I/O)	-
14	KH.13.P.825/13	4	F.2658	W	M	Mb1	10YR 7/2 (C) 7.5YR 7/4 (I/O)	-

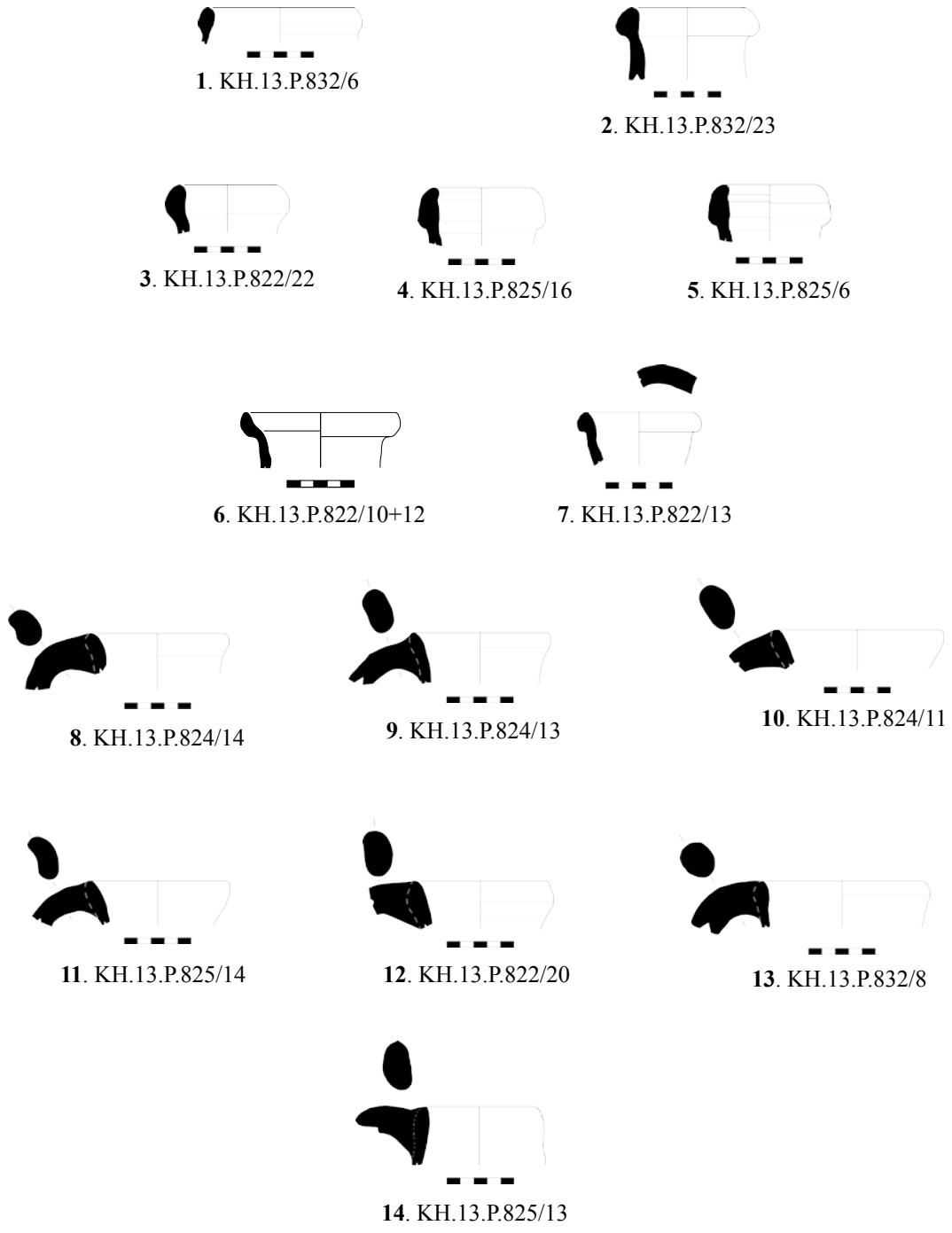


Fig. 4.11. Pottery assemblage from F.2658, phase 4, Iron Age I.

No.	Pottery No.	Phase	Context	Techn.	Firing	Inclusions	Fabric color	Surf treat.
1	KH.13.P.822/23	4	F.2658	W	M	Mb3	7.5YR 7/4 (C) 5YR 7/4 (I/O)	-
2	KH.13.P.825/22	4	F.2658	W	H	Ma3	2.5YR 6/6 (C-I/O)	-
3	KH.13.P.822/24	4	F.2658	W	M	Ma3	7.5YR 6/4 (C) 5YR 6/6 (I/O)	-
4	KH.13.P.832/12	4	F.2658	W	M	Ma1	7.5YR 5/4 (C-I/O)	-
5	KH.13.P.826/8	4	F.2658	W	H	Ma1	2.5Y 7/2 (C-I/O)	-
6	KH.13.P.832/14	4	F.2658	W	M	Mb2	5YR 6/6 (C) 2.5YR 6/6 (I/O)	-
7	KH.13.P.832/16	4	F.2658	W	M	Ma2	7.5YR6/4 (C) 2.5YR 7/4 (I/O)	Slip Whitish
8	KH.13.P.832/13	4	F.2658	W	M	Ma1	7.5YR 6/4 (C) 2.5YR 6/6 (I/O)	-
9	KH.13.P.832/9	4	F.2658	W	M	Ma3	2.5TR 6/6 (C-I/O)	-
10	KH.13.P.826/12	4	F.2658	W	M	Ma1	7.5YR 6/4 (C-I/O)	-
11	KH.13.P.832/15	4	F.2658	W	M	Mb2	10YR 6/4 (C-I/O)	-
12	KH.13.P.825/18	4	F.2658	W	M	Mb2	7.5YR 7/3 (C) 5YR 7/4 (I/O)	-
13	KH.13.P.826/7	4	F.2658	W	H	Ma1	2.5Y 7/2 (C) 5Y 8/2 (I/O)	-
14	KH.13.P.826/11	4	F.2658	W	H	Ma1	7.5YR 6/3 (C) 7.5YR 7/3 (I/O)	-

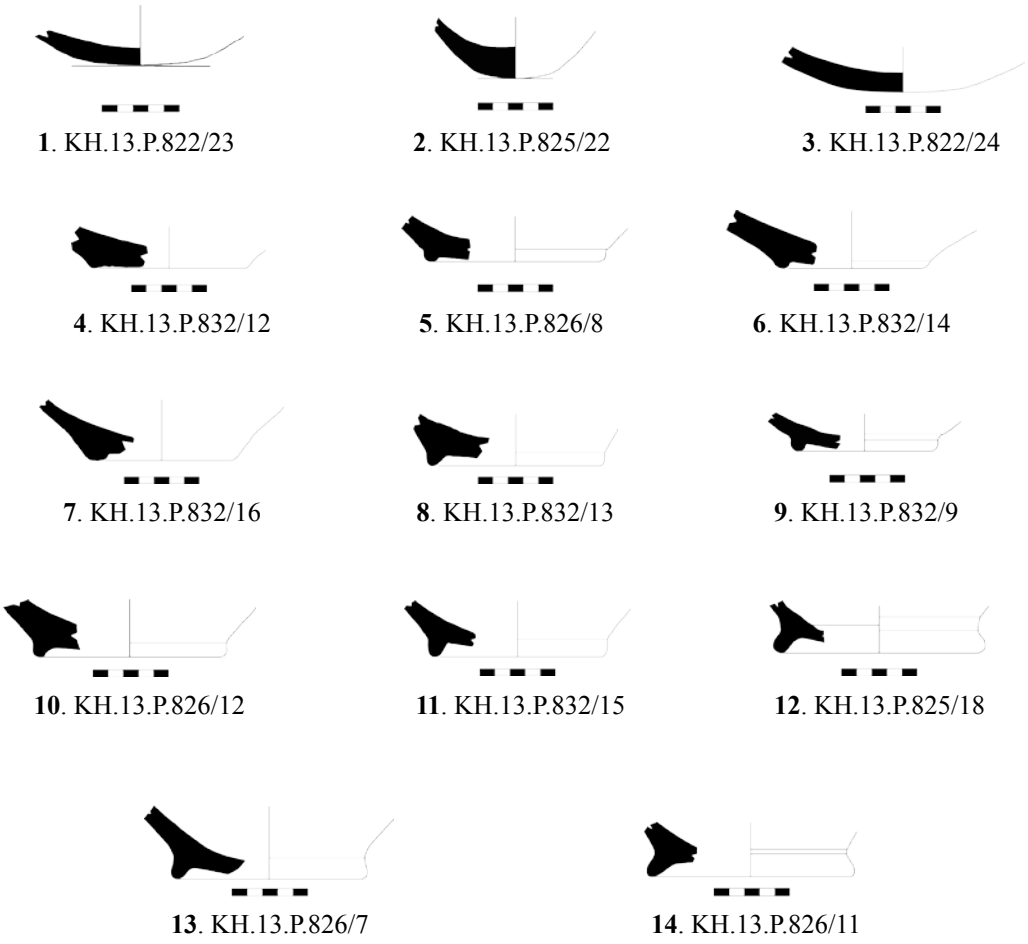


Fig. 4.12. Pottery assemblage from F.2658, phase 4, Iron Age I.

No.	Pottery No.	Phase	Context	Techn.	Firing	Inclusions	Fabric color	Surf treat.
1	KH.13.P.822/27	4	F.2658	W	H	Ma1	7.5YR 6/3 (C-I/O)	-
2	KH.13.P.832/22	4	F.2658	W	L	Mb3	10YR 6/3 (C) 5YR 7/4 (I/O)	-
3	KH.13.P.828/20	4	F.2658	W	M	Mb2	5YR 6/2 (C-I/O)	-
4	KH.13.P.828/15	4	F.2658	W	M	Ma2	10YR 6/3 (C-I/O)	-
5	KH.13.P.828/21	4	F.2658	W	M	Mb3	7.5YR 6/4 (C) 2.5YR 6/6 (I/O)	-
6	KH.13.P.824/21	4	F.2658	W	H	Ma1	5YR 6/6 (C-I/O)	-
7	KH.13.P.832/19	4	F.2658	W	M	Mb3	7.5YR 7/4 (C) 2.5YR 6/6 (I/O)	-
8	KH.13.P.832/20	4	F.2658	W	H	Ma1	7.5YR 6/4 (C) 5YR 6/6 (I/O)	-
9	KH.13.P.832/21	4	F.2658	W	L	Mb2	7.5YR 7/4 (C-I/O)	Slip Whitish
10	KH.13.P.822/26	4	F.2658	W	M	Ma1	10YR 7/1 (C) 2.5YR 7/6 (I/O)	-
11	KH.13.P.822/25	4	F.2658	W	M	Mb1	10YR 7/1 (C) 5YR 7/4 (I/O)	-
12	KH.13.P.832/18	4	F.2658	W	M	Ma1	7.5YR 7/4 (C) 2.5YR 6/6 (I/O)	-

Fig. 4.13. Pottery assemblage from F.2658, phase 4, Iron Age I.

No.	Pottery No.	Phase	Context	Techn.	Firing	Inclusions	Fabric color	Surf treat.
1	KH.13.P.832/10	4	F.2658	W	M	Mb3	5YR 6/4 (C-I/O)	-
2	KH.13.P.832/2	4	F.2658	W	M	Ma1	10YR 7/4 (C-I/O)	Slip Whitish
3	KH.13.P.824/15	4	F.2658	W	H	Ma1	7.5YR 7/1 (C-I/O)	Slip Whitish
4	KH.13.P.824/24	4	F.2658	W	L	Mb3	7.5YR 7/6 (C-I/O)	-
5	KH.13.P.825/24	4	F.2658	W	L	Mb3	5YR 6/3 (C) 2.5Y 6/6 (I/O)	-
6	KH.13.P.850/1	4	F.2658	W	H	Ma1	5YR 7/4 (C) 5YR 7/6 (I/O)	-
7	KH.13.P.832/24	4	F.2658	W	M	Mc3	7.5YR 7/4 (C-I/O)	-
8	KH.13.P.825/17	4	F.2658	W	M	Mb3	10YR 6/2 (C) 7.5YR 7/3 (I/O)	Slip Whitish
9	KH.13.P.828/22	4	F.2658	W	M	Mb2	7.5YR 5/4 (C-I/O)	-

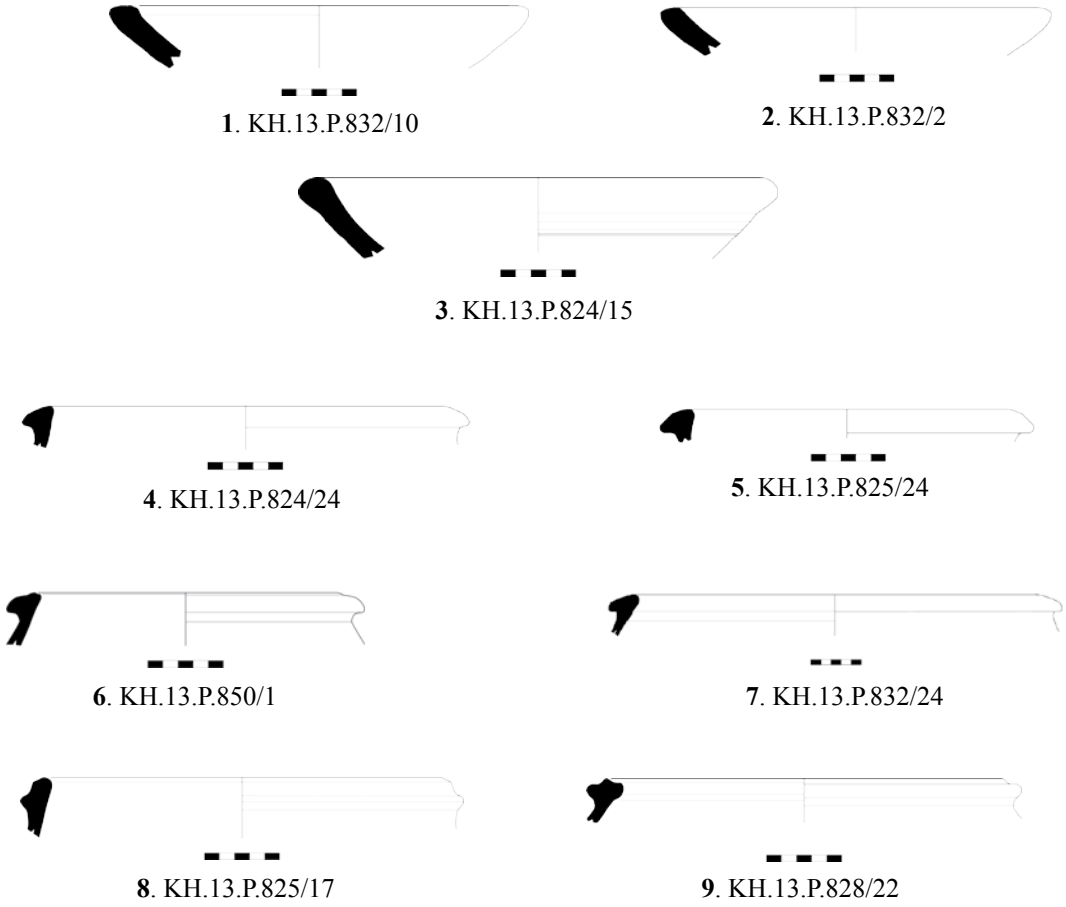


Fig. 4.14. Pottery assemblage from F.2658, phase 4, Iron Age I.

No.	Pottery No.	Phase	Context	Techn.	Firing	Inclusions	Fabric color	Surf treat.
1	KH.13.P.825/1	4	F.2658	W	M	Mb2	10YR 5/2 (C) 7.5YR 7/4 (I/O)	Slip Whitish
2	KH.13.P.825/23	4	F.2658	W	M	Mb1	5Y 7/2 (C-I/O)	-
3	KH.13.P.822/16	4	F.2658	W	H	Ma1	7.5YR 6/4 (C) 5YR 6/6 (I/O)	-
4	KH.13.P.826/9	4	F.2658	W	M	M-Va2	7.5YR 5/4 (C) 7.5YR 6/4 (I/O)	-
5	KH.13.P.824/18	4	F.2658	W	M	Ma3	7.5YR 7/3 (C-I/O)	-
6	KH.13.P.822/17	4	F.2658	W	H	Mb3	7.5YR 6/4 (C) 5YR 6/6	-
7	KH.13.P.824/16	4	F.2658	W	M	Ma1	7.5YR 6/4 (C) 5YR 6/4 (I/O)	-

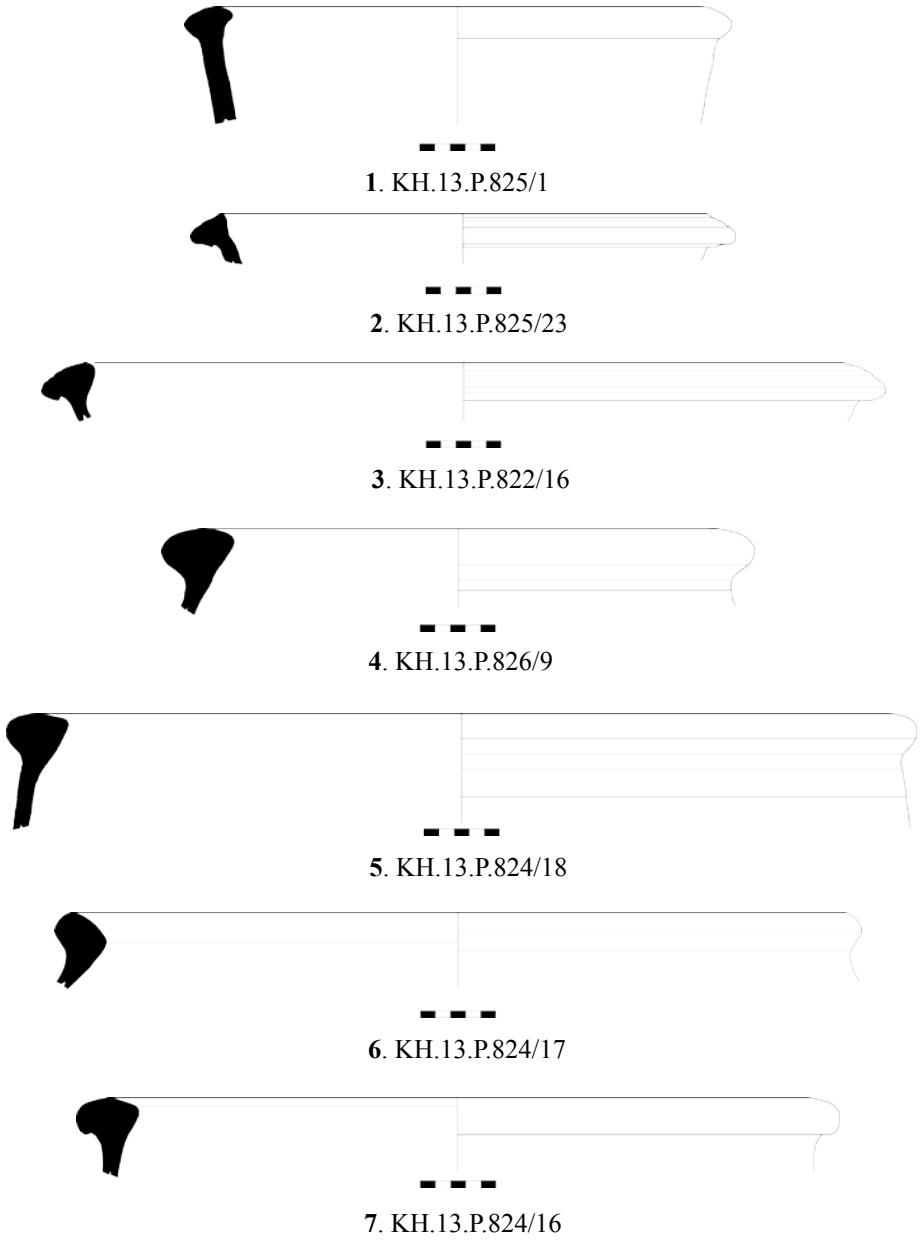


Fig. 4.15. Pottery assemblage from F.2658, phase 4, Iron Age I.

No.	Pottery No.	Phase	Context	Techn.	Firing	Inclusions	Fabric color	Surf treat.
1	KH.13.P.832/11	4	F.2658	W	M	Mc2	7.5YR 7/4 (C) 5YR 7/4 (I/O)	-
2	KH.13.P.826/10	4	F.2658	W	M	Mb3	5YR 6/6 (C-I/O)	-
3	KH.13.P.832/17	4	F.2658	W	H	Mb3	7.5YR 7/4 (C-I/O)	-
4	KH.13.P.828/19	4	F.2658	W	H	Mb1	2.5YR 6/6 (C-I/O)	-
5	KH.13.P.828/17	4	F.2658	W	M	Mb1	2.5YR 6/6 (C-I/O)	-
6	KH.13.P.826/6	4	F.2658	W	H	Ma1	5Y 7/3 (C-I/O)	-
7	KH.13.P.825/21	4	F.2658	W	M	Mb1	10YR 5/1 (C) 2.5YR 6/6	-

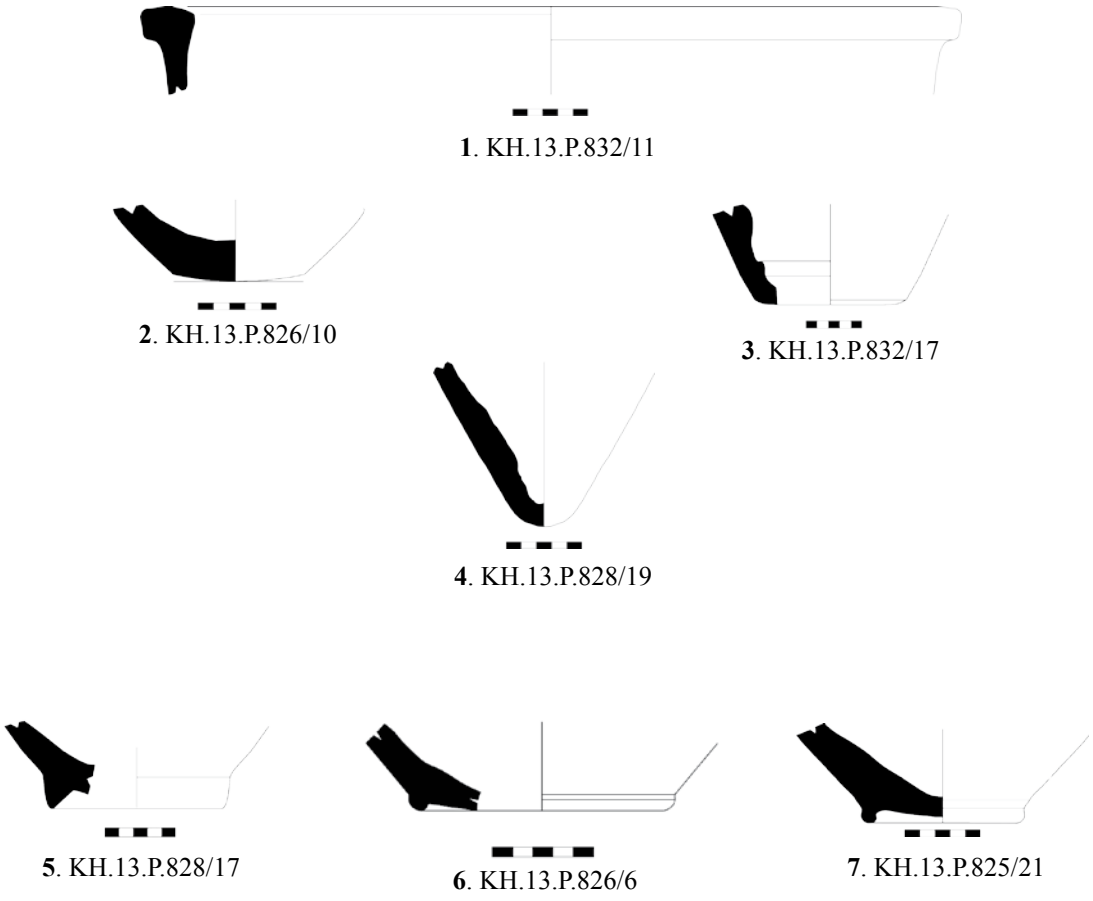


Fig. 4.16. Pottery assemblage from F.2658, phase 4, Iron Age I.

No.	Pottery No.	Phase	Context	Techn.	Firing	Inclusions	Fabric color	Surf treat.
1	KH.13.P.818/1	4	F.2651	W	M	Ma1	5YR 7/4 (C) 7.5YR 6/3 (I/O)	-
2	KH.13.P.815/1	4	F.2642	W	H	Ma1	5YR 7/4 (C-I/O)	-
3	KH.13.P.815/3	4	F.2642	W	M	Ma2	7.5YR 7/2 (C) 7.5YR 7/4 (I/O)	-
4	KH.13.P.818/3	4	F.2651	W	M	Ma1	7.5YR 6/2 (C) 5YR 6/4 (I/O)	-
5	KH.13.P.815/2	4	F.2642	W	H	Ma1	5YR 7/6 (C-I/O)	-
6	KH.13.P.818/2	4	F.2651	W	H	Mb1	5Y 7/3 (C-I/O)	Burnish
7	KH.13.P.815/4	4	F.2642	W	H	Ma2	5YR 7/6 (C-I/O)	-
8	KH.13.P.818/4	4	F.2651	W	H	Ma1	10YR 7/3 (C-I/O)	-
9	KH.13.P.827/1	4	F.2654	W	L	Mb2	10YR 7/3 (C) 5YR 8/4 (I/O)	-

Fig. 4.17. Pottery assemblage from F.2642, F.2651 and F.2654, phase 4, Iron Age I.

No.	Pottery No.	Phase	Context	Techn.	Firing	Inclusions	Fabric color	Surf treat.
1	KH.13.P.817/7	4	W.2628	W	H	Ma1	5YR 7/4 (C-I/O)	-
2	KH.13.P.817/3	4	W.2628	W	H	Ma1	7.5YR 6/3 (C-I/O)	Slip Whitish Burnish
3	KH.13.P.817/5	4	W.2628	W	H	Ma2	5YR 7/6 (C-I/O)	Burnish
4	KH.13.P.817/4	4	W.2628	W	M	Ma1	7.5YR 7/4 (C) 7.5YR 6/3 (I/O)	Burnish
5	KH.13.P.817/6	4	W.2628	W	M	Ma1	7.5YR 7/3 (C) 5YR 7/6 (I/O)	Burnish
6	KH.13.P.817/2	4	W.2628	W	M	Ma1	5YR 7/4 (C) 7.5YR 7/3 (I/O)	
7	KH.13.P.817/1	4	W.2628	W	H	Ma1	7.5YR 7/4 (C-I/O)	Slip Whitish Burnish
8	KH.13.P.817/9	4	W.2628	W	H	Ma1	7.5YR 7/3 (C-I/O)	Slip Whitish
9	KH.13.P.817/8	4	W.2628	W	H	Ma1	10YR 7/3 (C-I/O)	-
10	KH.13.P.817/11	4	W.2628	W	H	Ma2	7.5YR 7/4 (C-I/O)	Slip Whitish
11	KH.13.P.817/13	4	W.2628	W	H	Ma2	5YR 7/6 (C-I/O)	-

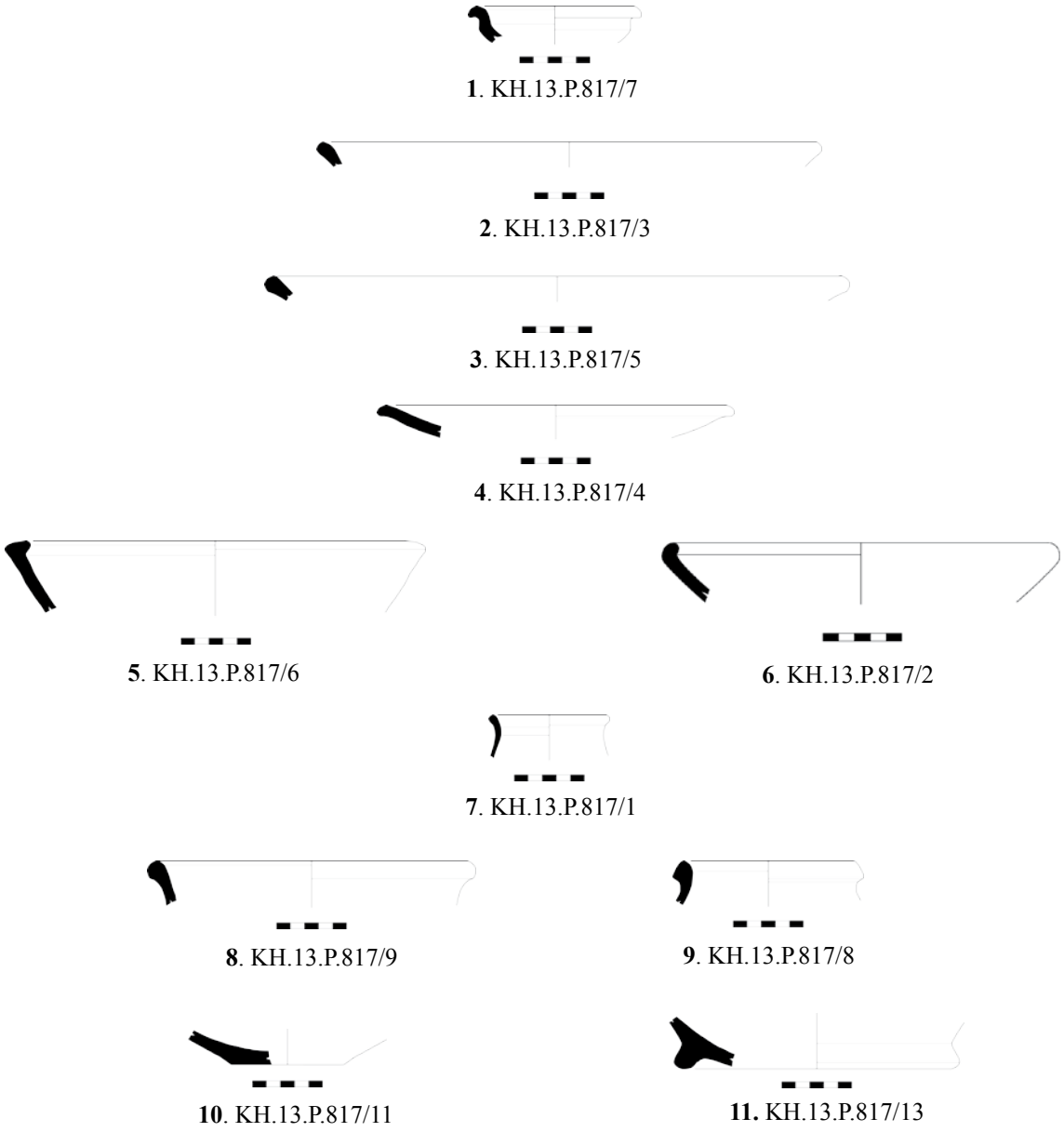


Fig. 4.18. Pottery assemblage from W.2628, phase 4, Iron Age I.

No.	Pottery No.	Phase	Context	Techn.	Firing	Inclusions	Fabric color	Surf treat.
1	KH.13.P.817/12	4	W.2628	W	M	Ma2	5YR 7/4 (C-I/O)	Slip Whitish Burnish
2	KH.13.P.817/16	4	W.2628	W	M	Ma1	10YR 7/3 (C) 5YR 7/6 (I/O)	Slip Reddish Burnish
3	KH.13.P.817/17	4	W.2628	W	L	Ma1	7.5YR 7/2 (C-I/O)	-
4	KH.13.P.817/14	4	W.2628	W	L	Ma1	5YR 7/6 (C-I/O)	Slip Reddish Burnish
5	KH.13.P.817/15	4	W.2628	W	M	Ma1	7.5YR 6/3 (C) 7.5YR 7/3 (I/O)	-
6	KH.13.P.817/18	4	W.2628	W	M	Ma1	7.5YR 7/3 (C) 5YR 7/4 (I/O)	-

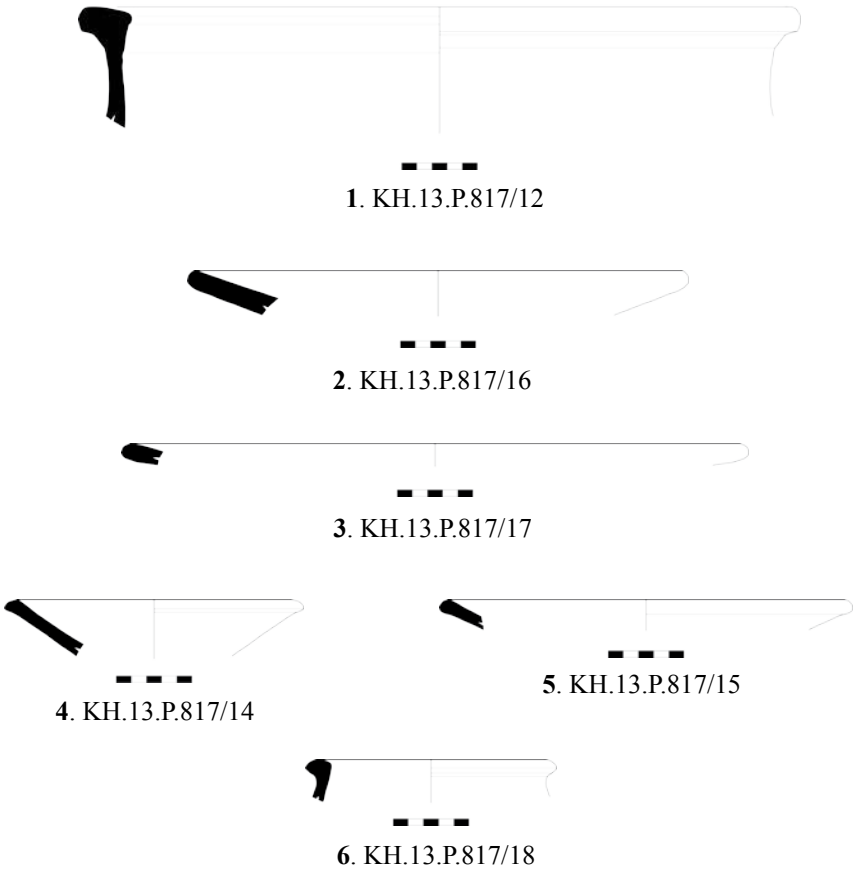


Fig. 4.19. Pottery assemblage from W.2628, phase 4, Iron Age I.

Chapter 5
THE ROMAN AND POST-ROMAN PERIODS

5.1 ROMAN PERIOD (PHASE 3)

This is the latest significant anthropic attestation in the Inner West Gate. A water conduit is the only feature surviving from this period but it is remarkable for two main peculiarities: its tunneling into the blocking wall and its meandering between the LB I towers (Pl. XXXIII). The technique used to build the water conduit, including a vaulted profile and the use of regular small-sized stones cemented together with gray concrete are typical of Roman hydraulic engineering.[62] Woolley unearthed only the top of the water conduit, and he followed it from the northern LB I tower to a few meters East of the blocking wall (Woolley 1921: 80). He referred also to the presence of several Roman tiles and pottery on either side of the blocking wall,[63] other than that, no architectural features were attested in that period (Pl. VIII.2).

Although less monumental than other hydraulic systems in the Roman Near East, such as the aqueducts of Apamea (Syria), Gadara (Jordan) and Phocea (Turkey), this conduit certainly played a crucial role in the water supply system of Karkemish in that period. Except for a rock-cut aqueduct of an unknown dating that runs along the northern foot of the citadel, and a presumed underground water basin (the "Cave") along the northern limit of the Inner Town, the aqueduct in Area N stands as the most sophisticated hydraulic system hitherto discovered at Karkemish.[64] Its complete

---

62 There is an extensive bibliography on Roman hydraulic, and specifically the aqueducts. As a general reference on the construction technique of Roman aqueducts, see Riera 1994.

63 Woolley (1921: 74) wrote of the Inner West Gate as "strong point" during the Roman period.

64 On the well found by Woolley in the Northern Fort and dated to the Late Hittite period, see Woolley 1921: 68. On the Neo-Assyrian well unearthed in Area C by the Turco-Italian expedition see Marchetti (ed.) forthcoming.

development is very difficult to establish because this conduit was discovered only at the Inner West Gate. West of Area N, i.e. in the moat between Inner and Outer Towns, the ground level is ca. 1-1.50 m lower than the outer top of the vaulted roof but there are no traces of it on the surface. Like the main IA I stone conduit, which runs into the town, the source of this water supply systems should be placed somewhere West, but the Turco-Syrian border situation at the moment does not allow any further research and hypothesis to be carried out. East of the blocking wall, the good state of preservation of the conduit attested in sounding no. 5, making it a reasonable assumption that it is still preserved inside the town, but buried underground. The construction of this conduit cannot be connected at the moment with the Roman bath discovered by Woolley in the area of the Northern Fort (Woolley 1921: 68).

5.1.1 Architectural Remains and Stratigraphy

The Roman water conduit has been unearthed in three different parts of Area N, each one marked with a different locus in order to better manage its stratigraphic relationships with other evidence (Fig. 5.1 and Pl. LIX). West of the blocking wall, the conduit was named D.2600 and it was exposed for a total linear length of ca. 25 m (23.80 m as a crow-flies), from the western border of the excavation until it entered into blocking wall W.2684. East of the blocking wall, the aqueduct was named D.2637 and it was uncovered for 4.20 m from its exit until the excavation eastern border. Finally, as D.2690, it was opened for 2.60 m in sounding no. 5. Taking into account the 13.80 m below the blocking wall and the 9.20 m buried between the main excavation and sounding no. 5, the whole linear length of the conduit in Area N amounts to 55.00 m.

The overall state of preservation of the Roman conduit in Area N is quite good. However, some damages in the vault and some collapsed sections of the conduit required specific restorations, which was done according to traditional methods and materials (Pl. XXXIV.1). West of the blocking wall, its outer vaulted roof is attested between 348.21 m and 348.89 m (Pls. XXXIV.2, XXXV.1-4). East of the blocking wall, the coverage is even better preserved and regular, with an elevation between 348.77 m and 348.91 m (Pls. XXXV.5-6). The vaulted ceiling collapsed in five spots (D.2600a-d, D.2690a), three of which were used for a partial inspection of the tunnel. The largest damage (D.2600a) was in proximity of the excavation western border and it measured 1.90 x 1.20 m. The length of the tunnel, the filling inside it, and the

possible danger in the stretch under the blocking wall made impossible its complete excavation in a short time, even considering the need to protect its inner and outer structures after its emptying. However, the possibility to access the tunnel allowed the exploration of the inner chamber and the measurement of the elevation at its bottom: 347.429 m in the westernmost damage D.2600a and, at the distance of 52.255 m as the crow flies, 347.320 m in the easternmost failure (D.2690a). The difference in height between the two points is 0.109 m, which is equivalent to an average slope of 0.2% hence confirming that the water flowed from West to East, i.e. inside the town. Although concerning only a short section of the conduit, this figure well corresponds to the gradient usually recorded in Roman period either for long aqueducts or minor ducts (Tölle-Kastenbein 1993: 53; Hodge 2000: 50-51, table 2).

The construction of this water conduit combined different techniques for its planning and realization that well reflect the Roman hydraulic engineering: i) foundation trench; ii) building of the conduit; iii) tunnel inside the IA blocking wall; iv) inner waterproofing.

i) The foundation trench of the conduit along its path was identified as P.2680 for D.2600 and P.4912 for D.2637, while in sounding no. 5 the excavation was too shallow for its identification. West of the blocking wall, cut P.2680 cut the following layers: 1) the section W.2684 of the Late IA I blocking wall (phase 4, see § 4.1.1); 2) accumulations F. 4914, F.4918 and F.4930 dated to the IA I (phase 6, see § 4.1.1); 3) the IA I "early blocking wall" W.2693, its stone foundation W.2699 and preparation F.2677 (phase 8, see § 3.2.1); 4) accumulations F.4915, F.4921, F.4923, F.4925, F.4926 and F.4928 belonging to the LB I-II abandonment (phase 9, see § 3.1.1). The three stones W.4931, found at 347.94-348.31 just above the pier W.4932 of the LB I northern tower, look specifically arranged during the construction of the Roman aqueduct (Pl. XVII). East of the blocking wall, cut P.4912 altered the LB II "early blocking wall" W.2666, F.4904, F.4908 and F.4920 (phase 8, see § 3.2.1), and also the massive stone foundation W.2655-W.4901 of the blocking wall itself.

ii) The building technique of the conduit became clearer especially West of the blocking wall, where the external structure was opened up to the bottom of sounding no. 3 at 346.80 m (Pls. XXXV.3, XXXVI.1). The building technique, which vaguely remembers the typical Roman *opus caementitium*, consists of small, roughly rounded, local limestone rubbles merged with waterproof gray mortar. At that point, the top of the extrados is at 348.81 m so the height of the conduit is ca. 2 m. If we consider

that here the inner bottom was recorded at 347.20 m in the nearby failure D.2600c, it is arguable that its outer structure has been almost completely opened. East of the blocking wall, the point where the cement conduit exits from the tunnel shows very well how it was constructed underground. It is particularly clear by the gap between the perfect adhesion of the outer vaulted roof ceiling with the stone foundation W.2655 at the exit of the conduit from the blocking wall (Pl. XXXVI.2). The underground construction of aqueducts and conduits is well attested in the Roman hydraulics. Remarkable examples are those of *Brixellum*/Brescello, Italy (Bergamaschi and Borlenghi 2002; Losi and Curina 2008), the Eifel aqueduct of *Colonia Claudia Ara Agrippinensium*/Colonia, Germany (Grewe 2002, 2014: 239–289; see also Hodge 2000: 57), *Corduba*/Cordova – Valdepuentes, Spain (Ventura Villanueva 1996: 30–40), and *Treviri*/Trier, Germany (Tranz 2017).

The rough building technique of the external structure suggests that the aqueduct continued running underground even eastward. However, in sounding no. 5, the outer vault of D.2690 is regular and well coated, with traces of incisions (Pl. XXXVII). It is therefore possible that here, unlike the stretches D.2600 and D.2637, the conduit D.2690 was outdoor.

A peculiar feature of the Roman conduit of Karkemish is a double bend in proximity of the LB I northern tower (Pls. XXXIII and XXXIV.2). This meander can find different explanations. The first refers to a wrong calculation, which was a rather common issue in Hellenistic and Roman aqueducts when two teams worked simultaneously from both ends.[65] The most remarkable example comes from the construction of the Roman aqueduct of *Saldae*/Bejaia (Algeria) built under the supervision of the well-known military engineer Nonio Dato (Tölle-Kastenbein 1993: 75–76; Castellani 1999: 221–224). Other significant attestations come from the underground part of the Roman aqueduct of *Bononia*/Bologna, Italy (AA.VV. 1985), the tunnel of Fontanes in the Gier aqueduct of *Lugdunum*/Lyon at Saint-Martin-la-Plaine, France (Burdy 1996: 194–198), and the aqueduct 'La Bot' of *Acelum*/Asolo, Italy (Riera 2016). Due to the relatively simple situation, and the limited volume of the "relief" (i.e. the blocking wall), the builders decided to merge the two parts outside the blocking wall. An alternative interpretation can be seen in the intention of creating that double loop. Except for this meander, the conduit followed a straight path, especially *intra*

65 On the contrary, the Eupalinos aqueduct of Megara on the island of Samos is an excellent demonstration of the success of this technique (Tölle-Kastenbein 1993: 73; Hodge 2000: 43).

moenia, and the removal of the eastern orthostat from the LB I northern tower would have required a very little effort.[66] The change in direction can be therefore attributed to the need to reduce the flow rate because of its proximity to the town's entrance. An excessive water velocity at this point could cause breakdowns in the conduit with the consequent flooding of this area.

iii) Tunneling inside natural reliefs was also typical of Roman hydraulic engineering, as testified in the outstanding artificial emissaries in several lakes of the Alban Hills, Latium (Castellani and Dragoni 1991; Grewe 1998; Castellani 2002). The point where the Roman conduit entered the blocking wall W.2684 is largely damaged (Pls. XXXVIII.1 and XLIII.2). This is an irregular cut of ca. 2.20 x 1 m that was filled with materials of different types. Below topsoil F.2614, at 349.89-350.78 m, the upper filling was a soft brown soil (F.2629) without pottery. Under it, at 349.54 m, was another filling made of light red clay with many limestone chippings and fragments of mud-bricks (F.2625), whose collapse is the result of the tunnel excavation. Further fillings were: a soft brown earth with some darkish traces, possibly of charcoal and ash (F. 2685); some small-size stones that were part of the foundation of the "early blocking wall," and that were moved laterally South (F.2694); a block of half-destroyed mud-bricks, likely of the blocking wall, that was reused to fill the tunnel at the end of work (F.2695); finally, the lower filling, right above the outer vaulted roof of the conduit, was a soft brown earth with ash and limestone (F.2696). The damage caused by cut P.2680 and the later rough filling, suggests that the builders first attempted to cut the blocking wall from the top. Then, they realized that this work would have been very expensive due to the hardness of the blocking wall, hence they decided to proceed frontally. This hypothesis is confirmed by the mud-bricks still in place on the top of the blocking wall in correspondence of the other part of the conduit, as well as by the regular architecture eastward, at the point where the conduit exits from the blocking wall (Pl. XXXVI.2). Below, P.2680 cut the lower part of the western section of the blocking wall W.2684, the LB II "early blocking wall" W.2695 and its foundation W.2699, and also the collapsed MBA rampart F.2677.

iv) The inner structure is also rather typical of Roman hydraulic architecture. The breaks in the vaulted cover at spots D.2600a, D.2600c, and D.2690a, and the emptying of the filling layers, allowed to observe measure and building technique of this

66 As mentioned above (see § 3.1.1), it is impossible to establish whether the western orthostat of the northern tower was removed intentionally during the construction of the conduit or earlier. The fact that the orthostat was not found either by Woolley or us suggests that it was moved elsewhere already in ancient times.

aqueduct. The inner structure appeared in a good state of preservation. At D.2600a, the conduit has an inner width of 0.60 m, an outer width of 1.40 m. Shoulders raise for 0.80 m from the bottom, the inner vaulted ceiling is 1.25 m in height, while outside it is 1.40 m. Same measures have been found at the second break D.2600c.

The inner inspection of the Roman conduit also provided useful clues on its coating. At D.2600a, it was made by a layer of polished cocciopesto (F.2691), 5 cm thick, which was covered by a ca. 10 cm thick limescale. The second damage D.2600c showed a situation similar to D.2600a (Pl. XXXVIII.2). There, however, a very thin dark layer (F.2688), possibly due to the water flow, was found between the limescale F.2687 and the polished cocciopesto F.2689 (Pl. XXXIX.1). At the damage D.2690a, a thick layer of whitish limescale (F.4951) above the gray cocciopesto waterproofed the inner conduit (F.4949) and the bottom (F.4952)(Pl. XXXIX.2) where F.4952 was not preserved, here the dark gray concrete and small pebbles shaping the bottom of the conduit were visible (F.4950).

5.2 POST-ROMAN PERIOD / ABANDONMENT (PHASE 2)

5.2.1 Architectural Remains and Stratigraphy

It is very difficult to recognize evidence for a Post-Roman occupation after the removal of the upper layers by Woolley. Summarizing the history of the Inner West Gate, he wrote that "... builders of a yet later date had cut into the inner slope of the mound to lay their foundations and to cut their drains in the mass of brick which represented the earliest gateway and its successive botchings" (Woolley 1921: 73). However, Woolley did not give any further explanation and it is only arguable that he was referring to the Islamic period.

Layers that can be certainly attributed to the Post-Roman period are therefore few and very difficult to date. The only architectural evidence is possibly the remnants of a thick stone foundation discovered by Woolley at a "high level" (+2.30 m on his main station) on the eastern foot of the blocking wall (Woolley 1921: 77). Although Woolley did not provide any chronology, in pl. 10a (Pl. VIII.1), he has drawn this wall above the Roman conduit so it should be later than it. Otherwise, most of the Post-Roman evidence resulted from the abandonment of the Roman aqueduct. Since Woolley did not mention any operation inside the Roman conduit, it is arguable that

those fillings still were in a primary context at the time of our excavation.

At the southern base of the same conduit, for example, the unpublished picture by Woolley (Pl. X) shows how the collapse of its vaulted roof F.2616 remained untouched by the British excavation. This was a very hard and compact layer mixing large stones, limestone chippings, small gypsum blocks, small-sized rounded pebbles, and dark brown mud spread over an area of 3.20 x 1.50 m. The damage to the vaulted ceiling at D.2600a is different from the others because the stones, either collapsed or intentionally removed, were arranged outside the southern foot of the conduit (Pl. XL.1). The opening, measuring 1.90 x 1.20 m (outer top at 348.84 m), was then sealed by three squared slabs. Except for the largest rectangular slab (94 x 60 x 20 cm), the other two worked stones (77 x 60 x 20 cm unbroken, 66 x 55 x 19 cm broken) were removed and accurately arranged near the western section of the excavation in order to be part of the forthcoming touristic park. Although these layers, including the soil F.2615 covering the slabs, were not interested by Woolley's excavation, it is impossible to establish their chronology. The filling inside was a soft and brown sandy clay with chipping (F.2668), very easy to remove. The few potsherds recovered dated to LB II, thus they are clearly in a secondary context. The second damage D.2600c (outer top at 348.70 m) is located right after the loop of the conduit, ca. 4.70 m before it entered inside the blocking wall. The inner structure was filled by two layers: a fine gray soil with many small-size rounded stones belonging to the coverage (F.2621); a layer of brown sandy clay with many limestone chippings and few pottery sherds (F.2622). It raises ca. 70 cm from the bottom, which is attested at 347.40 m. East of the blocking wall, evidence of the abandonment of the Roman water conduit came from sounding no. 5 where, except for conduit D.2690 itself, all the layers inside the conduit belong to its final abandonment. The fillings outside the conduit are several: F.4909 = light brown sandy clay with stones below Woolley's dump F.4907; F.4913 = light brown mud clay with many limestone chippings, stones, and mixed ceramic sherds (348.64-71 m) under F.4909 and covering the outer vault of conduit D.2637; F.4917 = fine brown sandy clay also with many inclusions (small pebbles, stones and pottery) that was concentrated between conduit D.2637 and the northern section of the sounding at 348.50-60 m;[67] F.4940 = fine light gray sandy soil with small-sized stones and mixed pottery, concentrated in the Southwestern corner at 348.77 m,

67 The attribution to the abandonment of the upper deposit F.4913 and F.4917 has been based on the assumption that they were not been previously investigated by Wolley.

which might be part of the collapsed vaulted roof; F.4941 = similar to F.4940 but without pottery; F.4942 = soft, light brown soil with few non-diagnostic potsherds; in the southeastern corner of sounding no. 5, F.4942 covered a compact brown soil (F.4943); below F.4943 was a very hard layer of stones mixed with a gray mortar (F.4944) that belonged to the collapse of the vaulted roof and was very difficult to dig. There are four fillings covering the inner structure of conduit D.2690. The upper layer (F.4945), covered by F.4917 and F.4944, is a compact gray soil (remains of mortar?) without inclusions. Below it was a brown soft sandy clay with big rocks and stones (F.4946), followed by a similar layer (F.4947) having less stones than the former but with some potsherds. The lower layer, ca. 10 cm high and covering the bottom of the conduit, was a very hard clay with small stones and pebbles and a few pottery sherds (F.4948) that recalled a conglomerate because of its solidity.

Further evidence of the Inner West Gate abandonment comes also from sounding no. 3 at the Northwest base of the blocking wall, where the debris (F.2675) of the northern rampart is especially visible in the eastern section of this sounding that was certainly not interested by Woolley's work. The hard dark-brown clay with some limestone chippings typical of the rampart has an evident slope from North (348.53 m) to South (347.78 m). This layer was opened just below the topsoil F.2604 and it stopped against the LB II "early blocking wall" W.2693 and its stone foundation W.2699. The collapse of the rampart arguably occurred after the passage into the blocking wall had been already done, and when this area no longer used.[68]

A final remark concerns the breach in the northern section of the blocking wall. According to Woolley, it also occurred in the Roman Age (Woolley 1921: 80). However, he did not provide any strong argument supporting this theory, which seems implausible for two reasons. Firstly, the decision of tunneling the blocking wall for the construction of the Roman conduit D.2600 makes it reasonable that the blocking wall was still preserved at that time. Otherwise, Romans would have placed the conduit there, in an empty and open space, according to a solution that was certainly more economic than tunneling the conduit inside the blocking wall. Secondly, as a common practice, Romans would monumentalize the main gates of their cities. In this regard, with its colonnaded street, bath, and residential quarters, Karkemish was

68 This is confirmed by the huge amount of limestone chippings found by Woolley (1921: 74, see also pl. 10c), who hypothesized a breach into the retaining-walls of both ramparts, in particular the southern one that was not reinforced by chambers.

not an exception to this rule.[69] The demolition of this part of the blocking wall can be therefore placed later, possibly in the Islamic period, when the city suffered drastic changes in its urban planning and settlement occupation, and there was no longer any need to keep this access blocked.[70]

5.2.2 Pottery

Pottery of phase 2 consists in a mixed assemblage composed by few eroded sherds, mostly dated to LB I and IA I.

The selected LB I sherds include only Simple Ware closed shapes, such as jars with molded rim (Fig. 5.2.4) and jars with flared rolled rim (Fig. 5.2.6-7), while IA I sherds represent the majority of the sherds recovered. They include platters with plain rim (Fig. 5.2.1), small hemispherical bowls with simple rim (Fig. 5.2.2) and with simple rim and high carination (Fig. 5.2.3), carinated bowls with squared rim (Fig. 5.2.5), kraters with upper-grooved expanded squared rim (Fig. 5.2.12), jars with flared triangular rim (Fig. 5.2.8) and a cooking pot with molded rim (Fig. 5.2.10-11).

69 See more on Roman Karkemish in Ferrari 2014.

70 See for example the transformation during the Early Islamic period (phases 3 and 4) in Area C (Pizzimenti and Zaina 2016: 363-364).

5.2.3 Small finds

Four objects come from the post-Roman period (phase 2): one flint blade (Pl. L.1), one bronze ring (Pl. L.2), one basalt pestle (Pl. L.3) and one grinding stone (Pl. L.4), both in basalt.

Catalogue of small finds from phase 2:

KH.13.O.436, Blade (Pl. L.1)
Material: flint
Dimensions: l. 2.5+ cm; w. 1.8 cm; th. 0.5 cm
SU: F.2615
Bucket: KH.13.P.803
Preservation: fragmentary

KH.13.O.620, Ring (Pl. L.2)
Material: bronze
Dimensions: h. 2.2 cm; l. 1.9 cm; w. 0.7 cm; th. 0.2
SU: F.2629
Bucket: KH.13.P.807
Preservation: complete

KH.13.O.947, Grinding stone (Pl. L.4)
Material: basalt
Dimensions: h. 10+ cm; l. 19.2+ cm; w. 21+ cm
SU: F.2625
Bucket: KH.13.P.810
Preservation: fragmentary

KH.14.O.997, Pestle (Pl. L.3.)
Material: basalt
Dimensions: h. 4.9 cm; d. 4.5 cm
SU: F.4913
Bucket: KH.14.P.1210
Preservation: complete

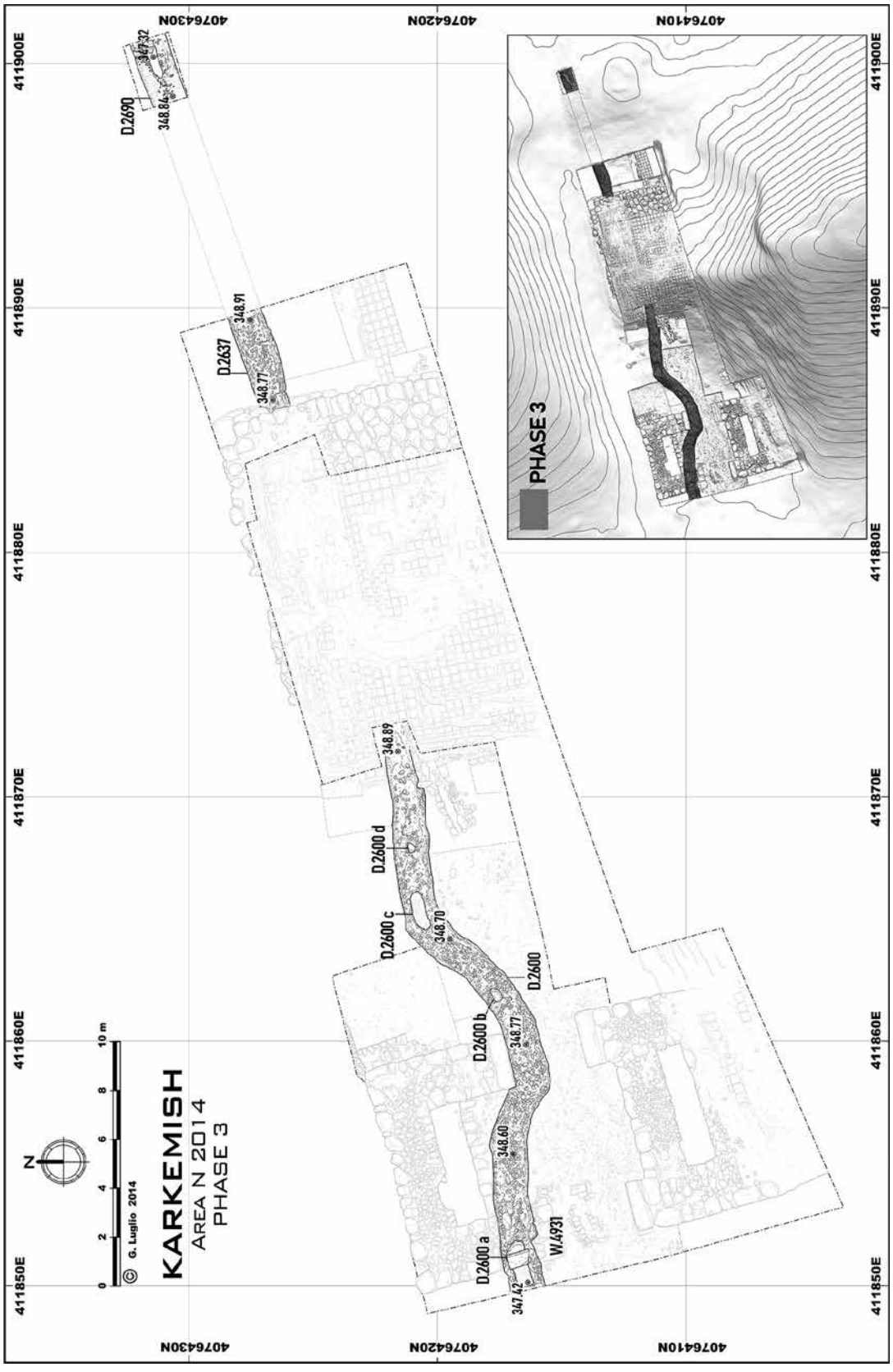


Fig. 5.1. Plan of phase 3, Roman Period.

No.	Pottery No.	Phase	Context	Techn.	Firing	Inclusions	Fabric color	Surf treat.
1	KH.13.P.810/5	2	F.2625	W	H	Mb3	5YR 7/6 (C-I/O)	-
2	KH.13.P.839/1	2	F.2668	W	H	Ma1	7.5YR 7/4 (C-I/O)	Slip Whitish
3	KH.13.P.810/1	2	F.2625	W	H	Ma2	5YR 7/4 (C-I/O)	-
4	KH.13.P.810/3	2	F.2625	W	H	Ma1	5YR 7/3 (C-I/O)	Slip Whitish
5	KH.14.P.1226/1	2	F.4940	W	M	Ma2	5YR 6/6 (C) 7.5YR 7/4 (I/O)	Burnish
6	KH.13.P.839/2	2	F.2668	W	H	Mb1	5YR 6/6 (C-I/O)	-
7	KH.13.P.810/7	2	F.2625	W	H	Ma1	5YR 6/2 (C-I/O)	-
8	KH.14.P.1210/1	2	F.4913	W	H	Mb2	7.5YR 7/3 (C-I/O)	-
9	KH.14.P.1210/2	2	F.4913	W	L	Mb3		Slip Reddish
10	KH.13.P.810/4	2	F.2625	W	M	Ma2	5YR 7/2 (C) 10YR 7/3 (I/O)	Slip Reddish
11	KH.13.P.810/6	2	F.2625	W	H	Ma1	7.5YR 7/4 (C-I/O)	-
12	KH.14.P.1226/2	2	F.4940	W	M	Ma3	10YR 7/3 (C-I/O)	Burnish

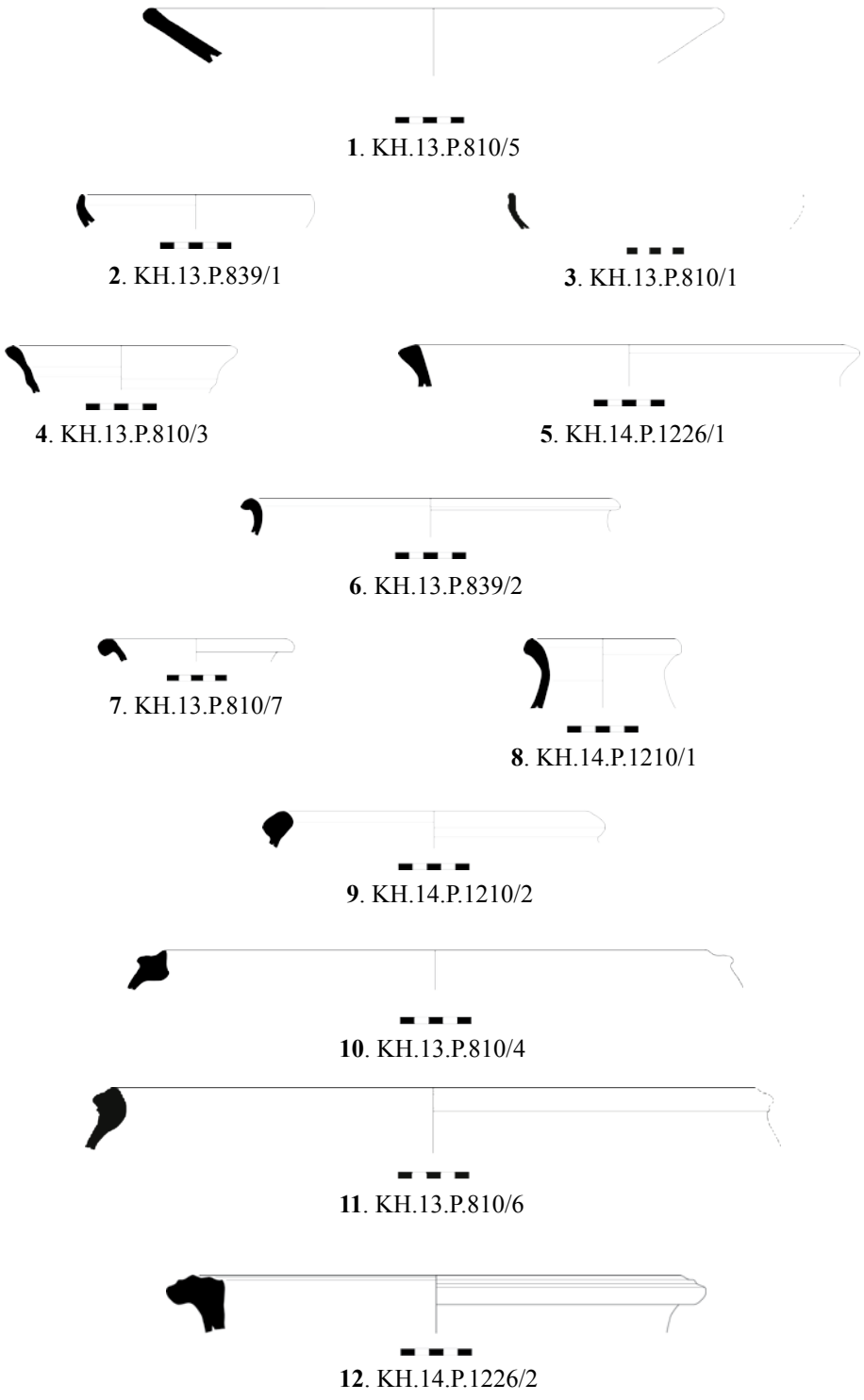


Fig. 5.2. Pottery assemblage from F.2625, F.2668, F.4913, F.4940, phase 2.

Chapter 6
THE MODERN AGE

If the architectural features brought to light by the British Museum in the Inner West Gate remained almost untouched after their exposure, the upper stratigraphy of this area was significantly affected by modern activities. This is the reason why, for example, we were not able to find any Roman potsherd and tile nor the rubble poured out by the rampart after the breach of the retaining wall, which were instead so abundantly discovered by Woolley (1921: 74, 80).[71] Right underneath the topsoil (F.2603, F. 2604, F.2614, F.2630, F.2647, F.2649, and F.4906), for a variable depth of 20-60 cm, most of the upper layers are therefore associated with the military occupation of the site. Otherwise, deposits refer to the British backfilling after excavation (if carried out) or later accumulations.

6.1 MODERN AGE (PHASE 1)

6.1.1 Architectural Remains and Stratigraphy

The most significant evidence came from East of the blocking wall, between the southern border of excavation and the Roman conduit D.2637 (Pl. XL.2). The lack of the "Hittite" stone conduit discovered by Woolley is a good illustration of the significant changes which occurred during the military occupation of the site. The remains of a cobbled floor (L.2639), mixed with mortar and white lime were found ca. 0.50 m below the topsoil F.2630 (349.40 m). The floor was damaged and its remains were found in the fillings above it: F.2631, F.2634, F.2635, F.2643, F.2645. In particular,

71 The profile of pl. 10b (Pl. VIII.2) illustrates very well the large presence of Roman artefacts and the limestone rubble from the retaining wall discovered on both sides of the blocking wall. See also § 1.2.

F.2634 and F.2643 are layers of medium-sized pebbles and small-sized stones within a gray/whitish soil that refer to the collapse of a structure (possibly a wall) associated with the floor L.2639, and are well clear on the southern section of the excavation. Filling F.2634 also yielded several modern iron tools. Two fillings were arranged as preparation of the floor L.2639: F.2640 was a dark brown earth with many chippings stones, as well as few ceramic sherds and animal bones; F.2646 was especially worth noting because it was a heavy and compact brown clay with many reddish inclusions that was considered as a layer of debris belonging to an earthen structure. This postulation was confirmed shortly thereafter by the discovery of the LB II "early blocking wall" (see § 3.2.1, phase 8): in excavating an irregularly shaped hole (P.2444), ca. 5 sqm large and ca. 30 cm deep, soldiers damaged the LB II mud-brick wall W.2666 and the result of this destruction was F.2646. Later on, the pit P.2644 was filled with a dark gray/blackish soil with many stones (F.2641), so big that they required the use of ropes pulled by a tractor for their removal. In this part of the excavation, the brown loose and soft soil (F.4900) below the topsoil F.2630 and covering at North the Roman conduit D.2637, was also of a recent formation. It contained many pottery fragments of different periods and was very similar to the filling F.2631 on the other side of the Roman water conduit. Finally, a good example of evidence connected with Woolley's excavation is the filling F.4907 from the sounding no. 5. It is a light brown and loose soil with pebbles, limestone chippings and many undiagnostic potsherds exposed under the topsoil F.4906. This filling shaped a sort of mound slightly raised from the terrain that can be attributed to a dump of the British excavation.

West of the blocking wall, traces of modern activities were also attested in several fillings. North of the Roman water pipe, the most affected area is the northern tower. A dark gray fine soil (F.2608) filled, either intentionally by Woolley at the end of the excavation or naturally later, the void between the tower and the Roman conduit D.2600. East of the tower, evidences of modern activities were recorded also between wall W.2624 and staircase L.4922 up to an elevation of 347.20 m. The layer F.2681, under the topsoil F.2604 between the wall W.2602 of the northern tower and the Roman conduit D.2600 (sounding no. 4) resulted in many small- and medium-sized pebbles and stones. Finally, in sounding no. 3, the upper layer (F.2667) was a brown clay with limestone chippings, pottery, and even one bullet, while F.2669 was a lumpy dark-brown clay with pottery clearly in a secondary context.

South of the Roman conduit D.2600, the two upper layers in sounding no. 1 were

also the result of modern operations. The first (F.2632) was a light brown soft clay with many fragments of mud-bricks, pottery sherds and many big stones that also partially collapsed over the stone conduit D.2636 (Pl. XLI.1). This layer extended westward and covered another layer of soft brown sandy soil (F.2664). The big stones collapsed from above after Woolley's excavation required a huge effort for their removal. Only the two largest stones close to the stone conduit D.2636 were left in place to prevent damaging the conduit itself.

Woolley investigated the gateway extensively. Hence, accumulations around the southern tower, though limited, are later than his excavation. F.2648, which contained some modern glass and iron fragments, and F.2650 are both a light reddish/brown soft clay of ca. 5 cm opened at the base of the orthostats of the southern tower after their first exposure by Woolley. East of the eastern orthostat, the filling F.2648 covered the gray limestone chippings (F.2656) typical of the Bronze Age rampart, which collapsed due to recent erosion and run-off. South of the southern tower, below the topsoil F.2604, a brown fine soil (F.2619) was also of recent formation.

The top of the blocking wall was covered, below the topsoil F.2614, by a brown light and soft earth (F.2617) a few centimeters high with traces of reddish clay from the mud-bricks below and including many ceramic fragments. At the northern base of the blocking wall, under the topsoil F.2630, a grayish sandy clay with few undiagnostic potsherds (F.2627) was also of very recent formation.

6.1.2 Pottery

The pottery assemblage from phase 1 consists of mixed non diagnostic sherds particularly eroded and belonging to several periods, from LB I to the Islamic period. In particular, F.4907 presented ca. 50 mixed non diagnostic sherds which confirmed its identification as the dump of Woolley's excavations.

6.1.3 Small finds

Four objects come from the modern age (phase 1): one bolt (Pl. LI.1), one clay stopper (Pl. LI.2), one grinder (Pl. LI.3) and one grinding stone (Pl. LI.4), both in basalt.

Catalogue of small finds from phase 1:

KH.13.O.874, Grinder (Pl. LI.3)
Material: basalt
Dimensions: l. 6.6 cm; w. 10.2+ cm; th. 10.5+ cm
SU: F.2640
Bucket: KH.13.P.816
Preservation: fragmentary

KH.13.O.1154, Stopper (Pl. LI.2)
Material: clay
Dimensions: h. 3.7 cm; w. 3.2 cm; th. 3
SU: F.2669
Bucket: KH.13.P.843
Preservation: complete

KH.13.O.1132, Grinding stone (Pl. LI.4)
Material: basalt
Dimensions: h. 9,2 cm; l. 17.5 cm; w. 13.5 cm
SU: Surface
Bucket: -
Preservation: complete

KH.14.O.1217, Bolt (Pl. LI.1.)
Material: metal
Dimensions: h. 0.5+ cm; l. 1.7 cm; w. 1.6 cm; th. 0.3 cm
SU: Surface
Bucket: -
Preservation: fragmentary

Chapter 7
CONCLUSIONS

The West Gate of the Inner Town well reflects the historical transformations that an important urban center of the ancient Northern Levant, such as Karkemish on the Euphrates experienced throughout its history (Pl. XLI.2). Conceived as part of the earliest defensive system of the town during the Middle and Late Bronze I Ages, the Inner West Gate was blocked during the Late Bronze I by the construction of an earthen wall with a stone foundation ("early blocking wall"). During the early Iron Age I, this area was used for hydraulic purposes, and in the late Iron Age I the Inner West Gate was completely closed off by the monumental earthen blocking wall and its massive stone foundation. At the time of the Roman occupation it was used again for the city's water supply, then reopened to allow a direct connection with the Outer Town likely in the Islamic period.

An updated and accurate interpretation of the major periods of the Inner West Gate – Area N is now possible by combining the information available from Woolley's excavation of the early 20th century and the results achieved by the Turco-Italian expedition after the 2013 and 2014 seasons. As stressed in the text, the British excavation and the military occupation altered significantly the original stratigraphy of this area. The pottery useful for a chronological assessment was very limited. As a result, the periodization of both the architectural remains and accumulation layers were mostly based upon their stratigraphical relationships, often making possible only a *terminus post quem* attribution.

MBA (phase 11) evidence in the Inner West Gate concerns only the remains of the rampart opened around the later southern tower. This was a hard compact mud mixed with small limestone chippings that resulted very difficult to dig through. Already at the time of the British excavation, there was no trace of the original gateway

closing the access between the ramparts.

The following LB I (1600-1400 BC, phase 10) witnessed a reorganization of this area, with the construction of a new gateway. This phase (no. 10) was already largely exposed by Woolley and it is still well preserved, especially the two C-shaped towers (W.2601 and W.2602) and the pebbled floor (L.2652, L.2657 and L.4902) that was built exactly over the natural limestone bedrock. It is remarkable that the two towers are not aligned with the South-North axis of the rampart but were built slightly outside it. For this reason, Woolley hypothesized the presence of a second gateway between the ramparts, identical to the other one which was later buried by the blocking wall. He chose not to remove the blocking wall because "Not only were the results likely to repay ill the cost and labor of such digging, but this blocking of the gate was of hardly less interest than the gate itself, and its destruction was not justified by the chance of completing a ground-plan whose general lines could not be surmised with a very fair degree of certainty. Therefore, excavation stopped short of the blocking wall" (Woolley 1921: 73). Our operations in the eastern section of the blocking wall and at the point where Roman conduit tunneled the western section of the blocking wall itself did not provide any evidence of this conjectured inner gateway. It is therefore arguable that the discovery of this second access, if ever existed, could occur only through the complete demolition of the blocking wall and its foundation.

The chronological evidence of the pottery assigns phase 10 to the LB I. The pottery assemblage can be ascribed to the Inner Syrian and the Middle Euphrates tradition, as confirmed by similarities with, Tell Mardikh/Ebla, Tell Misrifeh/Qatna and Tell Qara Quzaq, among others.

After a transition/temporary abandonment of the gateway (phase 9) testified by some accumulation levels over the LB I floor, in the LB II (1400-1200 BC, phase 8) the Inner West gate experienced a first closure. Remains of an earthen structure with stone foundation, named "early blocking wall", was found on both sides of the blocking wall. To the East the mud-brick structure W.2666 was partially preserved and with a deep stone foundation (W.2672). To the West the wall found in soundings no. 1 (W.2693-W.2699) and no. 3 (W.2697-W.2698) was largely damaged by later operations. The foundation of this outer side, shallower and less cared than the inner one, indicated that this structure was done hurriedly. It is however worth noting that the likely right angle of the wall W.2693 suggests the presence of a narrow passage (ca. 1-2 m) between this wall and the LB I structures flanking the northern rampart.

This significant change in the area could be connected with the capture of the city by the Hittite king Šuppiluliuma I in the late 14th century BC, reported by his son Muršili II in the 'Deeds' (Güterbock 1956: 9). Following this assumption, the "early blocking wall" would have been built after the capture of the city.[72]

The chronological attribution to LB II is based on a pottery assemblage mostly characterized by local shapes typical of the Middle Euphrates valley horizon, while the classical Hittite Drab Ware is not attested.

The beginning of the IA I was characterized by a first use of this area for hydraulic purposes. The early stone-lined drain D.4934 (phase 7) was found exactly above the LB I floor, in the middle of the two C-shaped towers. Some natural deposits, with homogenous IA I pottery, witness to a temporary transition (phase 6) before the installation of a second stone conduit (D.2636, phase 5). The latter hydraulic device arrived to us largely destroyed, also in comparison to the time of Woolley's excavation. After that, in the late IA I, the construction of the blocking wall (phase 4) completely closed off the passage at the Inner West Gate (Pl. XLII). This monumental structure is comprised of more sections made out of mud-bricks with a different size and pattern. Sections are separated by narrow (5-10 cm wide) interspaces filled with earth, pebbles and pottery that suggest the need for compensating architectural failures already during its construction. The massive stone foundation W.2655-W.4901, recorded for 2.70 m on the eastern side, differs greatly from the single course of stones W.2633 on the western side. This building technique recalls the previous LB II "early blocking wall" where the inner side reflects a better skill in its construction than the outer one. The "early blocking wall" itself served as, and was adapted for, the construction of the blocking wall itself in the Late IA I. This feature further confirmed Woolley's hypothesis that the blocking wall was built hastily. Chronological attribution to IA I is based on the quite homogeneous pottery assemblage found in large amount in the preparation layers and in the interspaces.

The last significant anthropic evidence at the Inner West Gate is the Roman water conduit D.2600-D.2657-D.2690 (phase 3), which was fundamental for the water supply of the city. Although peculiar for its meandering shape and tunneling inside the blocking wall, its construction technique and materials are shared with many other works of the hydraulic Roman engineering, hence it is impossible to establish more accurately its construction period. The same goes for the inner fillings after its

72 For a chronology of the kingdom under Hittite control, see Peker 2017; Hawkins and Peker 2014.

abandonment. They do only include few and mixed ceramic sherds, ranging from the LB I to the IA I period.

Post-Roman attestations (phase 2), possibly Islamic, concern the opening of the northern section of the blocking wall to allow the passage between the Inner and Outer Towns and some abandonment layers. Finally, the British archaeological excavations of the early 20th century and the military occupation of this area in the 1920s (phase 1) deeply altered the upper stratigraphy and made it impossible for any chronological attribution of the original upper layers.

Appendix 1

A REPORT BY C.L. WOOLLEY TO F. KENYON

This is the transcript of the letter written on May 31st 1914 by C.L. Woolley to F. Kenyon, the then Director of the British Museum (Pls. LIV-LV).

Carchemish
May 31st 1914

To the Director
of the British Museum

Sir:

When I wrote my last report work upon the North Wall had been concluded for the time being and the gang employed there had been transferred to the West Gate. Under the North Wall is a large cave, in part artificial and lined with Hittite masonry. But its exploration was best deferred till the autumn when work will not be hindered by water. The excavation of the West Gate has now been finished, and a plan of it is enclosed [Pl. LVI]. This was less elaborate than the South gate, being almost wholly of bricks, white little stone-work and no decoration, and it was also less well preserved; but it was of considerable interest. There was originally a small outer gate with two doorways passing between pylon-towers that stood slightly in advance of the line of the earth mound of the walls, and behind this a second single gateway between massive bricks buttresses corresponding to the town-wall proper that crowned the earth work. This gateway dated from the Middle Hittite period, i.e. between 1500 and 1200 B.C. At some time in the late Hittite period, certainly before Sargon's conquest of the town that perhaps in consequence of the Assyrian raids, the West Gate was dismantled. The outer pylons were razed to their foundations, a great

mass of solid brickwork blocked the inner gateway and backed up its buttresses, and in front of this barrier earth and rubble were poured down to make good the breach in the line of the earth mound. An intrusion burial with the characteristic late Hittite cylinders in the talus of this deposit, just inside the old pylon, confirmed the evidence given by pottery fragments and the measurements of bricks and made the relative dating a matter of certainty.

… (omissis)

After finishing the West gate, the gang employed there was sent off to continue the clearing in front of the King's gate.

… (omissis)

I propose to stop work on June 5th; the weather is now very hot. Harvest has drawn off more than half our men, and my credit for the season will not allow further work. I propose to return to England via Constantinople, so as to see Halil Bey[73] and arrange some matters with him.

In the mean time I have the honor to be, Sir,

Your obedient Servant

Leonard Woolley

73 The then director of the Imperial Museums.

Appendix 2

THE FAUNAL REMAINS

Zooarchaeological investigations were conducted on a small sample of animal osteological remains dated from the LB II to the late IA I for a total amount of 132 fragments. The majority of the sample (95 fragments) dates from the late IA I, while other 24 osteological remains belong to the LB II and 13 were retrieved in different fillings of Roman structures with no stratigraphic consistency.

In general, even if there was a high degree of fragmentation due to the different anthropogenic treatments, the bones surfaces show a good level of preservation and it was possible to determine the species for the 32.8% of the sample.[74] However, for many bones of ungulates, the high degree of fragmentation allowed to define the reference size referable to the main categories of domestic animals identified at the site, but not the species.

Sheep and goats resulted the most represented animals (36.8%) together with medium-small (21.1%) and small ungulates (18.4%); medium-large ungulates, which might refer to cattle or equids, are instead quite scarce (10.5% each), while pig remains are not present in this sample (Pl. LVII.1).

The evaluation of the age at death for the different domestic animals was made on each remains that had parameters useful for this purpose. For what concerns sheep/goat, it is possible to notice the general trend of exploiting the animals until the end of their growth cycle, as proven by the exclusive occurrence of remains from adult animals. The remains of cattle and equids are also related to at least three different adult individuals, including two cows and one donkey (Tables 1 and 2).

---

74 For the anatomical and species identification, see Schmid (1972) and Barone (1976) with the use of the reference collection of ArcheoLaBio - Research Center for Bioarchaeology, Department of History and Cultures, Ravenna Campus, Alma Mater Studiorum – University of Bologna.

Taxa & animal groups	Area N LB II (1400/1350-1200 BC)				Area N Late IA I (1020/1050 BC)				Area N total			
	NISP	NISP %	MNI	MNI%	NISP	NISP%	MNI	MNI%	NISP	NISP%	MNI	MNI%
Equus asinus	-	-	-	-	4	12.1	1	14.3	4	10.5	1	11.1
Sheep/Goats	3	50.0	1	33.3	11	33.3	5	71.4	14	36.8	5	55.6
Small ungulates	-	-	-	-	7	21.2	-	-	7	18.4	-	-
Small-medium ungulates	-	-	-	-	8	24.2	-	-	8	21.1	-	-
Bos taurus	2	33.3	1	33.3	3	9.1	1	14.3	4	10.5	2	22.2
Lagomorphs	1	16.7	1	33.3	-	-	-	-	1	2.6	1	11.1
Total det.	6	100	3	100	33	100	7	100	39	100	9	100
Total undet.	18				62				80			
Total	24				95				119			

Tab. 1. Faunal composition of Area N divided by chronological phases.

Karkemish – Area N			
Taxa & animal groups	**Locus**	**Anatomical elements**	**Measures**
Equus asinus	F. 2658	I phalanx	GL: 77.5; Bp: 46.7; SD: 29.2; BFd: 36.9; Bd: 38.5
Small-medium ungulates	F. 2658	II phalanx	GL: 2.3; Bp: 15.2; SD: 10.3; Bd: 12.2
Bos Taurus	F. 2666	II phalanx	GL: 33.5; Bp: 24.0; SD: 19.8; Bd: 19.9

Tab. 2. Bone measurements in mm (according to Angela von den Driesch's methodology: von den Driesch 1976).

As for the taphonomic evidence, three cut marks detected on a cattle tarsal bone testify to slaughtering practices related to the dismembering of the carcass.[75] One anthropogenically modified bone, likely a point or an arrowhead with the apex broken, was found in the Late IA level F. 2658 (Pl. LVII.2). Not a single fragment of non-mammalian species was instead found in Area N. The remains of one lagomorph confirm the general trend reconstructed so far for the other areas of Karkemish, where wild animals were only occasionally exploited during all the analyzed periods (Maini,

75 On this topic, see Giacobini (1996) and Lymann (1994).

Curci forthcoming).

Considering the formation history of its deposit, an archaeological context such as the Inner West Gate - Area N is unlikely reflecting a domestic food economy. In the near future, once considered in the general picture provided by the faunistic and economic analysis of all the excavated areas, the animal osteological sample retrieved in the gate structures of Area N will contribute to clarify and expand our understanding of the faunal resources exploitation in the different periods and social-economic contexts of Karkemish and the Middle Euphrates Valley.[76]

76 For an overview of the faunal remains of both domestic and wild animals discovered from the Neolithic to the Iron Age in the region, see Frey and Marean (1999); Tomè and Nishiyama (2005); Maini and Curci forthcoming.

Abbreviations

BAH	Bibliotèque Archéologique et Histoire
BAR	British Archaeological Reports
OLSM	OrientLab Series Maior
MAAO	Münchener Abhandlungen zum Orient
SAQ	Studi Archeologici su Qatna
SBA	Saarbrücker Beiträge zur Altertumskunde

References

AA.VV.
1985 *Acquedotto 2000. Bologna, l'acqua del duemila ha duemila anni. Catalogo della Mostra (Bologna, Museo civico, 23 marzo-30 giugno 1985)*, Grafis, Casalecchio di Reno.

Adler, W. and Penner, S.
2001 *Kamid el Loz 18. Die spätbronzezeitlichen Palastanlagen* (SBA 62), Habelt, Bonn.

Baffi, F.
2008 Area D: F. Baffi (ed.) *Tell Tuqan Excavations 2006-2007*, Congedo, Lecce, pp. 109-148.

Barbanes Wilkinson, E. and Ricci, A., 2016 Investigations of Iron Age Carchemish: the Outer Town survey of 2009 and 2010: T.J. Wilkinson, E. Peltenburg and E. Barbanes Wilkinson (eds.), *Carchemish in Context. The Land of Carchemish Project, 2006-2010*, Oxbow Books, Oxford, pp. 132-183.

Barone, R.
1976 *Anatomie comparée des Mammiféres domestiques*, Trad. it. 1995 vol. I e vol. III, *Osteologia*, III ed., Bologna.

Benati, G.
2014 The British Museum Excavations at Karkemish (1911-1914, 1920): A Summary of the Activities and of the Methods Employed: N. Marchetti (ed.), *Karkemish. An Ancient Capital on the Euphrates* (OrientLab 2), Ante Quem, Bologna, pp. 52-65.

Ben-Tor, A. and Bonfil, R.
1997 *Hazor V. An Account of the Fifth Season of Excavation, 1968*, Israel Exploration Society, Jerusalem.

Bergamaschi, C. and Borlenghi, A.
2002 La riscoperta del condotto romano di Brescello. Primi dati dai sondaggi di Campegine, Gattatico e Poviglio: *In Binos Actus Lumina I. Atti del convegno internazionale di studi su metodologie per lo studio della scienza idraulica antica (Ravenna, 13-15 maggio 1999)*, Agorà Edizioni, La Spezia, pp. 117-129.

Biran, A. and Ben Dov, R.
2002 *Dan II. A Chronical of the Excavations and the Late Bronze Age 'Mycenean Tomb*, The Israel Museum, Jerusalem.

Bitelli, G. et al.
2014 Georeferencing Karkemish: N. Marchetti (ed.), *Karkemish. An Ancient Capital on the Euphrates* (OrientLab 2), Ante Quem, Bologna, pp. 152-161.

Blaylock, S.
2016 *Tille Höyük 3.2. The Iron Age: Introduction, Stratification, Architecture* (The British Institute at Ankara, Monograph 50), BIAA, Ankara.

Bolognani, B.
2017 *The Iron Clay Figurines from Karkemish (2011-2015 Campaigns) and the Coroplastic Art of the Syro-Anatolian Region*, Unpublished PhD Thesis, University of Bologna, Department of History and Cultures.

Bonfil, R.
2003 Pottery Typology of the Middle Bronze Age II and the Late Bronze Age: A. Ben-Tor, R. Bonfil and S. Zuckerman (eds.), *Tell Qashish. A Village in the Jezreel Valley: Final Report of the Archaeological Excavations (1978-1987)* (Qedem Reports 5), Institute of Archeology, the Hebrew University of Jerusalem, Jerusalem, pp. 277-318.

Bonomo, A. and Zaina, F.
2014 The Iron Age II-III Pottery Assemblage from Karkemish and Yunus: N. Marchetti (ed.), *Karkemish. An Ancient Capital on the Euphrates* (OrientLab 2), Ante Quem, Bologna, pp. 137-144.

Bourke, S.J.
1993 The Transition from the Middle to the Late Bronze Age in Syria: the Evidence from Tell Nebi Mend, *Levant* 25, pp.113-195.

Braemer, F.
1986 La céramique à Engobe rouge de l'Age du Fer à Bassit, *Syria* 64, pp. 221-246.

Buhl, M.L.
1983 *Sukas VII. The Near Eastern Pottery and Object of Other Materials from the Upper Strata* (Publication of the Carlsberg Expedition to Phoenicia 9), Det Kongelige Danske Videnskabernes Selskab, Copenhagen.

Caubet, A.
2014 Late Bronze Age Ceramics from Emar: M. Luciani and A. Hausleiter (eds.), *Recent Trends in the Study of Late Bronze Age Ceramics in Syro-Mesopotamia and Neighbouring Regions. Proceedings of the International Workshop in Berlin, 2-5 November 2006*, VML Verlag Marie Leidorf GmbH: Berlin, pp. 71-84.

Castellani, V.
1999 *Civiltà dell?Acqua*, Editorial Service System, Roma.
2002 Origini e sviluppo delle opere cunicolari del mondo romano: *In Binos Actus Lumina I. Atti del convegno internazionale di studi su metodologie per lo studio della scienza idraulica antica (Ravenna, 13-15 maggio 1999)*, Agorà Edizioni, La Spezia, pp. 49-55.

Castellani, V. and Dragoni, W.
1991 Opere arcaiche per il controllo del territorio: gli emissari artificiali dei laghi albani: M. Bergamini (ed.), *Gli Etruschi maestri di idraulica. Atti del Convegno: Perugia, 23-24 febbraio 1991*, Electa editori umbri, Perugia, pp. 43-60.

Colantoni, A.
2010 A Preliminary Account on the Late Bronze Age Pottery Production at Tell Mardikh/Ebla: P. Matthiae, F. Pinnock, L. Nigro and N. Marchetti (eds.), *Proceedings of the 6th International Congress on the Archaeology of the Ancient Near East, 5 May-10 May 2008, Sapienza Università di Roma*, Harrasowitz, Wiesbaden, pp. 663-674.
2014 The Late Bronze Age I Pottery at Tell Mardikh/Ebla and its Relations with the Middle Bronze II Tradition: M. Luciani and A. Hausleiter (eds.), *Recent Trends in*

the Study of Late Bronze Age Ceramics in Syro-Mesopotamia and Neighbouring Regions. Proceedings of the International Workshop in Berlin, 2-5 November 2006, VML Verlag Marie Leidorf GmbH, Berlin, pp. 119-132.

Cooper, L.
2006 Pottery from Tell 'Acharneh, Part I: Typological Considerations and Dating According to Excavated Areas in Upper and Lower Towns, 1998-2002: M. Fortin (ed.), *Tell 'Acharneh 1998-2004. Rapports préliminaires sur les campagnes de fouilles et saison d'études* (Subartu 18), Brepols, Turnhout: pp. 140-190.

Coppini, C.
2018 Tall Bazi: the Middle and the Late Bronze Age Pottery from the Citadels *Nordhang*: A. Otto (ed.), *From Pottery to Chronology: the Middle Euphrates Region in Late Bronze Age Syria. Proceedings of the International Workshop in Mainz (Germany), May 5-7, 2012* (MAAO 1), PeWe-Verlag, Gladbeck, pp. 177-194.

Courtois, J.-C. and Courtois, L.
1978 Corpus céramique de Ras Shamra-Ugarit, niveau historique. Deuxième partie: C.F.A. Schaeffer (ed.), *Ugaritica VII* (BAH 99), Paris, pp. 191-370.

Czichon, R.M. and Werner, P.
2008 *Die bronzezeitliche Keramik* (Augrabungen Tall Mumbaqa-Ekalte IV), Harrassowitz, Wiesbaden.

Degli Esposti, M.
1998 Area E2. I livelli del Ferro I-II. Architettura e materiali: S. Mazzoni (ed.), *Tell Afis (Siria): the 1988-1992 excavations on the Acropolis*, ETS, Pisa, pp. 231-269.

Di Cristina, S.
2014 Woolley's and Lawrence's Expedition House in Karkemish: Preliminary Notes for the History of the Building: N. Marchetti (ed.), *Karkemish. An Ancient Capital on the Euphrates* (OrientLab 2), Ante Quem, Bologna, pp. 66-72.
2019 *Europos. The Archaeology of the Heir of Karkemish During the Hellenistic, Roman and Byzantine Periods on the Basis of the Results of the British Museum and Turco-Italian Excavations*, Unpublished Ph.D. Thesis, University of Bologna, Department of History and Cultures.

Dornemann, R.
1981 The Late Bronze Age Pottery Tradition at Tell Hadidi, Syria, *BASOR* 241, pp. 29-47.

Driesch von den, A.
1976 *A guide to the measurement of animal bones from archaeological sites* (Peabody Museum Bulletin 1), Cambridge MA, Harvard University.

Du Mesnil du Boisson, R.
1928 L'ancienne Qatna, ou les ruines d'el-Mishrifé au N-E de Homs (Emèse). Deuxième campagne de fouille, *Syria* 8, pp. 6-24.

Eidem, J. and Ackermann, R.
1999 The Iron Age Ceramics from Tell Jurn Kabir: A. Hausleiter and E. Reiche (eds.), *Iron Age Pottery in Northern Mesopotamia, Northern Syria and South-Eastern Anatolia: Papers Presented at the Meeting of the International "Table Ronde" at Heidelberg (1995) and Nieborów (1997)*, Ugarit-Verlag, Münster, pp. 309-324.

Einwag, B.
2007 Early Second Millennium Pottery of the Euphrates Region: P. Matthiae et al. (eds.),

From Relative Chronology to Absolute Chronology. The Second Millennium BC in Syria-Palestine, Rome 2001, Bardi Editore, Rome, pp. 195-208.

Einwag, B. and Otto, A.

2018 The Late Bronze Age at Tell Bazi: the Evidence of the Pottery and the Challenges of Radiocarbon Dating: A. Otto (ed.), *From Pottery to Chronology: the Middle Euphrates Region in Late Bronze Age Syria. Proceedings of the International Workshop in Mainz (Germany), May 5-7, 2012* (MAAO 1), PeWe-Verlag, Gladbeck, pp. 149-176.

Ferrari, K.

2014 Karkemish in Età Classica: N. Marchetti (ed.), *Karkemish. An Ancient Capital on the Euphrates* (OrientLab 2), Ante Quem, Bologna, pp. 111-118.

Frey, C.J. and Marean, C.W.

1999 Mammal Remains, in The Iron Age Settlement at 'Ain Dara, Syria. Survey and Sounding: E.C. Stone and P.E. Zimansky (eds.), *The Iron Age Settlement Settlement at 'Ain Dara, Syria: Survey and Soundings* (BAR International Series 786), Archaeopress, Oxford, pp. 123-140.

Fugmann, E.

1958 *Hama: fouilles et recherches de la Fondation Carlsberg, 1931-1938. 2.1: L'architecture des périodes pré-hellénistiques*, Nationalmuset, Copenhagen.

Giacobini, G.

1996 La Ricerca Tafonomica: una chiave per l'interpretazione dei siti preistorici: Associazione Nuova Civiltà delle Macchine, UISPP (eds.), *Oltre la pietra. Modelli e tecnologie per capire la preistoria*, ABACO, Forlì, pp. 197-215.

Giacosa, G. and Zaina, F.

in press Changing Patterns in Earliest Iron Age Material Culture from Karkemish: A. Sollee and V. Van Exel (eds.), *Formation, Organization and Development of Iron Age Societies: A Comparative View*, Austrian Academy of Science, Wien.

Grewe, K.

1998 *Licht am Ende des Tunnels: Planung und Trassierung im antiken Tunnelbau*, P. von Zabern, Mainz am Rhein.

2002 Die Eifelwasserleitung. Aquädukt für dar Römische Köln und Steinbruch für die Romanischen Grossbauten: *In Binos Actus Lumina I. Atti del convegno internazionale di studi su metodologie per lo studio della scienza idraulica antica: (Ravenna, 13-15 maggio 1999)*, Agorà Edizioni, La Spezia, pp. 389-396.

2014 *Aquädukte: Wasser für Roms Städte*, Regionalia Verlag, Rheinbach.

Güterbock, H.G.

1956 The Deeds of Suppiluliuma as Told by His Son Mursili II (Continued), *Journal of Cuneiform Studies* 10, pp. 75-98.

Hodge, T.

2000 Aqueducts: Ö. Wikander (ed.), *Handbook of Ancient Water Technology*, Brill, Leiden-Boston-Köln, pp. 39-65.

Hogarth, D. G.

1914 *Carchemish. Report on the Excavations ar Jerablus on Behalf of the British Museum. Part I. Introductory*, The Trustees of the British Museum, London.

Hawkins, J. D.

1976-1980 Karkamiš, *Reallexikon der Assyriologie und Vorderasiatischen Archäologie*, pp. 425-446.

Hawkins, JD. and Peker, H.
2014 Karkemish in the Iron Age: N. Marchetti (ed.), *Karkemish. An Ancient Capital on the Euphrates* (OrientLab 2), Ante Quem, Bologna, pp. 107-110.

Iamoni, M.
2012 *The Late MBA and LBA Pottery Horizons at Qatna. Innovation and Conservation in the Ceramic Tradition of a Regional Capital and the Implications for Second Millennium Syrian Chronology* (SAQ 2), Forum Editore, Udine.

Kelly-Buccellati, M. and Shelby, W.R.
1977 A Typology of Ceramic Vessels of the Third and Second Millennia from the Two Seasons, *Syro-Mesopotamian Studies* 1.6: 1-56.

Lebeau, M.
1983 *La céramique de l'Age du Fer II-III à Tell Abou Danné et ses rapports avec la céramique contemporaine en Syrie*, Éditions Recherches sur les civilizations, Paris.

Levi, S.
2010 *Dal coccio al vasaio. Manifattura, tecnologia e classificazione della ceramica*, Zanichelli, Bologna.

Losi, A. and Curina, R.
2008 L'acquedotto romano di Brescello e le forme di insediamento nella media pianura reggiana: R. Valloni, M. Bernabò Brea and R. Valloni (ed.), *Archeologia ad alta velocità in Emilia: indagini geologiche e archeologiche lungo il tracciato ferroviario: Atti del Convegno, Parma, 9 giugno 2003*, All'Insegna del Giglio, Borgo San Lorenzo pp. 175-184.

Lyman, R.L.
1994 *Vertebrate Taphonomy*, Cambridge University Press, Cambridge.

Maini E. and Curci A.
forth. Animal economy at Karkemish from the Late Bronze Age to the Iron Age: *Proceedings of the 13th International ASWA Meeting "Archaeozoology of Southwest Asia and Adjacent Areas" (ASWA[AA])*, Lockwood Press, Atlanta (GA).

Manuelli, F.
2010 Foreign Influence and Local Tradition in the Iron Age Pottery Production from Arslantepe. Evidence from the New Excavations of the Neo-Hittite Levels, *Mesopotamia* XLV, pp. 71-84.
2013 Pottery as an Indicator of Changing Interregional Relations in the Upper Euphrates Valley. The Case of the Late Bronze-Iron Age Assemblages from Arslantepe/Malatya: K.A. Yener (ed.), *Across the Border: Late Bronze-Iron Age Relations between Syria and Anatolia. Proceedings of a Symposium held at the Research Center of Anatolian Studies, Koç University, Istanbul May 31–June 1, 2010*, Peeters, Leuven, pp. 373-392.

Marchetti, N.
2012 Karkemish on the Euphrates. Excavating a City's History, *Near Eastern Archaeology* 75.3: 132-147.
2013 The 2011 Joint Turco-Italian Excavations at Karkemish, *Kazı Sonucları Toplantısı* 34.1: 349-363.
2014a (ed.) *Karkemish. An Ancient Capital on the Euphrates* (OrientLab 2), Ante Quem, Bologna.
2014b A Century of Excavations at Karkemish: Filling the Gaps: N. Marchetti (ed.), *Karkemish. An Ancient Capital on the Euphrates* (OrientLab 2), Ante Quem, Bologna, pp. 21-43.

2014c The 2012 Joint Turco-Italian Excavations at Karkemish, *Kazı Sonucları Toplantısı* 35.3: 233-248.
2015a Karkemish. New discoveries in the last Hittite capital, *Current World Archaeology* 6.10. 18-25.
2015b Karkemish - campagne di scavo 2011-2014 della Missione Turco-Italiana, *Arkeoloji ve Sanat* 148, pp. 40-52.
2016 The 2014 Joint Turco-Italian Excavations at Karkemish, *Kazı Sonucları Toplantısı* 37.3: 363-380.
2018 Area G and the Urban History of the Inner Town of Karkemish: F. Zaina (ed.), *Excavation at Karkemish I. The Stratigraphic Sequence of Area G in the Inner Town* (OrietLab Series Maior 3), Ante Quem, Bologna, pp. 362-366.
forth. (ed.) *Excavations at Karkemish III. The Neo Assyrian Well in Area C* (OLSM), AnteQuem, Bologna.

Mazzoni, S.
1987 Lo scavo dell'edificio del settore D, *Egitto e Vicino Oriente* 10, pp. 25-83.
1992 L'età del Ferro a Tell Mardikh e nella sua regione: S. Mazzoni (ed.), *Tell Afis e l'età del Ferro* (Seminari di Orientalistica 2), Giardini Editore, Pisa, pp. 99-115.
1998 Materials and Chronology: S.M. Cecchini and S. Mazzoni (eds.), *Tell Afis (Siria). Scavi sull'acropoli 1988-1992*, ETS, Pisa, pp. 9-100.
2002 Late Bronze Age Pottery Production in Northwestern Central Syria: M. al-Maqsissi, V. Matoïan and C. Nicolle (eds.), *Céramique de l'Âge du Bronze en Syrie, I. La Syrie du Sud et la vallée de l'Orontes* (BAH 61), Presses de l'Ifpo, Beyrouth, pp. 129-142.

McClellan, T.
1984-1985 El-Qitar: Second Season of Excavations, 1983-1984, *Abr Nahrain* 23, pp. 39-72.
1986 El-Qitar: Third Season of Excavations, 1984-1985, *Abr Nahrain* 24, pp. 82-106.
2007 Late Bronze Pottery from the Upper Euphrates: M. al-Maqdissi, V. Matoïan et C. Nicolle (eds.), *Céramique de l'âge du Bronze en Syrie, II. L'Euphrate et la région de Jézireh* Presses de l'Ifpo, Beyrouth, pp. 53-75.

Metzeger, M.
1993 *Kamid el-Loz 8. Die Spätbronzezeitlichen Tempelanlagen. Die Kleinfunde*. Tafeln (SBA 40), Habelt, Bonn.

Müller, U.
1999 Die eisenzeitliche Keramik des Lidar Höyük: A. Hausleiter and E. Reiche (eds.), *Iron Age Pottery in Northern Mesopotamia, Northern Syria and South-Eastern Anatolia: Papers Presented at the Meetings of the International "Table Ronde" at Heidelberg (1995) and Nieboróv (1997)*, Ugarit-Verlag, Münster, pp. 403-434.

Mullins, R.A.
2010 A Comparative Analysis of the Alalakh 2003-4 Season Pottery with Woolley's levels: K.A. Yener (ed.), *Tell Atchana, Ancient Alalakh Volume 1. The 2003-2004 Excavation Seasons (Amuq Valley Regional Projects. Excavations in the Plain of Antioch. Excavation in the Plain of Antioch)*, Koç Üniversitesi Yayinlari, Istanbul, pp. 51-66.

Nigro, L.
2002 The Middle Bronze Age Pottery Horizon of Northern Inner Syria on the basis of the Stratified Assemblages of Ebla and Hama: M. al-Maqdissi, V. Matoian and C. Nicolle (eds.), *Céramique de l'Age du Bronze en Syrie I. La Syrie du Sud et la vallé de l'Oronte* (BAH 161), Presses de l'Ifpo, Beirut, pp. 97-128.

Oggiano, I.
1997 The Pottery of Iron Age II at Tell Afis, *Contributi della Scuola di Specializzazione in Archeologia dell'Università degli Studi di Pisa* 1, pp. 185–211.

Otto, A.
2014 The Late Bronze Age Pottery of the 'Weststadt' of Tell Bazi (North Syria): M. Luciani and A. Hausleiter (eds.), *Recent Trends in the Study of Late Bronze Age Ceramics in Syro-Mesopotamia and Neighbouring Regions. Proceedings of the International Workshop in Berlin, 2-5 November 2006*, VML Verlag Marie Leidorf GmbH, Berlin, pp. 85-118.

Panayotov, S. V.
2014 George Smith's Identification of Karkemish: From the Account of His Assistant Mathewson: N. Marchetti (ed.), *Karkemish. An Ancient Capital on the Euphrates* (OrientLab 2), Ante Quem, Bologna, pp. 44-51.

Paoletti, P.
2011 Die keramischen Funde der Königsgruft von Qaṭna: P. Pfälzner (ed.), *Interdisziplinäre Untersuchungen zur Königsgruft in Qatna* (Qatna Studien 5), Harrassowitz, Wiesbaden, pp. 275-292.

Peker, H.
2017 Some Remarks on the Imperial Hittite Sealings from the 2017 Excavations at Karkemish*, Nouvelles Assyriologiques Bréves et Utilitaires* 2017/4, pp. 178-179.

Peltenburg, E.
2007 (ed.) *Euphrates River Valley Settlement. The Carchemish sector in the third millennium BC* (Levant Supplementary Series 5), Oxbow Books, Oxford.
2010 The Emergence of Carchemish as a Major Polity: Contributions from the Land of Carchemish Project (Syria): P. Matthiae, F. Pinnock, L. Nigro and N. Marchetti (eds.), *Proceedings of the 6th International Congress on the Archaeology of the Ancient Near East*, Vol. 2, Harrassowitz, Wiesbaden, 539–552.

Penner, S.
2006 *Kamid el-Loz 19. Die Keramik der Spätbronzezeit. Tempelanlagen T3 bis T1, Palastanlagen P5 bis P1/2, Königsgrab ('Schatzhaus')' und 'Königliche Werkstatt'* (SBA 63), Habelt, Bonn.

Pfälzner, P.
2007 The Late Bronze Age CeramicTradition on the Syrian Jezirah: M. al-Maqdissi, V. Matoïan, and C. Nicolle (eds.), *Céramique de l'âge du Bronze en Syrie II*, Presses de l'Ifpo, Beyrouth, pp. 232-291.

Pizzimenti, S.
2018 The Middle and Late Bronze Age: F. Zaina (ed.), *Excavation at Karkemish I. The Stratigraphic Sequence of Area G in the Inner Town* (OrietLab Series Maior 3), Ante Quem, Bologna, pp. 12-114.

Pizzimenti, S. and Scazzosi, G.
2017 The Urban Structure of Kakremish in the Late Bronze Age and the Settlements of the Middle Euphrates Valley, *Anatolica* XLIII, 157-172.

Pizzimenti, S. and Zaina, F.
2016 The Iron Age at Karkemish between Tradition and Innovation. The Case Study of the Pottery Assemblage from Area C: R. A. Stucky, O. Kaelin and H.-P. Mathys (eds.),

Proceedings of the 9th International Congress on the Archaeology of the Ancient Near East (Basel, 9–13 June 2014), Volume 3. Reports, Harrassowitz Verlag, Wiesbaden, pp. 361-376.

Rice, P.
1987 *Pottery Analysis. A Sourcebook*, University Press, Chicago.

Riera, I.
1994 Gli acquedotti: G. Bodon, I. Riera and P. Zanovello, *Utilitas Necessaria. Sistemi idraulici nell'Italia romana*, Progetto Quarta Dimensione, Milano, pp. 165-295.
2016 Asolo/Acelum: l'acquedotto 'La Bot': E. Tamburrino (ed.), *Aquam Ducere I - Proceedings of the first International Summer School "Hydraulic systems in the Roman world"*, pp. 79-100.

Riis, P.J. and Buhl, M.-L.
1990 *Hama: fouilles et recherches de la Fondation Carlsberg, 1931-1938. II.2. Les objects de la période Syro-Hittite (âge du Fer)*, Nationalmuseet, Copenhague.

Sakal, F.
2018 LBA Emar Revisited: the Stratified LBA Pottery from the Syrian-German Excavations: A. Otto (ed.), *From Pottery to Chronology: the Middle Euphrates Region in Late Bronze Age Syria. Proceedings of the International Workshop in Mainz (Germany), May 5-7, 2012* (MAAO 1), PeWe-Verlag, Gladbeck, pp. 61-88.

Schaeffer, C.F.A. and Chenet, M.G.
1949 Corpus Céramique de Ras Shamra: C.F.A Schaeffer (ed.) *Ugaritica II* (BAH 47), Presses de l'Ifpo, pp. 1-150.

Schmid, E.
1972 *Atlas of animal bones. For Prehistorians, Archaeologist and Quaternary Geologists*, Elsevier Publishing Company, Amsterdam – London – New York.

Schneider, E.
1999 Die eisenzeitliche Keramik von Tell Sheikh Hassan (Syrien): A. Hausleiter and E. Reiche (eds.), *Iron Age Pottery in Northern Mesopotamia, Northern Syria and South-Eastern Anatolia: Paper Presented at the Meeting of the International "Table Ronde" at Heidelberg (1995) and Nieboróv (1997)*, Ugarit-Verlag, Münster, pp. 325-346.

Smith, F.
1988 The Period VIII Pottery: M.N. Van Loon (ed.), *Hammam et-Turkman I. Report of the University of Amsterdam's 1981-1982 Excavations in Syria*, Nederlands historisch-archaeologisch Insituut, Istanbul.

Stone, E.C. and Zimansky, P.E.
1999 *The Iron Age Settlement at 'Ain Dara, Syria: Survey and Soundings* (BAR International Series 786), Archaeopress, Oxford.

Tomè, C. and Nishiyama, S.
2005 Animals in the Iron Age and Persian Period: Preliminary Report of Faunal Remains from Tell Mastuma, Northwest Syria, *Bulletin of the Ancient Orient Museum* XXV, pp. 87-116.

Tölle-Kastenbein, R.
1993 *Archeologia dell'acqua. La cultura idraulica nel mondo classico*, Longanesi & C., Milano, (Trad. di Antike Wasserkultur 1990).

Tranz, F.
2017 Die Trierer Ruwerleitung. Ein Uberblick: G. Wiplinger and W. Letzner (eds.), *Wasserwesen zur Zeit des Frontinus. Bauwerke - Technick - Kultur. Festschrift 40 Jahre*

Frontinus-Gesellschaft, Peeters, Leuven-Paris-Bristol, pp. 71-78.

Ventura Villanueva, A.
1996 *El abastecimiento de agua a la Córdoba romana. II. Acueductos, ciclo de distribución y urbanismo*, Universidad de Cordoba, Córdoba.

Venturi, S.
1998 The Late Bronze II and early Iron Age I levels: S. Mazzoni (ed.), *Tell Afis (Siria): the 1988-1992 excavations on the Acropolis*, ETS, Pisa, pp. 123-199.
2007 *La Siria nell'età delle trasformazioni (13°-10° sec. a.C.): nuovi contributi dallo scavo di Tell Afis,* CLUEB, Bologna.
2010 Cultural Breakdown or Evolution? The Impact of Change in 12th Century BC Tell Afis: F. Venturi (ed.), *Society in Transition. Evolutionary Processes in the Northern Levant between Late Bronze Age II and Early Iron Age* (Studi e Testi Orientali 9), CLUEB, Bologna, pp. 1-27.
2014 The Late Bronze Age II Pottery Production in Tell Afis: M. Luciani and A. Hausleiter (eds.), *Recent Trends in the Study of Late Bronze Age Ceramics in Syro- Mesopotamia and Neighbouring Regions. Proceedings of the International Workshop in Berlin, 2-5 November 2006*, VML Verlag Marie Leidorf GmbH, Berlin, pp. 133-156.

Wilkinson, T. J.
2016 The landscapes of Carchemish: T.J. Wilkinson, E. Peltenburg and E. Barbanes Wilkinson (eds.), *Carchemish in Context. The Land of Carchemish Project, 2006-2010, Themes from the Ancient Near East BANEA Publication Series*, Vol. 4, Oxbow Books, Oxford & Philadelphia.

Wilkinson, T. J., Peltenburg, E. and Barbanes Wilkinson, E.
2016 (eds.) *Carchemish in Context. The Land of Carchemish Project, 2006-2010 (Themes from the Ancient Near East BANEA Publication Series*, Vol. 4, Oxbow Books, Oxford & Philadelphia.

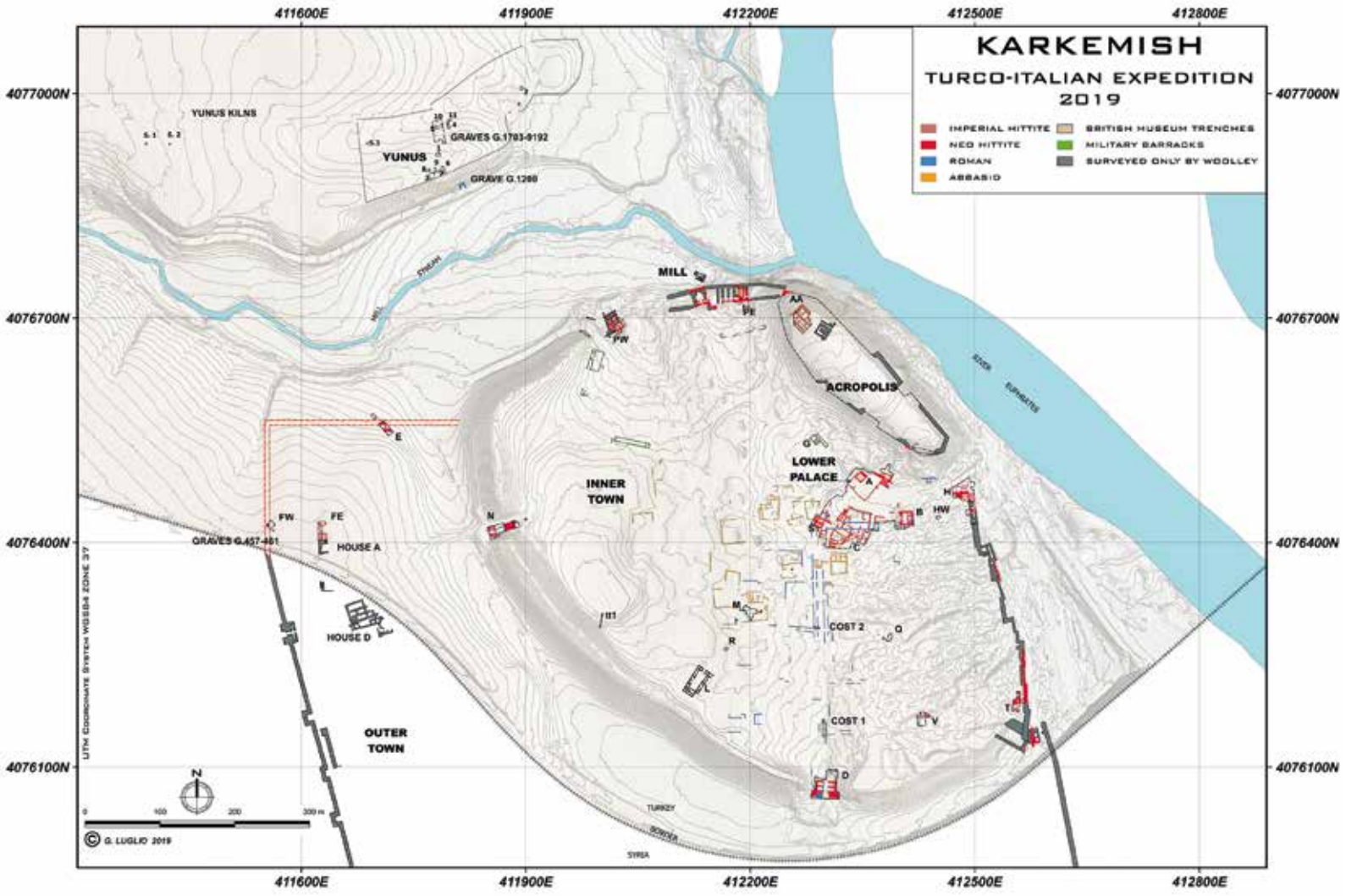
Woolley, C. L.
1921 *Carchemish. Report on the Excavations at Jerablus on Behalf of the British Museum. Part II. The Town Defences*, The Trustees of the British Museum, London.
1975 *Spadework, Adventures in Archaeology*, White Lion Publishers Limited, London-New York-Sydney-Toronto.

Woolley, C. L. and Barnett, R. D.
1952 *Carchemish. Report on the Excavations at Jerablus on Behalf of the British Museum. Part III. The Excavations in the Inner Town and the Hittite Inscriptions*, The Trustees of the British Museum, London.

Zaina, F.
2013 A Functional and Morphological Analysis of the Iron Age III Pottery Assemblage at Taşlı Geçit Höyük: L. Bombardieri, A. D'Agostino, G. Guarducci, V. Orsi and S. Valentini (eds.), *16 SOMA Florence - Identity and Connectivity*, Archaeopress, Oxford, pp. 5-75.
2018 The Iron Age: F. Zaina (ed.), *Excavations at Karkemish I. The Stratigraphic Sequence of Area G in the Inner Town* (Orientlab Series Maior 3), Ante Quem, Bologna, pp. 116-139.

Zanfini, M.
2014 Ortofoto aerea della Inner Town di Karkemish (campagna 2011): N. Marchetti (ed.), *Karkemish. An Ancient Capital on the Euphrates* (OrientLab 2), Ante Quem, Bologna, pp. 162-174.

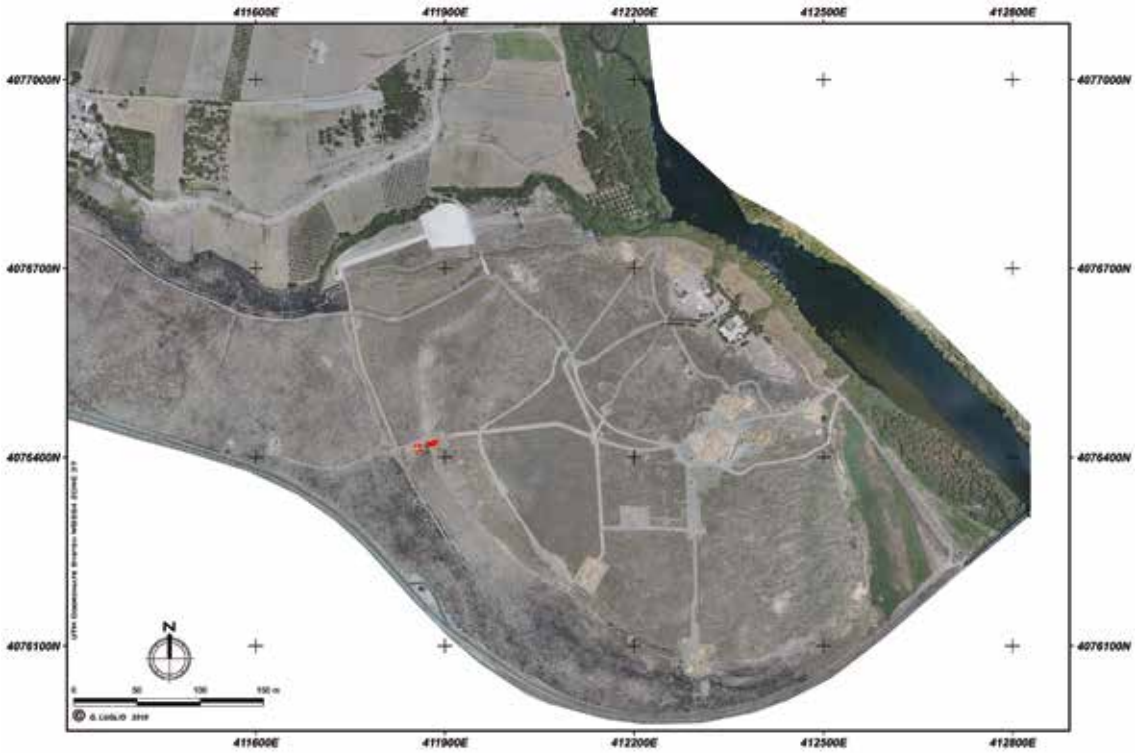
PLATES



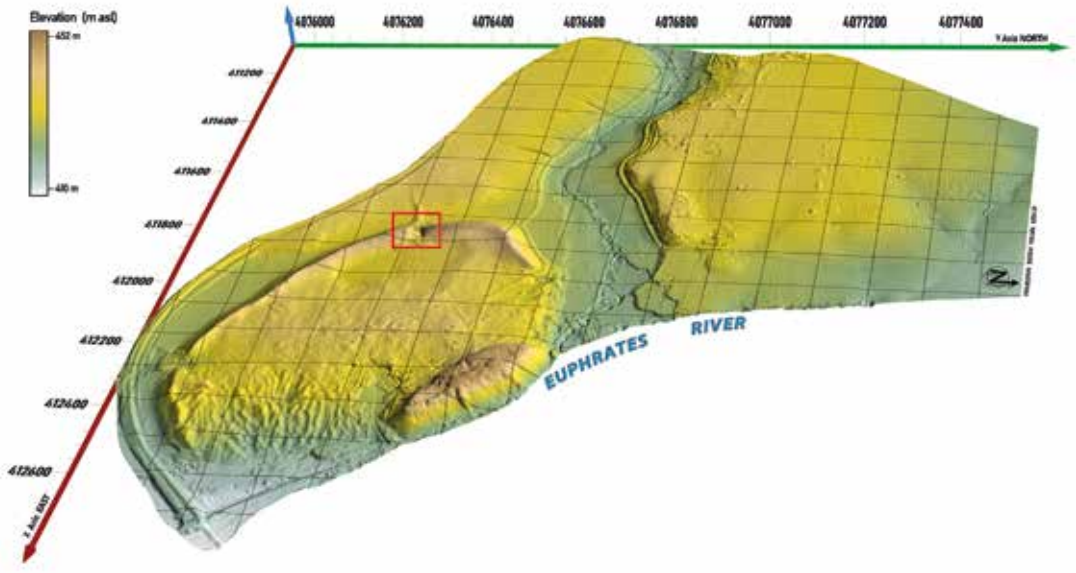
Topographic map of Karkemish with the excavation areas.

Pl. 1

Pl. II



1. Inner West Gate - Area N located in red on the orthophoto of Karkemish (2017).



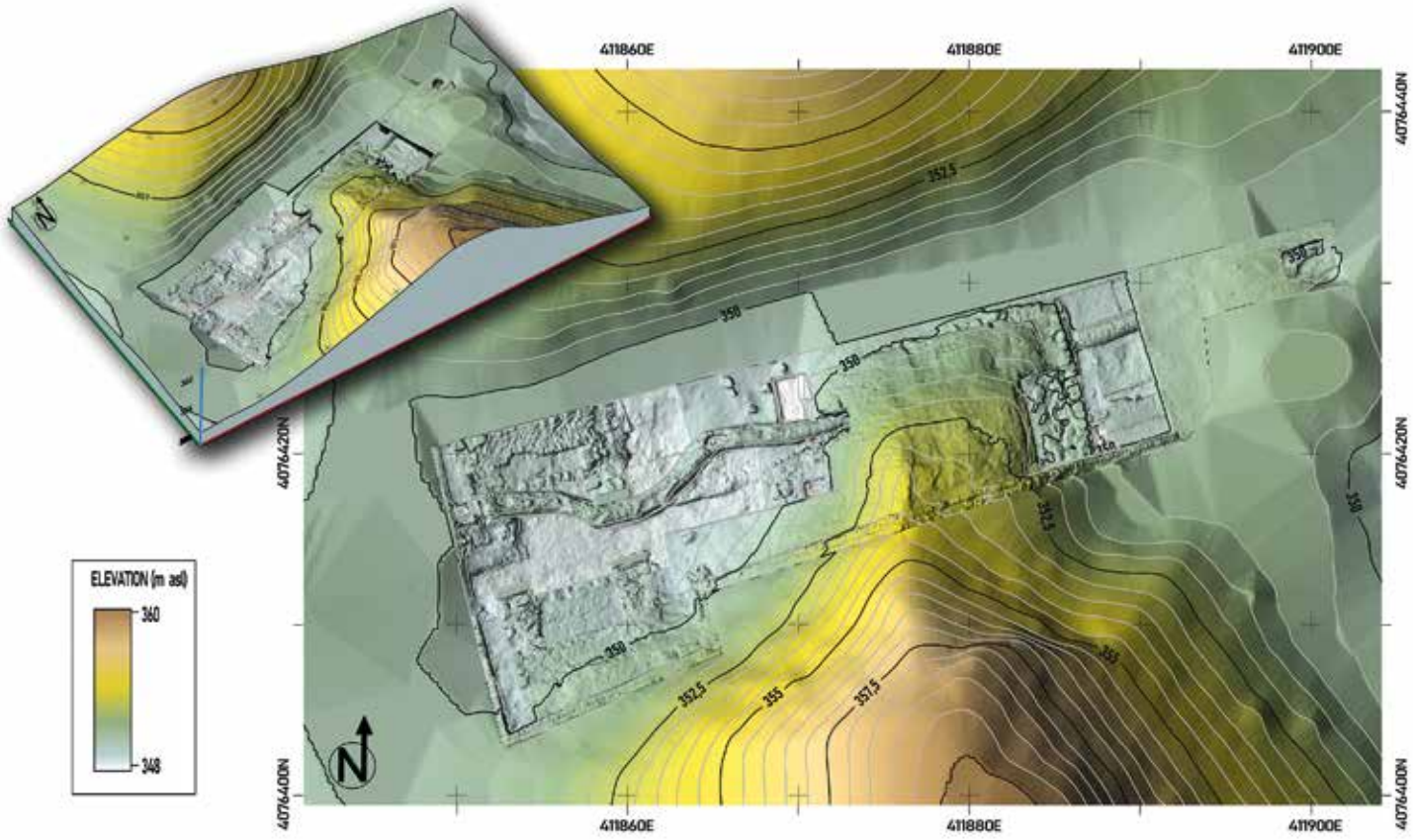
2. Inner West Gate - Area N seen from West on the Digital Elevation Model of Karkemish.

1. The inner rampart with the West Gate – Area N and the South Gate, view from North in the Inner Town.

2. The Inner West Gate – Area N, view from East in the Inner Town.

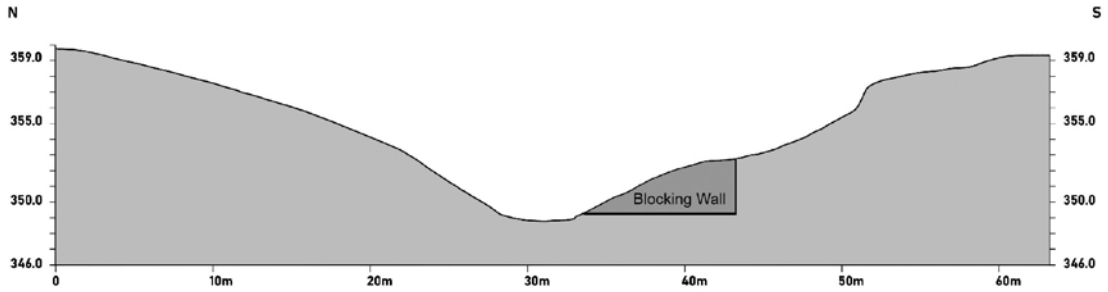
Pl. IV

"View of Jerabis looking towards Euphrates from South-West?"
(sketch by G. Smith, in his 1876 notebook, by courtesy of the British Library).

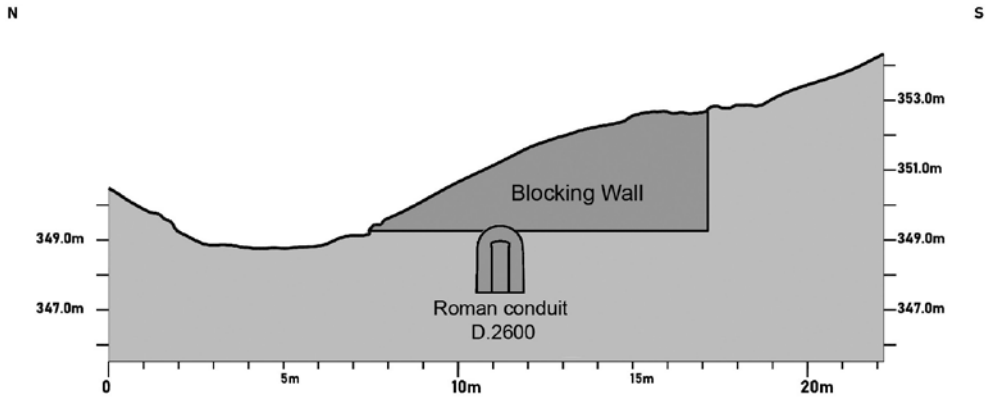


Digital Elevation Model of the Inner West Gate - Area N at the end of 2014 season.

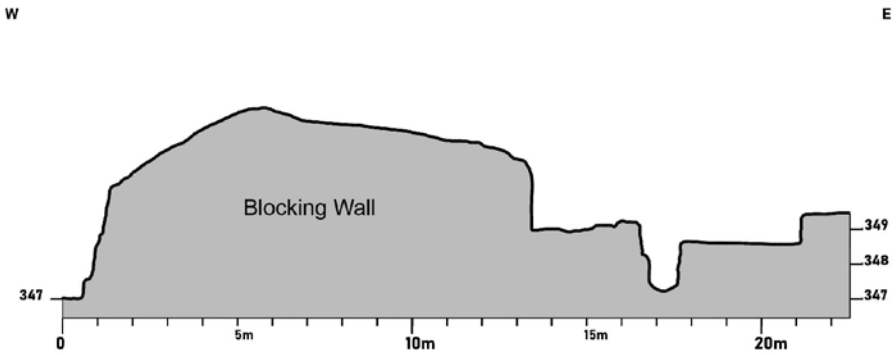
Pl. VI



1. North-South profile of the ramparts and the Inner West Gate - Area N (data source: DEM).

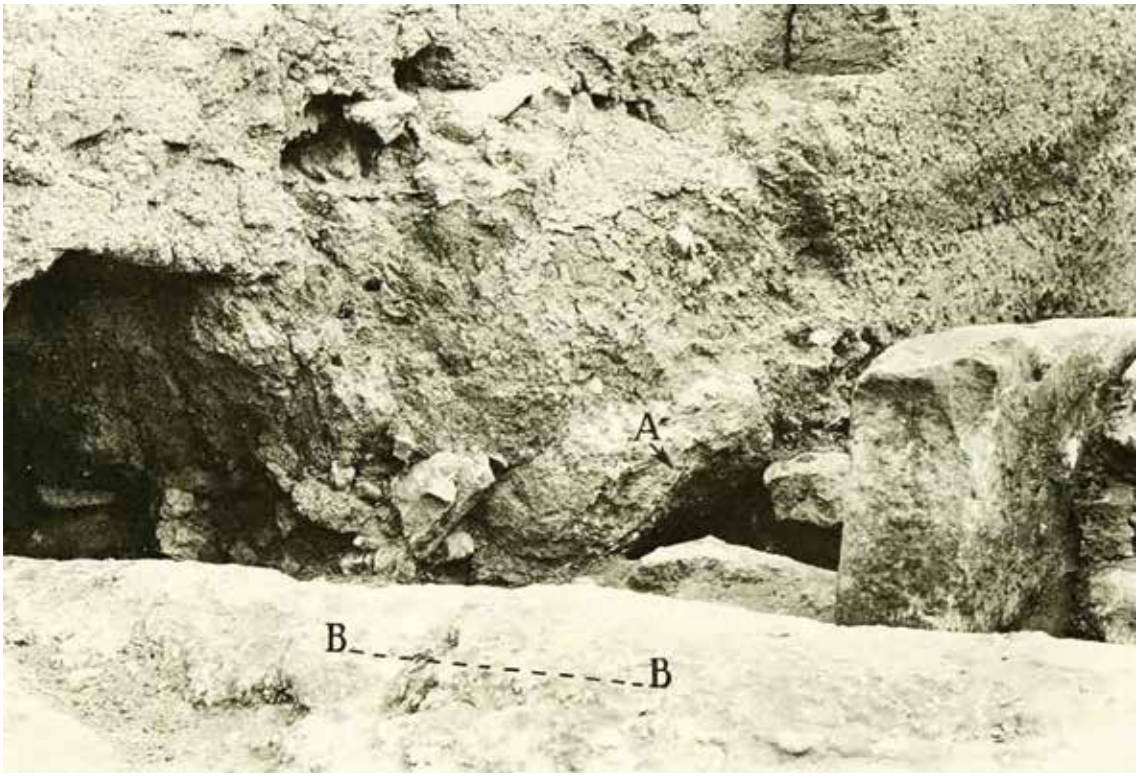


2. North-South profile of the blocking wall and Roman conduit (data source: DEM).



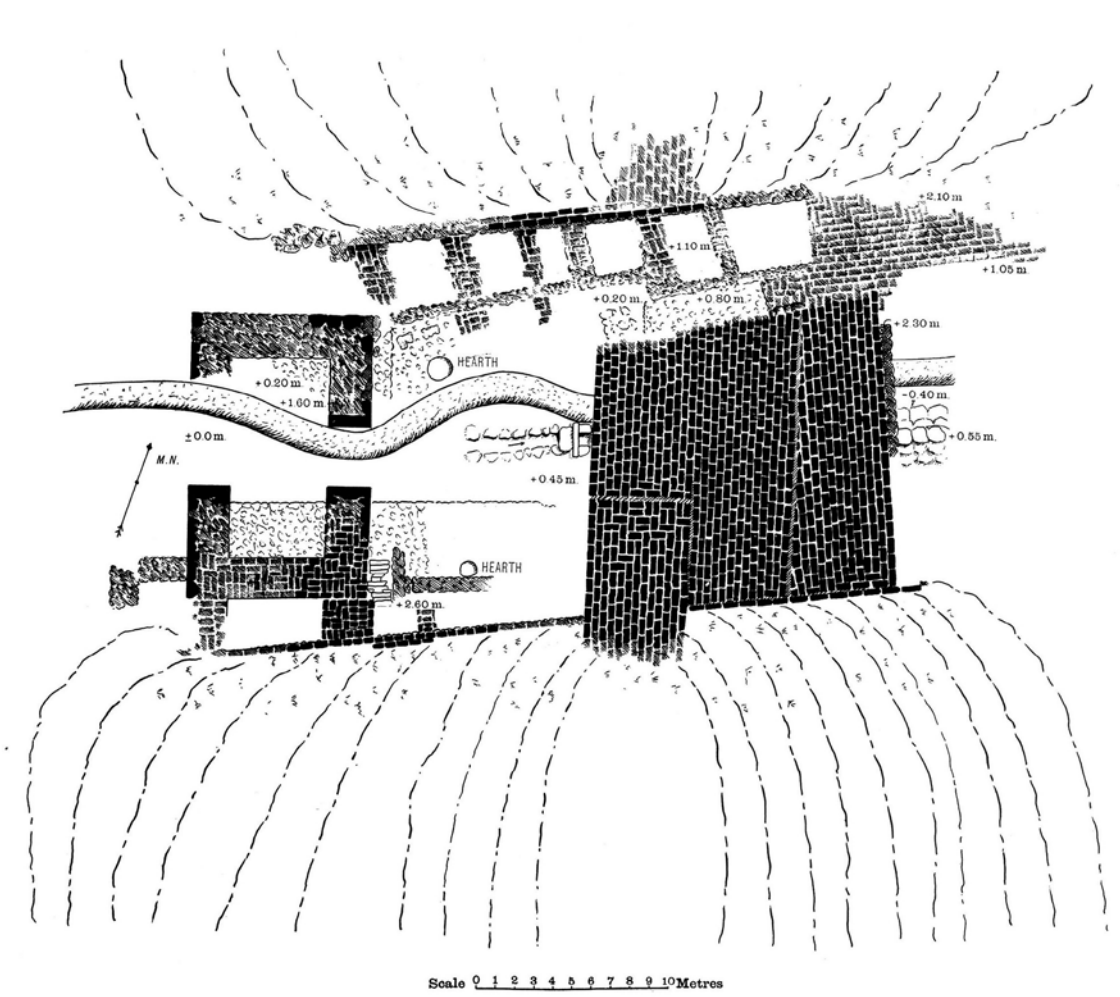
3. West-East profile of the blocking wall after excavation (Phase 8, data source: DEM).

1. “The staircase in the south recess of the West Gate” (from Woolley 1921: fig. 15).

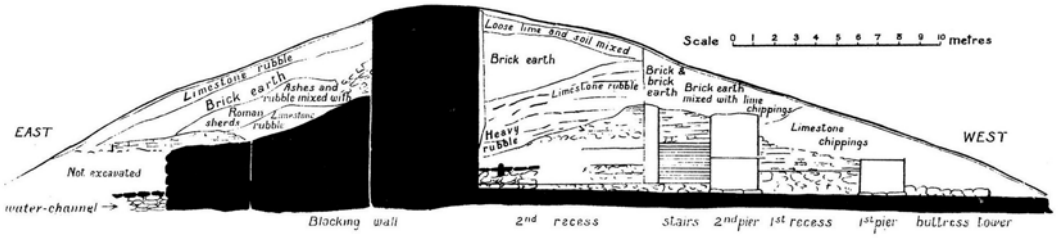


2. “The blocking-wall in the West Gate”: A - The Iron I conduit D.2636; B - The Roman water conduit D.2600 (from Woolley 1921: fig. 16).

Pl. VIII



1. “Plan of the ruins as found” (from Woolley 1921: pl.10a).



2. “Cross section through the gateway” (from Woolley 1921: pl.10b).

1. "The West Gate of the Inner Town" at the end of the British excavation, from East (from Woolley 1921: pl.11a)

2. The West Gate of the Inner Town at the end of the Turco-Italian excavation, from East.

1. The West Gate seen from the top of the blocking wall (from North-West) in the British excavations (unpublished picture in the Carchemish Second Album, p. 94 no. 921, neg. no. 033696, courtesy of the Trustees of the British Museum).

2. A detail of the Roman conduit D.2600 entering the blocking-wall and the Iron I conduit D.2636, from South-East (unpublished picture in the Carchemish First Album, p. 253 no. 531, neg. no. 033498, courtesy of the Trustees of the British Museum).

1. The Inner West Gate - Area N at the very beginning of the Turco-Italian excavations in August 2013 (view from North).

2. Bedrock F.4903 in the sounding no. 4 between the LB I northern tower and the Roman conduit (from North).

Pl. XII

1. The Middle Bronze Age rampart W.2618 (phase 11) behind the southern tower (from North-West).

2. The stone foundation W.2624 of the Middle Bronze Age retaining wall in the northern rampart (phase 11).

1. The Late Bronze Age I gateway (phase 10, view from the top of the blocking wall towards West).

2. The Late Bronze I stone-made staircase L.4922 (phase 10) East of the northern tower with Middle Bronze Age stone wall W.2624 in background (from South-East).

1. The Late Bronze Age I gateway and the earthen staircase L.2609, indicated with the black arrow (phase 10, view from North).

2. The Late Bronze Age I southern tower (phase 10, from North-West).

1. The Late Bronze Age I southern tower: detail of the cobbled first recess L.2605 and the mud-brick wall W.2606 in the background (phase 10, from North).

2. Late Bronze Age I southern tower (phase 10): the eastern orthostat before the restoration process.

1. Late Bronze Age I southern tower (phase 10): the eastern orthostat during the restoration process.

2. Late Bronze Age I southern tower (phase 10): the eastern orthostat during the restoration process.

1. Late Bronze Age I gateway: the entrance and the pebble floor L.2652-L.2657 (phase 10, from South-East).

2. Late Bronze Age I gateway: the pebble floor L.2652 with the door blocking-stone W.4938 and the door socket L.4939 (phase 10, from North).

Pl. XVIII

1. The cut into the eastern side of the IA I blocking wall (phase 4) did not reveal any evidence of the second LB I (phase 10) gateway theorized by Woolley (from East).

2. The abandonment levels F.4915 and F.4923 (phase 9, from North-East).

1. The Late Bronze Age II "early blocking wall" W.2693 and its stone foundation W.2699 in sounding no. 3 (phase 8, from West).

2. The Late Bronze Age II "early blocking wall" W.2697 and its stone foundation W.2698 in sounding no. 1 (phase 8, from West).

Pl. XX

1. The Late Bronze Age II “early blocking wall” W.2666 (phase 8, from North-East).

2. The Late Bronze Age II “early blocking wall” W.2666 (phase 8, from South-West).

1. The stone foundation W.2672 of the LB II "early blocking wall" (phase 8) at the bottom of sounding no. 2 with the double stone foundation W.2655-W.4901 of the of the IA I blocking wall (phase 4) in the foreground.

2. The Late Bronze Age II "early blocking wall" (phase 8, from South-West) damaged by the construction of the Roman conduit.

Pl. XXII

1. The Iron Age I stone-lined drain D.4934 (phase 7, from North-East).

2. The Iron Age I stone-lined drain D.4934 (phase 7, from North-West).

1. The transitional phase 6 between the Late Bronze Age I floor (phase 10) and the conduit D.2636 (phase 5, from West).

2. The Iron Age I conduit D.2636 (phase 5, from West).

Pl. XXIV

1. The Iron Age I conduit D.2636 (phase 5, from South).

2. General view of the Iron Age I blocking wall (phase 4) from the top of the northern rampart (from North).

1. The Iron Age I blocking wall (phase 4, from North) before excavation.

2. The Iron Age I blocking wall (phase 4) at the beginning of excavation (from North).

1. Construction technique of the Iron Age I blocking wall (phase 4, from East).

2. Detail of the southern section, eastern side of the blocking wall: the interspace F.2651 and the wall W.2628 (phase 4, from South).

1. Detail of the eastern section of the blocking wall: the interspace F.2653 and the wall W.2683 (phase 4, from East).

2. Detail of the eastern section of the blocking wall: the interspace F.4911 between walls W.2683 and W.2684 (phase 4, from South-East).

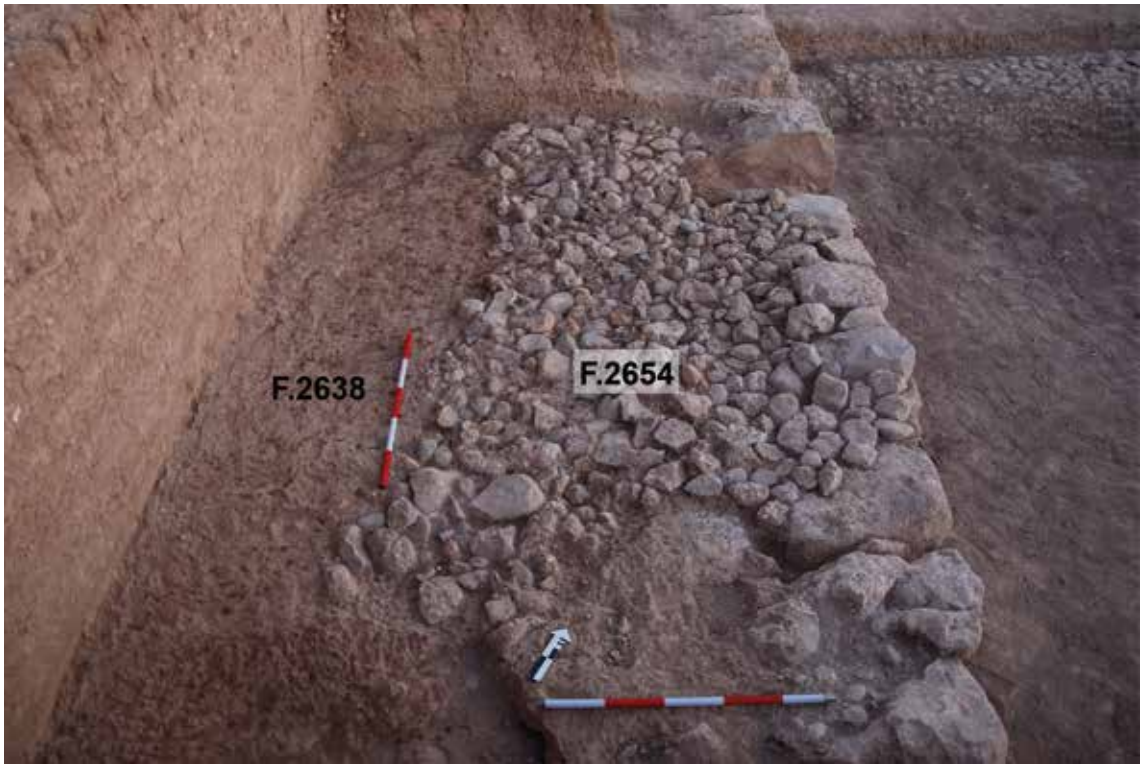
1. Detail of the mud-bricks in the central section W.2683 (phase 4).

2. The central section W.2683 of the blocking wall (phase 4, from East).

1. Detail of the eastern section W.2628 of the blocking wall during the excavation (phase 4, from East).

2. Double stone foundation W.2655-W.4901 of the eastern section of the Iron Age I blocking wall (phase 4).

1. The cut P.2674 (black arrows) into the "early blocking wall" W.2666 (phase 9) for the stone foundation W.4901 of the blocking wall (phase 4, from South).



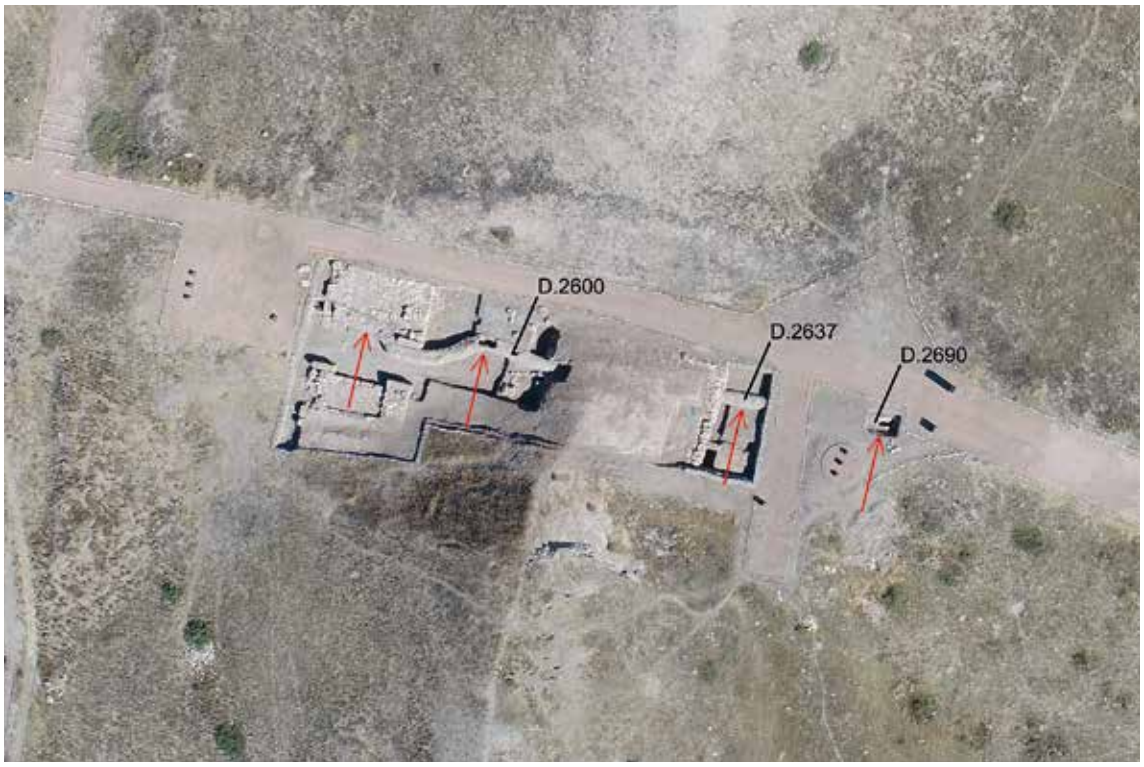
2. Stones F.2654 and mud F.2638 used in the preparation for the eastern section of the blocking wall (phase 4, from South-East).

1. Pebble-made levelling layer F.2654 and stone foundation W.2655 used in the eastern section of the Blocking Wall (phase 4, from East).

2. Stones of different size used in the foundation W.2626 of the central and western sections of the blocking wall (phase 4, from North).

1. The massive and well-made architecture on the eastern side of the Iron Age I blocking wall (phase 4, from East).

2. The rough technique employed on the western side of the Iron Age I blocking wall (phase 4, from West).

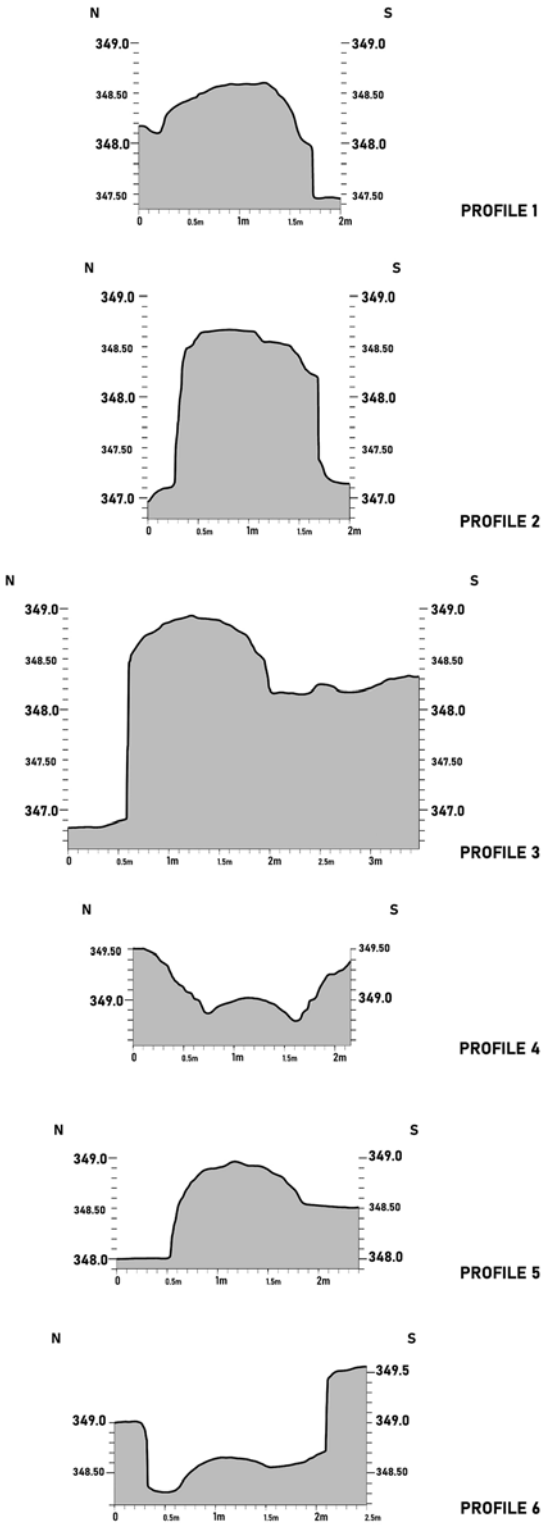


1. Aerial view of the Inner West Gate with red arrow indicating the Roman water conduit (phase 3). Drone view 2017.

2. The Roman water conduit D.2600 (phase 3, from East) West of the blocking wall in 2013.

1. Conservation work of the Roman water conduit (phase 3).

2. The Roman water conduit (phase 3) on a digital elevation model with the position of the outer profiles of Pl. XXXV.



Outer North-South profiles of the Roman water conduit (phase 3), see Pl. XXXIV.2.

1. Outer structure of the Roman water conduit D.2600 in its western section (phase 3, from North-West).

2. The Roman water conduit D.2637 (phase 3) at its exit from the blocking wall, from North-West (red arrow indicates a change in the construction technique).

1. The Roman water conduit D.2690 in sounding no. 5 (phase 3, from South-West).

2. Detail of the incised outer plaster of the Roman water conduit D.2690 in sounding no. 5 (phase3).

Pl. XXXVIII

1. The Roman water conduit (phase 3, from West) entering through the blocking wall (to the left).

2. Inner structure of the Roman water conduit D.2600c (phase 3, from North-West).

1 Detail of the inner waterproofing of the Roman water conduit D.2600c (phase 3).

2. Detail of the bottom of the Roman water conduit D.2690a (phase 3).

Pl. XL

1. Remains of the upper part F.2616 (phase 2) of the Roman water conduit D.2600a lying to the South of it (phase 3, from South-East).

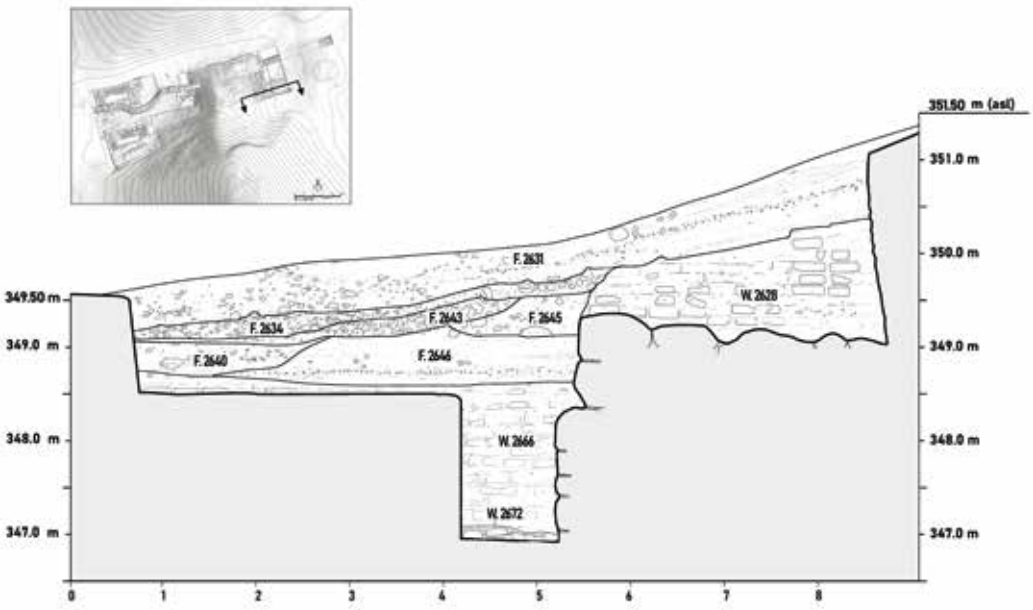
2. Evidence of modern activities (phase 1) East of the blocking wall (from North).

1. Collapsed stones and natural accumulations in the Modern period (phase 1) West of the blocking wall (from South-West).

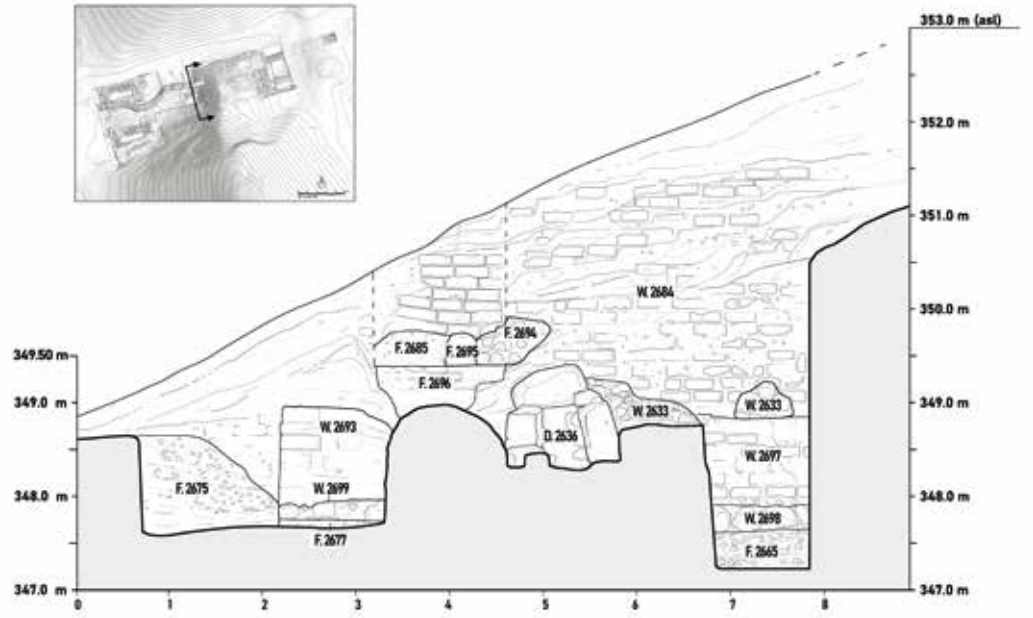
2. The Inner West gate - Area N and the ramparts from South-West (2017).

1. The construction of the blocking wall in the late Iron IA I closed off the Inner West Gate (view from the top of the northern rampart towards South).

2. The massive architecture of the inner side of the blocking wall with the passage likely opened in the Islamic period on the right (from East).



1. Section South on the eastern side of the blocking wall.



2. Section East into the western side of the blocking wall.

1. Pottery from phase 8, Late Bronze II (W.2666, KH.13.P.836).

2. Pottery from phase 8, Late Bronze II (F.2678, KH.13.P.844).

Pl. XLV

1. Pottery from phase 6, Iron Age I (F.2620, KH.13.P.849).

2. Pottery from phase 4, Iron Age I (W.2628, KH.13.P.817).

1. Pottery from phase 4, Iron Age I (F.2658, KH.13.P.822).

2. Pottery from phase 4, Iron Age I (F.2658, KH.13.P.825).

Pl. XLVII

1. KH.14.O.1256 (phase 9)

2. KH.13.O.1167 (phase 8)

3. KH.13.O.1245 (phase 6)

4. KH.13.O.1005 (phase 4)

5. KH.13.O.1248 (phase 4)

1. KH.13.O.1025 (phase 4)

2. KH.13.O.1026 (phase 4)

3. KH.13.O.1028 (phase 4)

4. KH.14.O.998 (phase 4)

Pl. XLIX

1. KH.13.O.1082 (phase 4)

2. KH.13.O.1019 (phase 4)

3. KH.13.O.1022 (phase 4)

4. KH.13.O.1024 (phase 4)

1. KH.13.O.436 (phase 2)

2. KH.13.O.620 (phase 2)

3. KH.13.O.947 (phase 2)

4. KH.14.O.997 (phase 2)

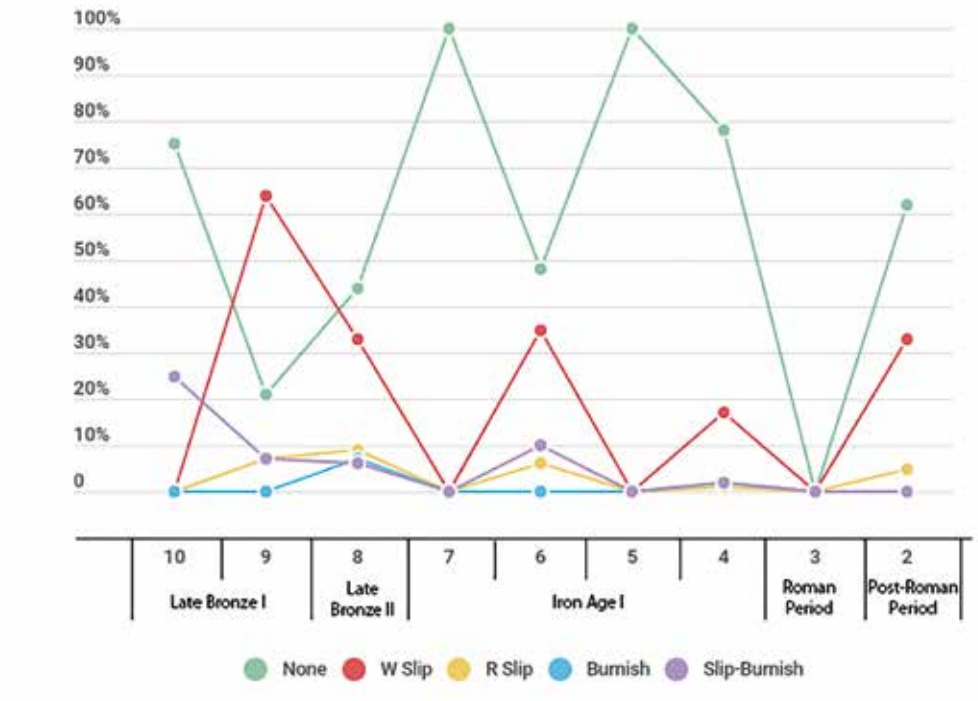
Pl. LI

1. KH.14.O.1217 (phase 1)

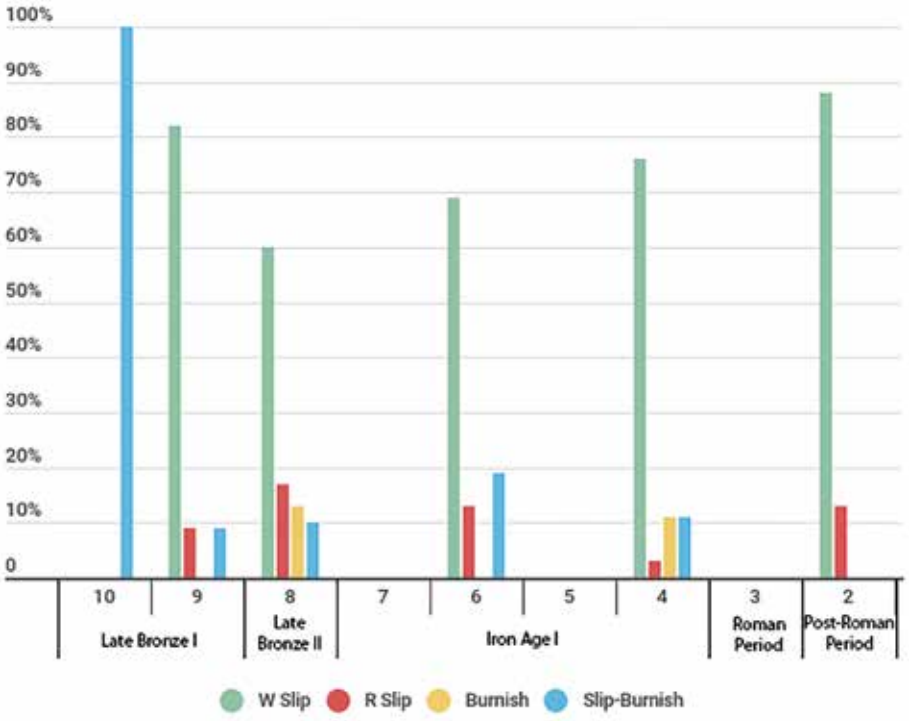
2. KH.13.O.1154 (phase 1)

3. KH.13.O.874 (phase 1)

4. KH.14.O.1132 (phase 1)

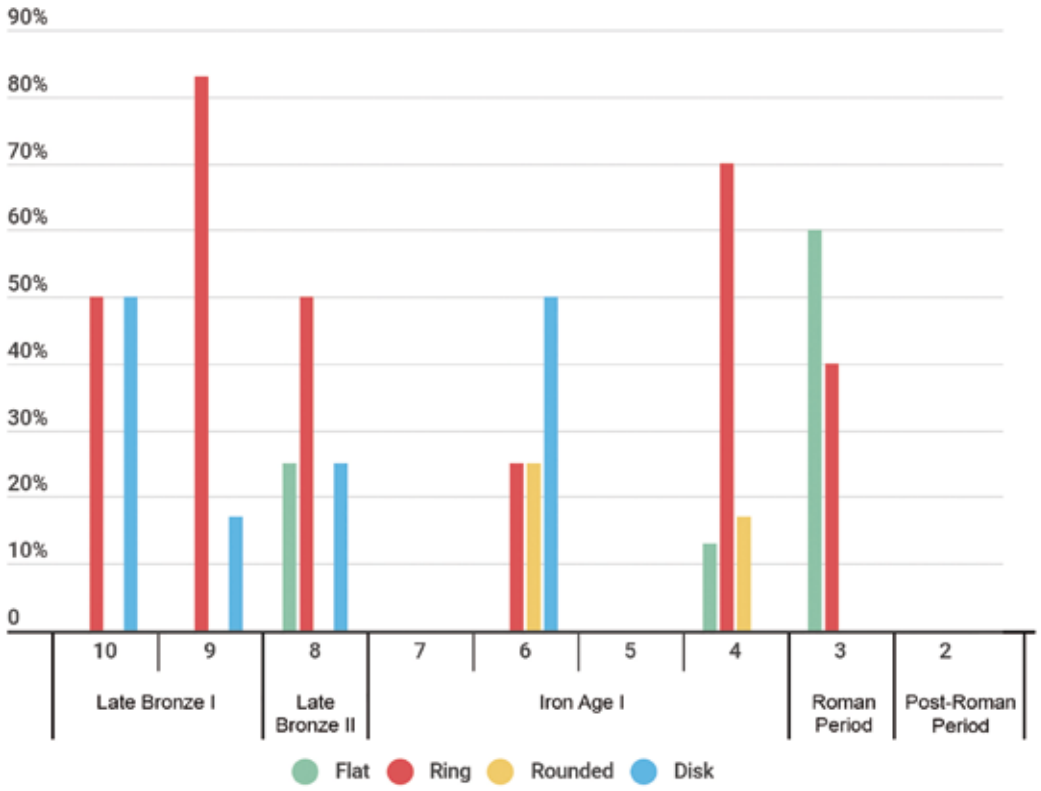


1. Quantitative development of pottery surface treatments including sherds without treatments.

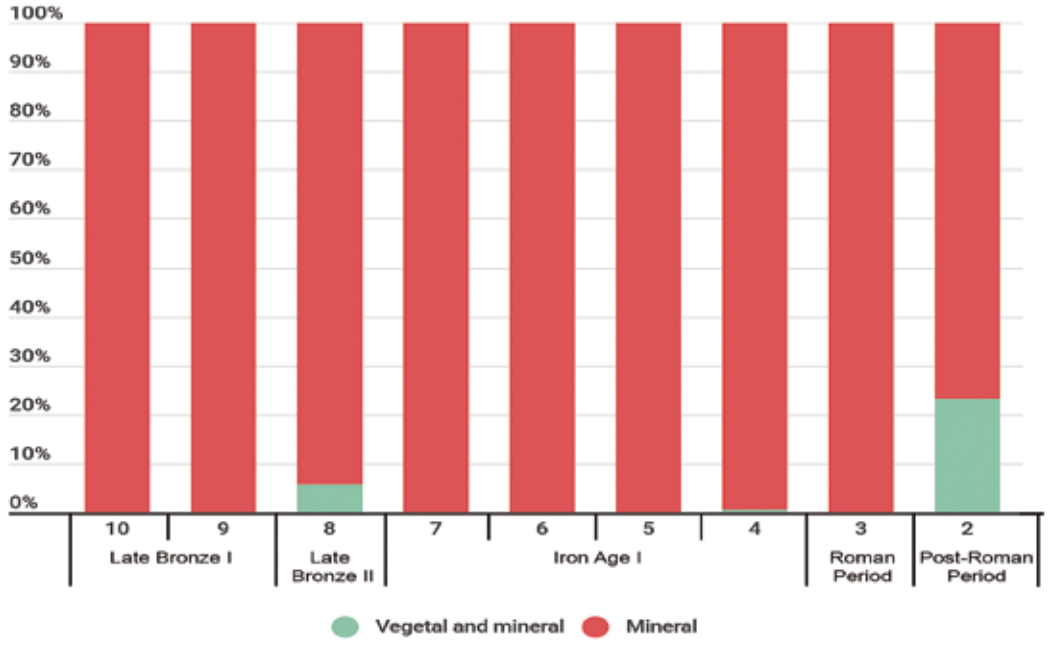


2. Detail of the quantitative development of pottery surface treatments excluding sherds without treatments.

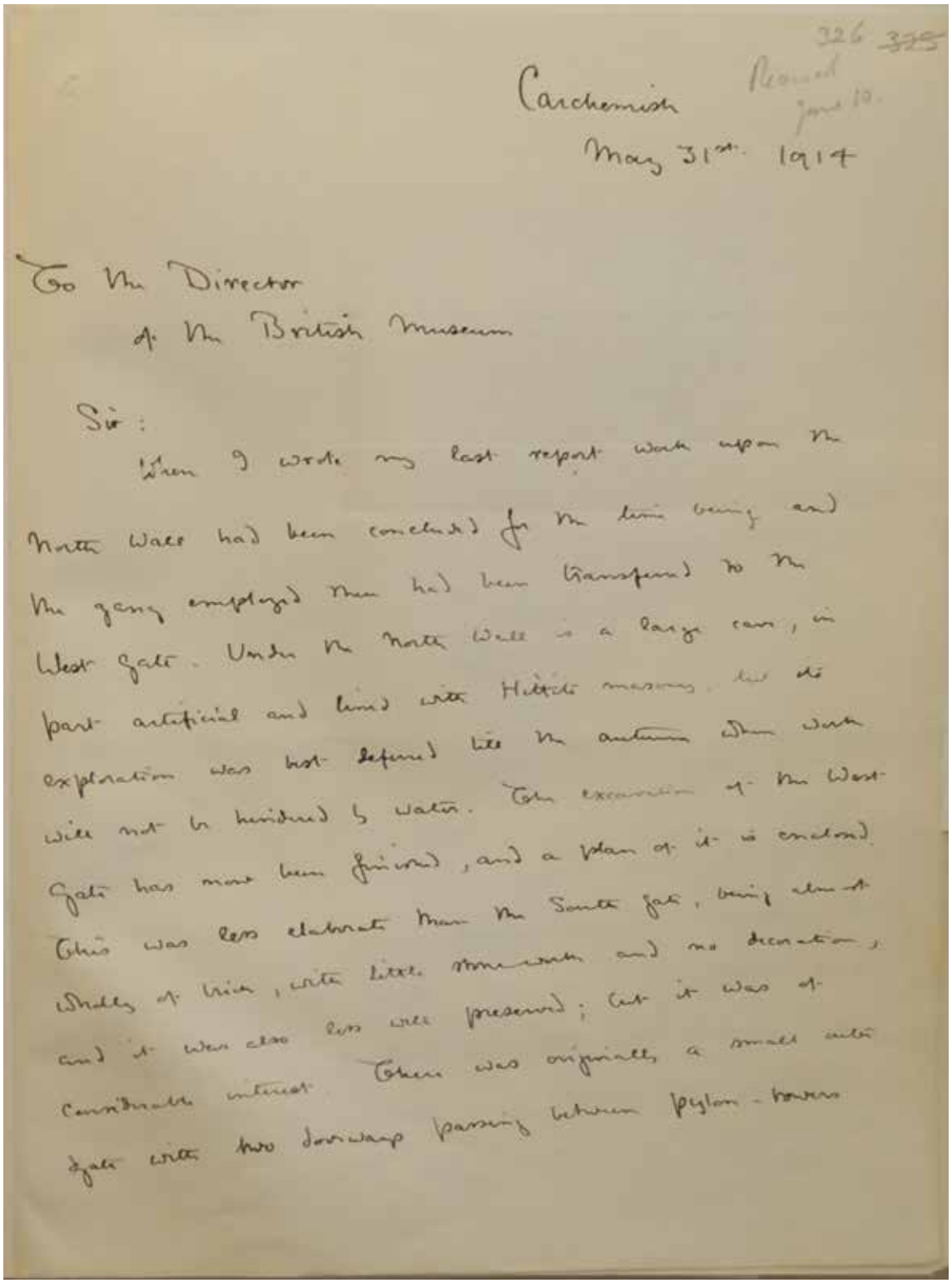
Pl. LIII



1. Quantitative development of the types of pottery bases.



2. Quantitative development of the pottery fabrics.



Carchemish
May 31st. 1914

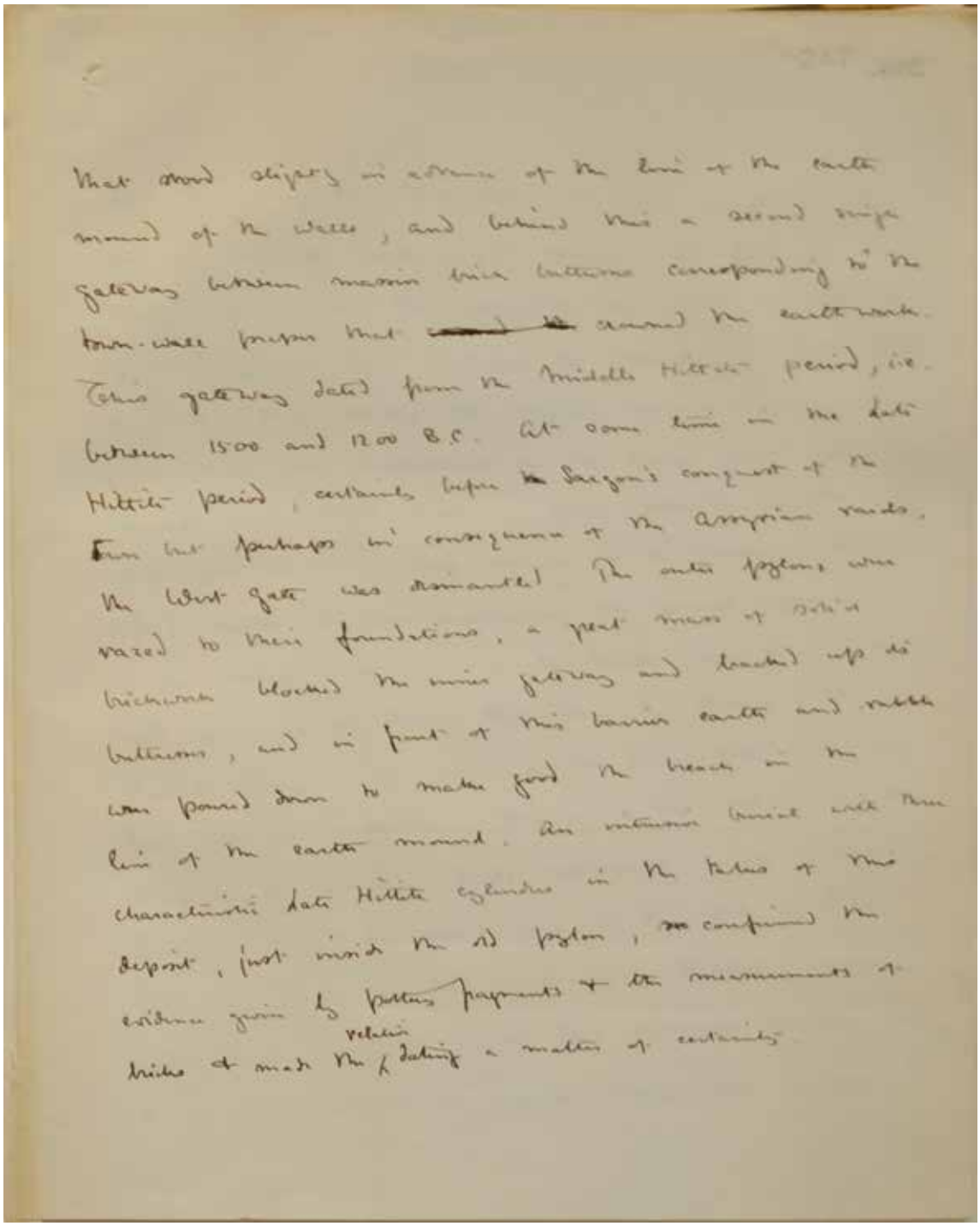
To the Director
of the British Museum

Sir:

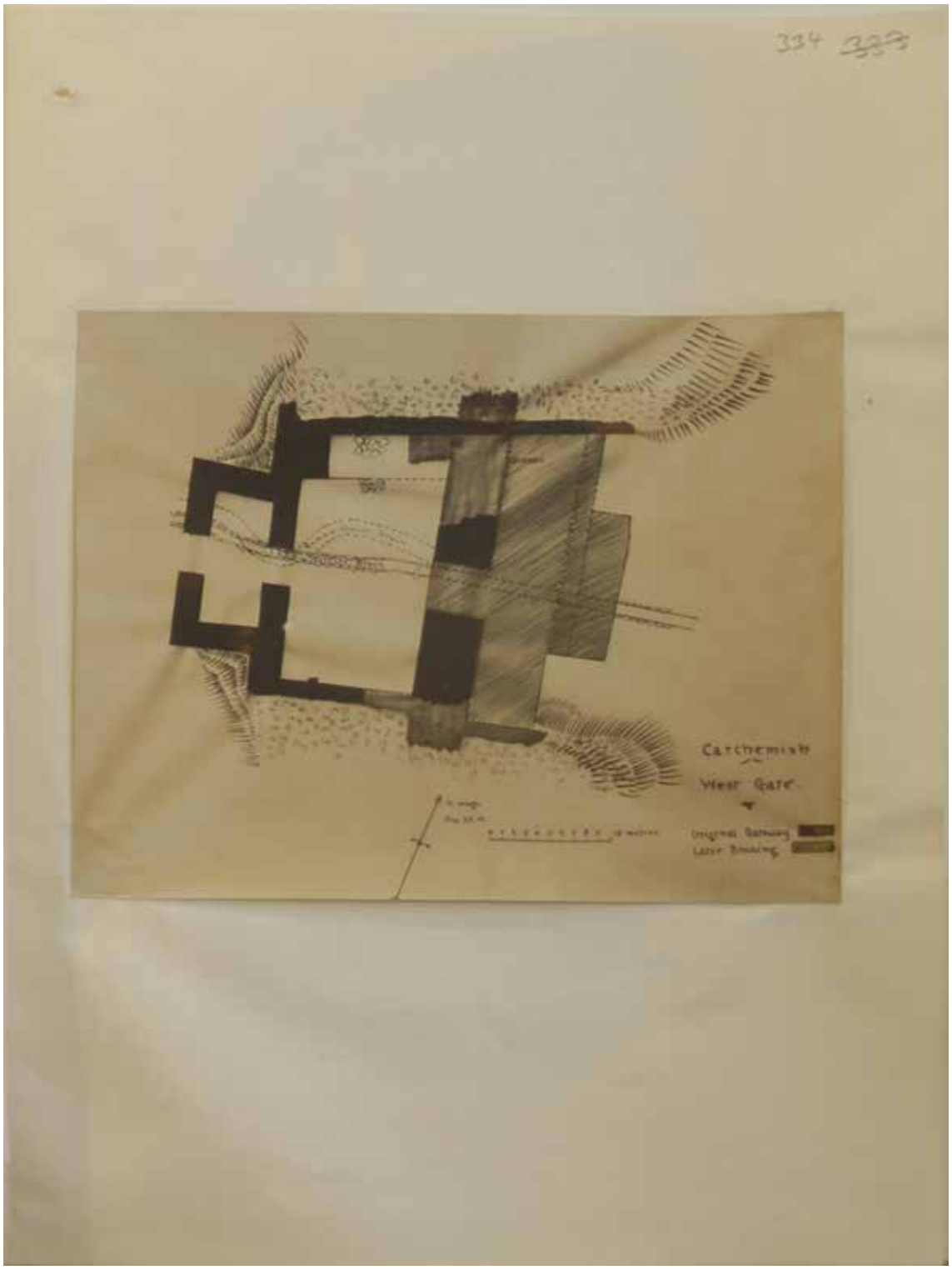
When I wrote my last report work upon the North Wall had been concluded for the time being and the gang employed there had been transferred to the West Gate. Under the North Wall is a large cave, in part artificial and lined with Hittite masonry. We did explorations was not deferred till the autumn when work will not be hindered by water. The excavation of the West Gate has now been finished, and a plan of it is enclosed. This was less elaborate than the South Gate, being almost wholly of brick, with little stonework and no decoration; and it was also less well preserved; but it was of considerable interest. There was originally a small arch Gate with two doorways passing between pylon-towers

C. L. Woolley's unpublished 1914 third report to Frederic Kenyon, p. 1 (archives of the Middle East Department, by courtesy of the Trustees of the British Museum).

Pl. LV

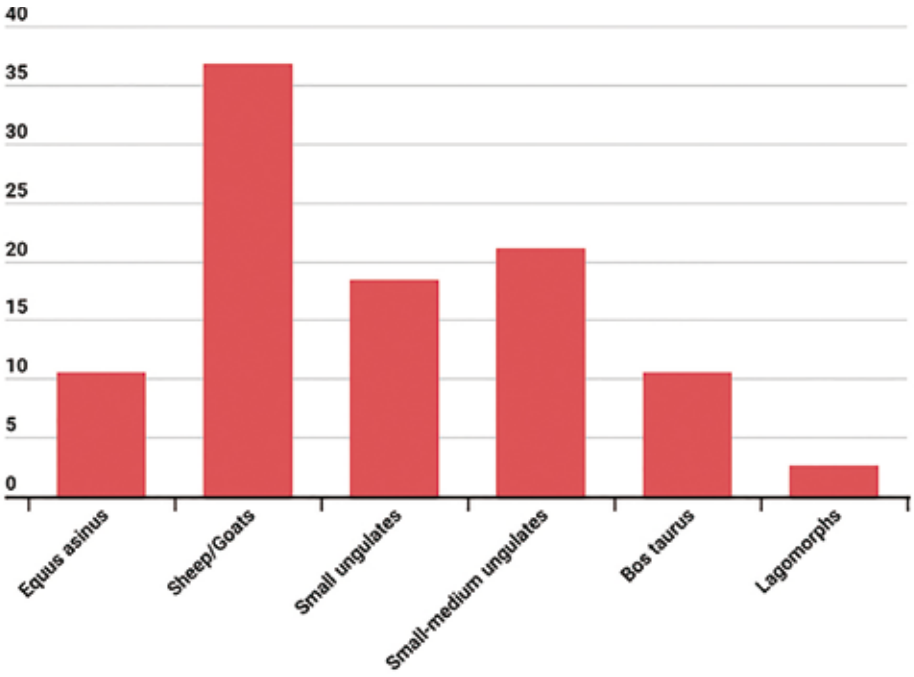


C. L. Woolley's unpublished 1914 third report to Frederic Kenyon, p. 2 (archives of the Middle East Department, by courtesy of the Trustees of the British Museum).



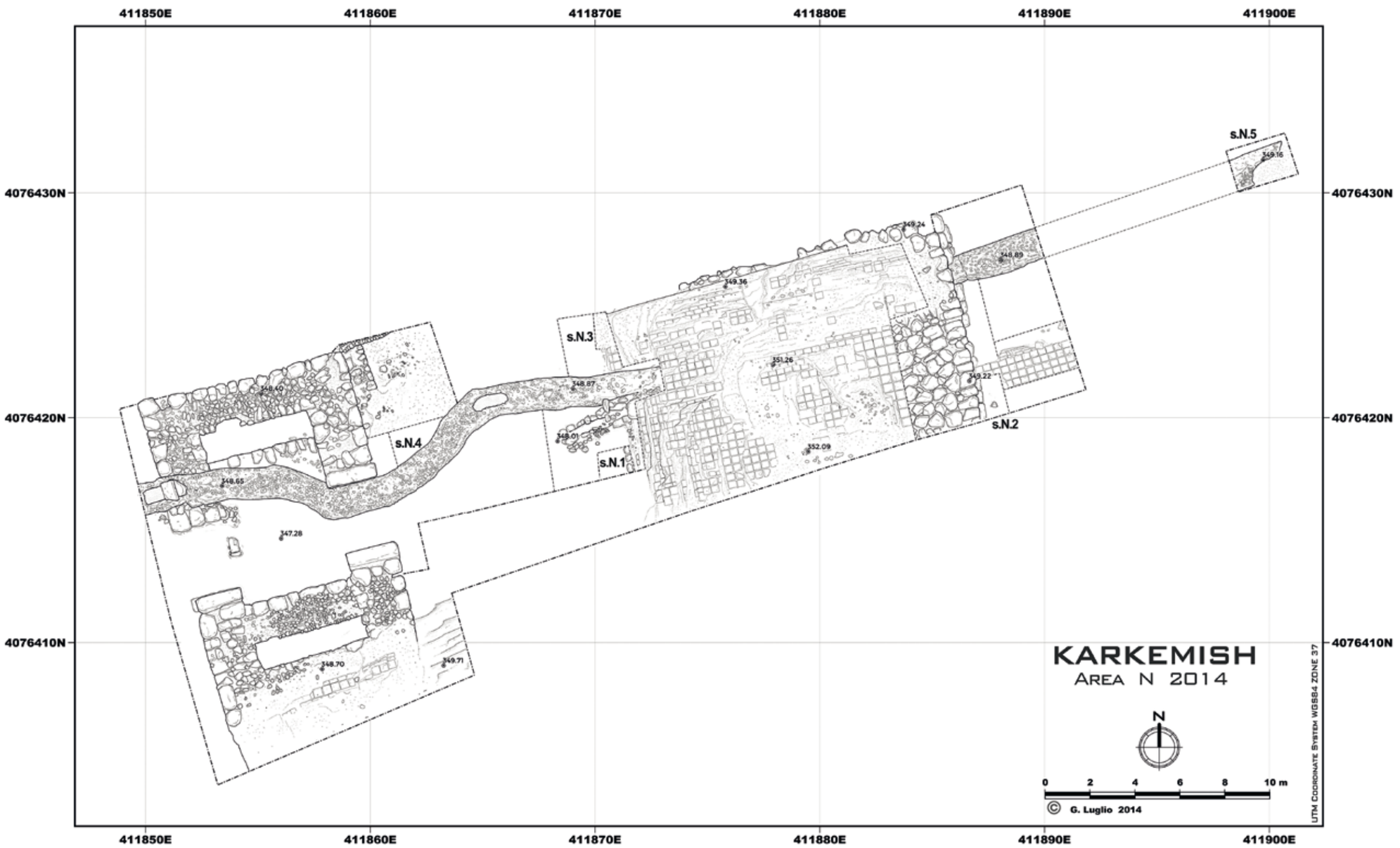
The LB gateway and later works of the Inner West Gate in the preliminary reconstruction (by C. L. Woolley from his unpublished 1914 third report to Frederic Kenyon, pl. 1, archives of the Middle East Department, by courtesy of the Trustees of the British Museum).

Pl. LVII

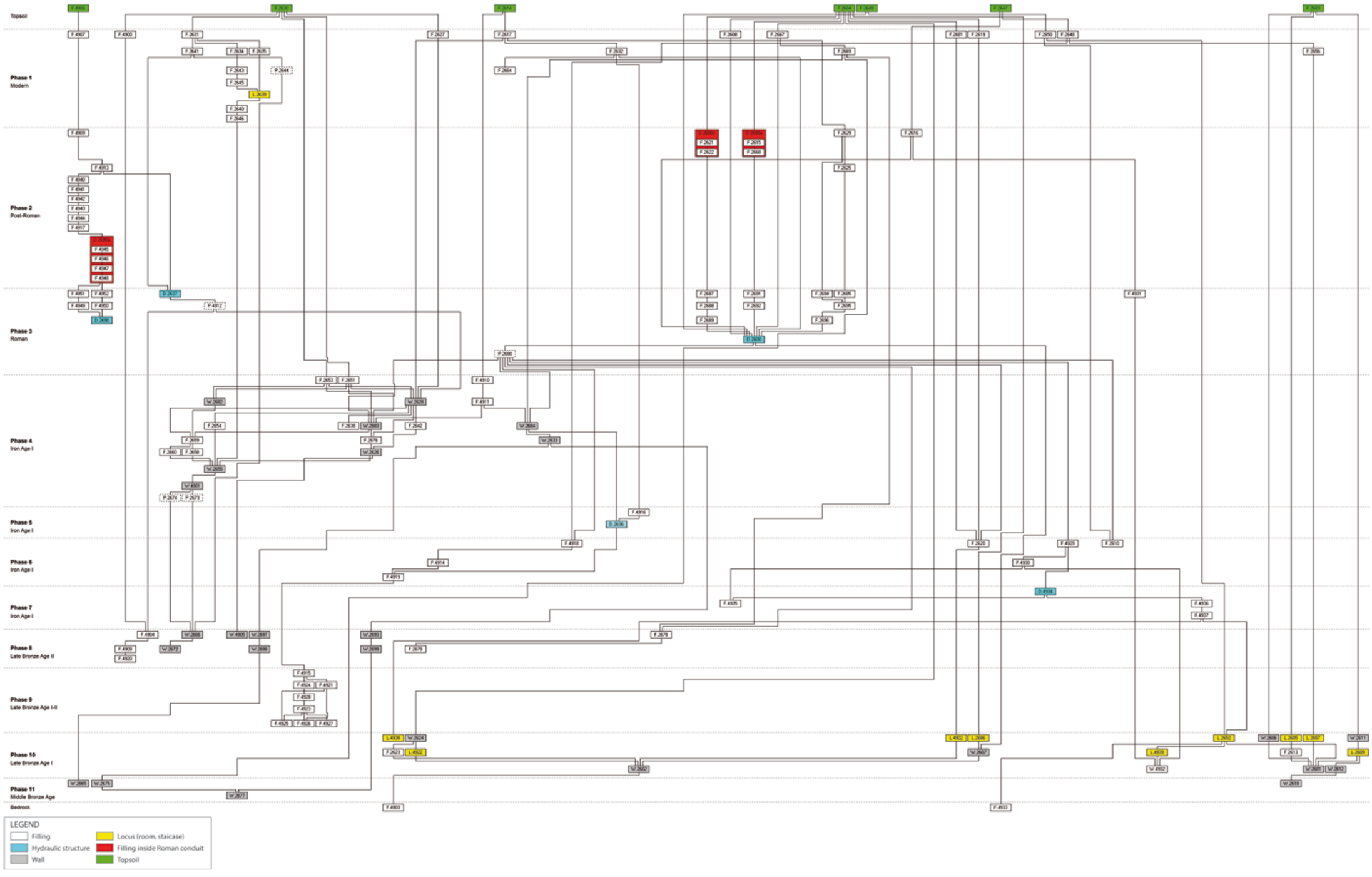


1. Faunal composition of Innew West Gate - Area N.

2. Possible tanged point or arrowhead made from animal bone (F. 2658, phase 4), front and rear view (photographs by E. Maini).



Composite plan showing the main architectural features of Area N (2013 and 2014 campaigns).



Harris matrix of Area N (2013 and 2014 campaigns).