



ARCHAEOLOGY AND HISTORY ART

THE LATE BRONZE AGE DOMESTIC ARCHITECTURE AT BEYCESULTAN
HÖYÜK AND ITS EVALUATION IN TERMS OF SOCIO-ECONOMICAL
ORGANIZATION

by

Muhip ÇARKI

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Evaluation in terms of Socio-Economical Organization

Koç University

Graduate School of Social Sciences and Humanities

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Muhip Çarkı

and have found that it is complete and satisfactory in all respects, and
that any and all revisions required by the final
examining committee have been made.

Committee Members:

Assoc. Prof. Çiğdem MANER (Advisor)

Prof. Eşref ABAY

Assoc. Prof. Mahmut Bilge BAŞTÜRK

Assist. Prof. Michael Rice JONES

Assoc. Prof. Fulya DEDEOĞLU KONAKÇI

Date: 22.11.2022

ABSTRACT

The Late Bronze Age Domestic Architecture at Beycesultan Höyük and Its Evaluation in terms of Socio-Economical Organization

Muhip Çarkı

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Beycesultan Höyük is located on the plateau of Çivril in the Upper Meander Basin and it constitutes one of the largest settlements located in Western Anatolia. During the excavations carried out for 6 seasons between 1954 -1959, it was revealed that the settlement was inhabited continuously from the Vth millennium BC until the end of the Late Bronze Age.

The layer 5b (c.1700-1595 BC/ Early Excavation Layer II), which constitutes the subject of this dissertation, demonstrates urban characteristics with the streets and buildings therein. Especially the domestic structures located between east-west oriented streets in the layer 5b are important in terms of shedding light on the existence of a well-planned construction. During the examinations made in the houses, it is revealed that the houses consist of a main room, where the hearth is located, a room at the front-side and storage rooms connected to this main room. The silos and pithos found in the main room reveals that this area was partially used for storage purposes. It is possible to state that the room at the front-side, located at the entrance of the houses, plays an alternative role for daily work. It is considered that the production and consumption activities in these two-story houses were carried out on the ground floors, and the upper floors were used for sleeping and resting purposes. This layer was destroyed by a big fire. During this disaster, numerous human remains were revealed, along with all the items used in the houses. It is understood that individuals who were found in hiding position in rooms in the fire could not get out of a possible threat. The lack of written evidence as well as any traces of conflict have made the outbreak of this fire disaster controversial and questionable. The economic activities in the Late Bronze Age houses were mostly based on agriculture and animal husbandry. Whilst the grain residues obtained in this settlement with a large possibility of agriculture are inspected, it is possible to state that agricultural activities such as wheat, barley, lentils, and vetch were carried out for dry farming in this settlement. Houses with a dense storage capacity in this settlement appear to have the potential to feed an adequate population. In this period, it is possible to consider that the settlement had an independent economic model to a large extent, although having it partially. Moreover, finds such as spindle whorls, crescent loom weights, weaving shuttle and weaving loom comb, which are used in textile production, have been discovered in the excavations. In addition to these, a textile sample found in a house. Altogether, all these finds point out that weaving activities were an important economic activity in the settlement.

Key Words: Upper Meander Basin, Denizli, Çivril, Kocayaka Village, Küfi Stream, Beycesultan Höyük, Household Archaeology, Middle Bronze Age, Late Bronze Age, Architecture, Ethno-Archaeology.



ÖZET

Beycesultan Höyük Geç Tunç Çağı Evsel Mekânları ve Bu Mekânların Sosyo-Ekonomik Örgütlenme Bağlamında Değerlendirilmesi

Muhip Çarkı

Arkeoloji ve Sanat Tarihi Bölümünde Doktora Derecesi

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Beycesultan höyük, Höyük Yukarı Menderes havzasındaki Çivril platosunda yer alan yer almaktadır. Batı Anadolu'nun en büyük yerleşimlerinden biridir. 1954-59 yılları arasında 6 sezon sürdürülen kazı çalışmalarında yerleşimin M.Ö. V. binyıldan Geç Tunç Çağı sonuna kadar kesintisiz yerleşime uğradığı anlaşılmıştır.

Tezin konusunu oluşturan Geç Tunç Çağı erken evresine ait 5b (Erken Dönem Kazıları Tabaka II) tabakası (M.Ö. 1700-1595), sokak ve yapıları ile kent özelliği sergilemektedir. Özellikle doğu-batı doğrultulu sokaklar arasına konumlandırılan domestik yapılar, planlı bir yapılaşmanın varlığını ortaya koyması açısından önemlidir. Evlerde yapılan incelemelerden, ocağın bulunduğu bir ana mekân ve bu mekana ilişkili bir ön oda ve depolama odalarından oluşmaktadır. Ana mekanda tespit edilen silo ve pithoslardan bu alanın kısmen depolama amaçlı kullanıldığı göstermektedir. Evlerin giriş kısmında yer alan ön odanın günlük işler için alternatif bir rolü üstlendiği söylenebilir. İki katlı olarak inşa edilen bu evlerde üretim ve tüketim faaliyetlerinin evlerin zemin katlarında yürütüldüğü ve üst katların ise uyuma ve dinlenme amaçlı kullanıldığı sanılmaktadır. Bu tabaka büyük bir yangın ile son bulmuştur. Yangında evlerde kullanılan tüm unsurlar ile beraber pek çok insan kalıntısı tespit edilmiştir. Saklanır pozisyonda tespit edilen ve yangınla hayatını kaybetmiş bireylerin olası bir tehditte dışarı çıkamadıkları anlaşılmaktadır. Herhangi bir çatışma izinin yanı sıra yazılı belgenin henüz bulunmayışı, bu yangının çıkışının tartışmalı hale getirmiştir. Geç Tunç Çağı evlerinde ekonomik faaliyetler daha çok tarım ve hayvancılığa dayanmaktadır. Yeterli tarımsal alana sahip bu yerleşimde elde edilen tahıl kalıntılarından buğday, arpa, mercimek ve burçak gibi kuru tarıma yönelik tarımsal faaliyetlerin yürütüldüğü anlaşılmaktadır. Yoğun bir depolama kapasitesine sahip evlerde, yeterli nüfusu besleme potansiyeline sahip olduğu görülmektedir. Bu dönemde yerleşimin tamamen olmasa da büyük oranda bağımsız bir ekonomik modele sahip olduğu anlaşılmaktadır. Diğer taraftan tekstil üretiminde kullanılan ağırşak, tezgâh ağırlıkları, mekik ve dokuma tarağı yanı sıra bir evde tekstil örneğinin tespit edilmesi, dokumacılık faaliyetlerinin önemli bir ekonomik faaliyet olduğu söylenebilmektedir.

Anahtar Kelimeler: Yukarı Menderes Havzası, Denizli, Çivril, Kocayaka Köyü, Küfi Çayı, Beycesultan Höyük, Household Arkeolojisi, Orta Tunç Çağ, Geç Tunç Çağ, Mimari, Etno-Arkeoloji.

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¹ T.C. Çevre ve Şehircilik Bakanlığı Çevre Yönetimi Genel Müdürlüğü “Büyük Menderes Havzası Kirlilik Önleme Eylem Planı”, 2016:8-11

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³ <http://www.nufusune.com/150429-denizli-civril-kocayaka-mahallesi-nufusu>

⁴ <https://twitter.com/ekonyar/status/1139612162303959041/photo/3>

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⁵ [https://www.freepik.com/premium-photo/dug-out-trench-building-works-new-house-concrete-foundation-construction-](https://www.freepik.com/premium-photo/dug-out-trench-building-works-new-house-concrete-foundation-construction-site_24042089.htm#page=2&query=groundwork&position=0&from_view=keyword)

[site_24042089.htm#page=2&query=groundwork&position=0&from_view=keyword](https://www.freepik.com/premium-photo/dug-out-trench-building-works-new-house-concrete-foundation-construction-site_24042089.htm#page=2&query=groundwork&position=0&from_view=keyword)

⁶ http://www.urbunhut.com/adobe_building.php

⁷ <https://www.kreatifbiri.com/adobe-kerpic-evler-nasil-yapilir/>

⁸ <https://twitter.com/sdmim/status/831753367840051200/photo/3>

⁹ <https://twitter.com/sdmim/status/831753367840051200?lang=eu>

¹⁰ <http://www.olay53.com/haber/son-kerpic-ustasi-529242.htm>

¹¹ <http://bayramicyenikoy.blogspot.com/2011/01/kerpic-sva-yapyoruz.html>

¹² <https://www.dreamstime.com/royalty-free-stock-image-old-oxen-yoke-isolated-wooden-pair-white-image38346516>

¹³ <https://www.dreamstime.com/stock-photo-devon-oxen-two-yoked-together-shaker-village-hancock-massachusetts-image68279781>

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¹⁴ <http://gunas.com.tr/tr/urun/67/tc50-orak>

¹⁵ <https://profit.pakistantoday.com.pk/2020/04/15/provinces-fail-to-submit-wheat-losses-report-to-centre/>

¹⁶ <http://bulmacameraklisi.com/uzun-sapli-orak-bulmaca-cevap/>

¹⁷ http://arsiv.gidatarim.com/HABERLER/19024_Orakci-Ve-Tirpancilar-Teknolojiye-Direniyor.html

¹⁸ <https://free3d.com/tr/3d-model/wooden-rake-7533.html>

¹⁹ <https://www.amazon.com/4-Tines-Forged-Pitch-Fork/dp/B005J160S6>

²⁰ https://stock.adobe.com/search?k=oxcart&asset_id=416971170

²¹ <http://sebahattindogan.blogspot.com/2014/03/duven.html>

²² <http://evvelzamanda.blogspot.com/2012/04/duven.html>

²³ <https://www.egemuzayede.com/urun/3838500/osmanli-donemi-elek-osmanli-donemi-elek-kismi-bagirsaktan-mamul-ahsap-elek-cap>

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²⁴ <http://huseyincilga.com/kangalda-bulgur-yapimi/>

²⁵ <http://aksarayegemengazetesi.com/Aksarayda-bulgur-yapimi-icin--hedik-kaynatma-donemi-basladi-haber-5665>

²⁶ <https://www.fibhaber.com/gundem/nevsehirde-unutulan-asirlik-gelenek-izle-h45546.html>

²⁷ <https://www.enhizlitarifler.com/hedik-tarifi>

²⁸

<https://afyonkarahisartr.tumblr.com/post/649174899278086144/ha%C5%9Fha%C5%9F-ezme-ta%C5%9F%C4%B1-ve-i%C5%9Flemi-afyonkarahisar>

²⁹ <https://www.yuksekovahaber.com.tr/haber/koyun-kirpma-zamani-8437.htm>

³⁰ <https://www.atasporlari.org.tr/egitimler/oyunlar/asik-oyunu>

³¹ <https://denizli.tarimorman.gov.tr/documents/download/soil%20Maps/%C3%87ivril%20kocayaka.pdf>

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Abbreviations

Neolithic Period	: NP
Chalcolithic period	: CP
Late Chalcolithic	: LC
Early Bronze Age	: EBA
Middle Bronze Age	: MBA
Late Bronze Age	: LBA
Iron Age	: IA
Late Helladic Period	: LH
Minoan Period	: MP
General Directorate of State Hydraulic Works	: DSI

INTRODUCTION*

It is possible to acquire information about social and cultural structure of a past society by examining any written or non-written archaeological material. All in-situ finds, particularly written sources provide detailed data on social, political, and economic structure based on the information they contain. In this regard, one of the aims of archaeological studies is to reveal and understand the socio-economic structure of settlements in light of the finds unearthed during excavations. Within this context, many theories and methods have been developed over time. Household archaeology is one of these methods. Since the 1960s, several new approaches appeared within the new archaeology movement. During the 1970s and 1980s many archaeologists were dissatisfied with the direction in which archaeology was going. Therefore they tried new methods for analysing archaeological materials. While the processual approach focuses on the practice of the archaeological material, the post-processual approach, which is developed by Ian Hodder in the 1980s, focuses on the plurality of an object's functions. For example, according to Hodder, there are many reasons for domestic archaeological finds in-house such as platforms, hearths and silos to be classified as necessities, and they can give information about the daily life of the past communities. Therefore, these archaeological remains and finds should be analysed in depth (Hodder, 1992, 341-35). In this context, household archaeology comes into prominence. Household archaeology can be defined as relationships between human and archaeological evidence (Parker- Foster, 2012). In other words, the household analysis is a means to understand socio-economic relations and organizations of a past society. Therefore, it is possible to understand social changes in a past society. Though the household archaeology approach is commonly used in regions such as Mesopotamia and Syria, it has a limited research history in Western Anatolia. Within this context, it is possible to state that this study on Beycesultan is important for the regional archaeology and especially settlement archaeology.

* APA style was used in this study.

CHAPTER I. AIM AND METHOD OF DISSERTATION

I.1. Aim of Dissertation

Numerous in-situ archaeological finds were detected among the ruins unearthed in Beycesultan höyük LBA Layer 5b (II). Thus, it is possible to state that examination of all finds and structures providing important data about the society that lived in Layer 5 (early excavation, Layer II) of the settlement makes a great contribution to the understanding of the political, social and economic structure of the settlement as well as its agricultural potential. Moreover, a possible specialization can shed light on based on the remains discovered in the houses. It is possible to consider that the houses in the given layer consist of separated sections and have common areas such as courtyards. Building materials used in the architectural structure and the methods used in house construction contain many technical details. Especially construction plans and structural elements located indoors provide essential data on the usage of these buildings. In addition to tools used in the construction of these buildings, finding out about factors such as time and labour force spent in the construction process is significant for understanding the settlement structure. In this context, it was examined the Kocayaka Village, in which is located on the west of the Beycesultan höyük, in terms of etno-archaeological studies. Thus, analogies such as understanding the construction process of architectural structures in the Beycesultan based on the data acquired about construction process and labour force of the houses from Kocayaka village were implemented. Furthermore, it is aimed to determine on joint works, especially on the construction process, in the modern settlement. Within this context, it is aimed that what kind of jobs are done in Beycesultan höyük and Kocayaka village.

It is possible to mention about similarities like the fact that Kocayaka village is adjacent to the mound and that the same agricultural areas were used even though these settlements were in different time periods. For instance, it is important in this scope that remains of agricultural products such as wheat, barley, lentil and vetch are discovered in the area and that these products are still cultivated at Kocayaka village. It is possible to consider that from the grain remains discovered in Layer 5b (II) of the settlement and agricultural products of modern village that dry agriculture came into prominence. Calculation of the agricultural areas on the Layer 5b (II) of the mound based on the number of agricultural products determined in the area on minimum and maximum basis will shed light on agricultural production. Moreover, determining the possible population

amount from the agricultural remains detected in the settlement is another important objective for this study.

In this study, it is aimed to obtain information regarding the social, economic, and cultural structure of the Late Bronze Age society from structures and all finds, especially the architectural elements of the two houses located in the Layer 5b (II) of the LBA, which were discovered during the recent excavations in Beycesultan höyük since 2007. In this context, Beycesultan höyük presents a city model in terms of complex buildings and streets. The settlement economy is based on agriculture and animal husbandry, and in this respect, it is aimed to provide data on alternative economic activities from the data obtained at buildings. Possible hierarchical differences can be revealed from the structures and the status objects obtained from these buildings. It can reveal the existence of a possible social organization from common areas such as streets and courtyards. Thus, I argue that in order to obtain reliable results, it is essential to ask the right questions. Firstly, it is necessary to understand the workforce and organization of the construction process, starting from the procurement of materials used in construction. It is aimed to acquire sufficient information on settlement model in light of plans of the unearthed buildings. In order to determine how this potential settlement model reflects on the social structure, it is necessary to evaluate the architectural structures that emerged in the early and recent excavations as a whole, including streets. For example, do families that are a part of the society belonging to the Late Bronze Age Layer 5b (II) of Beycesultan and residing in houses 1 and 2 have a simple or complex family structure, as well as providing sufficient data about the social structure as a part of the society they live in? In addition to what kind of economic activity was done in these households, what kind of role was undertaken in a possible economic model of the settlement? Were potential economic activities done by these households full-time or part-time? Are there any possible specializations among activities in question?

Ethno-archaeological studies examination will contribute to this study along with the questions stated above. I think that ethno-archaeological studies carried out in Kocayaka village will be valuable as they allow us to make a comparison about a possible connection or difference between the present and the past. The question is whether the data obtained from modern village provide sufficient clues about the Beycesultan LBA society. Finally, what is the sociocultural and economic place and importance of the settlement in the region it is located. Inspecting and answering all these questions shall

contribute to the comprehension of the settlement from many aspects. Within this context, I believe that the modern Kocayaka village shall be an important reference point in understanding the socio-cultural and economic structure of the Late Bronze Age Layer 5b (II) of Beycesultan Höyük.

I.2. Method of Dissertation

This study is separated into three main chapters. Chapter I, bibliographical research and example settlements are analysed in the context of household archaeology in order to understand the theoretical background of household archaeology and utilise it in this study. In the second chapter, Kocayaka village was investigated in order to conduct an ethno-archaeological study of construction and production activities. Finally, Beycesultan's early excavation publications and its recent excavation database is examined.

First, detailed archival research on household archaeology was carried out in order to contextualize all archaeological finds, especially architectural finds, unearthed in Layer 5b (II) of the mound with the correct method. Thus, background of household archaeology is tried to be explained thoroughly in the light of archaeological methods emerged in the 19th and 20th centuries, particularly the theoretical approaches emerged with New Archaeology movement in the 1960s, theoretical study of archaeological approaches and their application to archaeological settlements are investigated. Thus, settlements in Syria and Mesopotamia are examined.

First, visits to Kocayaka village were made in order to carry out ethno-archaeological studies on old mudbrick houses and their functions in the village. Additionally, houses were examined in terms of architecture and were analysed to understand what kind of new functions these houses assumed after losing their old functions over time. Visual recordings of all the processes related to construction, from procurement of construction materials, were taken during interviews with the master builder who have been working in the village for years. These records were later analysed in detail and the construction process of the houses from foundation to roof construction was examined. The labour force used in constructions has been tried to be revealed by focusing on how many workers took part in the construction and how long the process took. The data obtained about construction process and labour force is used as a source in the calculations related to construction of buildings in Beycesultan höyük. On the other

hand, studies on agricultural production and varieties of products manufactured under primitive conditions have been conducted. Therefore, agricultural reports related to the region were examined and interviews were made with farmers in the village. Agricultural production yields allowed the comparison of amount and variety of products in the mound. These examinations are important for the calculation of both potential population and agricultural areas in the mound. To calculate the potential population in mound, apart from the studies on agricultural production, the settlements in Mesopotamia and Anatolia were examined and the calculations based on the used areas of the houses were taken as reference.

Finally, all reports and databases regarding the Layer 5 identified in the early (Layers II, Ia-b) and late period excavations representing the Beycesultan LBA layer are examined. All remains, especially in architectural plans and finds points, were reviewed in the Netcat data system. The numerical data obtained from these data were entered using Excel, and templates and graphics subjecting these spaces were created. Data on the use of the spaces in houses has been tried to be obtained by examining the templates and graphics about house 1 and 2. It was understood from the demolished walls as well as the remains discovered in the cultural layer of the houses that the buildings were single or multi-storey. By examining the plaster samples in buildings, the usage period of the houses before they were demolished was estimated. It is possible to state that many methods used such as these contribute to the understanding of the LBA layer of the mound.

CHAPTER II. GEOGRAPHY OF BEYCESULTAN SURROUNDINGS

Çivril plain, where Beycesultan höyük is located, is in the west-central Anatolian region (Fig.1). Çivril plain has altitude of approximately 820 meters and forms a boomerang shaped plain with Baklan plain on its south-west and Işıklı plain on its east (Öner-Vardar-Karadaş- İlhan, 2019, 1066). This plain is in the upper part of Great Meander (Büyük Menderes) River and shows the characteristics of a basin in terms of geomorphological and hydrographic features (Ceylan, 1998, 2). Moreover, it extends to the Baklan and Çal districts on a northeast-southwest axis. Işıklı and Gökgöl lakes are located on the eastern part of the plain, which has fertile agricultural lands. These lakes are accepted as the sources where Great Meander (Büyük Menderes) River rises.

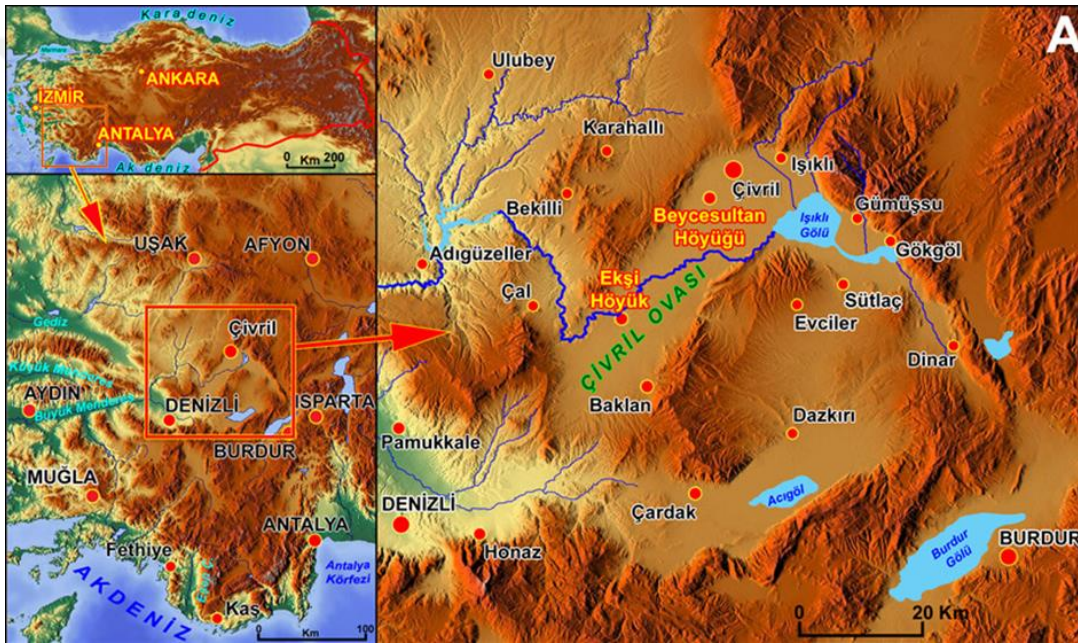


Fig.1: Location of Beycesultan Höyük (Öner-Vardar-Karadaş- İlhan, 2019, 1072)

Great Meander (Büyük Menderes) gives its name to a 2,600,967 ha. basin in the Aegean region and is the longest river, is 584 km long³². Great Meander (Büyük Menderes) River is located within the borders of Çivril. It rises from the same source as Küfi stream and other streams flowing into Işıklı Lake. It is fed by Banaz Stream, and it flows into the Aegean Sea through Aydın (Fig.2). Küfi Stream, an important water source for the Çivril plain, used to run close to the Beycesultan höyük in the past. However, due

³² T.C. Çevre ve Şehircilik Bakanlığı Çevre Yönetimi Genel Müdürlüğü “Büyük Menderes Havzası Kirlilik Önleme Eylem Planı” 2016:8

to potential floods, direction of the stream has been changed and directly connected to Işıklı Lake in recent years.

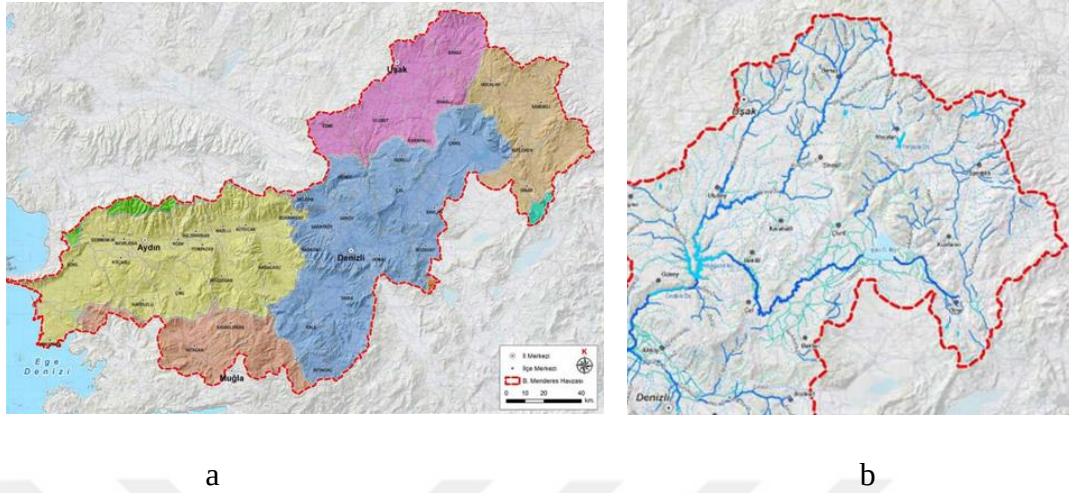


Fig.2: Great Meander Region (a) and Upper Meander Basin (b)³³

Küfi stream reaches the Çivril plain through a valley which is located between the Afyon/Sandıklı-Çivril basin, that partly acts like a strait (Ceylan- Eskikurt, 2001, 124). The valley is approximately 36 km long and has a width of 1-1.5 km from place to place (Ceylan- Eskikurt, 2001, 124,126). Additionally, the valley, which was formed as a result of tectonic movements, is an important transit route between Sandıklı and Çivril (Ceylan- Eskikurt, 2001, 124-125). In addition to the slope and the width of the valley, the fact that the eroded material consists of small-sized materials makes this place convenient for transportation (Ceylan- Eskikurt, 2001, 124-125). The annual flow rate is measured to be higher during winter months (Ceylan- Eskikurt, 2001, 134-138 /Fig.4) (Fig.3). As a result, since the stream was located near Beycesultan höyük in the early periods, potential alluvial accumulation and floods in this area are thought to occur mostly during the winter months. It is possible that the streams in surroundings and feeding into the Great Meander (Büyük Menderes) River had a similar flow. Accordingly, it is highly likely that the floods occurring in Great Meander (Büyük Menderes) River will occur in similarly to those in Küfi Stream.

³³ T.C. Çevre ve Şehircilik Bakanlığı Çevre Yönetimi Genel Müdürlüğü “Büyük Menderes Havzası Kirlilik Önleme Eylem Planı”, 2016:8-11

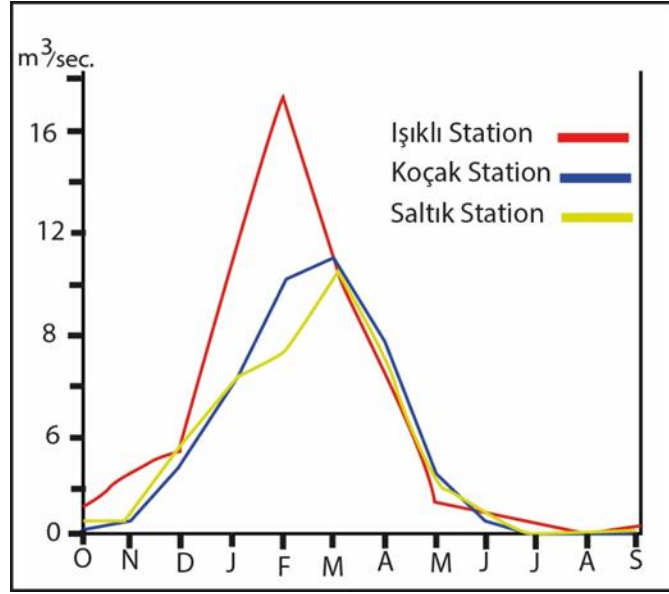


Fig.3: Monthly Average Flow of the Küfi Brook (Ceylan- Eskikurt, 2001: 134, Fig.4- Illustrated by M. Çarkı)

Summer and autumn months can be convenient in terms of transportation as the stream ceases flowing during these seasons (Ceylan- Eskikurt, 2001, 125-126). Considering the role of the Küfi valley in the transportation between Çivril and Sandıklı in early periods, it is thought to be on the one of the potential transportation routes between Kütahya - Afyon and Denizli - Aydın.

There is a mountain chain that can be considered as a natural barrier around the plain, which is located within the borders of Çivril-Baklan and Çal districts. This plain is surrounded by Burgaz Mountain (Armutçuk T.-1787 m) and Sarıkaya- Yaka Mountains (Sarıkaya T. 1350 m, Beşikkaya T.-1267 m) in the north; Ortadağ (Çobansivrisi T.-1687 m) in the northeast; Akdağ mountain (Kıraç T.-2446 m) on the east; Bozdağ (1329m) and Beşparmak mountains (Domuz T.-1689 m) in the south; and finally, Çökelez Mountain (1841 m) and Mali Mountain (1277m) in the southeast (Fig.4). As it can be understood from the topography of the settlement, it has been observed that the surrounding of the settlement is surrounded by mountains that allow partial access.

consider that from the explorations made by DSI³⁴ that it exceeded 100m from place to place (Öztürk, 1981; Taşdelen et al., 2001). Considering the fertility of alluvial layer, it is revealed that agricultural activities are common in the area. It is possible to consider that from the amount and variety of agriproducts detected in Beycesultan Layer 5b (II) that this area was fertile in LBA as well.



³⁴ General Directorate of State Hydraulic Works (DSİ)/Devlet Su İşleri Müdürlüğü (DSİ)

CHAPTER III: THE HISTORY OF THE RESEARCH CONDUCTED AND CHRONOLOGY IN WESTERN ANATOLIA

III.1. The Research History of Western Anatolia

Dating from the 17th and 18th centuries, countless travellers and explorers including Jacop Spoon- George Wheeler (Spoon and Wheller, 1679), William J. Hamilton (Hamilton, 2012), and Charles Texier (Texier, 1839), have experienced western Anatolia. Travels and visits to this region constituted the main centre of interest for historians. As a consequence, numerous excavations were conducted in Late Bronze Age settlements in western Anatolia in the 19th century. The excavations initiated in 1879 by Heinrich Schliemann (Schliemann, 1875) at Troy (Korfmann, 2003, 11-12) inspired new excavations at other settlements including Kusura (Lamb, 1937, 1), Beycesultan (Lloyd-Mellaart, 1955, 39; Lloyd-Mellaart-Stronach, 1959, 35; Mellaart-Murray, 1995, 1; Abay-Dedeoğlu, 2009, 53; Dedeoğlu- Abay, 2014, 1), Miletos (Niemeier, 1995, 260; 1996, 87; 1997, 347), Panaztepe (Erkanal, A- Erkanal, H, 1986, 67-76), Limantepe (Erkanal-Günel, 1995, 263), Bademgediği (Meriç, 2002, 230; Meriç-Mountjoy, 2002, 79; Meriç-Öz 2004, 293), Kadı Kalesi (Mercangöz, 2002, 276; 2003, 125; Akdeniz, 2004, 21), Aphrodisias-Pekmez höyük (Joukowsky, 1986,1; 1991, 9), and Çine-Tepecik (Günel 2006, 19; 2010, 25). In addition to the excavations in western Anatolia, archaeological surveys conducted by James Mellaart (Mellaart, 1955, 53-88), David French (French, 1997; 2014), and Eşref Abay in Denizli Çivril-Baklan- Çal regions (Abay-Dedeoğlu, 2005, 41-50; 2007, 277- 297); in the mountainous areas of Denizli Çivril-Baklan- Çal by Fulya Dedeoğlu (Dedeoğlu, 2013, 215- 226; 2014, 4-11); in the province and district of Manisa by Engin Akdeniz (Akdeniz, 2009, 255-266; 2010, 153-174; 2011, 83-98); in Gölarmara and its near vicinity by Christina Luke and Christopher H. Roosevelt (Luke-Roosevelt, 2008, 305-326; 2009, 199-217); in the province and district of Balıkesir by Engin Beksaç (Beksaç, 1999, 109-119; 2001, 113-122; 2002, 293-288); and in Aydın-Muğla districts by Sevinç Günel (Günel, 2004, 325-34; 2005, 183-192) have shed light on the history of this broad region. Although the surveys performed in the region provided inadequate chronological data, they constitute of crucial importance for determining settlement layouts and the scope of cultural connections.

III.2. Chronology (LBA) of Western Anatolia

A significant event which is considered to mark the beginning of the Late Bronze Age for the Aegean islands, mainland Greece and western Anatolia is the eruption of the

Thera (named after the Greek name Thera for the island), located on Santorini, one of the islands of the Cyclades Archipelago. This eruption occurred between 1650-1600 BC ³⁵. It is also known as the Minoan eruption (Manning et al., 2014, 1164). Traces of volcanic ash from the eruption have been found in wide areas including the Aegean islands, mainland Greece, Egypt, the Levant, Cyprus, and Anatolia (Muhlenbruch, 2017, 92-107; Vardar-Öner 2016,16, fig.1). Traces of tephra³⁶ from the same eruption have also been identified in cores taken from several lakes Gölcük, Gölhisar and Köyceğiz in western Anatolia and off the coast of Sinop (Yiğitbaşıoğlu, 2003, 70; Vardar-Öner 2016, 16). In fact, Egyptian papyri from the 18th Dynasty mention the dense ashes from this eruption and a small-scale tsunami which occurred on the Egyptian coast (Dorozynski, 1972). Furthermore, traces of the eruption have been found in Tell el-Amarna, Kahun, Tell el-Daba on the banks of the Nile and in Levantine settlements such as Beth Shean, Kamid el- Löz, Tell Kazel and Qatna (Muhlenbruch, 2017, 93). Signs of the Santorini eruption have been detected in the cultural layers of the 3-metre of deep sounding (ÇHT-11 Sounding) made on the west slopes of Çine - Tepecik Höyük (İlhan et al, 2019, 861-864). Soundings conducted by Serdar Vardar and Ertuğ Öner on the southern part of Bayraklı Höyük (Sounding 1 and 8) have also revealed traces of tephra from the Santorini eruption; however, there are no indications of a powerful tsunami on the Aegean coast (Vardar-Öner 2016, 24-29). As a consequence, it is possible to state that the traces of the Santorini eruption are found in many several settlements in different regions and contribute to the formation of a common chronology for these settlements thus our consideration of the connectivity that defined this wide cultural zone.

The Late Bronze Age is associated with various cultures in different regions. In Central Anatolia, it is represented by the Old Hittite Kingdom and the Hittite Empire (1650-1190 BC), while in the Aegean islands and mainland Greece it refers to the Late Helladic (e.g. Mycenaean) culture (1550-1025 BC)(Furumark, 1972: 115).

³⁵ Tobias Muhlenbruch suggests that based on analysis conducted on olive trees in Santorini and the surrounding area the eruption must have occurred in 1613+- 13 BC (Muhlenbruch, 2017, 92-107). On the other hand, the C14 dating conducted by Sturt W. Manning and Bernd Kromer on archaeological evidence obtained in settlements of the Eastern Mediterranean suggests that this eruption may have happened in 1630-1600 BC.

³⁶ Tephra: volcanic ash ejected by a volcanic eruption.

Mycenaean cultural traditions and all finds (potteries, small finds etc.) correlate to the Late Helladic in the Aegean islands and mainland Greece while in Crete this period is known as Late Minoan, which is subdivided into three main periods and is subsequently followed by the Sub-Mycenaean period (1050/30 – 1000 BC) (Mountjoy, 1999b, 298). It can be argued that finds of Mycenaean provenance in settlements on the Aegean coast contribute to the establishment and refinement of the Late Bronze Age chronology defined by the regional settlements. However, it does not provide a definitive solution to the existing chronological problems, due to the limited number of Mycenaean finds in the inner Aegean Region and the local productions in some settlements such as Miletos and Limantepe (Mangaloğlu-Vortruba, 2011, 45). A detailed chronology regarding the Late Helladic period has been suggested by Arne Furumark and Penelope A. Mountjoy both of whom are experts in Mycenaean chronology (Fig 5).

LATE HELLADIC PERIOD			Mountjoy	Furumark
LH I			1600-1500 BC	1550- 1500 BC
LH II	LH II A		1500- 1460 BC	1550- 1450 BC
	LH II B		1460- 1400 BC	1450- 1425 BC
LH III	LH IIIA	LH III A1	1400-1375 BC	1425- 1400 BC
		LH III A2	1375- 1300 BC	1400- 1375 BC (Early) 1375- 1300 BC (Late)
	LH III B	LH III B1	1300- 1230 BC	1300- 1230 BC
		LH III B2	1230- 1210 BC	
	LH III C	LH III B2- III C (Transition)	1210- 1190 BC	III C1 1230- 1075 BC
		LH III C (Early)	1190- 1130 BC	
		LH III (Middle)	1130- 1070 BC	
		LH III (Late)	1070- 1050/1030 BC	III C2 1075- 1025 BC
Sub-Mycenaean			1050/1030- 1000 BC	

Fig. 5: Late Helladic Chronology (Mountjoy, 1999b, 298); Furumark, 1972, 115)

Mycenaean pottery was identified in settlements around the Aegean, Mediterranean and Amuq regions. However, the pottery does not provide concrete evidence that the region was under direct Mycenaean influence since Mycenaean ceramics of the Late Bronze Age can be discovered at these settlements as well due to commercial relations. Mycenaean pottery in settlements of Western Anatolia was imported, while Mycenaean-style pottery was locally produced. Late Helladic (Mycenaean) IIA, IIIB2 and IIIC ceramics were discovered in layers VIIA and VIIB1 in Troy (Mountjoy, 1998,60). Late Helladic (Mycenaean) IIB-C ceramics were found in the fourth phase of the Panaztepe cemetery and this layer dates to the Late Helladic IIIB-C period (Günel, 1999,142). Locally produced Late Helladic IIIC ceramics were identified on the Bademgediği II structure floor (Meriç-Mountjoy, 2002,83). Mycenaean ceramics were unearthed in layers V and VI in Miletos and therefore, it is assumed a Mycenaean colony existed there (Greaves, 2010,882-885). Late Helladic IIIA-C ceramics and a kiln were uncovered (Mangaloğlu-Votruba, 2011,45) at Limantepe Layer II. Local and imported Mycenaean ceramics were unearthed at Layer III at Kadı Kalesi (Akdeniz, 2007,37). Late Helladic IIIC ceramic was discovered at II1a-b layer at Çine Tepecik höyük (Günel, 2010, 28- 30). Lastly, one piece of Mycenaean pottery was found at the eastern mound of Beycesultan and its dates to 1360-1240 BC. Based on this piece of pottery, Setton Lloyd and James Mellaart suggested a chronology for Beycesultan (Lloyd-Mellaart, 1965, 73). Their suggested chronology for Beycesultan Late Bronze Age is as follows; Layer III (1450-1300 BC); II (1300-1200/1180 BC); Ia and Ib (12-11 centuries BC) (Lloyd- Mellaart, 1965,173-174).

During the Late Bronze Age, different part of Western Anatolia was divided into different polities such as Arzawa, Wilusa, Mira-Kuwaliya, Seha River Land, Hapalla-Assuwa, Karkisa, Masa and Lukka region (Dinçol, 1982, 24; Hawkins, 1998, 10; Beckman, 1996, 10-12). Archaeological studies have been conducted in the Late Bronze Age settlements of the region, which has a geographically strategic location, between Central Anatolia and the Aegean Islands. The comparison of stratigraphic data obtained from the Late Bronze Age layers of key settlements such as Troy, Panaztepe, Limantepe, Çine Tepecik höyük, Kadı Kalesi, Miletos and Beycesultan have made a great contribution to the establishment of the Late Bronze Age chronology of Western Anatolia. However, the arrangement of a common chronology for the region is still problematic. The possible relations of Western Anatolia with Central Anatolia, mainland

Greece and the Aegean islands in different time were in local scales, having a negative impact on the establishment of a common chronology.

Excavations conducted settlements in western Anatolia have revealed Late Bronze Age layers. According to studies, the Late Bronze Age layers have been determined as I (1650-1450 BC), IIa (1450-1225 BC) –IIb (1225-1100 BC) (Goldman, 1956, 63-64). In this respect, the stratigraphy of coastal settlements such as Troy, Panaztepe, Limantepe, Çine-Tepecik and Miletos, as well as settlements like Beycesultan in the Inner Aegean Region is of foremost importance. Particularly the Late Bronze Age layers of Troy and Beycesultan have a significant contribution to the chronology of the region; still, there are differences between the chronologies of the two settlements.

Troy lies within the borders of the province of Çanakkale on Hisarlık hill (Korfmann, 2003, 11-12). The first excavations were conducted by Schliemann between 1870 and 1890, followed by Wilhelm Dörpfeld in 1893-94 and Carl W. Blegen in 1932-38. After a long break, Manfred Korfmann resumed the excavations between 1988 and 2005. After Korfmann passed away, Ernst Pernicka and Peter Jablonka assumed the duty. Since 2013, excavations in Troy are conducted by Rüstem Arslan. Nine major layers were discovered during the excavations. The Late Bronze Age chronology of Troy is crucial for the establishment of the chronology of the other Late Bronze Age settlements of Western Anatolia. In this respect, the Late Bronze Age chronology of Troy has been attempted to be applied to these settlements.

Nine layers were discovered during the excavations. While Troy Layer VI dates to the Middle and Late Bronze Age, the Troy Layer VII dates back to the Late Bronze Age. According to the chronology created by Blegen for Troy VI (1800-1300), this layer is divided into three different periods: Early (VIa-VIc), Middle (VIId-VIe) and Late (VIg-VIh) (Blegen, 1953, 12). The detailed stratification at Troy is as follows: VIa (1725), VIb (1725-1650), VIc (1650-1575), VIId (1575-1500), VIe (1500-1425), VIg (1375-1325), VIh (1325-1275) (Blegen, 1963: 174). Korfmann, on the other hand, revised Blegens' chronology and proposed a new chronology based on radiocarbon evidence, as follows: Troy VIa-g (1700-1300), VIh (1400-1300); VIIa (1300-1200/1190), VIIb1 (1200/1190-1120/1100), VIIb2 (1125/1120-1025/1020), VIIb3 (1025/1020-950) (Korfmann, 2003, 33; 2006, 7; Kromer- Korfmann- Jablonka, 2003, 50). Examination of the two chronologies suggests that the dates of these levels differ from each other.

On the other hand, a study by Donald Easton and Bernhard Wenninger suggests that the Early and Middle Bronze Age chronologies previously established by Carl Blegen based on pottery sequence should be lowered by 100-200 years. As a consequence, according to Easton and Wenninger, the Troy Layer VI dated to the end of the Middle Bronze Age and the beginning of the Late Bronze Age, can be lowered to an earlier date (Easton-Wenninger, 2018, 33-73). The comparison of the Early Troy Layer VI with recent excavations at Beycesultan suggests that it can be contemporary with Layer 5a-b (II-Ib (1700)) (Easton-Wenninger, 2018, 53).

The foremost architectural find representing the Late Bronze Age layers of Troy is the fortification wall. Evidence from excavations reveals that the citadel is surrounded by a partly preserved fortification wall, five meters wide and eight meters high, supported by towers and supports (bastions) (Korfmann, 1997; Jablonka, 2010, 853-855). Besides the citadel which encloses an area of around two hectares and dates to the end of Troy VI and VII, a lower city covering an area of 25-35 hectares has also been determined. The fortification wall resembles Mycenaean palaces in terms of construction technique and characteristics (Jablonka-Brian Rose, 2004, 620). Along with the wall, the city was surrounded by a ditch and the houses were built in square and rectangular plans (Jablonka-Brian Rose, 2004, 619-620). It has been observed that megaron houses were still in use during this period (Jablonka, 2010, 853-855). Storage areas containing pithoi were found inside the megaron houses, which generally cover a maximum area of 200 m² (Jablonka-Brian Rose, 2004, 619). Although there is a dense settlement in the lower city, outside the citadel, studies have been conducted only in limited areas due to the Hellenistic and Roman architectural remains in this area. The walls of the houses were built with limestone and completed with mudbrick (Jablonka-Brian Rose, 2004, 619-620). During this period wheel-made burnished pottery, also utilized in the Middle Helladic period, was utilized. It has been determined that especially from the middle of Layer VI on, Minyan Gray Ware was reproduced in different shapes and using different techniques. It was observed that, besides imported ceramics, a production similar in form to Mycenaean pottery, however, with different traits was densely utilized at the end of Layer VI and during Layer VII (Jablonka, 2010, 853-855). A Mycenaean seal, a terracotta bull, a bronze statuette, gold fragments and blue wall plaster were found in Layer VII (Jablonka-Brian Rose, 2004, 619). The presence of Mycenaean pottery in Troy VI is evidence of Troy's possible relationship with mainland Greece and the Aegean islands (Mountjoy, 1997, 292). In this regard Troy VI_d and Late Helladic IIA; Troy VI_e and Late Helladic IIB;

Troy VI^f and Late Helladic IIB; Troy VI^g and Late Helladic IIIA1 are contemporary (Kelder, 2010, 58-59). On the other hand, Troy VIa-f, Limantepe II and Beycesultan layers IV-V (Early Excavations) are contemporary (Pavuk, 2015, 85, fig. 1).

Panaztepe is located on the alluvial plain of River Gediz, within the borders of the district of Menemen, in the city of İzmir. Excavations at the settlement were conducted by Armağan Erkanal in 1985 in three main areas: the Acropolis, the Port and the cemetery area (Erkanal-Öktü, 2002, 190).

Panaztepe Layer Ia (atelier) dates back to the Late Bronze Age (Erkanal-Öktü-Çınardalı Karaaslan, 2006, 193-195) and the architecture of this period was substantially destroyed during the Late Period settlement. Late Bronze Age layers were discovered in the Port and the cemetery. The cemetery is architecturally divided into two phases: Panaztepe level II (14th and 13th centuries B.C.) and level I (12th and 11th centuries B.C.) (Çınardalı-Karaaslan, 2012, 68).

In the excavations conducted in Panaztepe pottery of local production as well as Late Helladic pottery were unearthed. The imported pottery, which dates to the Late Helladic IIIA, mostly originates from Rhodes, the Argolid, Attica and Cyprus (Ersoy, 1988, 71). The pottery includes three-handled jars, stemmed vases and lentoid flasks (Ersoy, 1988, 71-79). The rim and body of the S-profiled pots are decorated with spirals, lozenges and bands made in deep brown and reddish-brown on a buff surface (Ersoy, 1988, 71-83). Besides pottery, bronze swords with spiral decoration, spearheads, daggers, knives and arrowheads were found. The decoration patterns and types suggest that these weapons originate from Crete and mainland Greece (Ersoy, 1988, 61-71).

Limantepe lies within the borders of the district of Urla in İzmir and is located in the southern section of the Gulf of İzmir (Erkanal-Şahoğlu, 2016, 157; Erkanal, 2008, 92). Excavations regarding the early periods of the settlement were first conducted by Ekrem Arkungal in 1950 (Akungal, 1950, 4). In 1979-81 excavations were conducted by Güven Bakır and Çetin Anlağan. Since 1992 excavations have been ongoing under the direction of Hayat Erkanal and, now it has been conducted by Vasıf Şahoğlu (Erkanal-Hüryılmaz, 1994, 361-373; Şahoğlu, 2021).

Archaeological evidence from Layer II of the Late Bronze Age in Limantepe indicates that the settlement was of importance during this period. Layer II of the Late Bronze Age dates back to the Late Bronze Age and is separated into three phases II3 (Early), II2 (Middle) and II1 (Late phase). Limantepe II3 is contemporary with Late Helladic IIIA2 (1390/1370-1360/1325 BC), Layer II2 is contemporary with Helladic IIIB

(1360/1325-1200/1190 BC), and Layer II1 corresponds to Late Helladic IIIC (1200/1190-1050/1030 BC) (Mangaloğlu-Votruba, 2011, 44; 2015, 648). Along with well-preserved architecture, Mycenaean ceramics were determined at level II1 (Erkanal, 2008, 93-99). In addition, Limantepe Layer II.1 includes the early, middle and late phases of the Late Helladic C. Thus, Limantepe Layer II.1 is of foremost importance in order to understand the traditional styles of Late Helladic C (Mangaloğlu-Votruba, 2011, 52). Conversely, Limantepe Late Bronze Age ceramics (reddish-buff clay color, either self-slipped or red-slipped) are similar to Troy, Panaztepe, Bademgediği, Kadıkalesi, Çine-Tepecik and Beycesultan Höyük finds (Mangaloğlu-Votruba, 2015, 648). Limantepe Layer II.3 is parallel to Troy VI g-h, Limantepe II.2 is parallel to Troy VIIa, and Limantepe II.1 is parallel to Troy VIIb1-2 (Pavuk, 2002, 59-61; Mangaloğlu-Votruba, 2011, 46-47). In addition, Limantepe II3-1 is equivalent to Panaztepe atelier Ia and port city V1-5 and if mentioned in detail, Limantepe II3 is parallel to Panaztepe port city V5-4, Layer II2 is parallel to Panaztepe V3-2 and Layer II1 is parallel to V1 (Erkanal-Öktü & Çınardalı-Karaaslan, 2007, 396-408). On the other hand, Limantepe Layer II is parallel to Miletos V- VI (Greaves, 2002, 56-65), Beycesultan III-I (Early Excavation) (Mellaart and Murray, 1995, 93-98), Çine-Tepecik II 1a-b (Günel, 2011, 69-72), Kadıkalesi III (Akdeniz, 2006, 7) and Bademgediği II-V (Meriç, 2007, 244).

Layer II.3 is architecturally the best-preserved layer among the Late Bronze Age layers of Limantepe and has a settlement layout consisting of a 3-meter-wide road, narrow streets and single-spaced buildings (Erkanal, 2008, 92). The street is paved with pebbles and surrounded by rectangular houses of various plans (Erkanal, 2008, 92). Oval-shaped pottery kilns and local as well as imported Mycenaean pottery were obtained from these buildings. Mycenaean pottery with vertical decorative bands and two handles was found along with pottery decorated with crosshatchings and octopus figures and plain ware (Erkanal, 2008, 94). Besides locally produced and imported Mycenaean pottery found in Layers II.2 and 1, a button-shaped seal of the Late Helladic IIIB-C period unearthed in Layer II.1 is one of the important finds, representative of this period. Important finds from the same layer of Limantepe include pottery of Mycenaean style decorated with geometric patterns and bird figures (Erkanal, 2008, 97-98).

Bademgediği settlement is close to İzmir-Aydın highway, Excavations have been conducted since 2000 by Recep Meriç. Four Layers (II- V) dating to the Late Bronze Age were discovered during the excavations (Meriç, 2003, 86-91). According to Meriç and Ali Kazım Öz, the Layer II of Bademgediği (1180- 1050/1030 BC) is contemporary with

Beycesultan Layer I (Early Excavation), Miletos VI, Troy VIIb, and Late Helladic IIIC. Layer III (1375-1300 BC) is contemporary with Beycesultan III, Miletos V, Troy VIIh, Panaztepe atelier Ia (1460 to 1180 BC), and Late Helladic IIIA2. The Layers IV and V (1430- 1375 BC) are contemporary with Troy VIg, f, e, Panaztepe atelier Ia, Beycesultan Layer III, and Miletos V (Meriç- Öz, 2015, 612-619).

The Late Bronze Age layer of the settlement is represented by a strong fortification wall. The settlement model is made up of narrow streets and roads related to this wall. The rectangular domestic houses are made of stone and mudbrick. Oval-shaped kilns were found inside the spaces. Hundreds of pottery sherds of the Late Helladic IIIC period were discovered in Layer II of Bademgediği (Meriç-Öz 2015, 613). On the other hand, the most prominent local pottery for Bademgediği Layer II is Gold Wash Ware and Red Ware styles, which find close parallels in Beycesultan Layer I (Meriç-Öz, 2015, 612-613). Bademgediği Layer III came to an end after a big fire. Meriç and Öz argue that this fire might be related to the campaign of Mursili II to Western Anatolia (Meriç-Öz, 2015, 617). Pottery known as Grey Ware stands out in the Layers IV and V of the settlement. It is suggested that these ceramics are contemporary with Troy Layer VI (Meriç-Öz, 2015, 619).

Ayasuluk *Tepesi* is located in the district of Selçuk, İzmir and it is known as a castle of the Aydinids and Byzantine periods (Konakçı, 2016, 136; Büyükkolancı, 2008, 41). In fact, the fortress of the castle is located on a mound which dates back to the Late Chalcolithic Period. According to the excavations, Layer X was represented by the Late Bronze Age (1400-1200 BC) (Konakçı, 2016, 138 fig.1).

Excavations at Ayasuluk suggest that Late Bronze Age architecture was destroyed by subsequent Protogeometric, Geometric, Hellenistic, Byzantine and Ottoman constructions. However, Mustafa Büyükkolancı has proposed that a partially unearthed wall which resembles a fortification wall was constructed in the Hittite style (Büyükkolancı, 2008, 46). A deep Mycenaean bowl with spiral, wave and band patterns dated to the Late Helladic IIIC period was found on the south part of the settlement (Konakçı, 2016, 143). Also, jugs, a pitcher in the form of a rhyton and a flask dated to the LHIIIA2 period were found in the Mycenaean graves of the settlement (Büyükkolancı, 2008, 43; Konakçı, 2016, 143-144). Besides coarse ware dated to the Late Bronze Age, finds include red, brown and black-slipped ware, grey and buff ware and gold slipped pottery (Konakçı, 2016, 146-150). The pottery unearthed in the Late Bronze Age layer of

settlement are similar to Panaztepe, Smyrna-Bayraklı Höyük, Limantepe II, Troy VI, Bademgediği III-V, Beycesultan III-I, Thermi, Poliochni, Attisata Apasos later V (Konakçı, 2016, 150-151).

Kadıkalesi is located 8 km south of Kuşadası district, in the province of Aydın and is named after the Byzantine castle dating back to the Middle Age. The excavations at the settlement were initiated in 2001 by Zeynep Mercangöz (Mercangöz, 2003, 125). Since archaeological finds from the Middle Bronze Age were discovered during excavations, more excavations for the earlier period were also conducted (Akdeniz, 2004, 24). The three-phased Layer III of Kadıkalesi, a harbor city, was traced back to the Late Bronze Age during works at the mound (Akdeniz, 2006, 7; 2007, 36). Local and import Mycenaean pottery (Late Helladic IIIC) were found (Akdeniz, 2007, 37). Imported Mycenaean pottery constitutes 10% of the local pottery and consists of bowls, cups, plates, amphoriskoi, kylix, kalathoi and jugs (Akdeniz, 2007, 55). In addition, a bronze statuette dating to the Hittite period was also discovered at Kadıkalesi (Akdeniz, 2004, 23).

Çine-Tepecik höyük is located at Çine district of Aydın province. The mound is located at Çine Plain (Günel, 2006, 19; 2010, 25, 27). The excavations at the settlement were initiated by Sevinç Günel in 2004. The works of Günel at the mound dated the settlement to the Late Chalcolithic, Middle Bronze Age, Late Bronze Age, Geometric and Hellenistic periods (Günel, 2010, 27). The II1a-b layer was traced back to the Late Bronze Age at the excavations (Günel, 2011, 1).

The most significant architectural element representing the Late Bronze Age at Çine-Tepecik Höyük is the fortification wall in Layer II.1 (Günel, 2021, 117-144; 2014, 243-256). Rectangular chambers on the east and southeast of the wall were utilized as storage areas. Local and imported Mycenaean pottery and two Hittite hieroglyph seal stamps similar to Hittite Imperial stamps were recovered in these chambers (Günel, 2014, 243-256; 2012, 3). The pottery mostly consists of local productions, predominantly coarse ware, however, painted examples were also found (Günel, 2010, 28). Mycenaean ceramics were found at Çine Tepecik höyük level II1a and are contemporary with Late Helladic IIIB1 and IIIC (1320/1300-1100/1090 BC) (Günel, 2010, 42). It was demonstrated that Late Helladic pottery is of great significance for the dating of the Late Bronze Age Layers of Çine-Tepecik Höyük.

Miletos is located in the Yenihisar district of Aydın. The excavations were initiated by Olivier Rayet in 1873 and finds related to Mycenaean culture were discovered by Theodor Wiegand in 1906-7. Excavations conducted by Carl Weickert in 1938 brought to light finds that established the relations of the region to the Minoan culture (Graeve, 1997, 530). Stratigraphic studies on early periods were conducted by Wolf- Dietrich Niemeier in 1994, followed by studies around the Temple of Athena (Graeve, 2007, 628). Ruins from the Late Bronze Age were substantially destroyed by structures dated to the Roman Empire.

Miletos Layer V (1450-1300) and Layer VI date back to the Late Bronze Age and are divided into three phases (1450-1300; 1320/1300-1200/1190; 1200/1190-1100/1050 BC) (Niemeier, 2007:14-16). A strong Mycenaean influence was detected in these layers (Late Helladic IIIB-C (1320/1300-1100/1050 BC.) (Niemeier, 2007, 14-19; Gorman, 2001, 23).

A significant architectural formation in Miletos during this period is the fortification wall which incorporates bastions in certain intervals and was constructed in the casemate technique (Niemeier, 2002, 523). Besides Mycenaean pottery imports of the LH IIIB-C period, locally produced ceramics and eight ceramic kilns were unearthed (Graeve, 2005, 209). It is believed that these Mycenaean ceramics were imported from mainland Greece and the Aegean and Mediterranean islands (Kelder, 2010, 58-59).

Iasos is located on a peninsula in Kırıkkışlacık village, 28 km. far from Muğla/ Milas. The topography of the settlement, surrounded by the sea on three sides, makes it a significant harbor and trade center (Mee, 1978, 130; Berti, 1997, 823). The first excavations at Iasos were conducted by Doro Levi in 1960-1972. Excavations were conducted by Clelia Laviosa in 1972-84 and were continued by Fede Berti on behalf of the Italian School of Archaeology. Since 2011 Marcello Spanu has restarted the excavations.

The archaeological evidence obtained in the excavations indicated that Iasos might have represented a significant gate for the relations between the Aegean cultures and Anatolia (Mee, et al, 1978, 129). Excavations at Iasos have brought to light the earliest examples of Mycenaean pottery (LH I-II) however, at the same time ceramics of LH IIIA and IIIC take an important place among the finds (Mee, et al, 1978, 129). The finds from the Late Bronze Age layers consist of Mycenaean ceramics are probably imported from the Argolid and mixed with locally produced pottery.

Müsgebi is located in the town of Ortakent in Bodrum-Muğla. The first excavations were conducted by Yusuf Boysal in 1963-66 (Boysal, 1967a, 32). Later, in 2013, Müskebi was excavated by the Bodrum Museum of Underwater Archaeology. During the first excavation campaigns in Müsgebi three areas —including areas A, B, C— were excavated and nearly 50 tombs were revealed. These Mycenaean tombs consist of two parts: a dromos and a burial chamber. A total of 48 tombs were found – 17 tombs in area A, 19 in area B, 9 in area C- and were dated to the Late Helladic IIIA and IIIC periods Boysal, 1967b, 69; 1969. A significant amount of stirrup-handled pots, pyxis and kylix were discovered in the tombs (Boysal, 1964, 83).

Kaymakçı is located in the Marmara Lake basin of the Gediz River valley in Manisa. The site was first discovered during a survey in 2001 by C. Roosevelt and his team (Roosevelt, 2009). In this context, excavations started in 2014 to explore the development of the spatial organization and economic situation of this site (Roosevelt-Luke, 2017, 136; Roosevelt et al, 2018, 646). According to the ceramic chronology at Kaymakçı, it was occupied in the Middle Bronze Age (2000- 1700/1650 BC). Furthermore, the Late Bronze Age layers are divided into two phases Late Bronze Age 1 and Late Bronze Age 2 (1700/1650- 1200 BC). The Late Bronze Age 1 is dated to the 17th – 15th centuries and the Late Bronze Age 2 is dated to the 14th -13th (Roosevelt et al, 2018). During the excavations, two fragments of Mycenaean Decorated Ware were found in the Late Phase of the Late Bronze Age and these potteries date to Late Helladic IIIA and IIIB (Roosevelt et al, 2018, 665). Kaymakçı consists of a citadel and lower city in the Late Bronze Age. The site was surrounded by a fortification wall which was supported by bastions and towers (Roosevelt et al, 2018, 659). In the early phase of the Late Bronze Age, the ceramic assemblage consists of Gray Wares, Red, Red Light Brown, Brown Coarse Wares, and silver and gold-wash wares. At the late phase, the amount of Gray Wares decreased; however pointed potteries show up (Roosevelt et al, 2018, 664-668).

Finally, excavations and surveys in Western Anatolia have shed light on the history and chronology of the region. It is difficult to suggest a regular stratigraphy in the archaeological settlements examined due to the relation of Late Bronze Age layers to both the cultural relations to Central Anatolia (Hittites) and Aegean cultures (Mycenaean). The interaction of Hittites with Western Anatolia in the Late Bronze Age affected the region in terms of culture and arts. The discovery of Central Anatolia-origin archaeological finds (Hittite finds) at Western Anatolian settlements proves such relations. Related to this connection, many Hittite diplomatic texts were found in Hattusa, and many of them

are related to relationship between Hittite and the Western Anatolian states, such as the Treaty of Muwatalli II with Alaksandu of Wilusa (Beckman, 1999, HDT, no. 13). Hittite campaigns during their reign as an empire caused great destruction in the region. However, since these campaigns aimed toward a certain state, the traces of destruction are only local. The fact that the Western Anatolian campaign of Mursili II was limited to these regions and lands is a good example (Hawkins, 2015, 22). On the other hand, campaign of Hattusili I was limited area on western Anatolia (Bryce, 2005). Furthermore, it is major obstacle to the formation of a common chronology due to the fact that the settlements in Western Anatolia are located in different geographies and that different cultures shelter under different influence. For instance, the fact that the settlements in the coastal Aegean region are geographically close to continental Greece and the islands might show parallelism to the Aegean world culturally. In this respect, it may differ with the inner Aegean region, which is geographically distant. The greatest obstacles to the formation of a common chronology shall be considered as geographical differences and different cultural influences. Therefore, it is hard to discuss a common chronology for Western Anatolia as a whole although local stratigraphy and chronology can be determined locally.

CHAPTER IV. THEORETICAL BACKGROUND OF THE HOUSEHOLD ARCHAEOLOGY

Social organization is related to the economic structure of society. It is possible to see this connection in societies both today and in the past. Especially the tools utilized reflect the economic structure of society. At the same time, the materials that are produced and utilized can represent the social and political changes. In modern complex societies communities, tools that are utilized both for the purpose of production and consumption demonstrated far greater variety than the ones from the past. It is possible to see the traces of the material elements that have come into being due to complex relations and are an important part of the cultural factor in many settlements. To be able to gain information from said material factors, it is necessary to analyse and study archaeological finds from many perspectives. It necessary to approach said materials both from the perspective of the statistical data and the qualities and functions of the material utilized. As of the second half of the 20th century, new theoretical movements have come into existence for the evaluation and interpretation of the archaeological materials surfaced. By throwing all traditional methods aside, it has been intended to implement new archaeological methods to reach important data regarding the elements representing the material and intangible culture as well as the social organizations, economical structures, manufacturing relations, domestic and external politics, expansions of people, commercial activities of past societies. For example, while culture history focuses on not only the cultural structures of past civilizations, however, also the cultural spreading of the said civilizations, anthropological archaeology concentrates on presenting important data regarding human behaviours and lives (Matthews, 2003, 23-26). Related to this point, processual and post-processual archaeology contributes to the thought process to evaluate the archaeological materials.

The process described as “New Archaeology” was first explicitly introduced in the 1962 article “Archaeology as Anthropology” published by Lewis Binford (Binford, 1962). In accordance with the idea put forward as New Archaeology or Process Archaeology, it dealt with the development process and social reflection of archaeological finds, unlike Traditional Archaeology. It can be summarized as a systematic evaluation of the archaeological data obtained in order to understand the reasons of the change in the environmental and cultural process (Renfrew-Bahn, 2016, 267). For this purpose, it has emerged as an alternative to traditional archaeology by considering the functionality of

archaeological finds, rather than the time and space analysis of the archaeological data. Scholars who advocate this trend argue that it is insufficient to simply define the finds systematically obtained by archaeologists and that this evidence should be explained (Renfrew-Bahn, 2016, 268). In other words, it aims to question how and why cultural change, event or phenomenon occurs rather than what a historical event or phenomenon is, where it exists and when it occurs (Binford, 1962, 217-225).

From the point of view of New Archaeology, it has been tried to make important determinations about cultural behaviours based on the archaeological finds that have emerged as a consequence of the cultural change in many countries, especially Indigenous people in America (Dinçol- Kantman, 1969, 11). In particular, it argues that there should be cross-disciplinary cooperation, and that environmental factors influencing individuals' nutrition and consumption should be analyzed through scientific approaches and methods employed disciplines such as bioarcheology, paleo economics and zooarchaeology (Binford, 1962, 217-225).

It is argued that culture in process archaeology is a system in terms of technological, economic, political, social, and ideological aspects and it should be evaluated from these aspects (Renfrew-Bahn, 2016, 268). In the context of cultural ecology, Processual Archaeology aims to systematically address the relationship between environment and culture or the environment and technology. Another essential element is the importance of focusing on the evolution of cultural systems over time (Renfrew-Bahn, 2016, 269). It reveals the necessity to evaluate the archaeological finds objectively and try to explain the human behaviours in the past societies on a certain theoretical basis by emphasizing that human beings are a part of society. It is suggested that it is an experimental science within the scope of theoretical and testable methods put forward in the context of process archaeology (Binford, 1962, 217-225).

A number of inadequacies have been noticed in processual archaeology, and criticism against it reached its peak in the 1970s. Particularly, processual archaeology has been subjected to critical criticism related to the idea that suggests archaeology is a repeatable experiment (Gamble, 2014, 30). Moreover, he was not able to maintain the rules of the theoretical approach to the discovery of human behaviour. In this context, post-processual archaeology approach emerged in the late 1970s and early 1980s,

suggesting that the concept of positivism has altered, and that the absolute truth cannot be utilized in the evaluation of archaeological knowledge (Yalman, 2003, 178).

Ian Hodder (Hodder, 1982) Julian Thomas (Thomas, 2000), Christopher Tilley and Michael Shanks (Shanks- Tilley, 1987a;b) have been put forward and advocated as a consequence of criticism of processual archaeology. According to Hodder, archaeological objects have many functions, and it is possible to obtain different types of information from these objects (Hodder, 1992). These objects were produced and utilized as a consequence of certain needs and contain a lot of information about past life (Hodder, 1992, 341-352). Therefore, it is necessary to analyse these archaeological finds and find out their different meanings (Hodder, 1992, 341-352). Post-Processual Archaeology is concerned with society, which forms the basis of past cultures, and tries to identify the present and the past (Hodder-Hutson, 2003, 207). With the emergence of post-processual archaeology, an alternative to processual Archaeology has been tried to be created and thus, some questions that are difficult to answer are tried to be searched for answers. Although he claims that the reflections of social changes are apparent in in objects or symbols, he tries to identify the social changes and transformations by interpreting such as evidence (Hodder, 1982).

Post Processual Archaeology also tries to explain the connections between the past and the present in their contexts (Yalman, 2003, 178). These may include evidence of gender roles and status in past societies. Having examined the social structure of past societies, post processual Archaeology has aimed to determine gender roles and status from the obtained archaeological material or data. While trying to make sense of archaeological data by considering religious and political factors as well as environmental influences, it examines past life in all its aspects beyond associating thought to past cultures with social transformations. It evaluates all archaeological data by considering the flora and fauna conditions as well as the context in which they are located (Hodder, et al, 1998, 81). According to Hodder and Scott Hutson, there is a dialectical link between the past and the present and is interpreted by considering the present-day conditions, so that the present can also be criticized over the past (Hodder-Hutson, 2003, 206-235). At the same time, post-processual archaeology suggests that the relationship between norm and individual, subject and object, process and structure, material and intellectual can be studied, however, problems cannot be solved with a single approach and archaeological data should be examined from a pluralistic perspective (Hodder-Hutson, 2003, 234-235).

In addition, his perspective is concerned with the theory of society and the relationship between social groups and provides an interpretation of the past (Hodder-Hutson, 2003, 235).

In order to evaluate the spaces that belonged to the inhabitants of past civilizations and the materials utilized in said spaces as a whole, a new archaeological approach that targets space analyses and is described as “Household Archaeology” in the literature appeared in the third quarter of the 20th century. Following the processual archaeology intellectually, the household archaeology focuses on understanding people that inhabited domestic or common spaces, and the social statuses, relationships, what materials these individuals utilized and their economic structures.

IV.1. Household Archaeology

In the beginning of the 19th century, the archaeological research on the native groups of the American continent was first conducted in the context of the house phenomenon (Özdemir – Özdemir, 2019, 29). With these studies that are deprived of hypothetic context, the seeds of household archaeology were planted. At the end of the 1970s and in the beginning of the 1980s, both in North America and the Western Europe, the household archaeology was born as a response to the traditional (old) archaeology that focuses on the classification of archaeological materials (Godino-Madella; 2013, 1). This approach improved with increasing interest in household archaeology in the 1980s and 1990s (Özdemir-Özdemir, 2019, 29). As first generated and supported within the context of the processual archaeology, household archaeology had become small-scale archaeology on its own, it had not become a sub-discipline in archaeology. Richard Wilk and William Rathje were put household archaeology on a theoretical base (Wilk and Rathje, 1982). Wilk, Rathje and Wendy Ashmore claimed that there is a disconnection between archaeology and the theories of cultural change and evolution, and therefore, the approaches put forward regarding the changes in household organizations may eliminate this disconnection (Wilk and Rathje, 1982).

Unlike processual archaeology, household archaeology focuses on the household which is the smallest unit of society and the finds inside the household and their relationship to the residents of the household (Wilk and Rathje, 1982; Godino-Madella, 2013, 1). In other words, household archaeology can be defined as relationships between human and archaeological evidence (Parker- Foster, 2012). It is a window to understand

socio-economic relations and organizations of past society and with this window, it is possible to understand the social role or changes in the past community. According to Ruth Tringham, household archaeology defines its main goal as an understanding of social evolutionary change by emphasizing the micro-scale analysis of the social and economic changes between large regions or continents on social groups (Tringham, 2001). Household archaeology can give the opportunity to research on social cohesion since housing is the level of social groups where economic and ecological processes are directly expressed (Wilk and Rathje, 1982, 618).

A household is defined as the unit that is shared by individuals that are living together, using the same resources and sharing the same tasks for living (Wilk- Netting, 1984). Households give the opportunity to scrutinize social adaptation (Çevik, 2014, 110). Also, the economic and environmental process can be analysed from evidence for activities and the activity areas inside the household with respect to the number of people living inside the household. According to Wilk and Rathje, a household consists of three main factors: Social (demographic unit that holds the numbers and the relationships of its members), Financial (housing, activity areas and goods) and Behaviour (activities that are practiced) (Wilk-Rathje, 1982, 618). Indeed, a household that consists of these factors may have distinctive characteristics in different societies (Özdemir- Özdemir, 2019, 30). It is possible to gain information on housing by analysing domestic finds, and to gain information on the household by analysing housing (Wilk-Rathje, 1982, 618).

Theoretical approaches from other social science disciplines have been effective in the development of household archaeology (Çevik, 2014, 110). For example, household archaeology has a firm foundation from a theoretical point of view with theories on social and economic inequality within a framework of a Marxist ideology and also social practice theories such as feminist or gender anthropology (Godino-Madella, 2013, 1-2). The approaches mentioned above have significance especially in gathering detailed data in determining the household resident's behaviour and the daily practices regarding the use of the house in which they dwelled (Kent, 1990; Allison, 1999). Unlike top-down approaches, household archaeology focuses on a bottom-up approach to explain the social and cultural changes and modellings based on the archaeological pieces of evidence (Çevik, 2014,110). In other words, household archaeology is a method for analysing small-scale social changes, can in fact provide information on generating social models and social structures from specific to general (Godino-Madella, 2013, 2).

Social anthropologists generally utilized these basic units of analysis in household studies. However, some anthropologists utilized some special methods to describe the environmental factors, economic and demographic changes. However, for wide-scale descriptions, they often utilized ethnographical data and tried to gather information on the reasons for the changes in households in societies (Wilk- Rathje, 1982, 619; Özdemir-Özdemir, 2019, 31). Examples such as the individuals in the same household not cooperating economically clearly revealed that the household can be a complex phenomenon (Çevik, 2014,110).

Social anthropologists describe the household type depending on the number of individuals living in the house. For example, while the nuclear family, consisting of parents and offspring, is described as “family household”, while the family that consists of married children, servants, or seasonal workers that join the family is described as a complex household, houseful, extended family or a joint family (Blanton, 1994, 5; Çevik, 2014, 111; Özdemir-Özdemir, 2019, 31). To sum up this discrepancy in the household types, a wider description exists for “co-resident domestic groups” for a family type which consists of individuals who live together, participate in common activities and share a family tie (Tringham, 2001). Changes in the individuals of a household (marriage, death, birth) reflect onto the household and the spaces are expanded or abandoned according to the needs of the group (Özbal, 2014, 159).

Household archaeology emerged through analysis of the independent buildings and the courtyards constructed in relation to buildings in complexes which consisted of independent structures and courtyards in Central America. In archaeological studies conducted in Central America, it was first determined that single house or individual houses that are utilized within the scope of household archaeology have a relationship within the settlement (Tringham, 2001). The study of household archaeology has progressed through studies in independent walled building complexes that facilitate the spatial identification of households in the settlements of the Ant Mountains in South America (Özbal, 2014, 159). In a study by Kent Flannery called *The Early Mesoamerican Village* (1976), the archaeological finds and the spatial plans and dimensions of the houses in the Mayan settlements of Central America were explained in terms of social, material, and behavioural aspects (Flannery, 1976). Household archaeology has been flourishing with field practices, especially with the studies in Central America.

Wilk and Rathje examine households in which there are individuals living together, sharing the same resources and duties as well as participating in common activities, under four different conceptual categories: *Production*, *Distribution*, *Transmission* and *Reproduction* (Wilk - Rathje, 1982, 622).

- a. *Production*: Production is needed in a household to ensure continuity (Çevik, 2014, 112). The goods produced in the household can be made with a simple and complex labour force (Özdemir-Özdemir, 2019, 32). Expertise may not be necessary, especially in simple tasks or complex tasks. Works requiring expertise are usually performed by a single craftsman and can be more productive.
- b. *Distribution*: It is the action made for the completed production of the goods to meet the consumer. In addition to the distribution of produced goods within the households within the scope of the livelihood economy, it can be distributed to different households through exchange (Çevik, 2014, 112).
- c. *Transmission*: The transfer of all property and structures by inheritance from generation to generation or with increasing population pressure (Çevik, 2014, 112).
- d. *Reproduction*: It can be defined as the upbringing and socialization of children in the household (Çevik, 2014, 112). Reproduction, which is a variable factor, can be done with different kinds of organizations in the household. For example, cooperation in the household to raise the children can be examined in this context (Özdemir-Özdemir, 2019, 32).

It has been suggested that these four different elements listed above are closely related to household structure and in this context have more efficient and solid foundations in production, distribution and transfer in large-scale households. In this context, it is considered that the goods produced in relation to the diversity of production in the households were gathered in a certain center and as a consequence, formed the basis for social inequality in households and the formation of elite households (Wilk -Rathje, 1982; Çevik, 2014, 112). On the other hand, it is seen that the production and distribution of the goods produced in small households are more rapid and systematic and give mobility to households (Wilk -Rathje, 1982, 632).

In the 1990s, household archaeology included approaches intended to study class, gender, and identity along with progressive archaeology (Çevik, 2014, 112). Amos Rapoport evaluated the housing from an intercultural perspective before interpretive archaeology presented by the post-process approach and suggested that socio-cultural

factors rather than climate and geography were influential in determining the household (Rapoport, 1969, 18). At the same time, he stated how the spatial order of the households with subsistence economies, as well as how the types of households are influenced by factors such as symbolism and religion.

IV.2. Space Usage and Space Analysis Methods

Environmental conditions such as rivers, lakes, plants, as well as prey animals and fertile agricultural areas have been effective in the establishment of hunter-gatherer societies (Özdemir, 2017, 15-16). First, caves and shelters were utilized as shelter, then man-made simple houses were utilized (Arsebük, 1996). The design of these spaces (elements such as platform, hearth, silo etc.) has been shaped according to the needs (Duru, 2013, 25). In early periods, houses were built with single or multiple rooms. In this context, production and consumption were conducted in the same space in addition to daily activities in houses with one-room spaces. However, in houses with multiple rooms, these activities can be done in various places. It is considered that the houses constructed in direct correlation to the population, reflect human behaviour and are shaped within this context (Özdemir-Özdemir, 2019, 35). Flannery suggests that round and rectangular houses are related to social structure and that one-room houses represent the nuclear family type and the multi-room houses represent large families (Flannery, 2002, 421). Rapoport, on the other hand, argued that the house is a product of human behaviour, and that it is the power of communication with the past and the future (Rapoport, 1990). Özlem Çevik defines the house not only as a place where people take shelter and where economic activities occur, however, also a place that holds symbolic significance in terms of relationships between households in generally (Çevik, 2014, 113). Hodder states that there is a meaningful relationship between Domus³⁷ and Domestication and that animals and plants taken to Domus are taken into the house and therefore domesticated (Hodder, 1990). Thus, he argues that prehistoric societies do domestication work before the action of domestication because they form their homes first (Hodder, 1990).

³⁷ Domus, in Latin which means "House"

In addition to house architecture and the elements built in relation to architecture, evaluation and analysis of archaeological finds found in the spaces within the framework of certain methods are of great significance. In this context, the relationship between spatial analysis, space and spatial organization can systematically be revealed (Çevik, 2014, 109). Analytical methods such as micro-archaeological and micromorphological analysis, soil chemistry and phytolith analysis can be applied in addition to analysis such as ethnoarchaeological studies, spatial sequence analysis, spatial distribution of finds and base sequence analysis (Çevik, 2014, 113-118).

IV.2.1. Ethnoarchaeological Studies

Ethnoarchaeological studies are conducted in order to obtain information about the past societies through analogies to modern societies. This method can be applied in household archaeology in order to reveal the relationship between people and households and how people have utilized the spaces in the past (Çevik, 2014, 113-114). In particular, it is the most important method utilized to reveal the usage of the hearths, platforms, silos and the associated pottery. Thus, an understanding on the past life and thought is obtained through analogy to modern settlement models (Özdemir, 2017, 20).

Although ethnoarchaeological research dates back to the beginning of the 19th century, it constituted widespread with the *New Archaeology* that emerged in the 1960s. Its popularity increased throughout the 1970s and 1980s until today. It tries to define the relationship between human and material culture within the framework of certain rules (Çevik, 2014, 113-114). At the same time, Hodder in *Symbols in Action* (1982), describes the existence of the relationship between the diversity of human behaviours and material culture, however, he argues that in order to better understand the past, the material left behind by different individuals should be handled with stories (Hodder, 1982).

IV.2.2. Space Syntax Analysis

This analysis was first utilized by architects as a way to understand the relationship between the spatial arrangement of buildings and open spaces and the intentional movement within them (Osborne, 2012, 45). The aforementioned analysis acquires its theoretical base from structuralism (the rules that give meaning to human myths, concepts, and cultural behaviour) (Cutting, 2003, 1-3). The space syntax analysis is based on three main hypotheses. These are; a) Spaces are utilized consciously by

inhabitants for their goals; b) the way that spaces are connected affects the way that inhabitants use the space and how they move; c) the movements that are caused by said spaces affect the inhabitants' behaviours (Hiller, 1996; Cutting, 2003, 3; Çevik, 2014, 114).

It consists of an analytical system created in a environment by considering how spatial order is made with spatial sequence analysis, comparison, and interpretation (Cutting, 2003, 3). By allowing us to see the access and usage of spaces together, it can reveal the relationship between the inhabitants or visitors and the space. Within the scope of this analysis method, each chamber can be treated as a cell and the connections between them can be shown on a template. In this way, it can be understood which places are utilized and to what intensity. Again, through the template, a series of mathematical tasks are performed to determine whether the spaces are integrated or segregated. In this way, the morphological characteristics of the spaces are examined to see whether they demonstrated symmetrical, asymmetrical, dispersive or non-dispersive properties. It is possible to classify rooms and spaces depending on accessibility. For example, in order to reach the most remote corners of the house, it is necessary to go through many rooms; while this is called depth; such spaces can be isolated and asymmetrical. On the other hand, the depth is generally low in the spatial plane that is easily accessible near the main entrance and such spaces can be symmetrical (Çevik, 2014, 114-115).

Space syntax analysis has been criticized by many researchers. In this context, one of the criticisms that are directed at two important issues is that the functions and dimensions of the spaces are not cared for, and the focus is on the relationship between the spaces, while the other is that they cannot provide sufficient data about the real uses of the area where the spatial plane is revealed (During, 2006, 32; Çevik, 2014, 115). Despite these criticisms, it can provide important data to researchers by considering the locations of the spaces from a unique perspective.

IV.2.3. Base Sequence Analysis / Spatial Distribution of Base Finds

It can be defined as the inter-spatial changes by analysing the finds in the space floors and the determination of the archaeological formation process of the space floors and it was first applied within the scope of Processual Archaeology (LaMotta-Schiffer, 1999, 19). By analysing space bases in a process context, the relationship between humans, material culture and space has been examined in many ways (Duru- Özbaşaran,

2014, 126). However, it has been suggested that post-processual archaeology and human-space relationship should be put forward by interpreting these finds on floors and bringing together the households stories (Hodder, 1982). The life of the housing is realized in three ways that are described as settlement, abandonment and after abandonment (LaMotta-Schffer, 1999, 20-15).

a. Settlement Process

Activities conducted during the resettlement process include maintenance of activity areas, production equipment maintenance, food preparation and consumption, sleep, and household ritual. The material residues of these activities can be summed up as three accumulation processes as primary, secondary, and temporary waste (Çevik, 2014, 117). Primary Waste is composed of in-situ finds and provides primary information about the socio-economic structure of individuals living in households. The wastes defined as Secondary Wastes are the group of wastes collected by taking them from their activity areas and transporting them to a different area. Secondary wastes are collected in places such as abandoned houses, rubbish dumps and cemeteries. Finally, Temporary Waste is the storage of broken or worn goods for reuse (Özdemir-Özdemir, 2019, 44).

b. Abandonment Processes

These are the waste that is created when leaving the house or leaving behind easily transported goods. However, moving the goods to another location is defined as relocation (Çevik, 2014, 117). When leaving the house, the displacement of the material that is highly cost-effective and impossible to supply is given priority. The abandonment of the space occurs within the framework of Changeability, Transportation Costs and Leave Conditions (Özdemir- Özdemir, 2019, 45). The presence of high-value and functional portable goods on the floor of the space shows that the space is subject to a rapid and unplanned abandonment process (LaMotta-Schiffer, 1999, 22).

c. Post-Abandonment Process

The life history of abandoned houses and other structures continues in the post-abandonment process (Özdemir-Özdemir, 2019, 44). In this context, the reuse of the abandoned space can eliminate the evidence of the primary uses, and the use of the abandoned area as a dump also conceals the evidence of the first use (LaMotta-Schiffer, 1999, 24). The destruction of the structure after the abandonment of the space and the

subsequent accumulation of finds on the floor by the displacement of the animals by the animals or the destruction of the pits can cause stratigraphic problems (Çevik, 2014, 117).

IV.2.4. Micro-archaeology and Micromorphology

Micro-archaeology, microstratigraphy, or micromorphology analysis, as well as soil chemistry analysis and phytolith analysis, can be performed in order to detect the daily activities and transactions realized in houses (Özbal, 2014, 162). Micro-archaeology and micromorphological analysis methods were first utilized by archaeologists in the 1960s to detect deposits in Pleistocene and Early Holocene caves (Tringham, 2012, 96-97; Çevik, 2014, 118). Micro-archaeological analysis is defined as the statistical analysis of 1.5cm² finds buried and buried in the soil habitat (Özbal, 2014, 162). The finds can be composed of pottery, bone, stone, flint, and obsidian fragments. These analysis methods can be utilized to understand the areas of activity inside and outside the spaces, as well as the streets, courtyards, ateliers, warehouses, and the process of using the space (Özdemir-Özdemir, 2019, 42). At the same time, in addition to the data it provides about the supply of raw materials from the samples taken from the floors and walls in the silos and the ateliers, the domestic or wild plant seeds which might shed light on the human environment relations can present important data in this context (Özdemir-Özdemir, 2019, 42).

As a consequence, the analysis and interpretation of archaeological finds with different perspectives and scientific methods contributed to the development of archaeology in theoretical context. In this context, Beycesultan Layer 5b is suitable for spatial analysis with its architecture and rich finds. In particular, all the finds resulting from the end of this layer with a large fire were found in situ. In the architecture of this layer, firstly the finds found in the spaces will be extracted from the base to a certain level and their relative quantities. The amount of storage in the houses can be reached by calculating the functions and capacities of the architectural elements (silos, etc.) of the house as well as the communities of finds in the spaces. Thus, valuable information can be obtained about the settlement process of Beycesultan Layer 5b and the lifestyles and economic structures of the people living there.

The data on agricultural activities shall be retrieved from the remains and quantities of grain as well as the pottery and finds obtained from the houses in the

settlement. Within this respect, ethno-archaeological studies conducted in the modern village of Kocayaka, which is neighbouring mound to the Beycesultan Höyük, might provide information about agricultural production and possible cooperation in the settlement. Ethno-archaeological studies can provide a relationship between the past and the present. They also present an important reference point about the social organization in the settlement. Within this study, it is possible to consider that evaluating the settlement in the context of household archeology and evaluating the finds found in the settlement both in terms of quality and quantity shall reveal important results.



CHAPTER V. INTRODUCTION TO BEYCESULTAN HÖYÜK

Beycesultan höyük is located 5 km southwest of Çivril district centre of Denizli Province (Fig.1). The octagonal tomb of Seljuk period belongs to Behice Sultan, one of the first “Alperens” who escaped from the Mongol invasion and settled in the region (Erdem 1997: 53). The name Beycesultan derives from Behice Sultan. The tomb, which is visited by local people today, has a surrounding boundary wall and graves from the Seljuk period.

Located in the fertile Çivril plain, the Beycesultan höyük consists of two summits, east and west. The cone of the höyük, which is approximately 25 meters high from the plain, is 36 hectares and its area is 73 hectares as per spread pottery sherds (Abay, 2012b: 40). The eastern and southern parts of the höyük, which is within the boundaries of Kocayaka village, are surrounded by Küfi stream, the most important branch of Great Meander (Büyük Menderes) (Dedeoğlu- Abay, 2014: 2). The northern part is surrounded by the mountain range known as the Yaka Mountains. Surrounded by fertile farmland, the höyük represents the largest settlement on the plain within the boundaries of the Çivril-Baklan and Çal districts. The höyük is located next to the north side of the Uşak-Denizli asphalt, however, it is a strategic location due to the ancient road routes coming from Küfi Valley and Işıklı Lake are heading west via Beycesultan höyük (Lloyd-Mellaart, 1962:6-7; Abay, 2012a: 9-20).

The location of Çivril plain and the valley of the Great Meander River is of great importance in terms of trade relationships. The main trade route between the coast of the Aegean and central Anatolia passes through near the Beycesultan (Fig.6). Great and Little Meander valleys reached the Aegean Sea; therefore these roads are of great significance for the western Anatolia trade system (Şahoğlu, 2005: 346). The Upper Meander Basin is a bridge between central Anatolia and Coastal Aegean region. The Aegean coastal strip is easily accessible through the natural routes from Afyon city, following the Gediz and Little Meander valleys (Şahoğlu, 2005, 346-347). This road played an active role in both the hinterland and coastal regions. This road was utilized almost every period.



Fig.6: Trade Road of the Western Anatolia During Bronze Ages³⁸

Although dry farming was done in the agricultural areas surrounding the settlement in the past, irrigated agriculture is being conducted with irrigation projects implemented since 1970s. In addition to agricultural products such as wheat, barley, chickpea and poppy, industrial products such as sunflower and corn have been grown recently.

During the surveys conducted by Abay and Dedeoğlu (Abay, 2011, 1-29) in the plains and mountainous areas within the borders of Çivril-Baklan and Çal districts between 2003 and 2014, over one hundred settlements were discovered. The settlement model of the region has been revealed in these studies. The first settlements date to the Neolithic period. In addition to the Neolithic period, Chalcolithic period (CP), Bronze Ages, Iron Ages (IA), Roman-Byzantine and Seljuk periods, many settlements were identified.

However, in terms of settlement dimensions, the region represents the largest settlement in the period when Beycesultan Höyük was inhabited. In this context, Beycesultan höyük was discovered during the research conducted by James Mellaart and Seton Lloyd in the name of British Archaeology which came to the region in the 1950s after Central Anatolia. Because it is the largest höyük in the region, it is considered that it may be the capital of Arzawa by Mellaart since it is located on the ancient transportation

³⁸ <https://www.google.com/maps>. (Illustrated by M.Çarkı)

route (Lloyd- Mellaart, 1962, 6-7). However, when the historical geography of the region, including the Upper Meander Basin, is considered to be part of the Arzawa Confederation in the 2nd millennium BC, it is still controversial which principalities are located within the borders. The campaign of Mursili II to Western Anatolia provides important information in this context (Beckman et al, 2011, 28-49). However, where Mira-Kuwalia is located, and its boundaries is still a controversial issue. In this context, According to Garstang and Gurney, it must be situated in the valley with reference to the Kupantakurunta treaty (Garstang-Gurney, 1959, 91). According to J.D. Hawkins, it must be located between Meander Rivers (Hawkins, 1998). On the other hand, Macqueen suggested that it must be west of the modern Afyon city (Macqueen, 1968, 177). However, according to Cornelius, Mira-Kuwalia should be within the Karia region (Cornelius, 1958, 394-395). Hawkins has mentioned that the Mira-Kuwalia country maintained dense political contact with the Hittites and according to him, it must have been Afyon region (Hawkins, 1998, 21-25, fig.11). It is highly probable that the principalities of Mira-Kuwalia are located in the Afyon region. As a consequence, it is probable that the region where Beycesultan höyük is located is within the borders of Mira-Kuwalia and this is one of the important cities of the Mira-Kuwalia.

V.1. Excavation History and Stratigraphy

V.1.1. Early Excavations

Lloyd and Mellaart started excavations in Beycesultan in order to reach the data about Arzawa mentioned in the Hittite and Egyptian written documents in the second millennium and also to shed light on the history of the region. For this purpose, excavations were conducted at many points of the höyük between 1954-59. A, B, C, D, E, F, G, H, K, M, N, S, T, AA, BB, CC, P, X, and J, L, O, R, SX, Studies were conducted in the areas of U, Y, Z (Lloyd-Mellaart, 1957, 27-36; 1962, 9-13) (Fig.7). Late Chalcolithic levels were found in the Trench SX during the early excavations (Lloyd-Mellaart, 1962). In addition, the Early Bronze Age levels were also found in the Trench SX (Lloyd-Mellaart, 1962). Middle and Late Bronze Age strata were found in a large area (Lloyd-Mellaart, 1965, 1972).

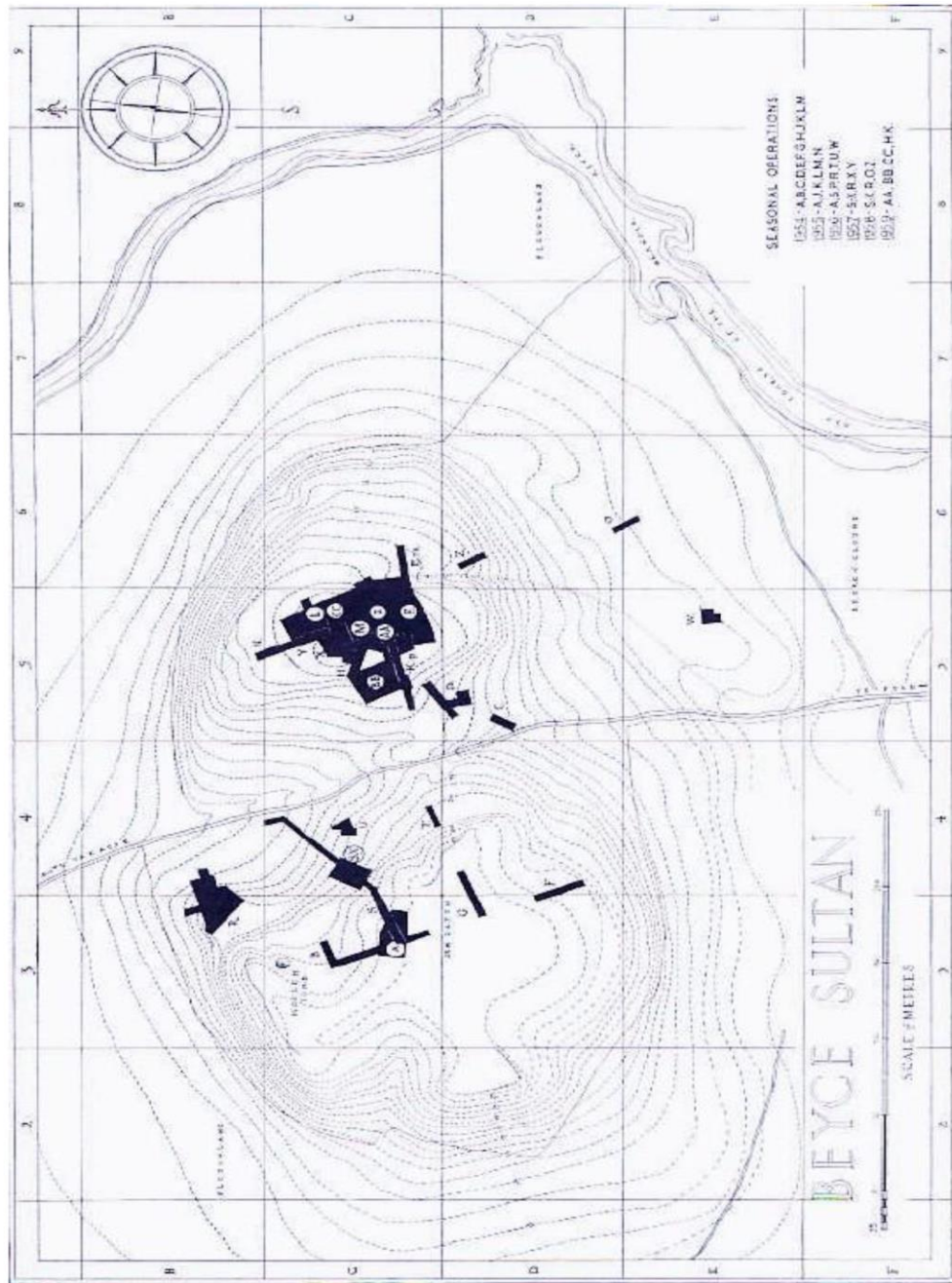


Fig.7: Excavations Areas at Beycesultan Höyük (Lloyd- Mellaart, 1962:8)

Early excavations revealed that the settlement was inhabited since the earliest Late Chalcolithic period. 40 strata were identified in the Trench SX in order to expose all stratigraphy in the western cone of the höyük (Lloyd-Mellaart, 1962; 1965; Abay-Dedeoğlu, 2009, 54) (Fig.8).

PERIOD	LAYER
Late Chalcolitik	Layer XL- XX
Early Bronze Age I	Layer XIX- XVII
Early Bronze Age II	Layer XVI- XIII
Early Bronze Age III	Layer XII- VI
Middle Bronze Age	Layer V- IV
Late Bronze Age	Layer III- I

Fig. 8: Layers Detected in Early Excavations at Beycesultan (Lloyd-Mellaart, 1962; 1965)

The Late Chalcolithic period (LCP), which represents the earliest period of the settlement, has a deposit of 11 meters and represents levels XL-XX. The Late Chalcolithic Age was discovered by Lloyd and Mellaart. It was dated between 4750-3500 / 3400 BC. Due to the narrowing of the SX trench, which started to be opened in a wide area, the architecture was reached in a limited area (8x4 m) in the Late Chalcolithic levels (Lloyd-Mellaart, 1962, 18, Fig.2-3) (Fig.8). The identified architecture has a rectangular plan and consists of a single space. Megaron-style spaces include containers, platforms, and hearths (Lloyd-Mellaart, 1962, 18-26, Fig. 4-6). The walls of the room are mudbrick and plastered with clay. Although some of the layers are architecturally strong, some are represented only by a pit or burned floors (Lloyd-Mellaart, 1962, 18-26). The Chalcolithic levels of the settlement are represented mostly black or brown burnished pottery (Lloyd-Mellaart, 1962, 18-26, 71-115). Handmade pottery is produced with stone, sand and straw added. Although white paint was utilized as a decoration element in pottery consisting of vessels, jugs and bowls, the burnished decoration was applied to other examples (Lloyd-Mellaart, 1962, 18-26, 71-115). In addition to the rim of the bowls of paint, there are zigzags in the form of scraped decoration on the body of the jugs. Especially, in the early and middle stages, line decoration was utilized extensively (Lloyd-Mellaart, 1962, 71-115). In addition to the pottery, clay figurines, stone beads, axes, bone scrapers and metal (copper) artifacts were found (Lloyd-Mellaart, 1962, 18-26).

Beycesultan is represented by EBA XIX-VI levels (EBA I: XIX-XVII; EBA II: XVI-XIII; EBA III: XII-VI) (Lloyd-Mellaart, 1962, 27-58). There was a significant

change in the pottery detected in the Trench SX (Lloyd-Mellaart, 1962, 27). The architectural elements of the EBA period are mentioned in addition to the stone-based mudbrick architecture and the presence of a city wall dated to EBA (Lloyd-Mellaart, 1962, 27-33). The megaron-style buildings built since the Chalcolithic period continued in the EBA. A megaron-style space, especially dated to EBA and found in the XVII level, was described by Lloyd as a temple (Lloyd-Mellaart, 1962, 29-35, Fig. 8-9). It was suggested by Lloyd that the front room of the two-room megaron is to be utilized as a sanctuary and the back room be utilized as a priest's room (Lloyd-Mellaart, 1962, 29-35). The presence of two steles made of clay and double horns and a circular altar adjacent to them in the anterior room utilized as a place of worship is shown as evidence that the place could have been utilized as a temple (Lloyd-Mellaart, 1962, 29-31, Fig. 8-9). This megaron-style temple was proposed by the excavator, who was the pioneer of the temples built later in the EBA (Lloyd-Mellaart, 1962, 29-35). There are clay platforms, hearths, kilns, and silos inside the spaces. The pottery of EBA I consists of two main groups: thin and coarse. The fine ware produced in black and red slipped ware is decorated with wide and shallow groove decoration. This well-baked pottery group includes keeled bowls, beak jugs, mugs and sharp-shouldered pots and tripods. In addition to the pottery, violin-shaped marble idols, copper daggers and awls are the other important finds (Lloyd-Mellaart, 1962, 27-35). Although the last phase of EBA I ended with a fire, it was understood that the settlement was rebuilt and utilized in EBA II.

In the EBA II (XVI-XIII) there was a significant change in both pottery and architecture. In particular, it was emphasized by Mellaart that the great change in pottery could not be a local development (Lloyd-Mellaart, 1962, 27, 136; Abay, 2012b, 43). Advanced examples of megaron-style temples were seen in the architecture. Two temples were built side by side in Layer XVI (Lloyd-Mellaart, 1962, 36, Fig.10). The twin temples are separated by a thin wall about 20 cm thick and the walls are reinforced with wooden posts (Lloyd-Mellaart, 1962, 36). The walls of the temple, including altar and silos, were plastered with clay. There are silos built adjacent to the walls at the entrance of the temple, as well as hearths and platforms (Lloyd-Mellaart, 1962, 36-39). The temple architecture in EBA II continued in similar ways (Lloyd-Mellaart, 1962, 36-57). In this phase, there is dark-faced pottery with black, red, grey, and brown burnished as well as buff and pinkish samples (Lloyd-Mellaart, 1962, 38-39). The pottery is handmade and utilized mainly as straw and sand additives. The most prominent pottery group consists of spouted

pitchers, bowls with keeled and pedestal bowls and broad necked jars. Groove, ruffle, and white paint were utilized as decoration elements in the pottery (Lloyd-Mellaart, 1962). Wheel traces were observed in the construction of the pottery starting from Level XIII and reflected in the variety of forms in the pottery produced in subsequent bartering. He concluded that EBA II ended with a major fire thought to be related to Luwians and that it was rebuilt in EBA III (Lloyd-Mellaart, 1962, 199).

Despite significant changes in pottery production in the EBA III (XII-VI) period, megaron-style buildings, which are characteristic of the architecture, continued to be utilized (Lloyd-Mellaart, 1962, 199-200; Abay, 2012b, 43). Hearths, kilns, and platforms appear as important architectural elements in the spaces (Lloyd-Mellaart, 1962, 199-200). Although the use of the wheel has increased in pottery making, they are produced as handmade of high quality and traditional forms (Lloyd-Mellaart, 1962, 58-62, 199; Abay, 2012b, 43). Tankard and depas containers, which are the most characteristic forms of this period, were produced for the first time (Lloyd-Mellaart, 1962, 58-62, 199; Abay, 2012b, 43). Especially at the end of this phase (VII-VI), there was an increase in the production of spouted pitchers, pedestal and handled jars in relation to the use of the wheel (Lloyd-Mellaart, 1962, 199-263). At the same time, bowls, goblets, teapots constitute an important form repertoire for this phase. Horizontal grooves, ruffles and line decoration were utilized as decoration elements in the pottery (Lloyd-Mellaart, 1962, 199-263).

During the transition from Early Bronze Age III to Middle Bronze Age (MBA), there is no cultural break in Beycesultan as in all of western Anatolia (Abay, 2012b, 44). Between the periods in question, although there is not enough evidence in Beycesultan at the beginning of the second millennium BC, it is mentioned that there is a transition period (Abay, 2012b, 44). The continuation of the tradition of ceramic forms and production in a similar way is shown as evidence of this (Lloyd-Mellaart, 1965: 69). The commercial activities developed between Anatolia and Assyria since the MBA have led to the formation of central and local kingdoms. As a consequence of this political change, although the Hittites appeared on the stage as a political power in Central Anatolia, local kingdoms took their place on the stage of history under the Arzawa confederation in Western Anatolia. Lloyd and Mellaart discovered the domestic architecture in Middle Bronze Age and in this context, they think that Beycesultan must be important site for Arzawa confederation or local kingdom (Lloyd-Mellaart, 1965, 73; Mellaart-Murray 1995, 93-98; Abay, 2012b, 44). Beycesultan MBA (V-IV) levels were unearthed in a

large area in the eastern cone. For this period, the public building complex known as the *Burned Palace*, which was found in the Layer V of the settlement, appears (Lloyd-Mellaart, 1965, 3-34). The building is a complex structure consisting of a portico courtyard and rooms and corridors connected to the courtyard. The palace, which was destroyed by a large fire, had entrances from the north, west, south and east, however, the main entrance could not be identified (Lloyd-Mellaart, 1965, 31-33; Abay, 2012b, 45). It is considered that the walls of this two-storey building were decorated with paintings from the paint traces on the walls. In this respect, the existence of the wall decoration tradition seen in the palaces of the Near East origin can be thought to have been built in this palace, although the settlement is not directly or indirectly related to the Near East (Lloyd-Mellaart, 1965, 3-34). On the other hand, it shows the importance of the settlement in this period with the rich finds found in the structures of area S (Lloyd-Mellaart, 1965, 39-49; Abay, 2012b, 45) on the western cone of the settlement and the temple structures found in the R area (Lloyd-Mellaart, 1965, 39-49; Abay, 2012b, 45).

The fortification wall found in the trench W in the southern part of the mound shows that the settlement was surrounded by a fortification wall during this period (Lloyd-Mellaart, 1965, 46-47; Abay, 2012b, 45). The pottery of this period, which has a rich repertoire of different varieties, is similar to the EBA III period forms (Lloyd-Mellaart, 1965, 69-81). It is considered to be a transition phase from EBA to MBA as the pottery of levels VII and VI representing EBA IIIb is similar to MBA pottery (Abay, 2012b, 44). The Layer Vc pottery forms representing the early phase of MBA are mainly composed of the previous pottery forms. The pottery produced with wheel-made started to produce new forms starting from Layer IVb, which represents the middle stage of this period. These new forms were utilized until the middle of the LBA period (Abay, 2012b, 44). During this period, the production of light-burnished pottery, especially in red and brown tones, continued increasingly (Lloyd-Mellaart, 1965, 128-138; Abay, 2012b, 44).

Looking at the LBA (III-I) levels of the settlement, it is clearly revealed that the architectural tradition that has continued since the MBA has continued to a great extent and that the settlement along with its streets has regular architecture (Lloyd, 1972; Abay, 2012b, 45). Especially in a wide area of study on the eastern cone of the höyük, all the elements of the LBA architecture were revealed (Lloyd and Mellaart 1956, 102). Although it is not known to what extent the Hittites were effective in the settlement in these strata, which were contemporary with the Hittites as of the period, this issue is still

unclear. There is no clarity as to the source of the great fires and demolitions in especially in the Layer II. However, the architecture and finds of the settlement indicate that the importance of MBA remains. The megaron-like architecture was built with mudbrick-based and stone-based architecture and the complex houses consisting of many spaces were unearthed with all the finds (Lloyd, 1972). In the houses, the main room and a storage and atelier areas connected to this main space and open courtyards were determined. Some houses are connected to the main streets by narrow streets in the settlement that appear pre-planned, with the streets extending parallel to each other in an east-west direction (Lloyd, 1972, 7). In the settlement where both domestic and religious places were detected, the complex architecture defined as “*Little Palace*” was also detected (Lloyd, 1972, 10). Especially from the “*Twin-Shrine*” found in the area R, it is evidence that the area was utilized as a sanctuary after the Middle Bronze Age (Lloyd, 1972, 24-32). When the characteristics and typology of the pottery of this period are examined, it is possible to mention the existence of a notable change and development (Mellaart- Murray, 1995). In this period, thin-walled and more elegant pottery was produced than the Middle Bronze Age (Mellaart- Murray, 1995, 1-88; Abay, 2012, 45). The vessels are buff, and the small vessels in brown tones use linear polishing decoration on mica slip, while large vessels have circular and linear decoration. At the end of the Late Bronze Age, the city lost its importance to a great extent (Abay, 2012a, 9-20).

Although there is no significant architecture related to the Iron Age in the settlement, a group of sherds belonging to the Phrygian period were found in trench Z (Mellaart-Murray, 1995, 89-91, Pl.50-51). The pottery dating to the beginning of the 7th century BC, suggests that the site may have been resettled during this period (Mellaart-Murray, 1995, 89).

Although Byzantine and Seljuk architecture was identified during the early excavations, the stratigraphy created for Beycesultan was not included. However, during the recent excavations, detailed studies have been conducted regarding these layers (Abay-Dedeoğlu, 2009; Abay, 2012a, 9-20).

V.1. 2. The Recent Excavations

Beycesultan reached important data on the political, cultural and economic structure of Western Anatolia during the early excavations. However, Western Anatolia did not provide sufficient contribution to the prehistoric debates due to the fact that the

excavations were conducted in a short time and organic material that would allow the dating of C14 was not collected (Abay-Dedeoğlu, 2009, 54). However, it is still an indispensable source for Western Anatolia prehistory.

Excavations have begun again after half century for three main purposes. Firstly, to reach the conclusions about the importance of Beycesultan höyük in the context of hierarchical relations between settlements revealed within the scope of surveys conducted in the region. At the same time, the first aim of the resumption of the excavations was to reach the data related to the political structures in the region. Additionally, it was to revealed the related political formations, as well as the data on the social structure in the settlement from the regional and local analysis (Abay-Dedeoğlu, 2009, 549). Another important objective is to contribute to regional chronology with stratigraphic finds and C14 results. Indeed, West Anatolian chronology (third and second millennium BC) was based on Troy, it did not provide a final solution to the chronological problems. Naturally, there are many reasons for this. For example, in the second millennium BC, the political structures in the region and the interventions in the region through the Hittite and the Aegean Sea at the local level can be shown as reasons for the absence of traces of the common material culture in the whole region. Therefore, it may be thought that it may be difficult to establish a common chronology throughout the region. In addition, the stratigraphy obtained during the new excavations of Beycesultan is aimed to be compared with other excavations in Western Anatolia in addition to the early excavations (Abay-Dedeoğlu, 2009, 54-55). Finally, it is aimed to contribute to the research of the political and cultural history of the region in the II millennium BC. In this context, it is limited information on the vassal states constituting the Arzawa or Arzawa confederation in the second millennium BC. In this direction, it is aimed to shed light on the political history of the region with possible written sources to be obtained in the excavation areas other than the monuments and rock reliefs in the region.

For all the purposes listed above, Beycesultan höyük is a member of Ege University Protohistory and Near Eastern Archaeology Department excavation was resumed in 2007 under the direction of Prof. Dr. Eşref Abay. First, intensive surveys were conducted on and around the höyük in order to study the topography (Abay-Dedeoğlu, 2009; 2011; Abay, 2012a, 9-20). In the agricultural areas around the höyük, many graves were found about 320 m to the west of the höyük during the levelling process (Fig.9). This area was the cemetery of the settlement (Abay-Dedeoğlu, 2009, 55; Abay, 2012b,

46, 62). Especially during the rescue excavations in the area where pithos graves were partially uncovered during the levelling works, eight pithoi belonging to Middle Bronze and Iron Age and a cist grave of Byzantine period were found (Abay-Dedeoğlu, 2009, 56, 60; Abay, 2012b, 46, 62).

The limited number of sherds belonging to the Iron Age indicates the presence of the Iron Age during the early excavations (Mellaart-Murray, 1995, 89-91). In addition, one of the vessels found in a grave identified in the cemetery area reinforces the idea that the settlement may have been resettled during the Iron Age (Abay, 2012b, 46). According to the new stratification of the recent excavation Iron Age is represented Layer 3 (Abay, 2012b, 46). The mouths of the graves found in the cemetery area are facing east (Abay-Dedeoğlu, 2009, 56, 60).. The mouths of the pithos burials are covered with stones and the burials are in the position of hocker (Abay-Dedeoğlu, 2009, 56, 60). The presence of tombs belonging to different periods showed that the area was utilized as a cemetery in almost every period (Abay, 2012b, 46). It is known that the pithos burial tradition has been utilized in the region since the Early Bronze Age.

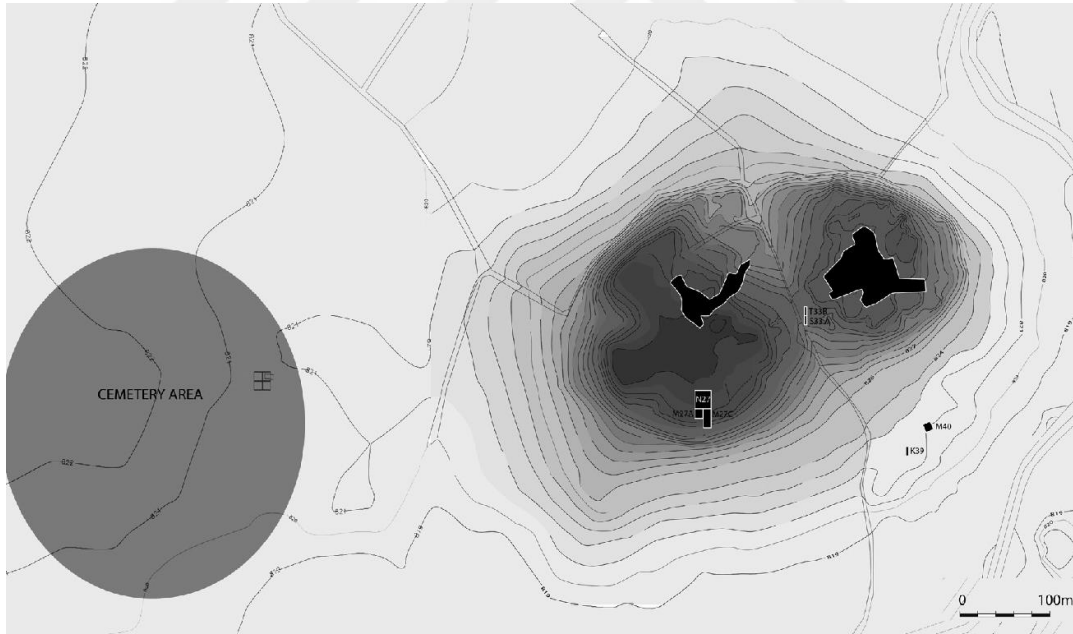


Fig.9: Topography of Beycesultan and Cemetery Area (Dedeoğlu-Abay, 2014: 19)

It was discovered by Lloyd and Mellaart during the early excavations in the southern part of the höyük (Lloyd-Mellaart, 1956, 46-47), work was conducted in trench K39 to reveal the continuation of the second millennium fortification wall (Abay-Dedeoğlu, 2009, 55) (Fig. 9). At the same time, studies were conducted in order to

determine the continuation of the architectural elements found in the eastern cone during the early excavations of the trenches T33 and S33 in the eastern part of the north-south direction in the centre of the settlement (Abay-Dedeoğlu, 2009, 55). As a consequence of all these studies, especially in the western section of the höyük, the excavations were initiated in the trench N27 in the context of the stratigraphy revealed in the trench SX in the early period and the excavations were continued in the Trenches M 27A-C, N26 C-27A-B-C-D, 28B and O27 B-D. In the studies conducted in these areas, layers belonging to the Seljuk, Byzantine, Late and Middle Bronze Age have been unearthed. It is possible to state that the Byzantine settlement on the Western summit and the deposit of the settlement made it difficult to reach the early levels because it covered the early settlements.

A closer look at the stratigraphy found during the recent excavations of Beycesultan yielded traces of settlement from the Seljuk Beylik just below the surface soil (Abay- Dedeoğlu, 2009; 2011; 2014a-b; Abay, 2012a) (Fig.10). Three phases, 1a-c, were identified. It is directly under the surface soil and has been severely damaged by agricultural activities on the höyük (Abay- Dedeoğlu, 2009, 56; Abay, 2012b, 46). Plow traces from these agricultural activities have been observed in places. Just below phase 1a represented by garbage pits were found scattered stone lines (wall fragments), as well as floor and partly hearths (Abay- Dedeoğlu, 2009, 56; Abay, 2012b, 46-50). The pottery and small finds found in this architecturally unsaved layer provided important data for the understanding of the period in question (Abay, 2012b, 47). In particular, it was discovered that the ceramics belonging to phases 1a and 1b did not differ from each other (Abay-Dedeoğlu, 2009, 56). Fine and coarse wares were identified in both phases. However, potteries from level 1a and 1b are dated to the 15th and 14th centuries AD (Abay-Dedeoğlu, 2009, 56). On the other hand, fragments of glass bracelets, bone objects, marble and metal objects and bronze coins appear in this layer (Abay- Dedeoğlu, 2009, 57). Particularly in phase 1c, the coin dated to Izzettin Keykavus (1246-1249 AD.) provided great convenience in dating this layer.



Fig. 10: Architectural Elements of Seljuk-Principalities Period (Abay, 2012b: 47)

Byzantine layers with a thick deposit were found beneath the Seljuk-Beylik period. Two main phases, 2a-b, were identified in the studies. However, 2a is divided into two intermediate phases, 2a1 and 2a2 (Abay- Dedeoğlu, 2009, 57-58; Abay, 2012b, 50). In addition to Byzantine spaces, east-west and north-south oriented stone-paved streets were identified. There is no temporal gap between the phases since the spaces in building complexes 2a, 1-2 and 2b were utilized with the same functions (Abay- Dedeoğlu, 2009, 57-58; Abay, 2012b, 50). After their first use, it was understood that the spaces were re-utilized with some changes and some additions to these spaces (Abay- Dedeoğlu, 2009, 58; Abay, 2012b, 50). Generally, stone foundations and mudbrick structures were utilized in some of the walls of the building as a tile (*Almaşık Örgü Duvar Tekniği*) was utilized as a building element. In the two important places named “Room 1 and 4”, pithoi were found where bread wheat, barley and vetch were stored (Abay- Dedeoğlu, 2009, 58). In addition to this building, which is thought to be utilized as a storage room, a stone-paved room filled with and pottery, bones and animal bells made of iron were found (Abay, 2012b, 50; 2012a). It may have been utilized as an animal shelter for this building, the purpose of which could not be determined. It is conceivable that the pits found in phase 2b, which represent the earliest phase, may be utilized as shelter, considering that animal products related to animal husbandry may have been preserved. The architectural elements belonging to the previous layer (LBA), except for the architecture, were mostly

destroyed (Abay, 2012b, 53) and pits which were thought to be utilized for storage were identified.

The pottery of this period found in the settlement yielded mostly cooking and storage vessels of daily use as well as glazed pottery characteristic for a small number of Byzantines (Abay, 2012b, 50-51). Pottery without lining and burnished and similar grooved amphorae identified as Marmaray 6 and dated to 9-11th century AD were identified within the scope of Marmaray's work in Istanbul Yenikapı (Abay, 2012b, 51). In addition, an electrum coin belonging to Nicephorus III Botaniates (1078-1081 AD.) played a significant role in the dating of this layer (Abay, 2012b, 51; 2012a, 9-20). In addition, 11-12 century AD bishop figurines of bone were found (Abay, 2012b, 51-52). Other finds include metal nails and small finds made of glass, ivory, clay and bone (Abay, 2012b, 51).

Just below the Byzantine levels, the Layers 4 and 5 of the LBA were reached. The architecture of the LBA layers, which were damaged in places due to Byzantine pits (rubbish) and construction activities, was unearthed with its rich finds. Data related to Layer 4, representing the latest phase of Beycesultan LBA, were reached in limited areas. This layer is represented by stone foundations and hearths in places due to the fact that it was probably destroyed by Byzantine architecture or rubbish pits (Abay, 2012b, 46-47; Dedeoğlu- Abay, 2014, 2-3). Only the foundations of the spaces built with small stones were reached. From the scant architectural remains unearthed, it is not clear how spaces belong to a building complex (Abay, 2012b, 46-47; Dedeoğlu- Abay, 2014, 2-3; 2016, 185, 187). A large number of sherds and small finds were found in this layer. When the production characteristics and typology of the pottery are examined; Wheel-made well-baked pottery consists of three main groups as “Light Brown or Buff Ware, Red Brown or Red Ware and Brown Ware” (Dedeoğlu- Abay, 2014, 3).

Layer 5 with its rich architecture and finds was found just below Layer 4. This layer, with its architectural and in-situ finds, constitutes the layer that provides the most data about the LBA culture (Fig.11). During this period, layers 5b (1700-1595 BC) and 5a (1600-1500 BC), representing the early phase of the layer consisting of two main phases, ended with a great fire and continued to be re-settled with reconstruction activities and renovations that started in Layer 5a (Abay, 2012b, 54). The architecture of the large building complexes was unearthed. It was seen that the interiors were added to the walls

in the one-meter-thick vertebra extending in the north-south direction and the interiors were formed (Abay, 2012b, 55; Dedeoğlu- Abay, 2014, 4). Spine walls and interior walls are constructed of 50 x32x 30 cm mudbrick blocks (Abay, 2012b, 55; Dedeoğlu- Abay, 2014, 4). Although the walls of the spaces were plastered with clay many times, there were no signs of paint decoration on the walls.

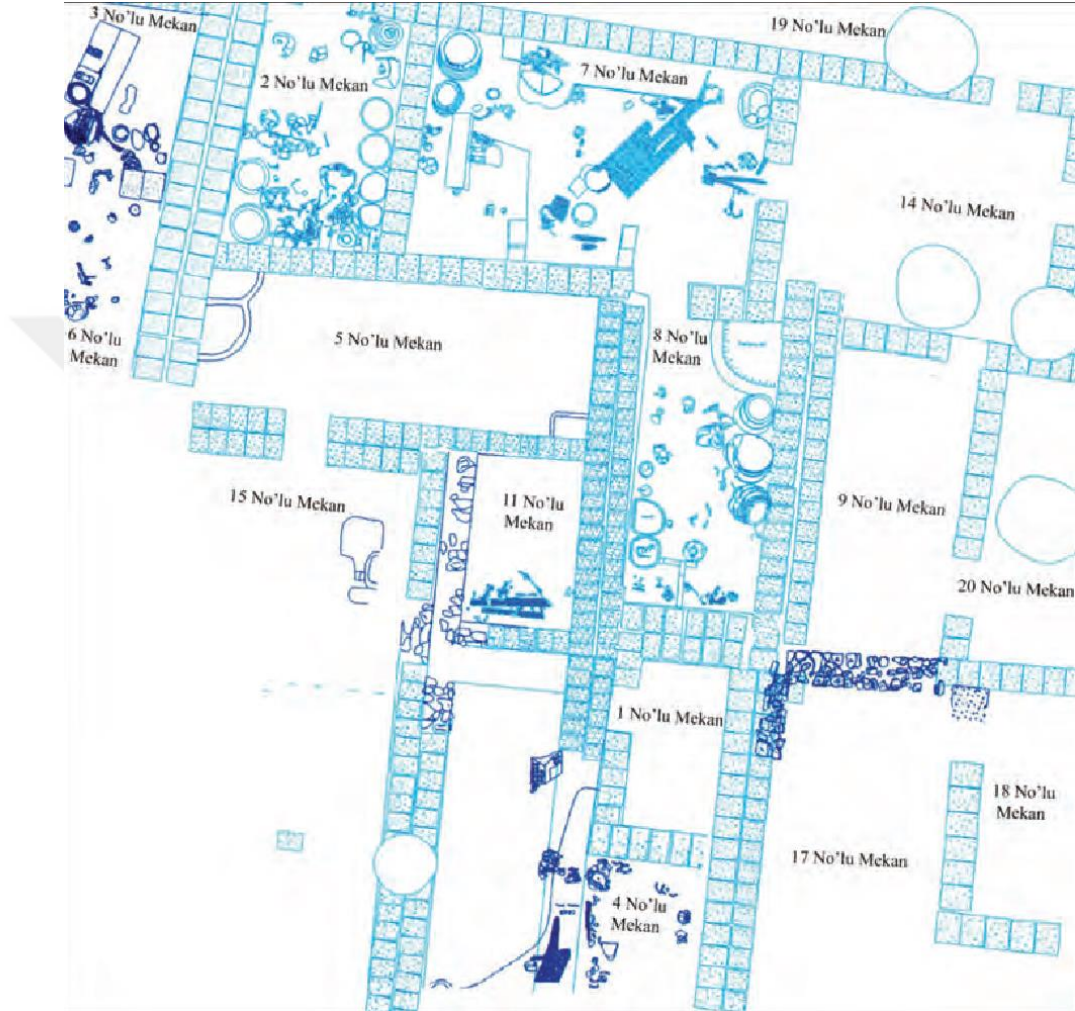


Fig.11: Buildings of the Late Bronze Age (*Layer 5a-b*) (Abay, 2012b: 53)

A temple unearthed in Layer 5a is the most important architectural element (Abay, 2012b, 56; Lloyd, 1972, 24-32). A similar example of this temple was seen in the second layer of Beycesultan's early excavations. It was thought that this room, which was partially unearthed at the beginning, was megaron shaped. However, in the works conducted in and around the place, in addition to the domestic architectural elements such as the grinding area inside the place, pithos utilized for silo and storage in spaces in the north and west of the place were unearthed. It is considered that this space, which gives the impression of being a part of a large building complex, may have been utilized for

religious activities (Abay-Dedeoğlu, 2016, 188). The fact that the sites identified as temples and found in early excavations also possessed domestic characteristics underlies the idea that these areas may be a building complex, including a worship area, rather than a temple complex (Abay-Dedeoğlu, 2016, 189). In addition to the building complex, the main spaces where daily works are conducted, and the storage rooms associated with these spaces were identified from the finds inside the building (Fig.12)

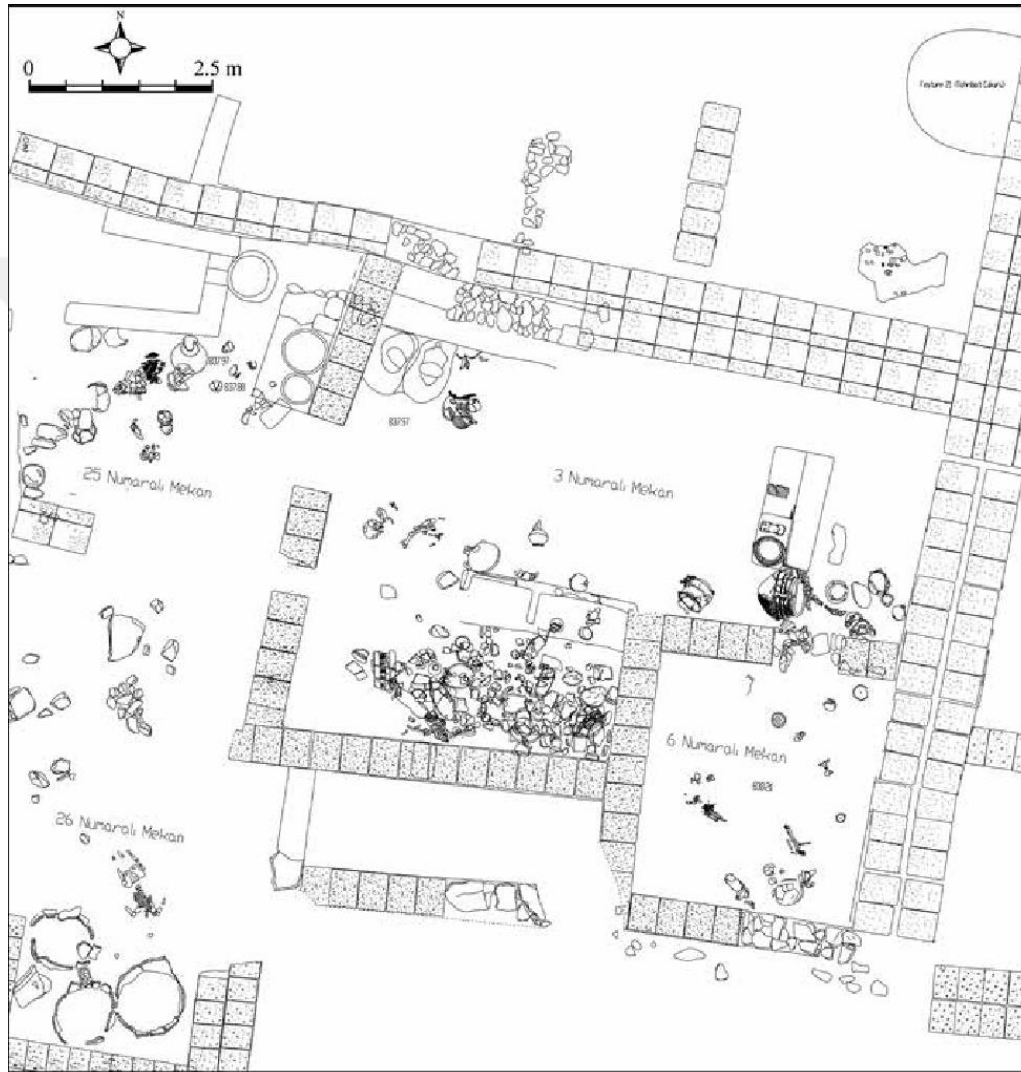


Fig.12: Building Complex of Layer 5a (Abay-Dedeoglu, 2016: 193)

Looking at the LBA Layer 5b, it is possible to speak of a strong and complex architecture in the settlement. This phase ended with a great fire and was found together with in-situ finds inside the spaces. Burnt human skeletons were found beside the finds in the spaces, likely belonging to the family members who lived in the houses who could not escape the fire. The destruction caused by an invasion probably dates back to c. 1600

BC in line with the samples of burnt grains in the pithos (Abay, 2012b, 58). Compared to the architecture of Layer 5a, a more complex architecture was revealed (Abay, 2012b, 56-58; Dedeoğlu- Abay, 2014, 4-7). The houses built with stone foundation, mud-brick walls consist of a main place where the hearth and daily works are conducted, a storage room connected to this main place and a possible semi-open courtyard that provides access to the main place (Abay, 2012b, 56-58; Dedeoğlu- Abay, 2014, 4-7). Both the thickness and height of the space walls and the cultural deposit within the space are thought to be double storey. It is considered that the ground floor is utilized for daily work and storage and the upper floors are utilized for accommodation. There was also a street that had an east-west direction, with a width of 3.5 meters covered with pebbles (Abay-Dedeoğlu, 2014, 7). The street was used in both the Layers 6 and 5 (Abay-Dedeoğlu, 2016, 186-187).

From the analysis of the pottery recovered in the early and late phases of Layer 5, there are not many differences between the early (5b) and late (5a) pottery except for some forms (Abay, 2012b, 59). In this period, pottery was made of a wheel, and they were well fired. Two different ceramic groups were determined: fine and coarse ware. Fine wares are generally buff, tile and brown in colour with stone added. When the surfaces of the pottery were examined, it was found that some groups were made of goods called “gold wash ware” or “silver wash ware (Abay, 2012b, 59). Spouted Pitcher, goblets, fruit plates, teapots, plates and bowls are among the pottery of this period which is rich in form variety. The coarse pottery is tile red, red and brown in colour with paste and heavy grit and mica added (Abay, 2012b, 59; Dedeoğlu- Abay, 2014, 8-9). There is no polish and slip application on well and moderately fired ceramics. Other than pottery, crescent-shaped clay objects, pyramidal or horn-shaped weights, spindle whorls, knucklebones and stone tools were found (Abay-Dedeoğlu, 2014, 389).

In order to reach the cultural layer and architecture belonging to the MBA levels of the settlement, studies were conducted on the southern slope of the western cone of the settlement. In this context, the trenches designed as “step trench” yielded MBA architecture just below the LBA architecture (Abay-Dedeoğlu, 2014, 389) (Fig.13).



Fig.13: Middle Bronze Age Architecture (*Beycesultan Excavation Archive*)

Data for Layers 6 and 7 of the MBA and layers 8 corresponding to the EBA III period were obtained (Abay-Dedeoğlu, 2014, 389-390). In this context, a limited amount of architecture belonging to Layers 6 and 7 was reached. In particular, since the architecture of this period was below the Layer 5, the Trenches N27 and O27 were not excavated to preserve the architecture of the Layer 5. It is clearly revealed that the stone-based spaces were rectangular. In addition, a street of Layers 6 was found just below the street of Layer 5. The walls belonging to the rooms were identified in the north and south of the Layer 6 Street which is the same dimensions as the street utilized in the Layer 5. Stone foundations and mudbrick were utilized in the Layer 7 (Abay-Dedeoğlu, 2014, 390). It is also thought that the open spaces associated with the spaces were utilized and that the wooden beams were partially overridden with a roof. Numerous sherds were found in the rooms of this layer. Mostly light, buff and brown tones are self-slip and burnished. In addition to the densely thickened rimmed pottery, bowls were numerous in form (Abay-Dedeoğlu, 2016, 189). In addition to the pottery, bone, clay objects, stone beads, knuckle bones, metal awls and silver needles were found. It was found that it ended with a violent fire from the slag mudbrick found in the Layer 7 (Abay-Dedeoğlu, 2014, 390). Similar pottery sherds found in this layer were found in Level V during the early excavations. According to the radiocarbon results obtained from the samples of burnt grain in this layer, this layer is dated to BC. It was dated between 1915-1745 BC (Abay-

Dedeoğlu, 2016, 189). It is possible to talk about the existence of a planned urban structure in this period from the architectural and finds.

As a consequence of the exposition of extremely well-preserved architecture in a wide area, important data were obtained regarding the stratification of the settlement as well as the settlement organization in both the Byzantine and LBA and partly in the MBA processes (Abay-Dedeoğlu, 2013, 222).



CHAPTER VI. DOMESTIC BUILDINGS IN THE LAYER 5B AT BEYCESULTAN

VI.1. Stratigraphy and Dating of the Late Bronze Age Layers

Considering the stratigraphy of the settlement in the light of LBA layers unearthed in the early and recent excavations, this period is basically represented by three main layers. LBA (Lloyd-Mellaart, 1965, 73) is separated into main three layers as I, II and III in early excavations. Layer I is divided into two subphases as Ia and Ib. These layers can be listed respectfully using the Mellaart Chronology: Beycesultan V (1900-1750 BC), IVc (1750-1650 BC), IVb (1650-1550 BC), IVa (1550-1450 BC), III (1450-1300 BC), II (1300/1200-1180 BC), Ib and Ia (12-11 centuries BC) (Lloyd-Mellaart, 1965, 73) (Fig.14). This chronology created in line with the data obtained from the early excavations, Layer VI represents transition from MBA to LBA, while Layers III-II and I represent LBA.

Beycesultan V	1900- 1750 B.C.
Beycesultan IVc	1750- 1650 B.C.
Beycesultan IVb	1650- 1550 B.C.
Beycesultan IVa	1550- 1450 B.C.
Beycesultan III	1450- 1300 B.C.
Beycesultan II	1300/1200- 1180 B.C.
Beycesultan Ib-a	12-11 Centuries B.C.

Fig.14: Dating of Beycesultan MBA and LBA layers (Lloyd-Mellaart, 1965:73)

Layer 5, which was unearthed in early excavations in Beycesultan, is separated into two main layers as 5a and 5b in its entirety. This layer represents the best-preserved layer of the LBA, with rectangular planned mudbrick buildings with stone foundations and rich finds unearthed in-situ in these places. Within 5b, which can be described as the early phase, well-preserved architectural buildings and various finds were unearthed. As stated previously, this layer, which came to an end due to a big fire, is contemporary with Layer II unearthed in early excavations, both in terms of finds and architecture. This layer dates back to 1700-1595 B.C. based on the studies made on carbonized seed and wood samples discovered in-situ at the sites (Dedeoğlu- Abay, 2014, 39; Dedeoğlu- Konakçı, 2015, 193) (Fig.15). Radiocarbon dates of this layer correspond to Layer IV in chronology

created by Mellaart. However, architectural remains and finds unearthed together with the fact that this layer ends with a big fire, corresponds to Layer II unearthed in the early excavations. Since Layer 5b ended with a fire, dating made on these finds gives the date of destruction caused by the fire. How long the houses were used before the destruction remains unknown, since the construction of houses in mentioned layer goes back to earlier periods. In this context, an average of 52 layers of plaster were detected in the examination carried out on the plaster samples taken from the Room 28 which is the main room of House 2. This room is well-preserved with its plaster and walls and was detected in Layer 5b³⁹. In the research carried out in Kocayaka village for ethno-archaeological studies, it was understood that the houses were plastered once or twice in a year depending on the contamination of the walls. It has been observed that walls where the hearths are located near became dirty more easily due to smoke, thus, these walls were plastered more often than others. On this basis, considering Beycesultan sample is plastered twice a year, it is possible to consider that the construction of the houses goes back at least 26 years. On the other hand, when considering the walls were plastered once a year, construction of the houses goes back 52 years. Regarding these, dating of 1700-1595 BC goes back minimum 26 years and maximum 52 years ago before the destruction (1752/1726 - 1647/1621 B.C.).

After the Layer 5b ended with big fire, some changes were made to house plans, sometimes using the same walls. Layer 5a is into two stages as 5a1 and 5a2. This alteration in architecture was also reflected in the interior arrangement of houses. Dating studies made on burnt seed and wood samples taken from the place points to years between 1600-1500 BC (Dedeoğlu- Abay, 2014, 39; Dedeoğlu- Konakçı, 2015, 193; Abay- Dedeoğlu, 2013, 218) (Fig.15). This layer is contemporary with Layer Ib discovered in early excavations in terms of both the space plan and unearthed finds (Dedeoğlu- Abay, 2014, 39; Dedeoğlu- Konakçı, 2015, 193). Potteries were unearthed in Layer Ib (Early excavations) at Beycesultan höyük, and similar examples of these potteries are contemporary with Troy VI, Aphrodisias III, Bademgediği III-V and Limantepe Layer II (Dedeoğlu- Abay, 2014, 9).

³⁹ This subject will be discussed in detail in following sections of this study.

Lab.no	Analysis	Conventional Radiocarbon Age (BP)	1 Sigma Cal Range BC	2 Sigma Cal Range BC	2 Sigma Cal Range BC Oxcall	Material	Sample Num.	Grid	Layer
Tokyo				1745-1620		Charcoal	CKM	N27	5a
Tokyo				1630-1505		Seed	CUV	N27	5a
Beta270118	AMS	3360±40 BP	1690-1610	1740-1530	1743-1531	Bone	CMO	N27	5a
Beta 270117	AMS	3200 +/- 40 BP	1500-1430	1530-1410	1605-1401	Seed	DDV	N27	5b
Beta 291951	AMS	3340 +/- 40 BP	1680-1600 1570-1540	1740-1520	1738-1522	Seed	DGH	N27	5b
Tokyo				1700-1635		Seed	DGH	N27	5b
Tokyo				1715-1620		Charcoal	DCE	N27	5b
Tokyo				1745-1640		Charcoal	DCV	N27	5b
Tokyo				1830-1685 (%89.8)		Seed	DCY	N27	5b
Tokyo				1640-1495		Seed	DAV	N27	5b

Fig.15: Radiocarbon results from Layer 5 (*Dedeoğlu –Abay, 2014:39 /Table.2*)

Finally, it was understood that the settlement was abandoned to a large extent by the end of Layer 5a. Layer 4, which was determined as the last phase of LBA, is divided into two layers as 4b and 4a. Since Layer 4 was largely destroyed by the Byzantine layer, architectural finds were only discovered in limited areas. In phase 4a of this layer, partially preserved stone foundations belonging to a room were discovered in the south of Trench O27. Phase 4b is represented by a white plastered floor discovered from place to place throughout the area. Architectural elements and pottery unearthed in limited areas in 4 layers are contemporary with the Layer Ia, which was unearthed in early excavations (*Dedeoğlu- Abay, 2014, 39; Dedeoğlu- Konakçı, 2015, 193*) (Fig.16). Potteries of Layer 4 (Layer Ia for early excavations) are wheel-made, medium, or well fired and has been classified as Light Brown or Buff Ware, Red-Brown or Red Ware, and Brown ware based in terms of colours and characteristics. Similar examples of these potteries are discovered in Aphrodisias, in Troy, Panaztepe, Limantepe, Smyrna-Bayraklı, Çeşme-Bağlararası and Bademgediği, and in Gordion and Demircihöyük.

Lloyd-Mellaart Stratigraphy	New Stratigraphy	Period	Relative Chronology	Absolute Chronology
	1	Sejuk-Ottoman Principality Period	13-14.century AD	
	2a1-2	Byzantine Period	11-12.century AD	
	2b			
	3	Iron Age	9.century AD	
Ia	4	Late Bronze Age		Cal BC 1600 to 1500
Ib	5a			
II	5b	Middle Bronze Age		Cal BC 1700 to 1595

Fig.16: Comparative stratigraphy of Beycesultan Höyük (*Dedeoğlu –Abay, 2014:39 /Table.1)*

VI.2. Early Excavation Data /LBA (II)

Early excavations were carried out in trenches A, B, C, D, E, F, G, H, K, M, N, S, T, AA, BB, CC, P, X and J, L, O, R, SX, U, Y, Z located on the east and western cone of the mound (Lloyd and Mellaart, 1956, 102; 1957, 93-125; 1962, 9-13). Although the excavations were carried out in a large area on the eastern cone, less area was studied in the western cone. A limited area may have been excavated in the western cone due to the presence of a large deposit of thick Byzantine layers.

Layer III represents the early phase according to the LBA chronology created during the early excavations in Beycesultan and encloses the structure which takes up approximately 30m² (Lloyd- Mellaart, 1956, 101; Lloyd, 1972, 7) (Fig.17). Rectangular structures made of mudbrick walls on stone foundations were discovered between and around two east-west oriented streets (North and South Streets). It was understood that these structures belonging to the mentioned layer were renewed and reused in the next layer (Layer II) (Lloyd- Mellaart, 1956, 101-106; Lloyd, 1960, 32; Lloyd, 1972, 7). Although it is possible to consider that the road located on south passes by the D-6 grid-square to the south, where it leads could not be determined as excavations end at this point. It is stated that the area where the western point of the north and south streets is located is the highest point of the eastern cone (Lloyd, 1972, 9). Houses in this layer

consist of walls with an average thickness of 50cm, and it has been observed that rectangular planned houses generally have courtyards (Lloyd and Mellaart 1955, 45-52). Hearths and silos are usually located at the main room of houses. Hearths discovered in Room 3 and 18 were horseshoe-shaped and cooking pots were discovered around the hearths. At the same time, there are pits in the houses where garbage was thrown. Based on the pottery and finds, it has been suggested that Layer III can be divided into two phases as III a and IIIb.



Fig.17: Plan of Layer III on East Summit (Lloyd, 1972: 8; Fig. 2)

Although architectural structures and finds were encountered in a limited area in Layer III, finds belonging to Layer II were encountered in a large area. Apart from the architectural structures built as a result of some renovations in Layer II, there has not been drastic changes in the settlement plan. As a result, South and North streets in Layer III were preserved and settlement was continued to be established around these streets (Lloyd, 1972, 9) (Fig.18).

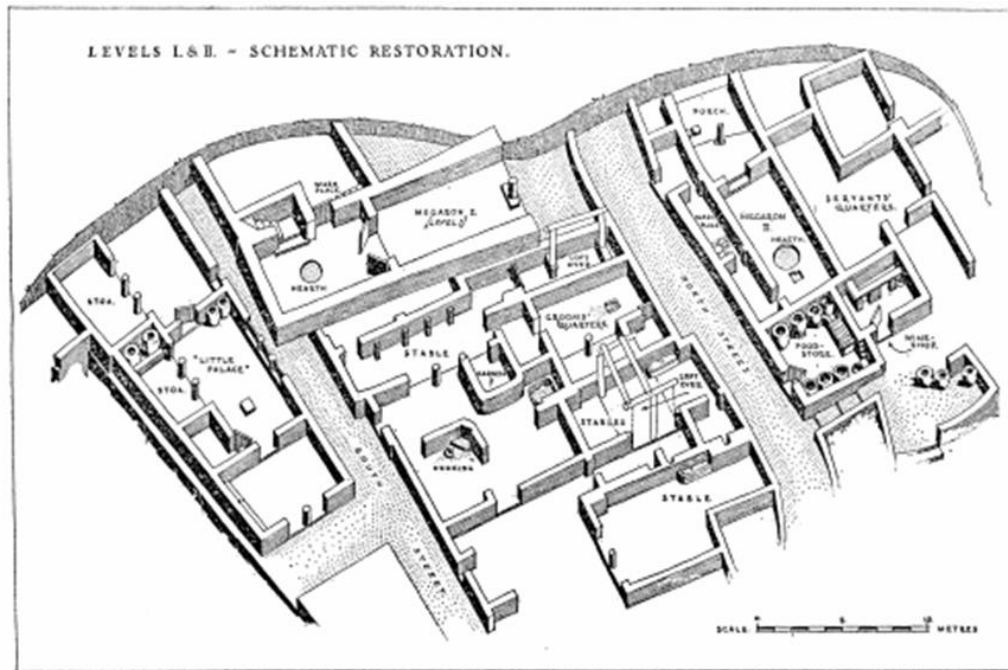


Fig.18: Plan of Layer II on the Eastern Summit (*Lloyd- Mellaart, 1956: 105, Fig.2*)

On the South side of the street that is located on south, structures composed as complexes were discovered. There are structures called “Little Palace” in this area (Lloyd- Mellaart, 1956, 102,104; Lloyd, 1972, 9-10). On the west side of this area, South Street slopes sharply to south, thus, structures mentioned above are located 50 cm below the road. As a result, it became obligatory to use stairs to enter the place, which is referred to as Room 45 (Lloyd, 1972, 10). These rooms on south consist of common walls and standard units. Each unit consists of a rectangular courtyard and since there is no data on the roof in these courtyards, it is thought that these places were not covered (Lloyd, 1972, 10). Through this yard, two rooms can be accessed, which are Room 46 and 47. Room 47 was rectangular shaped and used as portico while Room 46 was smaller, hence, it is thought that this room was used as bedroom (Lloyd, 1972, 10). Unit D, which is adjacent to unit E on the east side is preserved better and Room 48 measures 8.50 x 4m (Lloyd, 1972, 10). At a point close to the centre of Room 48, which forms the main venue of Unit D, there is a hearth covered by plaster (Lloyd- Mellaart, 1955, 45-46). There is a square shaped pedestal that is made of brick on the northeast corner of the room Lloyd- Mellaart, 1955: 46. On the east side of the room, a door which enables access to room 51 is located (Lloyd- Mellaart, 1955, 46, Fig 2; Lloyd, 1972, 10-11). However, it is possible to consider that that this door was later sealed. Rectangular shaped Room 51 is insufficient in terms of finds, however, a terrace made of mudbrick is discovered along the south wall (Lloyd, 1972, 11).

On northwest corner of the room, there are two huge adjacent pithoi. Additionally, there is passage to unit E through the door that is located on the west wall (Lloyd, 1972, 10). There are two planks placed on the stones laid on the ground at the threshold of the door stated above. The passageway was formed by plastering these planks with clay plaster (Lloyd, 1972, 10).

Through Room 48, which is a portico and forms a yard in unit D, one can access room 49, which is thought to be a living room. There are two wooden columns located on the entrance wall. There are three pithoi near west wall of the room (Lloyd, 1972, 10 (Fig.3)). Two pithoi that are adjacent to the wall are surrounded by a retaining wall, and the other is positioned on the edge of this retaining wall. On the other hand, there is a large open vessel with two handles discovered on east part of the room (Lloyd, 1972, 10-11). Room 50, which is thought to be used as a storage based on the remains in it, is discovered on east side of Room 49 (Lloyd- Mellaart, 1955, 46 (Fig. 2)). Grain remains, a bronze spearhead, numerous broken fruit plates remains, and pieces of a broken pithos was discovered in this relatively small area (Lloyd- Mellaart, 1955, 46; Lloyd, 1972: 11).

Examining unit E, it is possible to consider that that it is connected to Rooms 45, 46 and 47, additionally, it shows features similar to unit D (Fig.19). One can arrive the street using the stairs in Room 45, which forms the yard of unit E (Lloyd- Mellaart, 1955, 46; Lloyd- Mellaart, 1955, 46). Western part of the room has not been fully excavated; however, it is thought that there's a possible passageway leading to other rooms (Lloyd, 1972, 11). Rooms 46 and 47 can be accessed through Room 45 (Lloyd, 1972, 11 (Fig.3)). It can be thought that room 47 is similar to Room 49 which is located in unit D and Room 46 is similar to Room 50 in terms of architecture.

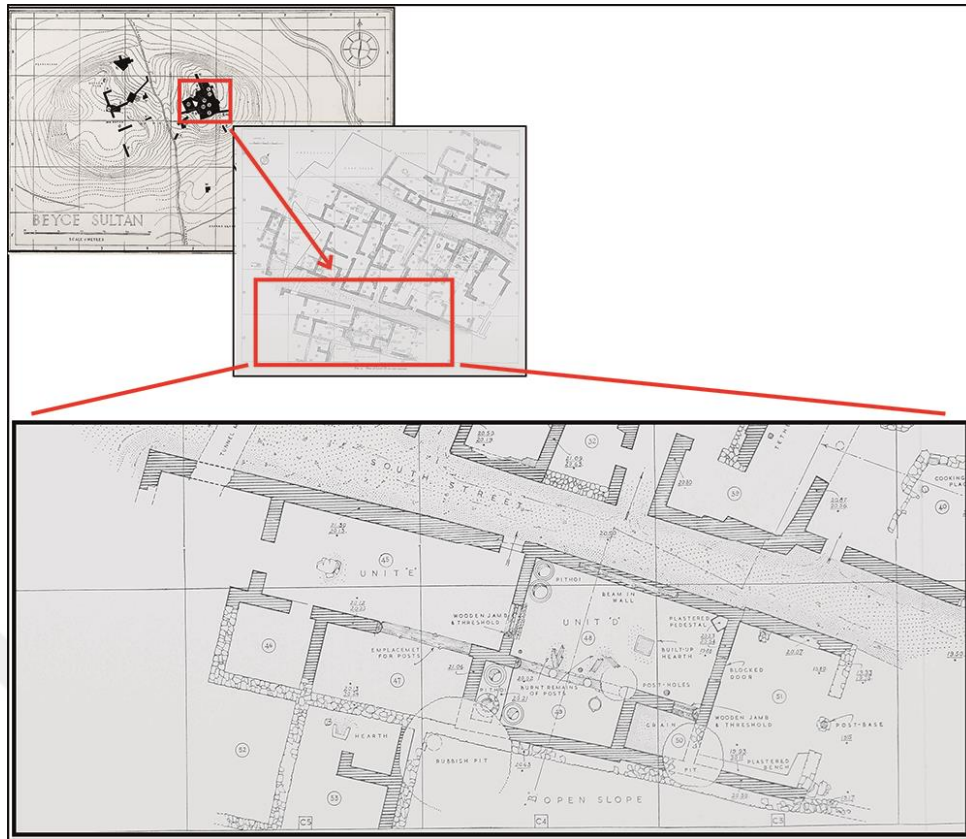


Fig.19: Plan of South Side of South Street (Lloyd, 1972: 11-12 (Fig.3))

Room 53 is excavated, where a hearth is unearthed with ash remains, on south of unit E and D complex. When studied based on its features, it is thought that this room belongs to another complex structure (Lloyd, 1972, 11 (Fig.3)).

Considering the structure on the northern side of the north street, there is a complex called megaron A on western side of the area (Fig.20). This room which is named as room 8 has a front room and measures 8 x 3.50 (Lloyd, 1972, 11-12 (Fig.3)). A hearth supported by rubble and 1.40m in diameter stands in the centre of the room. There is another square shaped hearth which is smaller and can be used to cook near this hearth (Lloyd, 1972, 11-12). A platform that heights 21cm stands alongside the eastern wall of the room (Lloyd, 1972, 11). On the other hand, a door with two stairs which leads to front room on the west wall. Wood piling pits were discovered on the roof of this smaller front room and this room opens onto a larger courtyard (Lloyd, 1972, 11-12). Megaron complex and the front room are separated from the north street by 1.74 cm wide rectangular rooms. Between Rooms 11 and 12 which can be used as hallways, Room 11 is stone-paved and thought to be used as restroom. Through a passageway located on the east side of Room 11, one can access Room 12, which leads to megaron A (Lloyd, 1972, 11).

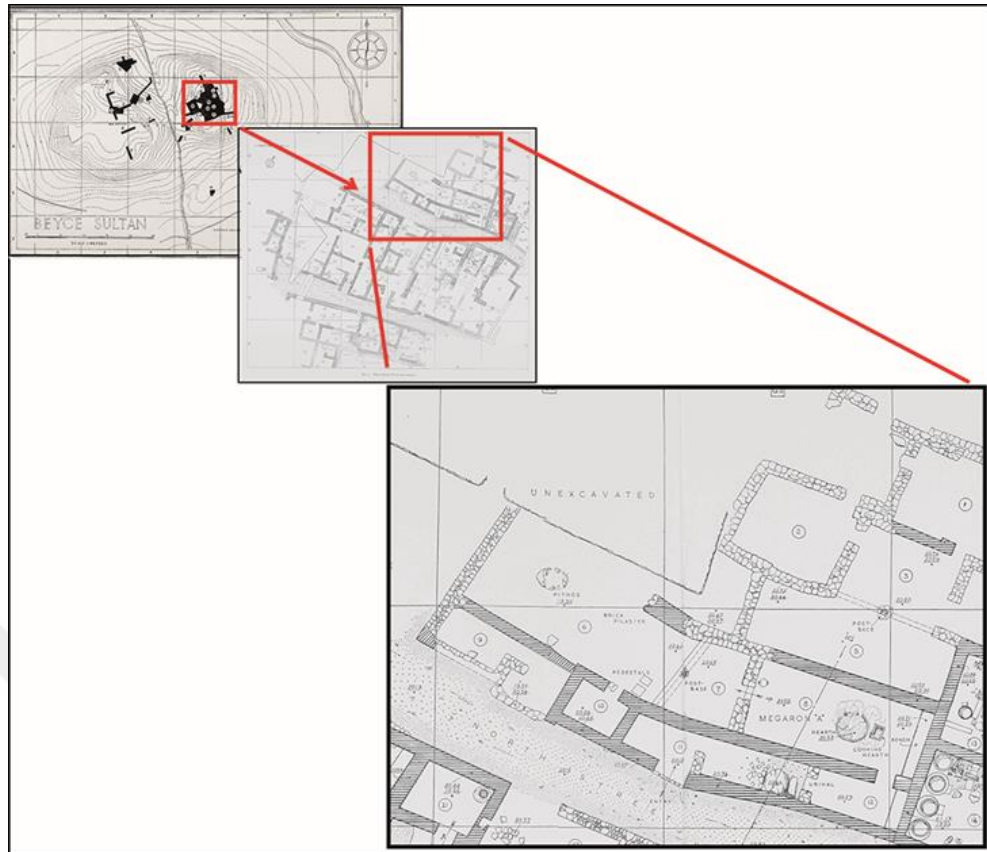


Fig.20: Plan of Megaron A (Lloyd, 1972: 11-12 (Fig.3))

Room 13 and 14 are located on the east adjacent side of megaron A (Fig.21) (Lloyd-Mellaart, 1955, 46-48). Though entrances of these two rooms are diverse, they are thought to belong the same complex (Lloyd- Mellaart, 1955, 46-48; Lloyd, 1972, 12). While one can Access Room 14 directly from north street, Room 13 can be accessed through the wooden door sill and door frame located on the east wall (Lloyd, 1972, 12). There is a wall compartment 3 x 1.30 cm wide and 30 cm thick on northwest part of the Room 13 (Lloyd- Mellaart, 1955, 46). A small pithos partially buried in the ground was discovered in this narrow compartment (Lloyd- Mellaart, 1955, 46; Lloyd, 1972, 12). Numerous chalices were discovered around the pithos on the northwest corner of the room, which had several scorch marks. A fruit platesplaced on the floor is discovered on southeast corner of the room (Lloyd- Mellaart, 1955, 46; Lloyd, 1972, 12). Among these finds, a mudbrick basin with 77 knucklebones in it and 31 crescent loom weights were discovered (Lloyd- Mellaart, 1955, 46). Moreover, a spouted pitcher and eight skeleton remains, one of which appears to be female were discovered (Lloyd- Mellaart, 1955, 46; Lloyd, 1972, 12). This room appears to be similar to houses 1 and 2 which belongs to Layer 5b unearthed in late period excavations in terms of finds and their context.

Room 14, which is located on the adjacent south side of Room 13 is rich in terms of finds. Eight pithoi that height 1.5m lined up alongside west and east walls and wooden lids thought to belong to the aforementioned pithoi were discovered (Lloyd- Mellaart, 1955, 47-48; Lloyd, 1972, 13). Wheat, barley, and lentil remains were discovered in these pithoi (Lloyd- Mellaart, 1955, 48; Lloyd, 1972, 13). In order to immobilize these pithoi, supports made of mudbrick or clay were used. It is clearly revealed that such supports were also used for pithoi in Layer 5b unearthed in late period excavations. A wooden and mudbrick platform which is thought to be used in order to access to the grain in pithoi is discovered inside the alcove on northeast corner of the room (Lloyd- Mellaart, 1955, 48; Lloyd, 1972, 13). Moreover, a trefoil-jug which is thought to be used in services, three fruit plates and nine carinated open vessels were discovered in the room (Lloyd- Mellaart, 1955, 48; Lloyd, 1972, 13). Besides these finds, twenty simple rimmed open vessels and plates were discovered on the west of the entrance door (Lloyd, 1972, 13). Sixty-four vessels were discovered in this room, and it is possible to state that this place was abandoned after a fire considering scorches on walls (Lloyd- Mellaart, 1955, 48; Lloyd, 1972, 13). A stone-paved ramp is located on east part of the room and this ramp enables access to terrace of Room 13 (Lloyd, 1972, 13). A spouted pitcher and half buried two pithoi which are thought to be used to drink water was discovered on this terrace (Lloyd, 1972, 13).

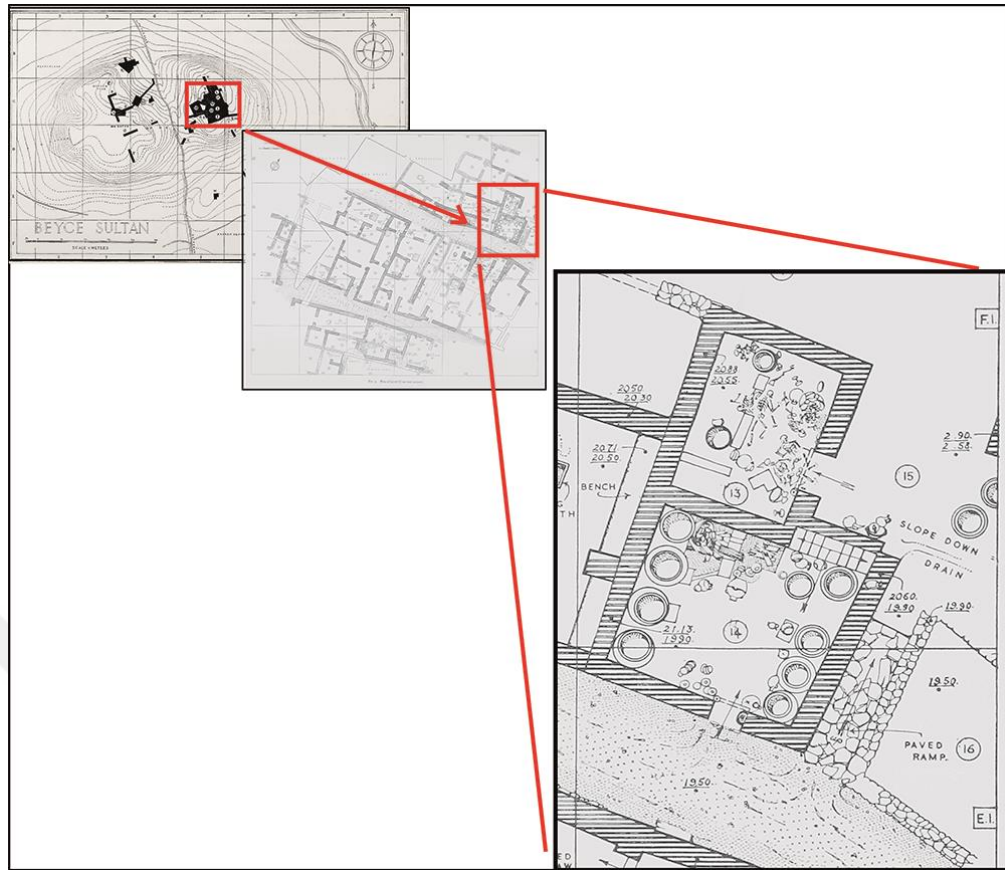


Fig.21: Plan of East Side of Megaron A (Lloyd- Mellaart, 1955: 47, Fig. 3)

Although a few rooms including rooms 1-5 were discovered in megaron A, which is connected to megaron complex, not many finds were discovered in these rooms (Lloyd, 1972, 12-13).

Several rooms connected to each other were detected between north and south streets. These rooms were divided into two groups as west and east parts (Lloyd, 1972, 13). The wall where Rooms 21, 22 and 26 are located near is accepted to separate these parts. The most important structure located on west is megaron B, whose plan especially resembles megaron A's plan (Lloyd, 1972, 13) (Fig.22). This rectangular structure measures 8.50 x 3.50m. In the eastern part of the room, there is a plastered large hearth placed in a square frame (Lloyd, 1972, 13). There is a platform along the eastern wall of Room 18 and placed 20cm above from the ground (Lloyd, 1972, 13). Moreover, on the northern part of the room a small alcove is places on line with the hearth Lloyd, 1972: 13-14. Another point that makes this place resemble megaron A is an asymmetrical yard discovered on the west of the room. This yard, named room 17 is built differently than megaron A's yard considering the asymmetric structure (Lloyd, 1972, 14). There are two rooms on the southern part of the aforementioned yard. These rooms 19 and 20 located on the southern part of the megaron are another similarity with megaron A. while the

Room 19 can be accessed through a wide door made of two wooden poles, Room 20 can be accessed by a door which is located on south-eastern side of the megaron (Lloyd, 1972, 14). A window bay on the common wall of Rooms 19 and 20 was filled partly and turned into an alcove to be used in Room 19 later on (Lloyd, 1972, 14).



Fig.22: Plan of Megaron B (Lloyd, 1972: 11-12 (Fig.3))

It has been indicated by Lloyd that the complex located on the eastern and southern part of Megaron B discovered on west, belongs to someone else based on its features and plan (Lloyd, 1972, 14). This structure is made up of Rooms 25, 24, 26, 22 and 21 and it can be accessed through south street unlike Megaron B. Room 21, located in the northernmost part of the complex, is 70cm lower than other rooms and it is thought to be used to store grain and food (Lloyd, 1972, 14). The aforementioned structure can be accessed through a small hallway and it opens into Room 25. Room 24 can be accessed through a door that is discovered across the main entrance located on northeast side of the room. One can Access Room 26 by passing through a door in southeast part of Room 24. Through this room, one can access Room 26 which is on the north of this room. Finally, through a passage located on the north side of Room 22, Room 21 can be accessed. All these rooms mentioned above are rectangular shaped and they are all

connected to each other (Lloyd, 1972, Fig. 3). Through the northwest part of the Room 24, which is right across the entrance of this complex, Room 23, which is defined as an open area, is accessed. It's seen that a square shaped 3 m² area is stone-paved and it is located on the south-eastern part of this open area which is half unearthed (Lloyd, 1972, 14). A tunnel perpendicular to the south street was discovered in the southern part of this paved area. On the western part of this open area, there is a large oval hearth that has been partially unearthed and reused many times (Lloyd, 1972, 14). In the western part of the open area, there are two small Rooms named 23a and 23b, which are thought to be connected to the area. In addition to the pottery discovered in the rooms, traces of fire seen in Layer II were also discovered here (Lloyd, 1972, 14-15).

Looking at the complex in the eastern part between north and south streets, it is clearly revealed that this part is accessed through three entrances from south street and consists of different units (Fig.23). It's stated that spaces that make up units in this complex provide an integrity. Wooden pillars thought to have been used for tying animals (horses) were discovered in front of the western wall of the place called Room 38 belonging to this building (Lloyd, 1972, 15). Thus, hay and straw remains discovered in Room 41 are important in terms of showing that this place was used for animals (Lloyd, 1972, 15). Stables are accessed through room 31 and 40 located on south street entrances. It is thought that this places' entrances are covered by the roof. It's thought that these mentioned rooms are built to be open areas. However, it's believed that all rooms located around the mentioned rooms including Room 38 are covered with roof (Lloyd, 1972, 15). Between Room 38 and north street, there are two small rooms called Room 33 and 34. Wooden piling postholes which are thought to support the roof were located at the intersections of walls of these rooms (Lloyd, 1972, 15). Near the eastern side of spaces 33 and 34, a complex consisting of spaces 35, 36, 37 that is built adjacent to the North street was discovered. It is thought that the complex, which consists of a yard with a hearth in the centre, a living-room and a small storage associated with this yard, were the residences of the grooms (Lloyd, 1972, 15).

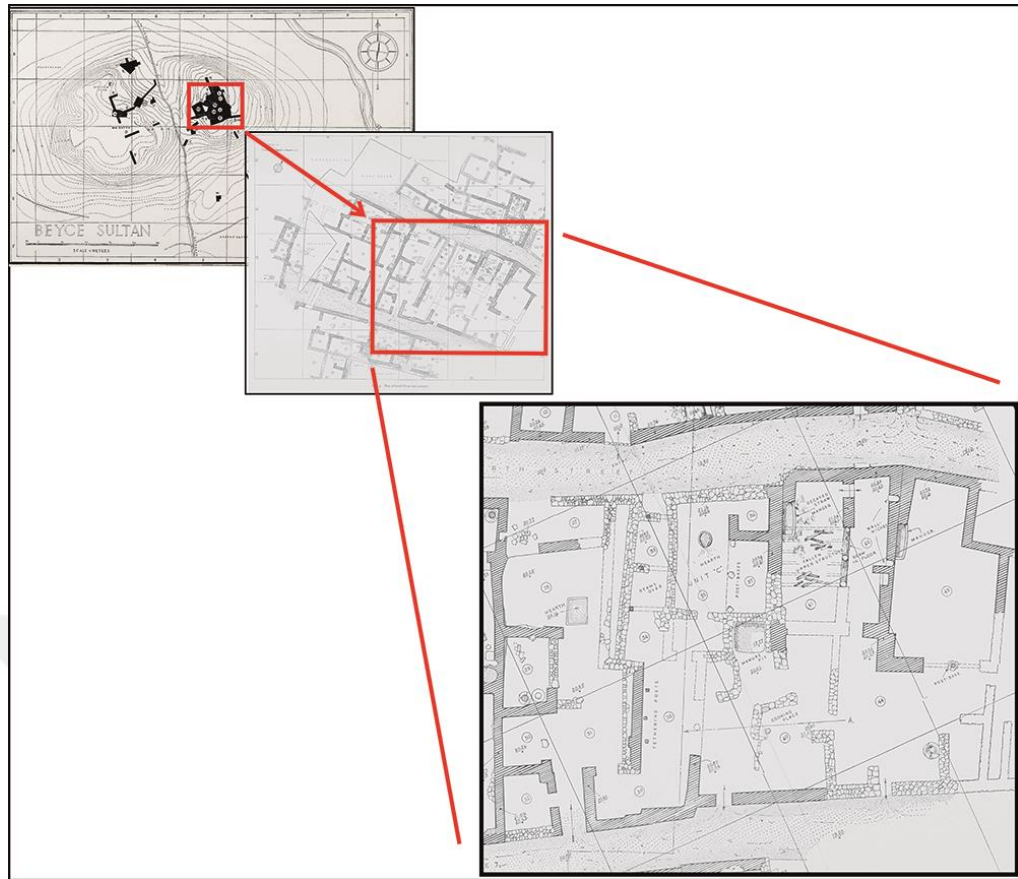


Fig.23: Plan of East Side of Megaron B (Lloyd, 1972: 11-12 (Fig.3))

On the other hand, there is a cooking area in the centre of Room 40, which is an open yard. A square shaped pit half filled with manure was discovered adjacent to the north wall of this yard (Lloyd, 1972, 15). Room 44 is accessed through a door that is located on the east wall of room 40. Rooms 41 and 42 which were used as a stable is discovered on the north of room 44. There are three alcoves thought to be used as shelves on the eastern wall of Room 42, which provides access to Room 41 and functions as a corridor (Lloyd, 1972, 15). In the west part of this corridor, there is an area of 3.50m supported by three wooden poles. A plastered manger in which there is chaff remains is situated northwest side of the Room 41 (Lloyd, 1972, 15). In addition to the manger in this area, hoofprints were detected in the area, indicating that the place was used as a stable (Lloyd, 1972, 15). It was also destroyed by the fire.

It is thought that this place was used as a stable considering the wide door opening on the south wall of the place in addition to the manger located on the west wall of the room, which is in the east of Room 42 and called Room 43 (Lloyd, 1972, 15-17). The fact that a part (east) of the complex located between north and south was used as a stable demonstrates the great importance of livestock-farming during that time of settlement.

Places belonging to Layer II of LBA were unearthed in early excavations made in area A, which is located on the western cone of the mound (Lloyd- Mellaart, 1955, 40-52) (Fig.24). Structures in this area were built of mudbrick and stone foundations, similarly to other structures in the cone. Due to the slope of the area, some structures are supported by walls (Lloyd, 1972, 19). In this area, besides two complexes, the existence of a partially unearthed third complex is known (Lloyd, 1972, 19). Houses in this area consists of a yard and a porch room connected to this yard as well as other places that can be accessed through this porch room (Lloyd, 1972, 19). Thus, when looked at the house located in north-western part of the area, it is possible to state that it is a good example of the architecture of the period with its yard, porch room and rooms. The porch room, which is called Room 3, has a rectangular shape and is accessed by a doorway that opens to the yard and is supported by two wooden poles (Lloyd- Mellaart, 1955, 44-45; Lloyd, 1972, 19). Numerous wooden remains that potentially belong to the roof of the porch room were detected around this doorway. A pithos stands on the southwestern part of the porch room (Lloyd- Mellaart, 1955, 44-45; Lloyd, 1972, 19). On the other hand, jugs, fruit plates, jar and two grinding stones were discovered on the entrance of the porch room along with a plastered hearth with its ashes inside before the northern wall (Lloyd- Mellaart, 1955, 45; Lloyd, 1972, 19). In addition to these, another group of finds consisting of fruit plates and open vessels was discovered in the southeast corner of the porch room (Lloyd, 1972, 19-20). On the south wall of the porch room, a door and Room 9 is located. Two skeletal remains belonging to people believed to die as a result of the fire and one of which is thought to belong to a child were discovered in this room, which was largely destroyed by pits from the Byzantine period (Lloyd- Mellaart, 1955, 45; Lloyd, 1972, 20). They are thought to die as they couldn't run away from the fire (Lloyd- Mellaart, 1955, 45). The small partition in the west part of the room is thought to be a stairwell belonging to the second floor (Lloyd- Mellaart, 1955, 45). The aforementioned child skeleton was discovered in the lower part of this partition. Potteries and big jars that were discovered in the room shows similar characteristics to those discovered in the porch room (Lloyd- Mellaart, 1955, 45; Lloyd, 1972, 20).

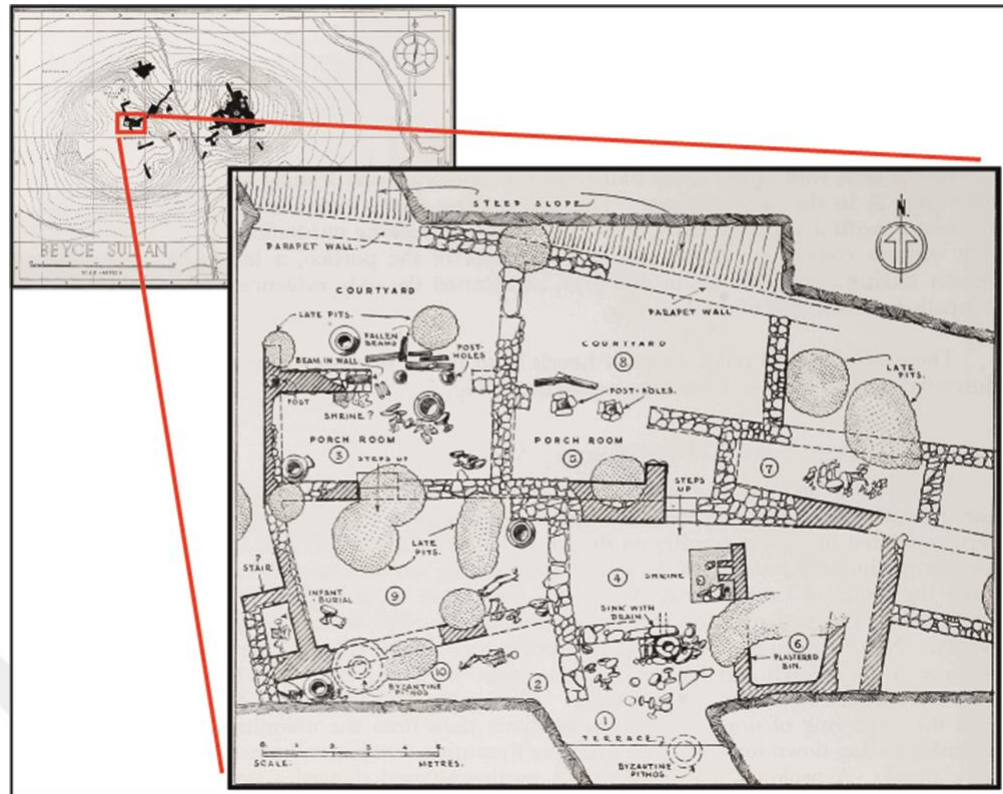


Fig. 24: Plan of Area A (Lloyd- Mellaart, 1955: 51; Lloyd, 1972: 20)

Moreover, second room located on the east adjacent side of the first house and using common walls with it, shows similarity to the first house in terms of plan and structure. This house consists of Rooms 8, 5, 4, 6 and 1 has three more rooms in addition to having yard and porch room, unlike the first house (Lloyd, 1972, 20-21). Porch room called place 5 is accessed through a wide doorway opening to the south from the yard called 8 and supported by a retaining wall. As in the first house, the doorway between the yard and the porch room is supported by two wooden pillars (Lloyd, 1972, 20). Through a door that's located on the southeast part of the Room 5, Room 4, which is the centre of the house can be accessed (Lloyd, 1972, 20-21). In the centre of Room 4, there is a double horn-shaped hearth standing on a square platform which is about 40 cm high, located on the floor facing west (Lloyd- Mellaart, 1955, 44-45). The front section of the mentioned hearth is framed by being enclosed in a square shaped frame (Lloyd- Mellaart, 1955, 44-45; Lloyd, 1972, 20-21). An earthenware jar with two handles, a trefoil-jug and two coasters were discovered around the hearth. The small-sized plastered room, which is located in the southeast of Room 4 and called Room 6, has been largely destroyed by a pit belonging to Byzantine period (Lloyd, 1972, 21). It was observed that the wall separating the place called Room 1, located in the southern part of Room 4, was largely destroyed (Lloyd, 1972, 21). There is a stone-built bathtub and its drainage before this

destroyed wall near Room 1 (Lloyd, 1972, 21). It is possible to consider that the drainage reaches towards to Room 4 (Lloyd- Mellaart, 1955, 44-45). Numerous goblets, fruit plates, and open vessels were discovered around the mentioned basin (Lloyd- Mellaart, 1955, 44-45; Lloyd, 1972, 21). Finally, a narrow and long room on east-west direction was discovered in the east part of this second house. Three spotted pitchers were found in this room which is called Room 7 (Lloyd, 1972, 21).

A temple area was unearthed during the excavations in area R located on the north of west cone (Lloyd, 1972, 24-37) (Fig.25). The building, which consists of two rectangular-shaped rooms leaning against a common wall, is called the east and western temple (Lloyd- Mellaart, 1958, 108-109). Temple, which has an entrance on the south, has one small-sized room in each of the northern and southern parts. The walls of the temple, which was built using a stone foundation and mudbrick, were preserved in some places up to 50 cm above the ground in Layer III (Lloyd, 1972, 24-28). This temple, which was built in a north-south direction, has an entrance on the south. Pottery remains thought to have been used in rituals were discovered in the northern part of the western temple, which measures 9.50m x 3m. There are two altars placed on a platform in the northern part of the temple. After the temple in Layer III was destroyed by a fire, it was reused after some alterations made in Layer II (Lloyd, 1972, 27). While there are altars leaning on a platform in both parts of the temple in Layer III, there are two horn-shaped altars leaning on a platform only in the northern part of the eastern temple in Layer II (Lloyd, 1972, 32, Fig.13). On the other hand, only few finds were discovered in the temple and in the rooms connected to the temple in the Layer III, while many finds were discovered in Layer III, especially in the eastern temple (Lloyd, 1972, 24-37). On the other hand, a pile of rope that is thought to belong to a basket or a bag and few goblets were discovered in the western temple (Lloyd, 1972, 27). The eastern temple, which stands out with abundance of the finds, measures 9.60 x 3.25 m and there is a small-sized wasteyard in the southwest corner. In addition to numerous potteries discovered around this place, small-sized finds were discovered as well (Lloyd, 1972, 31- 32). Moreover, around the altar, a great number of potteries were discovered (Lloyd, 1972, 27-28, Fig.10). Considering the finds discovered in the temple, apart from pottery, two bronze spearheads and an arrowhead, pestle, many spindle whorls and knife made of flint were discovered (Lloyd, 1972, 31-32). In addition to these finds, beads, a bronze buckle, beads made of seashells and a pig's skull were discovered behind the altar (Lloyd, 1972, 32). Finds such

as beads, pebbles, clay objects and wild boar teeth were discovered in the small area adjacent to the eastern temple (Lloyd, 1972, 32).

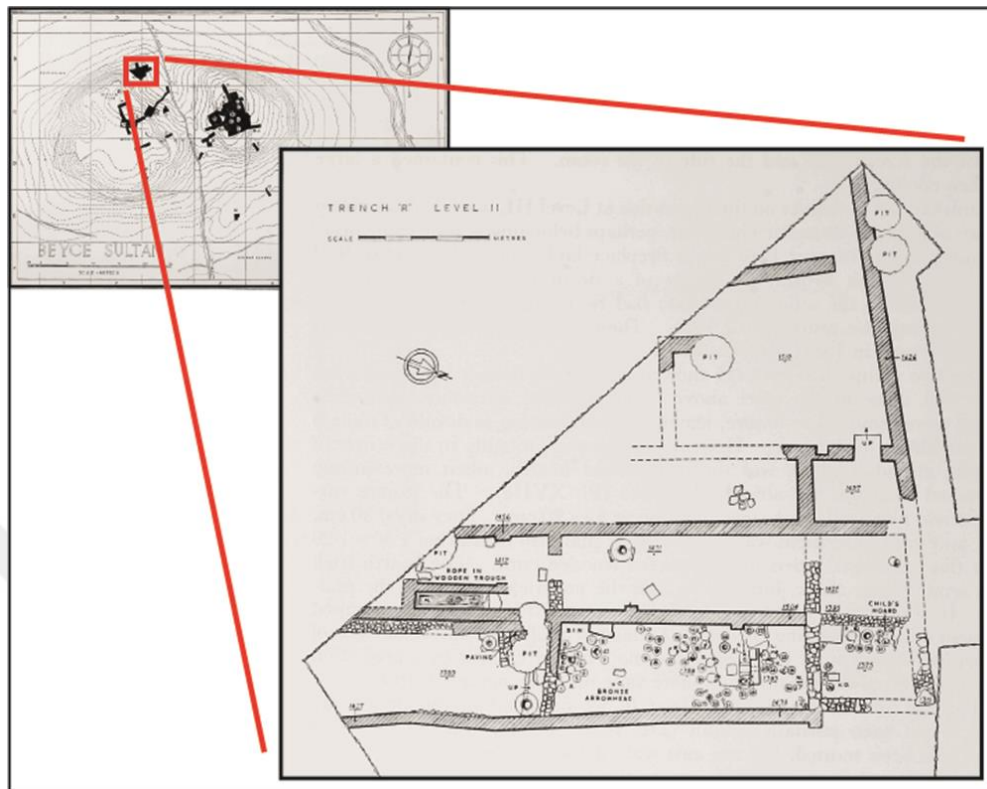


Fig.25: Plan of the Twin-Shrine of Layer II (Lloyd- Mellaart, 1958: 109)

In the northwest corner of the small space to the south of the eastern temple, there is a stone-paved area that was drastically destroyed by a pit (Lloyd, 1972, 27-28). Adjacent to the south of this area is a pithos supported by mudbrick which is thought to have been used for storing liquids. Moreover, there is another pithos next to the entrance, directly across to this paved area. It is thought that these mentioned pithoi were used in order to perform purification before entering the temple (Lloyd, 1972, 27-28). It was understood that the twin temple in question was destroyed by fire and abandoned in the last phase of LBA (Lloyd, 1972, 24).

Considering the Layer II in general, there has been a dramatic change in the settlement after the “little palace”, temple and domestic spaces inhabited in this period were destroyed by a fire. Especially in the eastern cone, although the structures belonging to Layer II were renewed and continued to be used in the Ib Layer, it was understood that the Layer Ia was abandoned to a large extent (Lloyd, 1972, 17).

VI.3. Recent Excavation Data /LBA (5b)

Beycesultan höyük has been excavated in a wide area during both early and recent excavations. Especially in recent excavations, the Layer 5b, dated to the second quarter of the second millennium BC, contains important data from this period with its rich in-situ finds. Pottery, small finds, and human skeletons that were unearthed in Trenches N27, M27 and O27 on an area of approximately 500 m² and detected in a place destroyed by a big fire provide important clues to the events that took place here (Abay, 2014, 176). Although the Layer 5b is thought to have been caused by a conflict due to exposure to a violent fire, this destruction is thought to have occurred as a result of a possible attack from the outside (Abay, 2014, 176). In this context, it is possible to obtain important data about the architecture of the houses, as well as the location, quantity and variety of the detected finds, about the cause of the destruction in question.

In addition, it is possible to obtain information about the settlement structure and the characteristics of the settlement architecture from the aforementioned layer architecture and in-situ finds, as well as the social and cultural characteristics of the settlement due to the street and public construction. From the density of finds in the venues, it is possible to obtain information about certain fields of activity and the functions of these areas, and the lifestyle, status and duties of the residents. In this context, it is necessary to examine closely the location and properties of structural elements and all finds belonging to Layer 5b, which constitutes the subject of the research.

Two important buildings belonging to Layer 5b were unearthed during the studies carried out in Trenches N27 and O27 between 2009 - 2012 and 2019. In the article published by Abay in 2014, the buildings in question were named as House 1 and House 2 (Abay, 2014, 175-189). Although houses are located in Trenches N27 and O27, these houses were built adjacent to each other, and some walls of the houses were used together (Fig. 26). The common walls of the houses are built with a single row of mudbrick. It was observed that Rooms 7, 14 and 55 belonging to the House 1 had common walls with Rooms 2, 28 and 19 belonging to the House 2. In this context, it is thought that the two houses were planned.

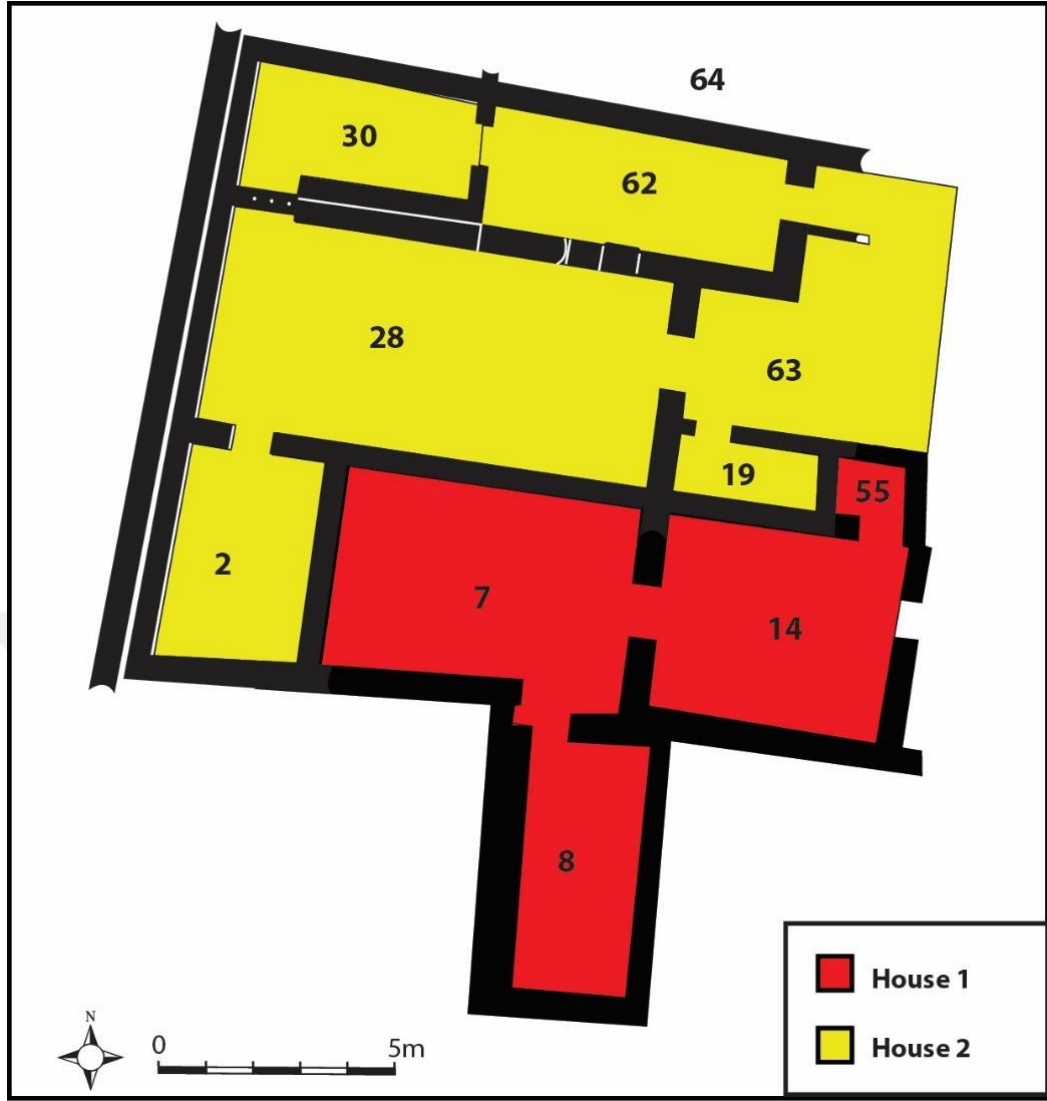


Fig. 26: Plan of the House 1 and 2 (*Illustrated by M.Çarkı*)

In the excavations carried out so far, all rooms of the building, especially defined as House 2, could not be exposed. For this reason, although the house has not been fully exposed, there is no situation that will prevent us from commenting on the forms, functions and social status of the households living in it. The architectural elements and all finds that arise in the rooms provide a great opportunity to be evaluated in the context of household archaeology analysis (Abay, 2014, 177). In this context, in order to reveal the repertoire of all archaeological finds detected in the rooms. Firstly, the ensemble unearthed in the culture layer with deposits up to the wall height will be discussed and the functions of the rooms will be revealed. In particular, it was observed that the wall of Room 28 in the Trench O27 and Room 7 was used in common, collapsed as one meter high from the floor and sealed the finds in the room. It is thought that the room deposit that the wall is sealed or the deposit up to the protected wall height of the houses will

provide a healthy interpretation of the data regarding the function and use of the rooms. In this context, it would be beneficial to evaluate the finds discovered in the deposit of the rooms as a whole. Another important point is to reach the data regarding the use and properties of the upper floors of the houses, which are considered to be double storey, among the architectural elements unearthed during the excavations. In the next parts of the thesis, the mentioned areas will be explained separately. The houses will be examined in detail, so that after giving information about the architecture of the houses, data will be presented on how the demolition occurred as a result of the destruction and comments will be made. In addition to a large number of sherds, all or integrable samples were discovered extensively in the houses examined. In this intense find context, all of the small finds as well as all or integrable pottery were taken into consideration. In this context, the defined finds in the rooms of the houses are classified within themselves.

Besides the architectural elements in the rooms, pottery is of great importance for a better understanding of the usage of the rooms uncovered in the individual structures. The pottery unearthed for this purpose were classified based on their usage characteristics. The classification made is based on defined pottery varieties. It is basically divided into 4 categories: Storage vessel, vessels for daily use, service / drinking vessels and vessels used for other purpose (Fig.27).

Storage Vessel	Vessels for Daily Use	Service/Drinking Vessels	Vessels Used for Other Purpose
Pithoi	Open Vessel	Plate	Funnel
Storage Jar	Trefoil-Jug	Miniature Vase	Sieve
Closed Vessel	Spouted Pitcher	Goblet-Fruit Plate	Bottle
	Flask	Juglet	Feeding Bottle
	Bowl	Mug	
		Teapot	
		Cup	

Fig.27: Functions of Pottery Types from Layer 5 (Illustrated by M.Çarkı)

In addition to understanding what kind of work is being carried out in the rooms, it is also important to determine the activities that are mainly performed in the rooms through the pottery function. It is considered to be important in terms of understanding the daily activities carried out in main rooms of the houses. In this context, it is aimed to evaluate the rooms from different perspectives on the potteries uncovered.

VI.3.1. House-1

The building, called House 1, has a complex architecture and consists of 4 interconnected rooms. The entrance door of this house, which consists of Rooms 14, 55, 7 and 8, opens to the east (Fig.28).

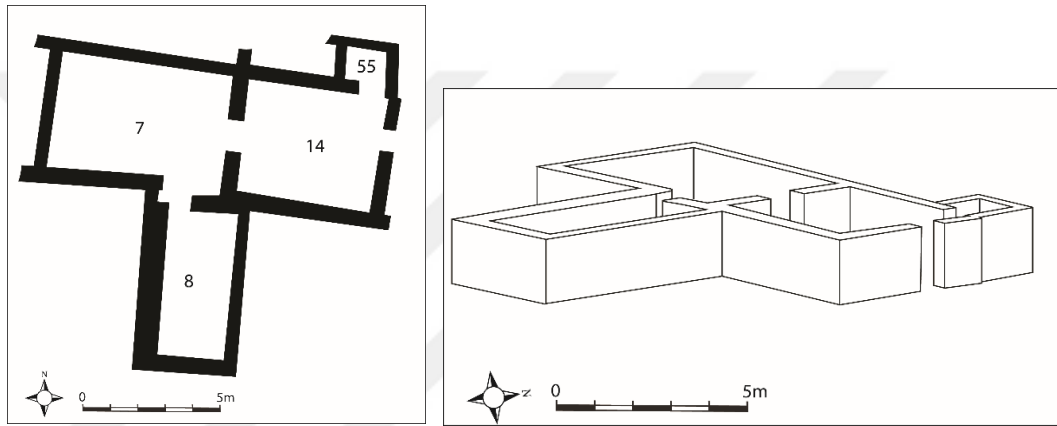


Fig. 28: House 1 plan (Illustrated by M.Çarkı)

Considering the construction features of the house in general, it was observed that the foundation was built with massive stones of 15-35cm size, and the walls were built using mudbricks of 50x 32 and 34x30 (Abay, 2014, 177) (Fig. 29).



Fig.29: Mudbricks of Houses (Beycesultan Excavation Archive)

It is clearly revealed that the walls defined as the main walls of the houses were rebuilt and utilized as double walls by adding a wall adjacent to the preserved walls in the construction from Layer 5a. In addition to the new walls in question, it is clearly seen that the plans of the rooms are changed sometimes, and new rooms are built adjacent to the houses due to the thickness of the cultural deposit in the rooms. The walls and floors of the house were plastered with clay more than once. It is possible to see the traces of this

fire in all finds in the rooms belonging to this house, which ended with a conflagration (Table 1). From the measurements made from the plan of the house in question, it has been observed that it has a usable living area of approximately 60 m². The calculation was made without including the interior walls. There are several silos and a hearth in the house in question as part of the architecture. Apart from the silo and the hearth, pithoi were placed leaning against the walls of the rooms. Due to the hearth, silos and pithoi, the movement areas in the houses was quite limited.

VI.3.1.1. Room 14

VI.3.1.1.1. Architectural Features

In Room 14, which was first discovered during the 2010 excavations, intense burnt mudbrick debris and wood remains were identified. The room, which has a rectangular plan, is 4.40 m north-south and 4 m east-west. Room 14 is an important part of the House 1 and it has got a door 90 cm wide to the east. It is believed that the Room 14 probably constitutes the main entrance of the House 1 from the available data.

The fact that there are abundant burnt mudbricks and wood remnants in the southern part of the room rather than the finds suggests that this area was utilized less frequently in daily work. It shows the density and dimensions of the wood samples in the east-west direction determined especially in the northern part of the room and that they belong to the roof construction (Abay, 2014, 178). Two massive stones 46 x 36 and 50 x 37 cm in size and which are probably related to the pillars carrying the roof, were identified in the central part of the room. Several collapses were observed in the plastered floor. These collapses probably occurred due to the pressure exerted by the remains of walls and roofs that were destroyed during the fire.

It is observed that the walls of Room 14 are protected in certain proportions although they are different from each other. The eastern wall of the room is 53 cm high from the floor, while the northern wall is 92 cm, and the south wall is 1.05 cm. The walls belonging to the room are built on a single row of mudbrick blocks with an average width of 50 cm.

The north-eastern part of this room, which was largely exposed in 2010, was not completely exposed. As a matter of fact, in the studies conducted in 2019, a new room in the north-eastern part of this room were identified. Finds and the uncovering of Room 55

was built in relation to room 14 were found in 2019 studies suggest that this room is completely covered by a roof. However, considering the location of the Room 14 and its relation to Room 55, it is also possible that it is a semi-open courtyard.

VI.3.1.1.2. Finds Assemblage

A small number of finds were unearthed in Room 14. In the fill soil of the room, there are potteries that can be integrated at different levels, and pithos fragments with grain residues adjacent to the wall at the ground level in the western part of the Room 14 (Fig.30).

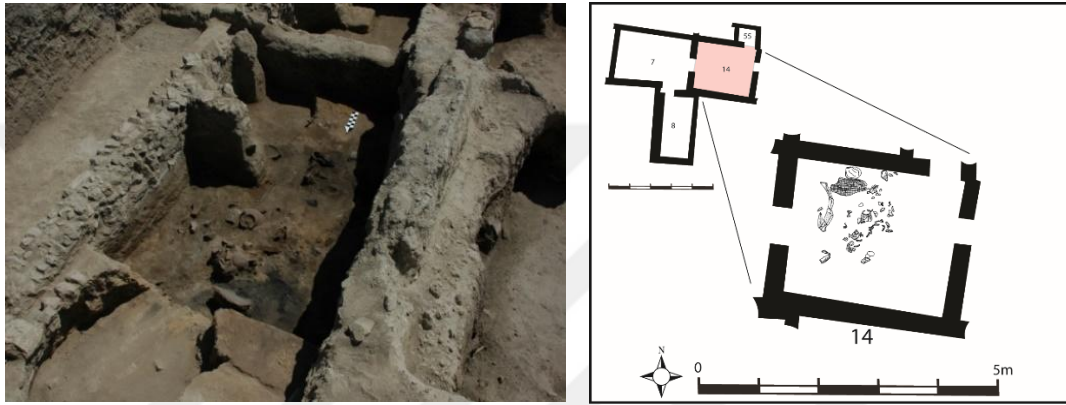


Fig.30: Room 14, Photo and Architectural Drawing (*Beycesultan Excavation Archive - Illustrated by M.Çarkı*)

Pithos fragments with a thickened-out rim and a horizontal band decoration were found on the floor in front of the western wall of the room. In addition to this, a container full of grain and a large amount of broken pottery, as well as small intact vessels, were discovered. A grinding stone was found, which is likely related to grain samples found in different areas of the room, was found. Although the aforementioned grinding stone was found in the centre of the room, it was determined that it did not fit completely on the ground. It is believed that the shifting from the northern part of the room to this area was probably due to the destruction during the big fire. On the other hand, pottery and small finds were found scattered in the close vicinity of the grinding stone found in the centre of the room and in the northern part. As mentioned above, the fact that the finds are mostly in the centre of the room is not very suitable for the use of the room. Therefore, it is believed that the finds were pushed towards the centre of the room as a consequence of the demolition of the room's northern wall during the fire

In the place (Fig.31), complementary bowls (4), closed vessel (8), bowls (5), goblets and fruit plates (8), plates (5) and trefoil jugs (2) were found. Apart from these finds, the grinding stone (1), Mortar (1), pestle (1), crescent-shaped loom weights (12) spindle whorls (3), flint blades (2), beads (2), bronze needle (1) and processed horns and bones were detected (Table 2).

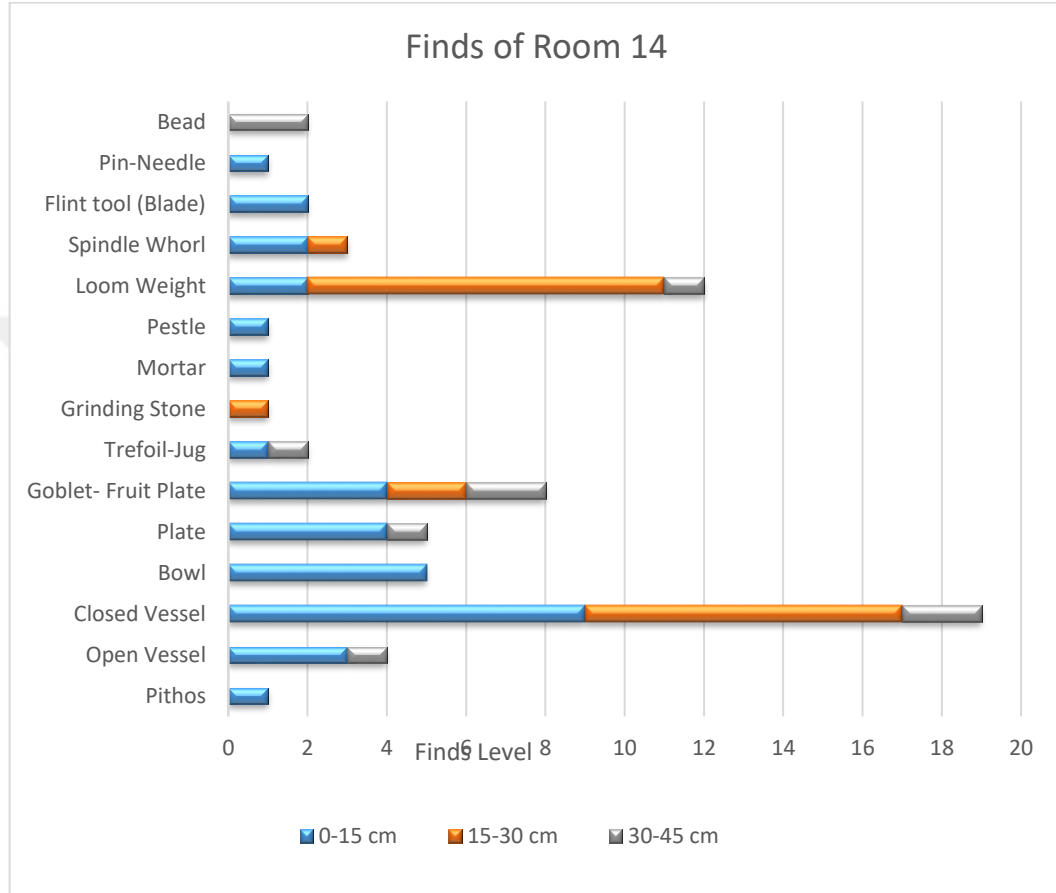


Fig.31: Finds of Room 14 (Illustrated by M.Çarkı)

VI.3.1.1.2.1. Pottery

Pottery was found extensively in the central and northern parts of Room 14. These sherds, probably thought to be related to the usage of the room, were found to be fewer in number compared to other rooms of the House 1. When looking at the general characteristics of the ceramics found in Room 14, a large number of pottery and fruit plates were observed. Simple, flattened or outward-thickening rimmed jars generally constitute the largest pottery group 32% of the assemblage. In addition to pottery, outward-pulled, outward-turned and outward-thickened rimmed, sharp-bodied goblets and fruit plates constitute the second-largest pottery group with a rate of 22%. Inward and outward-thickened rimmed plates constitute the third largest pottery group (14%), while

simple, inward-outward or flattened rimmed bowls make up the other ceramic group with 13%. Trefoil mouthed jugs (5%), as well as inward or outward-thickened rim open vessels (11%) and pieces of a pithos were found. Part of the pithos that was found scattered in the room was identified at the entrance of Room 55 (Fig.32).

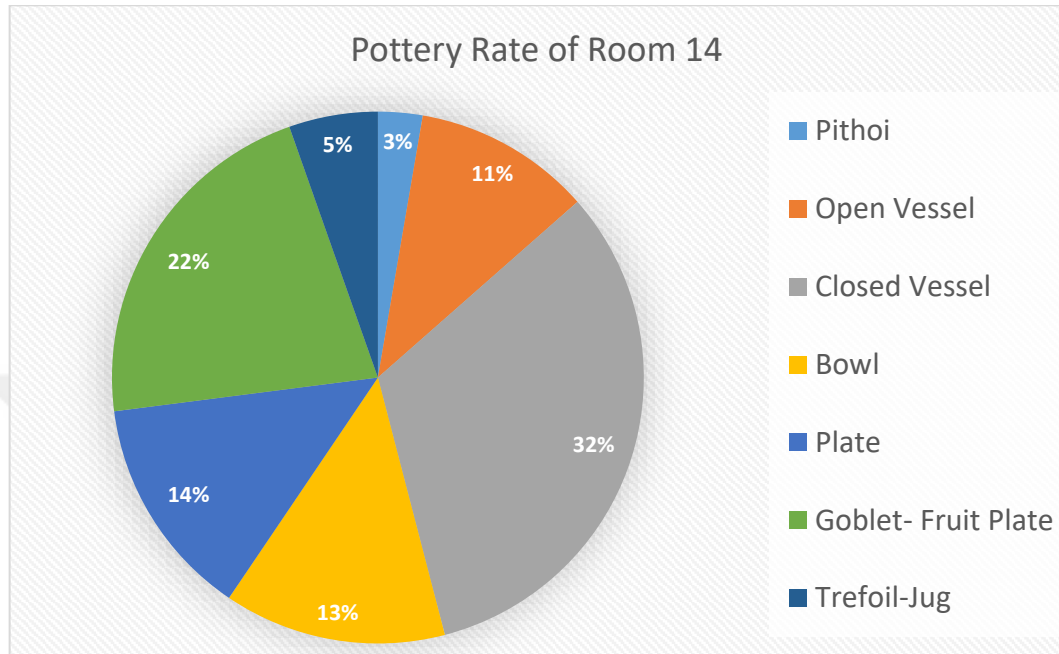


Fig. 32: Pottery Rate of Room 14 (Illustrated by M.Çarkı)

On the other hand, when looking at the graph made on the useful features of pottery, it is clearly revealed that 34% is utilized for storage and service/drinking, and 32% for daily use purposes (Fig.33). If it is necessary to make an evaluation regarding this place based on the said ratios, it is highly likely that daily activities were frequently performed except for besides the storage purpose of the placeroom.

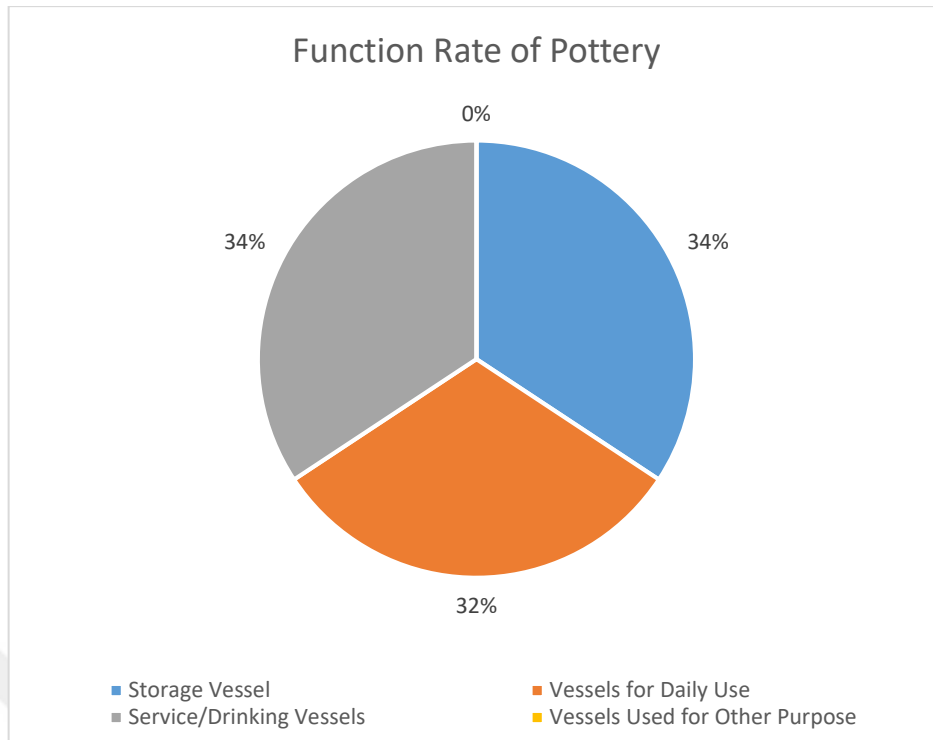


Fig. 33: Function Rate of Pottery (Illustrated by M.Çarkı)

VI.3.1.1.2.2. Small Finds

A large number of crescent-shaped loom weights were found outside the pottery inside the room. The crescent-shaped loom weights constitute the largest group (52%), however, are scattered throughout the room. The second-largest group, hemispherical spindle whorls made of terra cotta and bone, represents 13% of the total the small finds. In addition, beads (9%) made of stone and shell, and grinding stone made of basalt (5%), mortar (4%) and pestle (4%) were found in the room. Flint blades (9%) and bronze pins (4%) were also recovered (Fig.34)

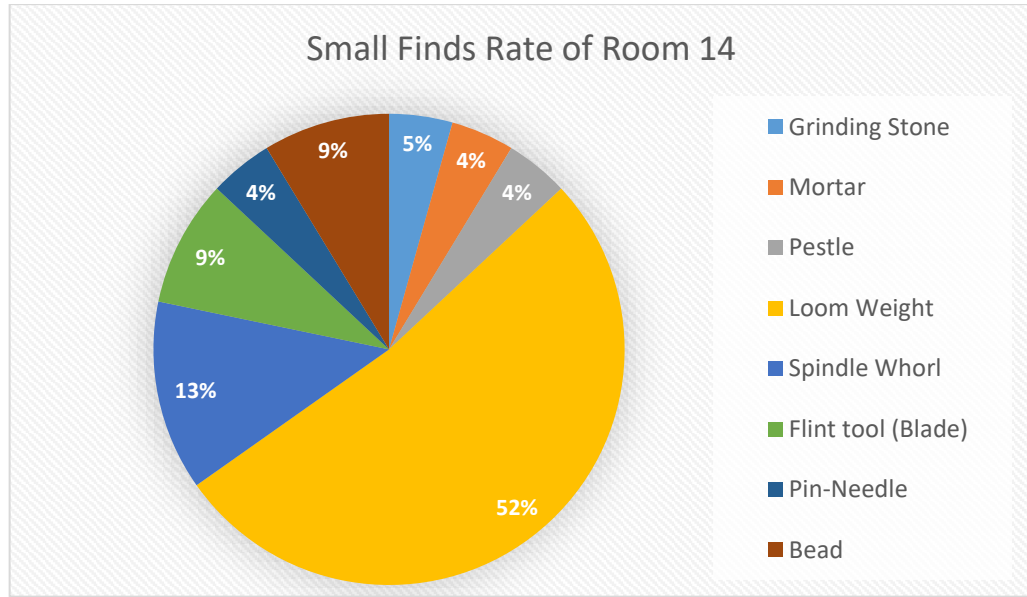


Fig.34. Small Finds Rate of Room 14 *(Illustrated by M.Çarkı)*

VI.3.1.1.3. Evaluation

Considering that this room is located at the entrance of the House 1 and its relationship with Room 7, it is clearly revealed that this place is in a position of transition. However, although Abay suggests that it is not clear exactly what role it plays in the context of House 1, he thinks that this area is utilized as an alternative during the production activities in place 7. He also thinks that due to the fact that Rooms 7 and 8 are accessed on this room, the need for daylight in order to carry out daily works in these rooms may have been provided by this room. However, due to the presence of the building 19 located on the north-east of the building 14, with the common walls next to the Room 55, as well as the location 7 on the west of the building, it also increases the probability that the Room 14 was probably be a closed place. Because evidence shows that the walls in both the north and west are built from floor to ceiling (Fig. 26).

In the current situation, it seems difficult to come to a certain conclusion about the function of the room from the finds uncovered. It can be considered that most of the finds found in the place are utilized for service (meal) purposes, the number of closed vessels, goblets and fruit plates are utilized following the daily needs rather than the production activities.

VI.3.1.2. Room 55

VI.3.1.2.1 Architectural Features

Room 55, which was built in relation to Room 14 in the north-eastern section of the trench N27, is 1.5 x 1.60 m. Although the entrance door of Room 55 opens to the south, it is located to the right of the possible entrance door of House 1. The western wall of the this room was built adjacent to Room 19. The construction of Houses 1 and 2 adjacent to each other and the use of common walls indicate the existence of a possible relationship between the houses. In the room, a basin with a size of 51 x 45 and a 4 cm wall, as well as a 26 x 33 cm silo, was detected under the pithos pieces seen at the entrance. The density of the finds in Room must a small storage room that is utilized in line with daily needs from the silo, basin, and pithos fragments in the room. It can be thought of as a place where materials such as pottery needed in daily works conducted at Room 14 can be preserved. The walls of the place were built using single row of mudbrick sizes of 50x 32 and 34x30. In particular, it was observed that the wall utilized in common with Room 19 was thinner than the other walls of the room. It was observed that the floor and walls of Room 55 were plastered with clay many times as in the other places of the House 1. However, it is seen that the floor of the room is relatively higher than the room number 14 (Fig.35).



Fig. 35: Room 55 Architectural Drawing and Top view *Beycesultan Excavation Archive-*

Illustrated by M.Çarkı)

VI.3.1.2.2. Finds Assemblage

Although the dimensions of Room 55 are small, many finds were unearthed (Fig.36). In front of the entrance door of the room, a basin that was bordered by a thin

wall on both sides and sitting on the ground, and parts of a pithos were identified in the basin. This pithos is a thickened-out rim and a band decoration in the horizontal direction. There is a small silo , just to the north of the pithos, with thin-walled walls made of clay. A closed vessel, a goblet and fruit plates (2), sieve (1), mug (1) and trefoil jug (1) were found around the silo. Due to the destruction of the place, some vessels were found in the ground and some vessels were found in an earth deposit approximately 30 cm above the floor. It is considered that the potteries are probably kept on the shelves or were hung on the walls. Apart from the pottery, grinding stone (1), crescent-shaped loom weight (1), flint blades (3) and beads were identified in the room (Table 3). It was understood that all the finds uncovered inside the room were damaged by a great fire.

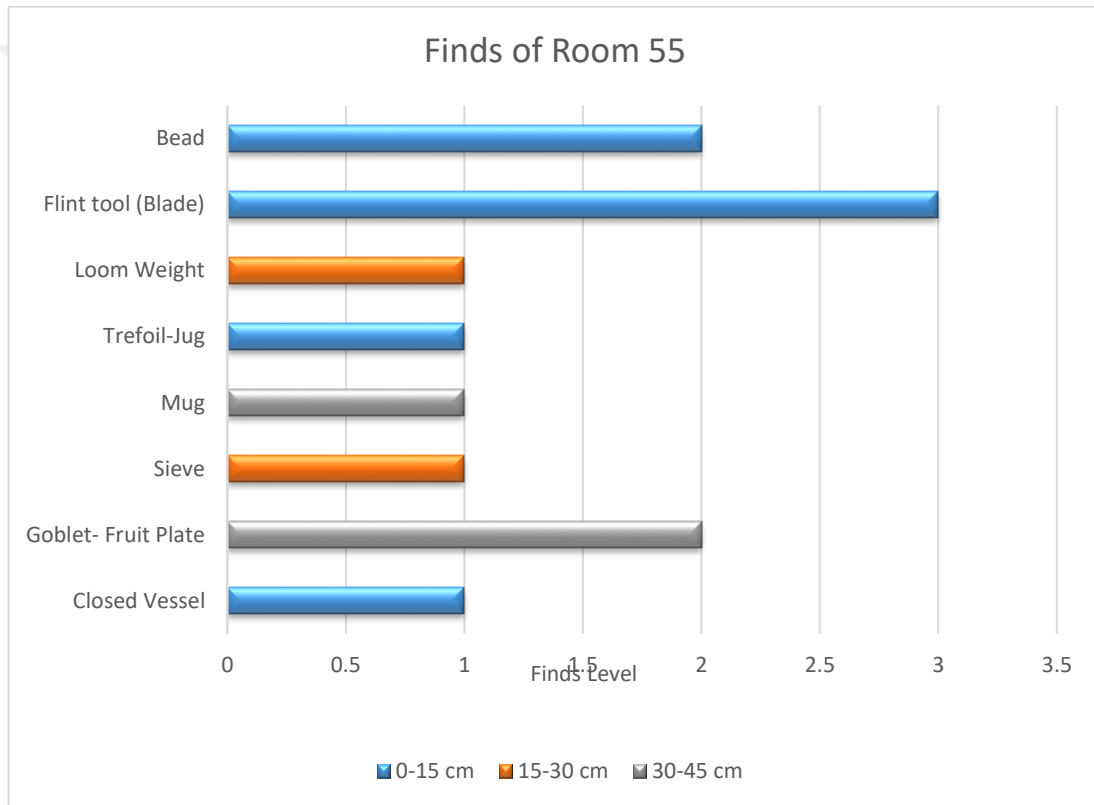


Fig.36: Finds of Room 55 (Illustrated by M.Çarkı)

VI.3.1.2.2.1. Pottery

Room 55 has the largest amount of pottery among all the finds. In this context, besides the thickened-out rim closed vessel (16%), a simple rimmed goblet and fruit plate (33%) mug (17%), sieve (17%) and trefoil jug (16%) were found. In addition to the pottery listed above, a large number of pottery sherds were found. When looking at the properties of ceramics in the room, examples for service purposes come to the fore (Fig.37).

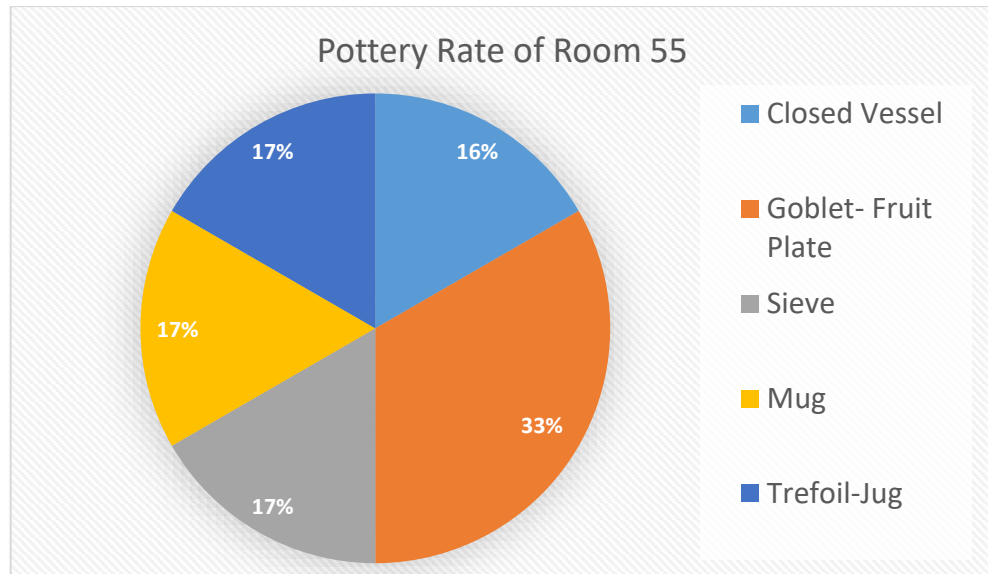


Fig.37: Pottery Rate of Room 55 (Illustrated by M.Çarkı)

Considering the usage characteristics of the pottery found in Room 55, there are 50% of the pottery utilized for service/drinking purposes, as well as 17% of the daily use pottery and special examples such as the sieve (Fig.38). On the other hand, there are 16% of pottery utilized as storage elements. Considering these rates, it is possible to state that the room, which is one of the daily use pottery samples as well as pottery for service/drinking purposes, is an area where the pottery utilized in daily works are preserved.

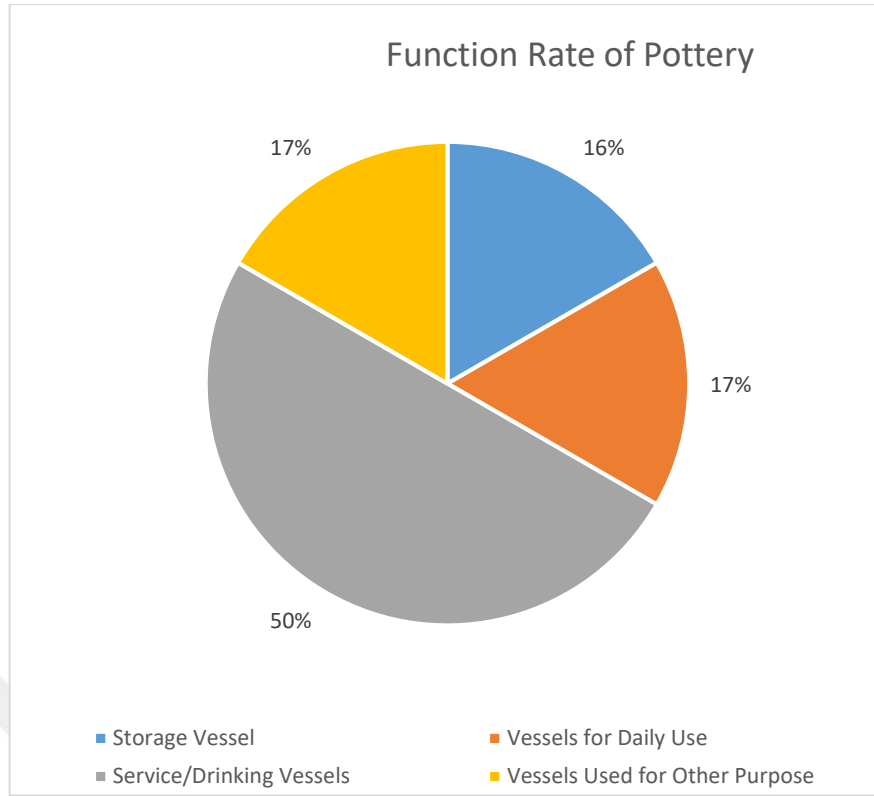


Fig. 38: Function Rate of Pottery (*Illustrated by M.Çarkı*)

VI.3.1.2.2.2. Small Finds

Apart from the pottery in the room, the grinding stone made of basalt is the largest group of small finds with a 50% proportion of flintstones, one was found inside a fruit plate within deposit, and the other was found right side of the door passage. In addition, processed seashells (33%) (possibly utilized as beads), clay crescent-shaped loom weight pieces (17%) and processed bone pieces that were not understood for which purpose were found (Plate. 4). Although it is clearly revealed that the small finds are relatively less in the find repertoire, it is considered that House 1 is in parallel with the ratio of finds (Fig.39).

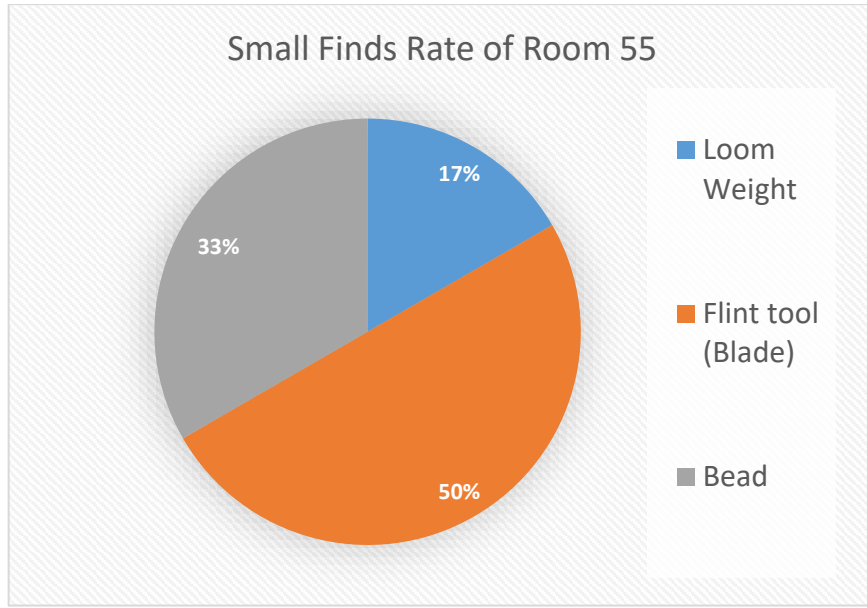


Fig. 39: Small Finds Rate of Room 55 (Illustrated by M.Çarkı)

VI.3.1.2.3. Evaluation

It is possible to state that Room 55, which was built related to Room 14, undertook an important function in the context of House 1. Considering the dimensions of the room in question and the various finds found inside it, it indicated a small size warehouse where daily items are kept at the entrance of the House 1 and frequently utilized items are placed.

On the other hand, the basin determined in this place was carefully made from terracotta and the presence of pottery such as a sieve and jug suggest that it may be a place where animal products are kept. As it is known, due to the fact that animal products are easily spoiled, they may require that they be kept in a hygienic environment, and they can be placed in an easily accessible point for daily consumption. From this point of view, both the location and the size of Room 55 may have been utilized for this purpose.

VI.3.1.3. Room 7

VI.3.1.3.1 Architectural Features

The location of Room 7, which is the central location of house 1, is reached by a gate passage on the west wall of Room 14. This room is 6.20 x4.40 m., and it has a rectangular form. In the construction of the room, the walls were created using a single row of mudbrick sizes of 50x32 and 34x30 cm size. It is seen that the west and north wall of this place was built adjacent to house 2 and the walls in question were utilized by houses 1 and 2. Massive stones up to 30 cm were utilized in the foundation construction of the room. The fact that the walls are exposed to a high degree of fire due to the severity of the fire is an important factor in its protection until today. It is believed that the deposit of the walls of the room is about 1.80 cm, and the deposit formed by the collapsed roof and walls due to the destruction during the fire is highly effective this high wall protection (Fig.40).

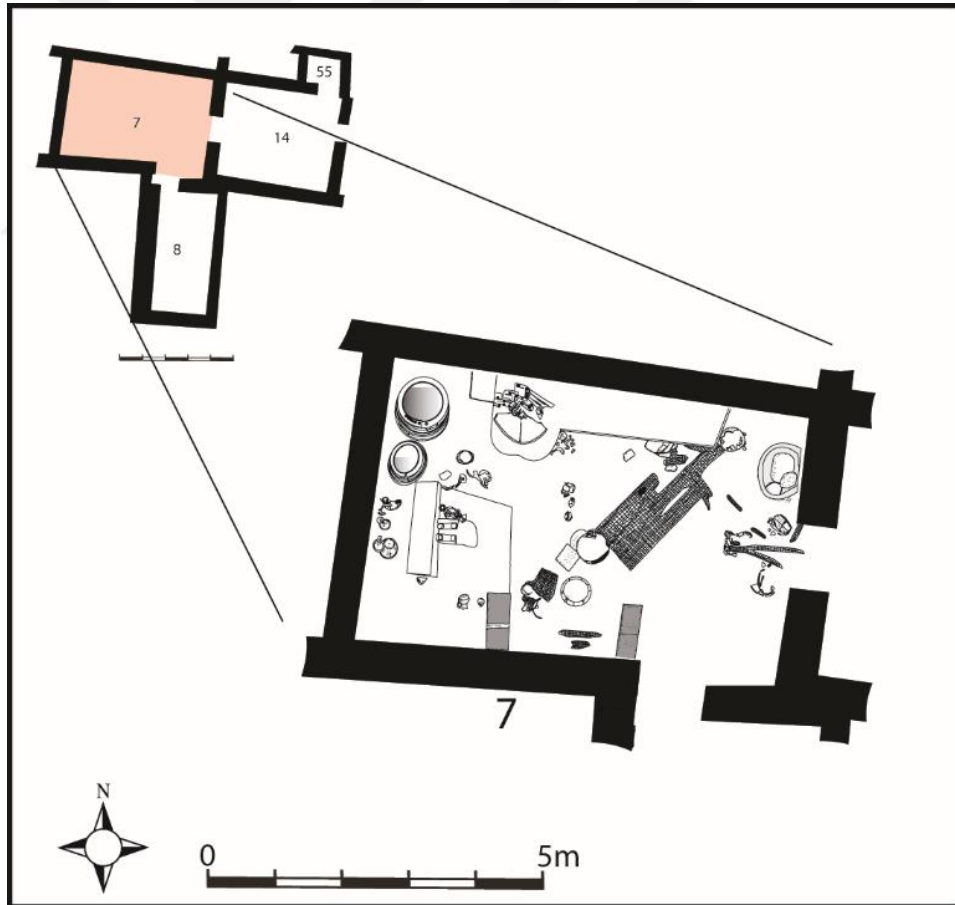


Fig.40: Room 7 Plan (Illustrated by M.Çarkı)

Opposite the entrance on the east wall, there is a hearth structure about 50 cm from the west wall . It has a height of 30 cm in the east-west and a height of 1.50 m in the north-

south. The hearth structure surrounded by a rectangular platform consists of a platform and the upper part adjacent to this platform consists of two horn-shaped wings. There are many butterfly motifs created by printing on the wings, which is an important element of the hearth structure (Fig.41).



Fig. 41: Front and Side View of the Room 7 Hearth (*Beycesultan Excavation Archive*)

The said hearth platform and wings are located on an oval-shaped fireplace (Abay, 2014, 178). In the north-west corner of the room, pithoi that were utilized for storage purposes close to the hearth structure and partially buried in the ground and based on the wall were found (Fig.41). In addition to band decorations on the bodies of the pithoi in question, a human face-shaped ornament on the outer side of the rim and intertwined circular motifs on the rim were utilized as decoration elements. In addition to the grain samples inside the exposed pithoi, a pithos was identified in a silo along the northern wall of the room and human remains were found in the largely destroyed pithos. Wheat samples and a grinding stone piece were found in the silo with a length of 2.50 x 0.60 m and a height of 30 cm where the pithos was located. Pithos, in which there are bone remains belonging to an individual, is located in the western part of the silo (Abay-Dedeoğlu, 2012b, 314). Skeletal remains in pithos, which are placed on the ground and supported by mudbrick blocks, have been greatly damaged by fire. It is clearly revealed that the remains in question belonged to a male person thought to have escaped from a fire or possible invasion (Abay- Dedeoğlu, 2013), and that he was standing in an upright position in the pithos (Boz, 2016, 78) (Fig.42).



Fig.42: The Pithos and Human skeleton in Room 7 (*Beycesultan Excavation Archive*)

Remains of a wooden shelf made of clay were found in front of the south wall of Room 7 (Abay, 2014, 178). These clay feet were partially destroyed. Along with wooden remains belonging to the wooden parts of this shelf a large number of small-sized pottery and two bronze needles were found.

The door passage between Room 14 and Room 7 was utilized probably as the grinding area. In this area, a mortar and a grinding stone were found inside the grinding chamber where cereals made of clay were deposited. The chamber, which was built on the floor adjacent to the eastern wall of the room, was carefully plastered and grains samples were found inside it (Abay, 2014, 178) (Fig.43).



Fig.43: Room 7 Grinding Area View (*Beycesultan Excavation Archive*)

In addition to these finds, burnt wood beams of 2.25 x 0.86 m. The remains of roof construction were found in the centre of the room (Abay, 2014, 178). It was understood that the wooden parts forming the ceiling fell into the centre of the room as a whole with the fire (Fig.43). In addition to the wooden remains, reeds were utilized in the roof structure along with the wooden pieces and burnt timber samples were found entrance and the central part of the room. Under the aforementioned roof construction, a large number of vessels, processed seashells, and a bronze sickle just in front of the hearth

structure were identified (Abay, 2014, 178). A few pieces of pottery were also found on the roof remains. From this perspective, it is possible to talk about two possibilities about the context of the sherds. It can be thought that the pottery samples in question were dispersed on the collapsed roof from the shelf after the roof collapsed or that they were examples of the second floor of the house.

VI.3.1.3.2. Finds Assemblage

The finds in the room (Table 4) were mostly found on the floor in the range of 0-30 cm. The finds in the place, which has a very rich repertoire, are mostly clustered around the hearth and its surroundings (Fig.44). On the other hand, 6 fruit plates were found together at behind the hearth.

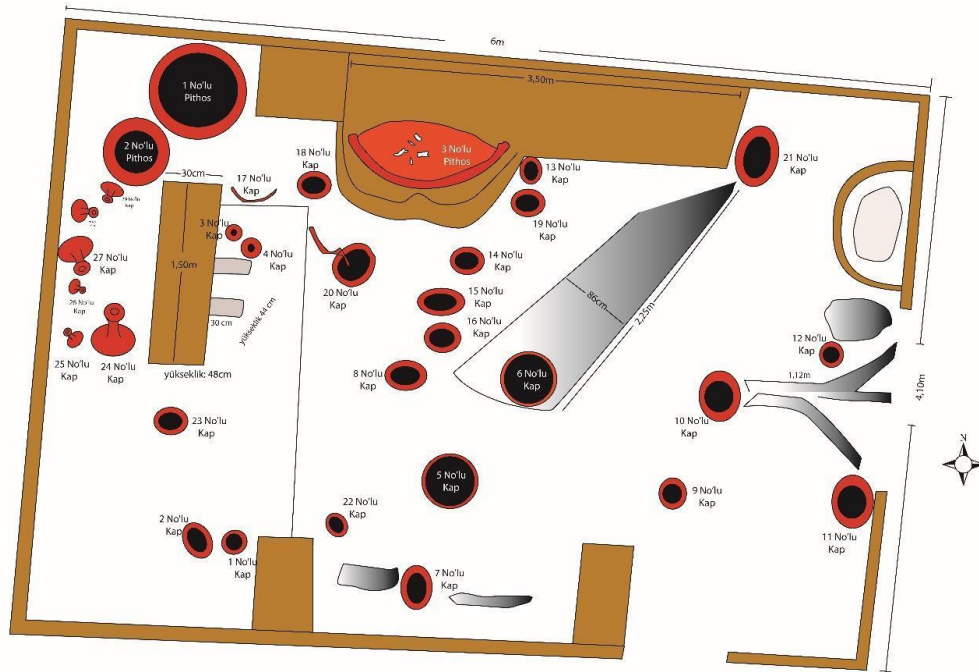


Fig. 44: Room 7 Finds Assemblage (*Beycesultan Excavation Archive*)

Nine crescent-shaped loom weights were found collectively at the in front of the pithos found in the northwest corner of the room. It may be shown that there is probably a relationship between the crescent-shaped loom weights and pithoi, because not only Room 7, a great number of crescent-shaped loom weights were found near by pithoi in the other rooms. In addition, 3 pithoi, small-sized storage jars (2), open vessels (5), closed vessels (7), goblet and fruits stands (18), bowls (5), plates (2), trefoil jugs (3), spouted pitcher (1), mug (1) and miniature vase (1) were identified in room. Small finds including

crescent-shaped loom weights (15), spindle whorls (3), flint blades (4), beads (20), grinding stones (2), burnishing stone (1), sickle (1), pin-needles (3) and knuckle bone (1) were also found (Fig. 45).

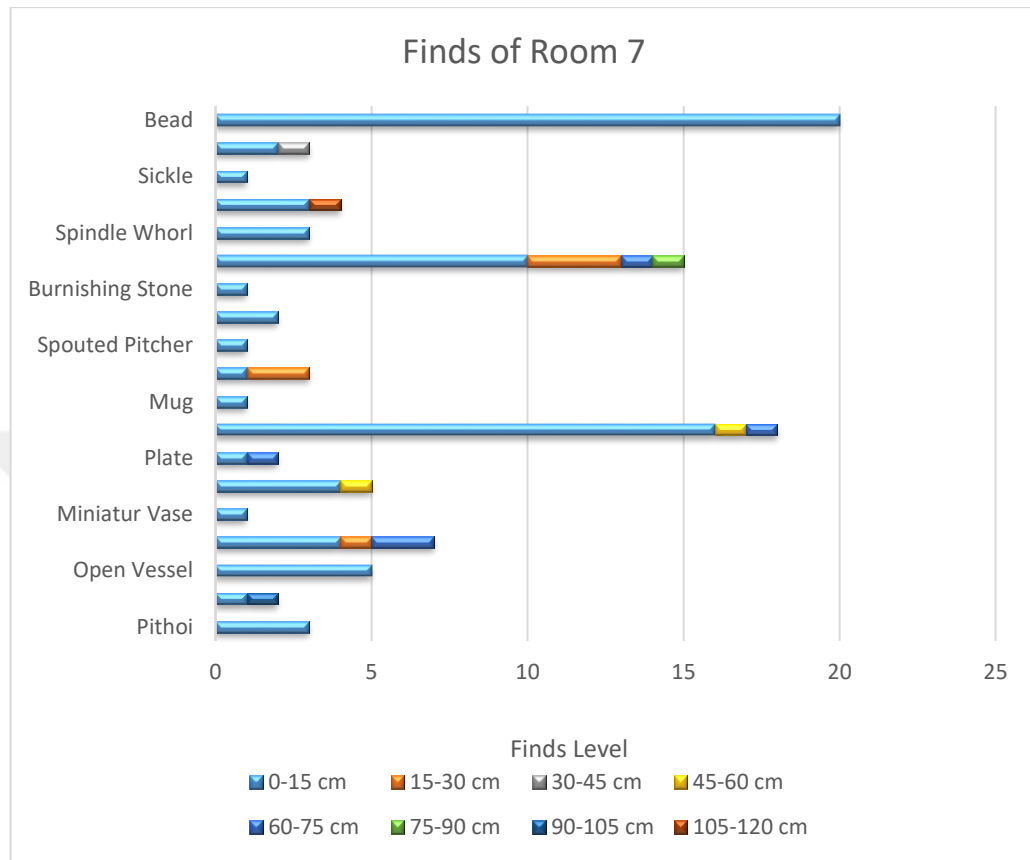


Fig.45: Finds of Room 7 (Illustrated by M.Çarkı)

VI.3.1.3.2.1. Pottery

Pottery samples were found scattered all over the area, especially the hearth and its surroundings, in Room 7. Looking at the pottery uncovered; outward-pulled and thickened rimmed open vessels (11%) and closed vessels (15%), as well as outward-pulled or thickened rimmed fruit plates and outward-facing and outward-pulled rimmed goblets constitute the largest group of 38% of the total pottery assemblage. At the same time, outward-thickened rim bowls (10%) and outward-rimmed rim plates (4%) have an important place in the ceramic group in the room. In addition, outward-thickened rimmed spherical miniature vase (2%) and outward-rimmed mug (2%) were found. Spouted pitchers (2%) and trefoil jugs (6%) and pithos utilized for storage (6%) are other finds (Fig.46). Especially the presence of a whole plate inside a pithos suggests that it may be a measure of consumption of stored grain in pithos.

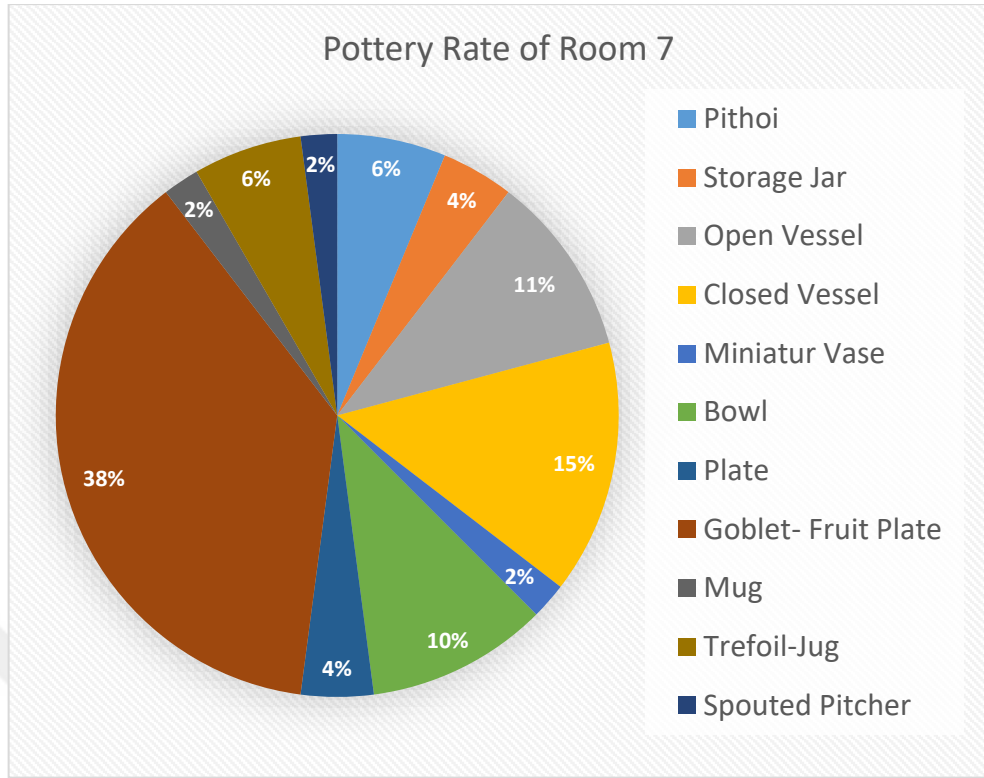


Fig.46: Pottery Rate of Room 7 (*Illustrated by M.Çarkı*)

Considering the functions of the pottery uncovered in Room 7, it is clearly revealed that 46% is for service/drinking purposes, 29% is for daily use and 25% is for storage purposes (Fig.47). From the archaeological all finds, it is possible to state that, considering the ratio of the usage characteristics of the pottery in the Room 7, which has an important function in terms of the House 1, it is a place where the daily works are conducted in line with the needs.

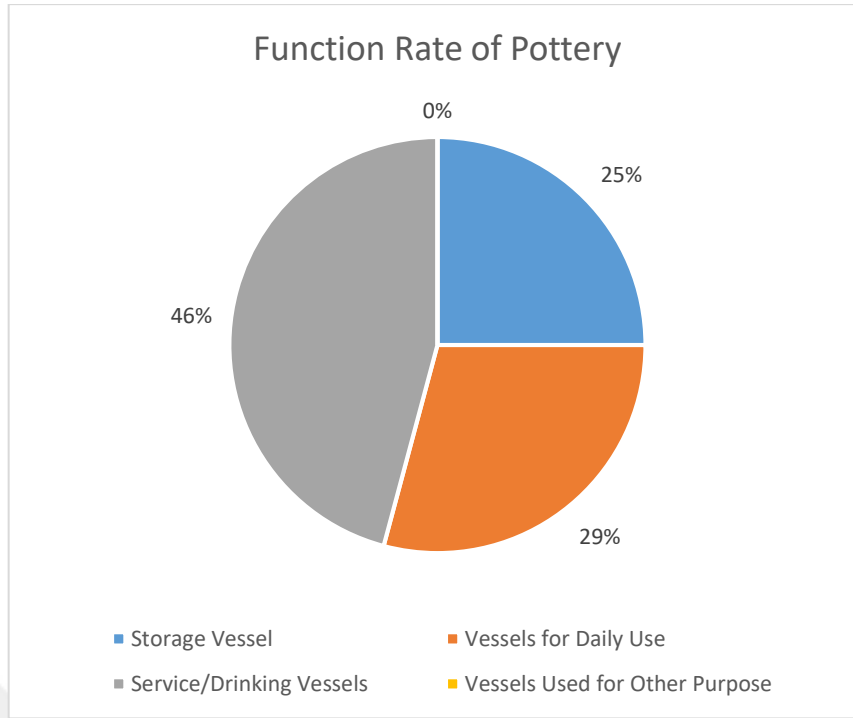


Fig. 47: Function Rate of Pottery (Illustrated by M.Çarkı)

VI.3.1.3.2.2. Small Finds

The number and variety of small finds uncovered in Room 7 are less than that of pottery. In the area called the grinding area in the north-eastern part of the room and in the silo in front of the north wall of the room, grinding stones (4%) were found. In addition to the grinding stones, bronze pin-needles (6%) and sickle (2%) were recovered. It has been observed that the sickle, which is similar in size to modern sickles, is heavily corroded. On the other hand, crescent-shaped loom weights (30%) were found, especially with the pithos in the north-western part of the room. Finally, a necklace with beads made of seashells was found in front of the hearth. The necklaces consisting of many beads constitute the largest group with the ratio of beads (40%). Spindle whorls (6%), flint blades (8%) and burnishing stone (2%) are important finds for the function of the room (Fig.48).

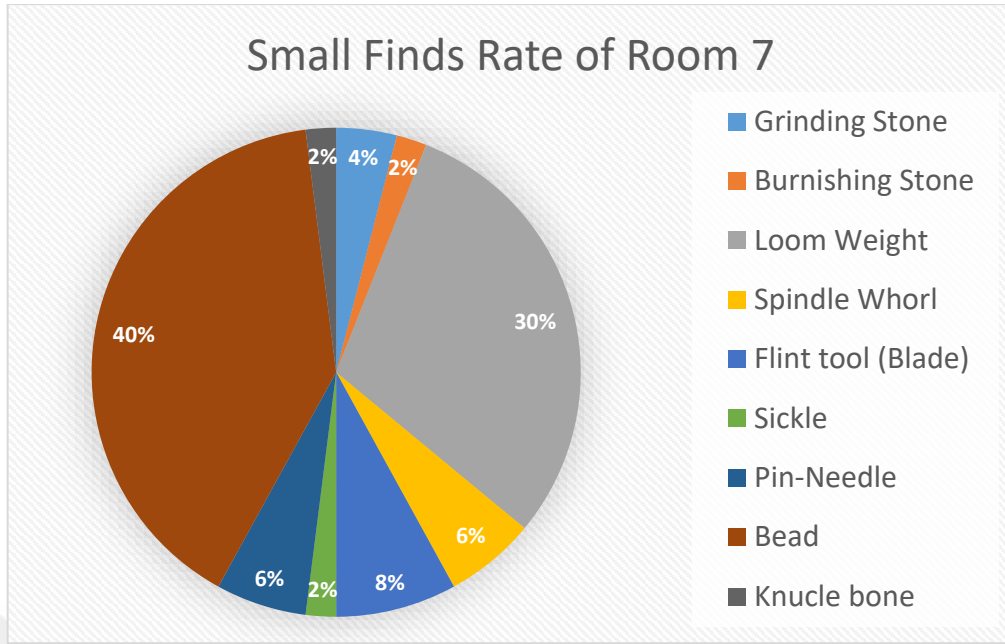


Fig.48: Small Finds Rate of Room 7 (Illustrated by M.Çarkı)

VI.3.1.3.3. Evaluation

Room 7 in the centre of the House 1 is thought to be an area where daily work was probably conducted based both on its size and the artifact finds. The fact that there is a grinding area and the hearth structure and also a large amount of pottery suitable for daily use can be shown as important evidence of using this place as a workshop. Another important point is that the dimensions of the room are larger than the other rooms of the house, as well as the fact that it was built in connection with Rooms 14 and 8 and that the room was quite likely to utilize for the above- mentioned purpose. In addition, the fact that small container forms (closed vessels, jugs, plates, fruits stands...) for presentation and consumption in the room are concentrated suggests that this room may be an area where collection and consumption are made. At the same time, the presence of cooking pots right next to the hearth structure is important, showing that daily living needs such as cooking took place there. The presence of crescent-shaped loom weights, spindle whorls, cutting tools (blades), pin-needles and grinding stones, burnishing stone provide important clues that the place was utilized as an atelier.

In addition to a silo built in front of the north wall of the room, the presence of pithos located in the northwest corner of the room and the detection of grain remains in it indicate that this room was utilized partly for storage purposes.

VI.3.1.4. Room 8

VI.3.1.4.1 Architectural Features

Room 8 is located adjacent to the south of Room 7 and is reached by the gate passage on the south wall of Room 7. It is 5.50 x 2.5 meters in size and has a rectangular form in the north-south direction. It was built using mudbrick to the dimensions of 50x32 and 34x30 cm.

In the eastern and western parts of the room, the walls were built with double rows of mudbrick. When looking at the areas east and west of Room 8, were destroyed by fire in Layer 5b. Especially in the studies conducted in the place located in the east of the Room 8 in 2019, important data about the Layer 5b houses were obtained. It was determined that the mudbrick walls of these new rooms unite with the wall forming Room 8. (Fig. 49).

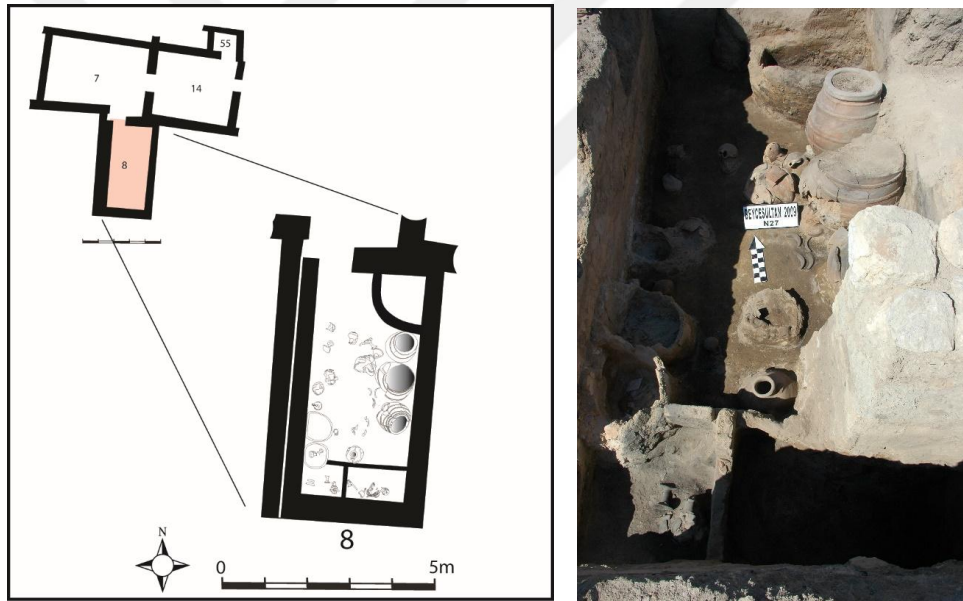


Fig. 49: Room 8 Architectural Drawing and View from the South (*Beycesultan Excavation Archive- Illustrated by M.Çarkı*)

Five silos of different sizes have been identified in Room 8 (Abay, 2014, 178). Along the walls of the room, silos made of clay and plastered adjacent to the walls form important architectural parts of this room (Abay, 2014, 178). One of the silos called Feature 57, built adjacent to the walls and corners of the room, was built on the northeast wall of the room, and the other of the two, called Feature 52, were built adjacent to each other along the south wall of the room. In the southwestern part of the room, two relatively small silos are built adjacent to the western wall, called Features 55 and 56. The silo

(Feature 57), built in the northeast corner of the room, was formed to cover the entire corner in an oval shape. This silo, measuring 1.03 x 1.40 m, is approximately 75 cm high from the floor and abundantly burnt grain was found inside. At the same time, processed bone fragments were identified. These pieces with concentric circles belong to an object that is not yet understood. In addition, ceramic and animal bone fragments were found inside the silo (Feature 57) (Fig. 50).

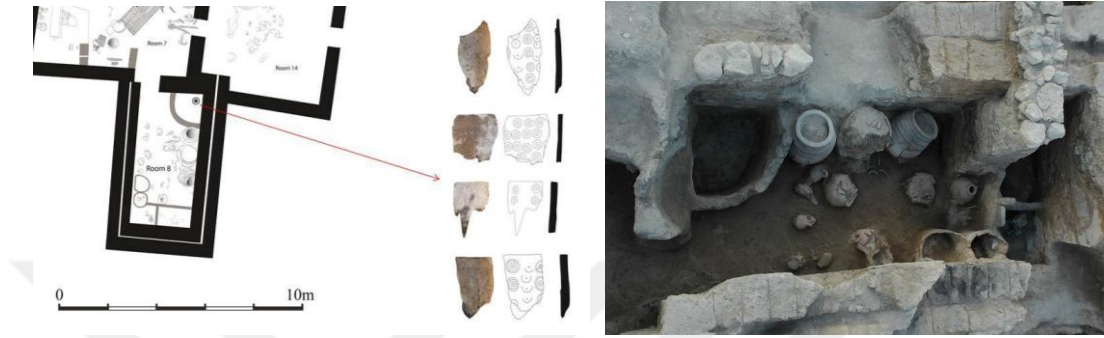


Fig. 50: The Decorated Bone Object in Silo (Feature 57) (*Beycesultan Excavation Archive-Illustrated by M.Çarkı*)

The larger of the silos built adjacent along the south wall of the room is located in the eastern section and the other in the western section (Feature 52). The silo, located in the eastern section, measures 1.32 x 0.90 m and has a height of about 65 cm above the ground. In this rectangular silo, a large amount of grain was detected. Skeletal remains belonging to a single individual were found inside this silo with a wall about 15 cm thick (Abay- Dedeoğlu, 2012b, 314; Abay, 2014, 178) (Fig.51).



Fig.51: Female Skeleton Drawing and Photo (*Beycesultan Excavation Archive*)

It was observed that the skeleton in the Hocker position has an east-west extension (Boz, 2016, 78). The female skeleton was significantly burned due to the big fire that destroyed the house, as in the skeleton detected in a pithos in the Room 7. It is believed that he died in the same way as the male individual identified in Room 7. As mentioned

above, they are thought to have hidden to try to escape the conflagration. Located in the western section, the silo is 85 x 90 cm in size and is about 65 cm above the ground. In addition to burnt grain samples, broken fruit plates pieces were found. Finally, silos (Features 55 and 56) located in the southwestern part of the room are oval and made of a relatively smaller size. One of the silos with a thin wall (Feature 55) is about 55 x 50 cm in diameter and 33 cm high, while the other (Feature 56) measures 60 x 55 cm and is about 50 cm above the ground. From the silos, Feature 55, a broken jug and fruit plates were found.

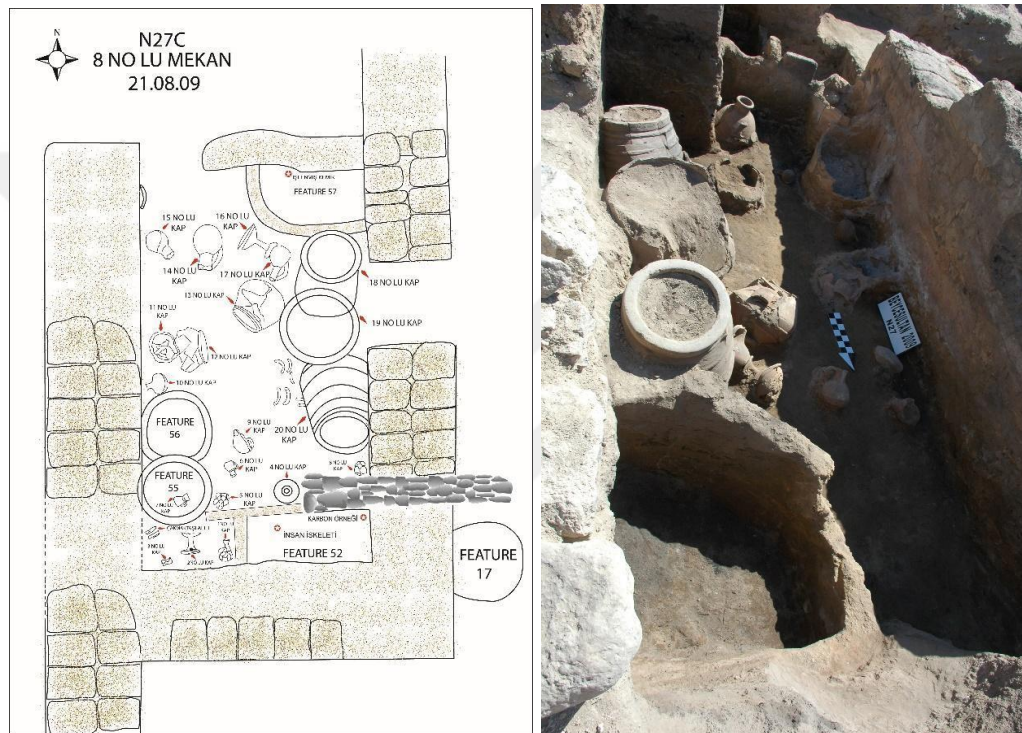


Fig. 52: Room 8 Sketch Drawing and View from North (*Beycesultan Excavation Archive*)

In addition to the silos in the room, pithoi leaning against the walls were identified (Abay, 2014, 178) (Fig.52). Silos and pithoi located along the eastern wall of the room provide important clues to the function of the room. Many burnt grain samples were found in the row of pithoi. In addition, pottery and crescent shaped loom weights were found around the pithoi (Fig. 53).



Fig.53: Room 8 Pithos and Grain (*Beycesultan Excavation Archive*)

VI.3.1.4.2. Finds Assemblage

In addition to the silos and pithos, a large number of sherds and small finds were found inside Room 8 (Table 5). Some samples were found scattered in the centre of the room, except for the potteries generally located on the edges of the walls of the room. Pottery probably caused by destruction during big fire should be scattered in the centre of the room. On the other hand, since there is no place at the in front of the walls due to the silos and pithoi located in a narrow room with a width of 2.50 m, it is also possible that the potteries that were utilized were put central of the room. Some pottery in the room were found in silos, possibly associated with the use of stored grain, as for example, in Room 7.

In addition to the pithoi (3), the open vessels (5), closed vessels (7), plates (2), goblet- fruit plates 4), spouted pitcher (1) and trefoil jugs (3), flasks (2), bowl (1) and juglet (1) were found. Also, crescent-shaped loom weights (46), spindle whorls (6), flint blades (2), beads (22), knuckle bones (1), flint core (1) and gold ring (1) are other finds (Fig.54).

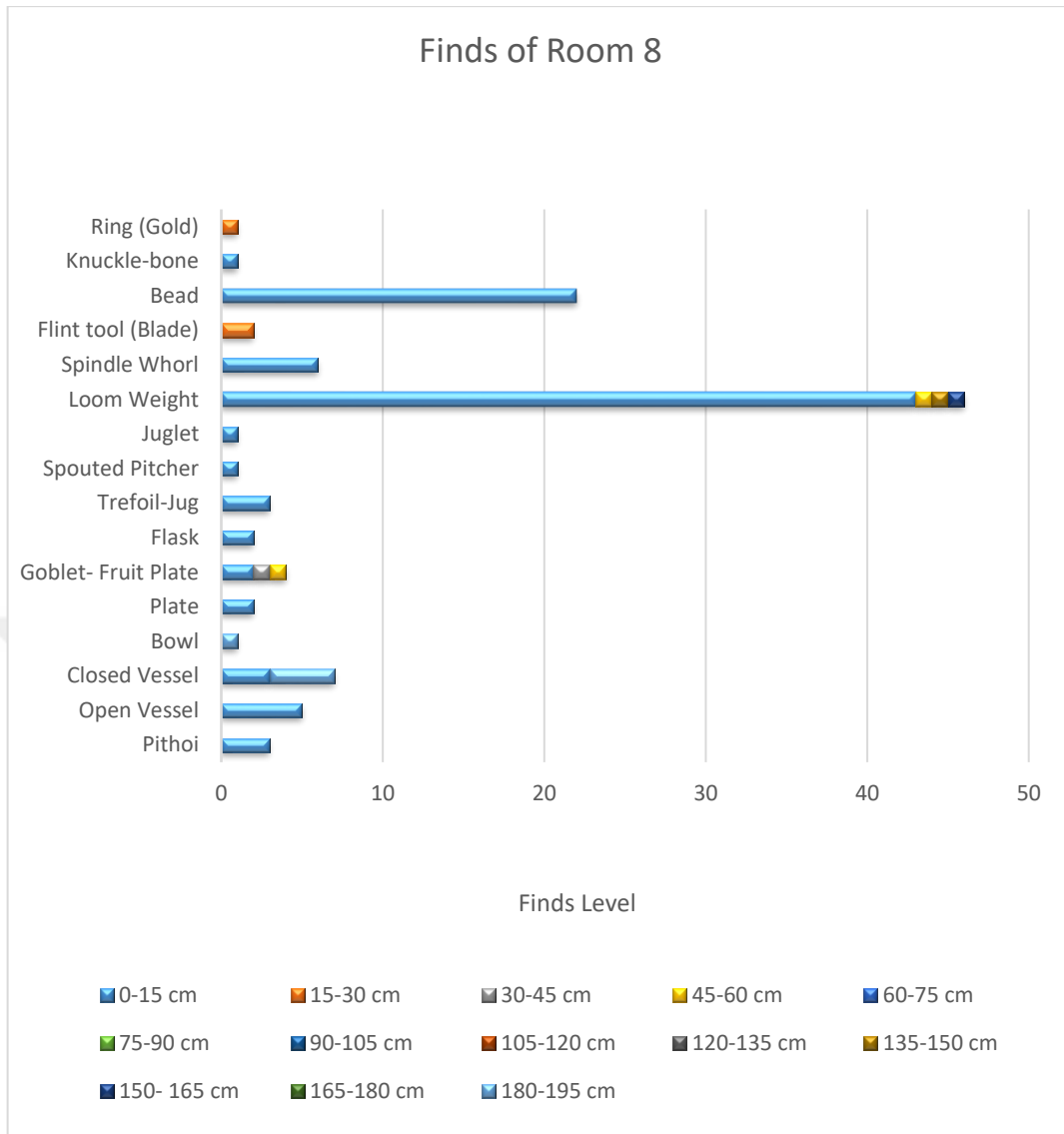


Fig.54: Finds of Room 8 (Illustrated by M.Çarkı)

VI.3.1.4.2.1. Pottery

The finds in Room 8 were generally found at the floor level (range 0-30 cm). In addition, it is possible to state that the kind of potteries was found close to each other in number (Fig.55).

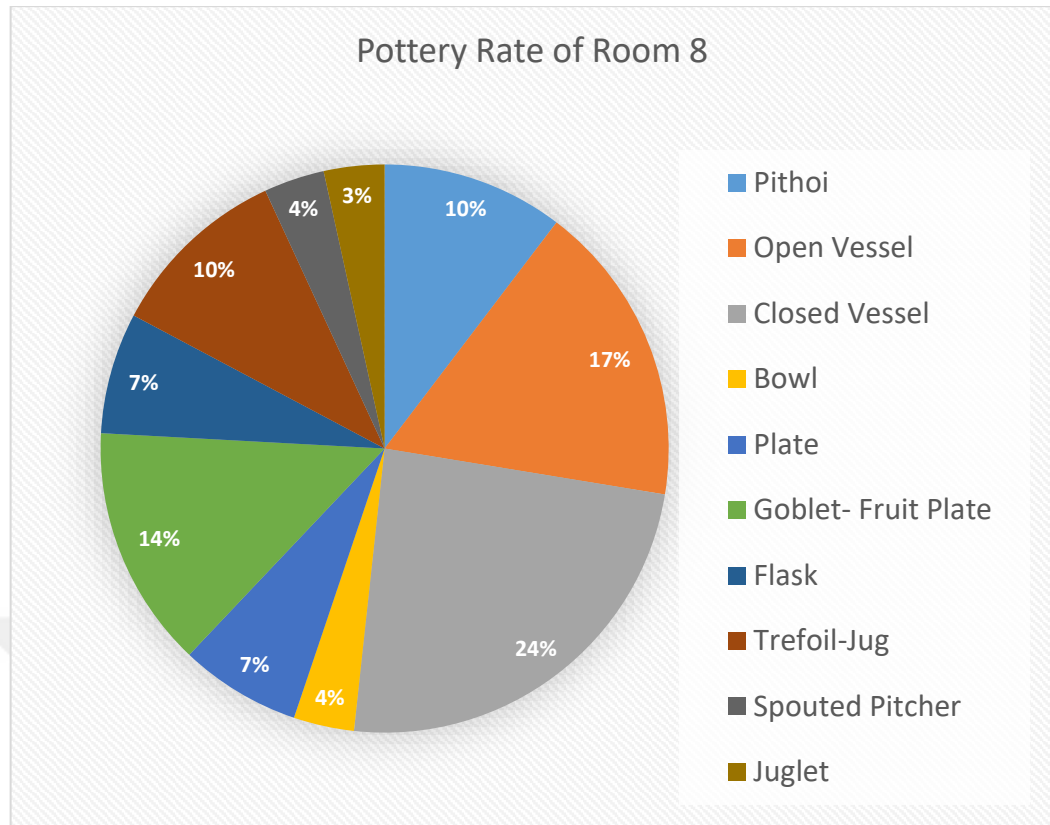


Fig. 55: Pottery Rate of Room 8 (*Illustrated by M.Çarkı*)

When looking at the pithoi first; they have a thickened-out rim spherical body and generally there are five or more embossed band decorations on the body. In addition, two of them have print decorations consisting of concentric circles on the rim.

Apart from the pithos, simple and everted rimmed bowls, outward-thickened rimmed closed vessels, outward and outward-thickened fruits stands, inwardly thickened rimmed plates, spouted pitcher, trefoil jugs and flasks were found in the room. When looking at the proportions of the ceramics detected in the room, 24% of the closed vessels make up the largest group. Closed vessels are followed by open vessels with 17% and goblet and fruit plates with 14%. Plates and juglet make up the smallest group 4%.

Considering the functions of the pottery found in Room 8, it is seen that 41% of the samples for daily use constitute the largest group. On the other hand, there are 35% of the samples were utilized for storage purposes, and 24% of the samples were utilized for service/drinking purposes (Fig.56). It is possible to state that the pottery uncovered here was intended mainly for daily needs. Considering the architectural elements and finds in the room, it is considered to be an area where the potteries utilized for daily needs were preserved as well as an area for grain storage.

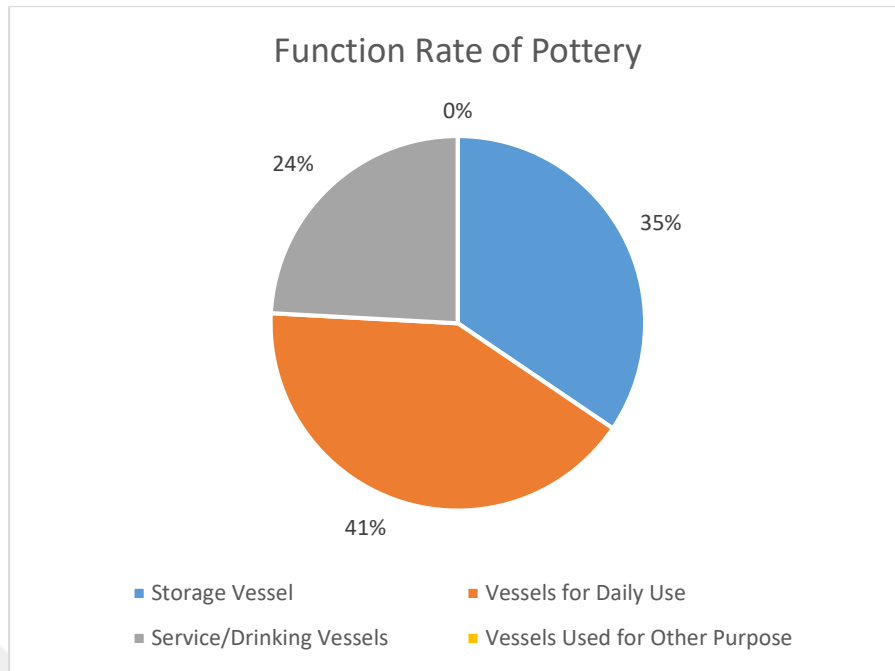


Fig.56: Function Rate of Pottery (Illustrated by M.Çarkı)

VI.3.1.4.2.2. Small Finds

Many small in situ small finds were found both inside the silos and on the floor. Among the small finds, crescent-shaped weights constitute the largest group with a rate of 59%. In addition to the crescent-shaped loom weights found among the pithoi leaning against the eastern wall, double-cone spindle whorls, flint blades, beads thought to belong to a necklace made of seashells, a knuckle bone and a spiral-shaped gold ring constitute another finds group (Fig.57).

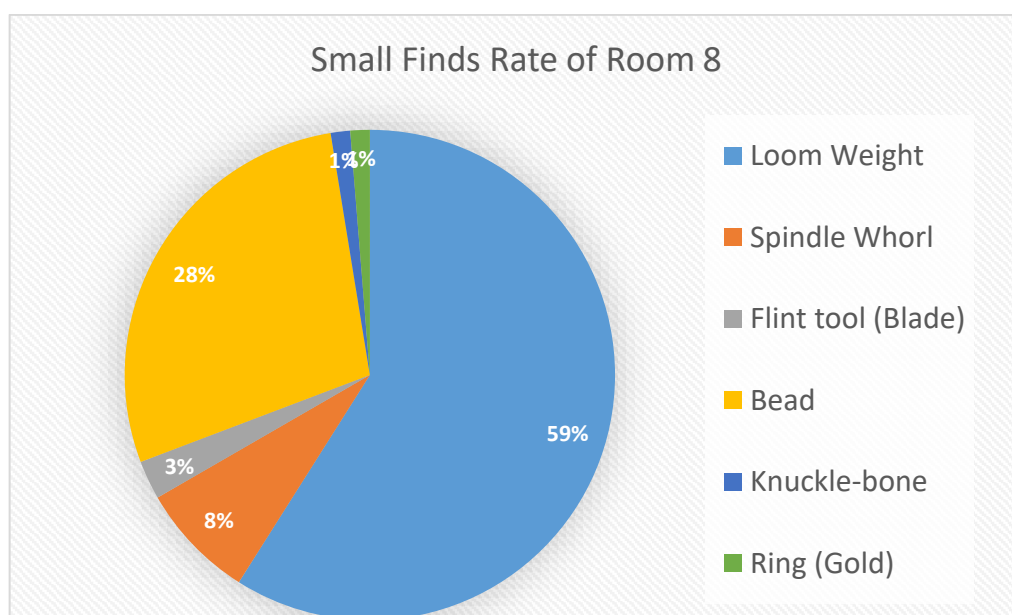


Fig. 57: Small Finds Rate of Room 8 (*Illustrated by M.Çarkı*)

VI.3.1.4.3. Evaluation

It is clearly revealed that Room 8 has an important function in terms of both architectural and in situ finds. It is possible to state that it has a narrow and long (5.50 x 2.5 m.) plan in terms of architecture and it contains 3 pithoi in addition to the architectural elements such as 5 silos of different sizes, and it limits the movement area of the individuals to a large extent. In addition to the aforementioned silos and pithos, the presence of a large number of pottery and small finds indicates that the room was utilized as an area where both cereals and potteries were stacked (Abay, 2014, 178). In this respect, it is important to obtain a large amount of grain in the silos and pithoi detected in the room. In addition, the fact that there is no connection other than Room 7 suggests that this room may have been utilized by a limited number of people. Consequently, in the light of the above data, it is clearly revealed that Room 8 is utilized as a cellar and storage area.

VI.3. 2. House-2

House 2 has a complex structure similar identical to house 1. This house is made up of Rooms 63, 19, 28, 2, 62 and 30 (Fig.58). Plan of this house, which has a highly complex structure couldn't be completely revealed. As far as it is revealed, the entrance of this house opens into the east. Considering the current plan, the front room of this house is Room 63. This room shows resemblance to Room 14 of the House 1. Although there is no exact similar example of the domestic architecture discovered in Layer II unearthed in the early excavations, it is possible to state that it is similar in terms of finds repertoire (Lloyd, 1972; Mellaart-Murray, 1995).

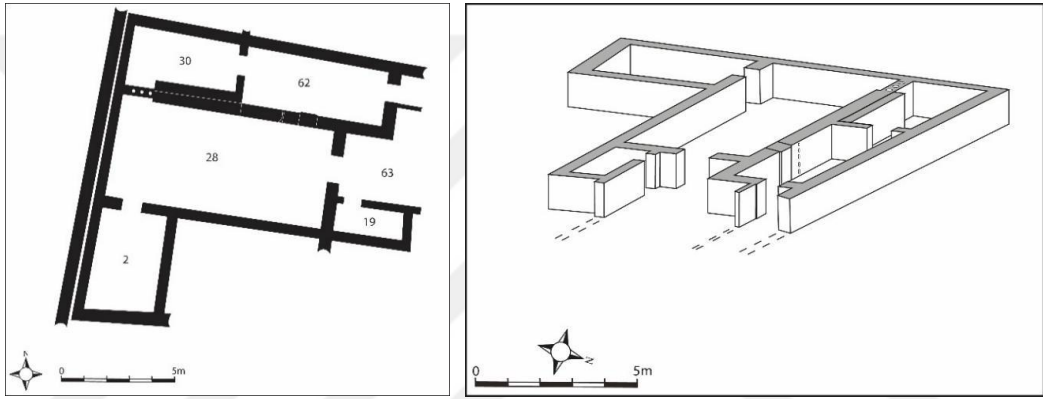


Fig.58: Plan of House 2 (*Illustrated by M.Çarkı*)

In house architecture, stone foundation and mudbrick walls appear to be important. It is clearly revealed that the mudbrick blocks used in the construction of the house has the same measurement (50x30 and 34x30 cm) as the ones used in the architecture of the House 1.

When looked at the structure of the building some of the walls of the rooms, which were generally built with a single row of mudbrick walls, are built with double walls. In addition to the wall separating the Rooms 28 and 30 from each other, it was observed that the wall forming the western border of House 2 was built with double wall. It is possible to consider that that the double walls of House 2, mostly belong to Layer 5b similarly to those in House 1. However, it has been observed that some walls of this house, which became unusable with the great fire, were fixed later (5a) and reused with a different plan (Abay-Dedeoğlu, 2012a, 218-219). It has been observed that the western wall of the House 2, which belongs to the Layer 5a and is referred as the temple complex, which stands in the western part of the house, was repaired and used as the second wall. On the other hand, the usage of common walls with the house 1 by building a single row of

mudbrick gives the impression that both houses were built at the same time (Fig. 26). The fact that these houses align with each other in terms of their plans can be shown as evidence of the existence of a planned settlement model. In this respect, architectural structures (Lloyd, 1972, 9-10, Fig 3) unearthed in a large area during the early period excavations by Lloyd and Mellaart also indicate the existence of a planned settlement model.

Houses in Layer 5b generally consist of a room with a hearth where daily work is carried out and storages connected to this area (Abay-Dedeoğlu, 2012a, 219). In the light of the data, it has been observed that there is a place where works are carried out in the House 2 and a storage connected to this place. In addition to the fact that the walls and floors of the house were plastered with clay many times, it was observed that especially walls were plastered more than once. Similar to the house 1, this house was destroyed by the fire (Abay-Dedeoğlu, 2012a, 219) and it is possible to see the traces of this fire in all finds (Table 6) in the house's rooms of the house. In the Room 28 of this house, where daily work was carried out, many silos are situated near the walls, and they contain large quantities of grain. Apart from the silos, a few pottery and small finds were discovered along with the pithoi used for storage. On the other hand, human skeletons were discovered in Room 2, where pottery and small finds were unearthed, as well as the pithoi in which grains were stored. All these finds unearthed in rooms were discovered in-situ.

VI.3.2.1. Room 63

VI.3.2.1.1 Architectural Features

Room 63 is located on the entrance of House 2 and through Room 63, Rooms 28, 19 and 62 can be accessed. Room 63, which can be seen as a front room is located on the north adjacent side of Room 55, which belongs to house 1 (Fig.59).

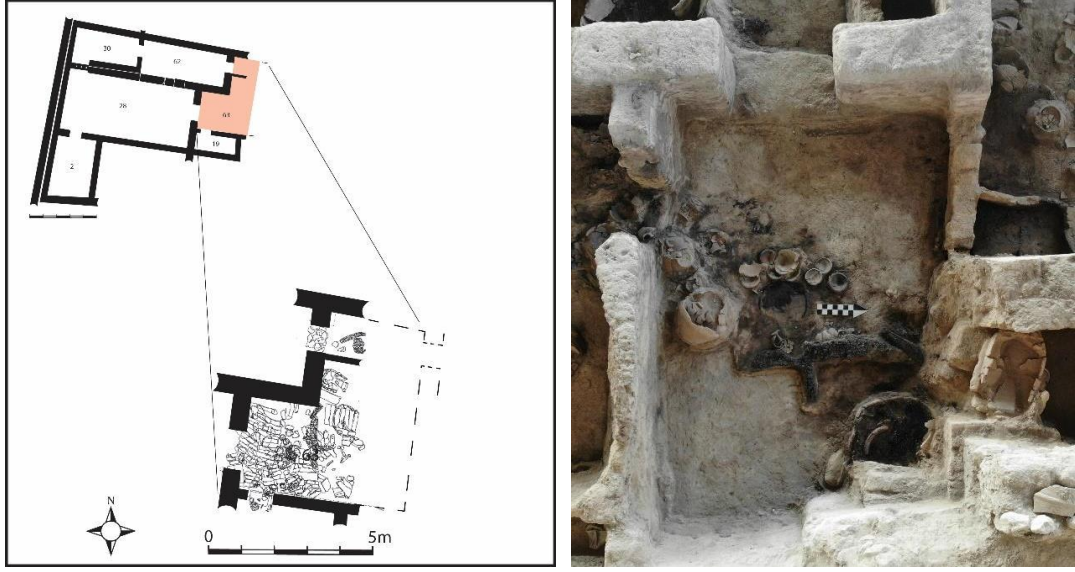


Fig.59: Plan and Photo from Room 63 (*Beycesultan Excavation Archive- Illustrated by M.Çarkı*)

Since the eastern part of this place, which was built connected with Rooms 28, 19 and 62, remained under the section, the place could not be fully revealed. As far as it was excavated this room measures 2.55 x 4m.

The walls of the place have thickness of 50 cm and in the construction of the wall mudbrick blocks measuring 50 x 30 cm on average were used. A lot of mudbrick debris was detected at a level of about 60 cm from the ground. Considering the debris belonging to the walls of the room, it is revealed that walls fell down into the room in blocks and sealed the entrance (Fig.60). It was observed that fallen blocks of the mudbrick walls burned and changed their colour to a reddish-brown color.

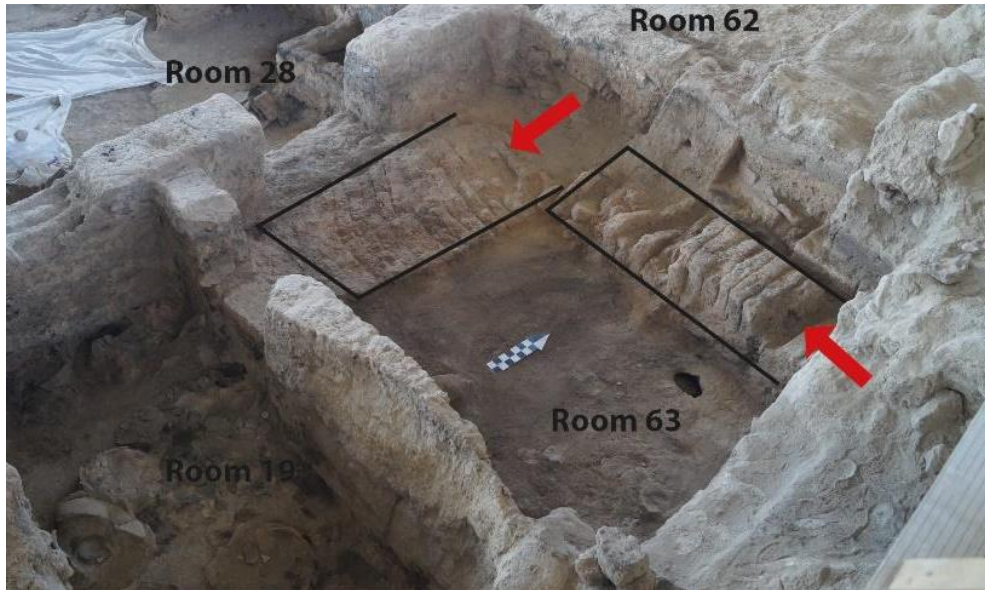
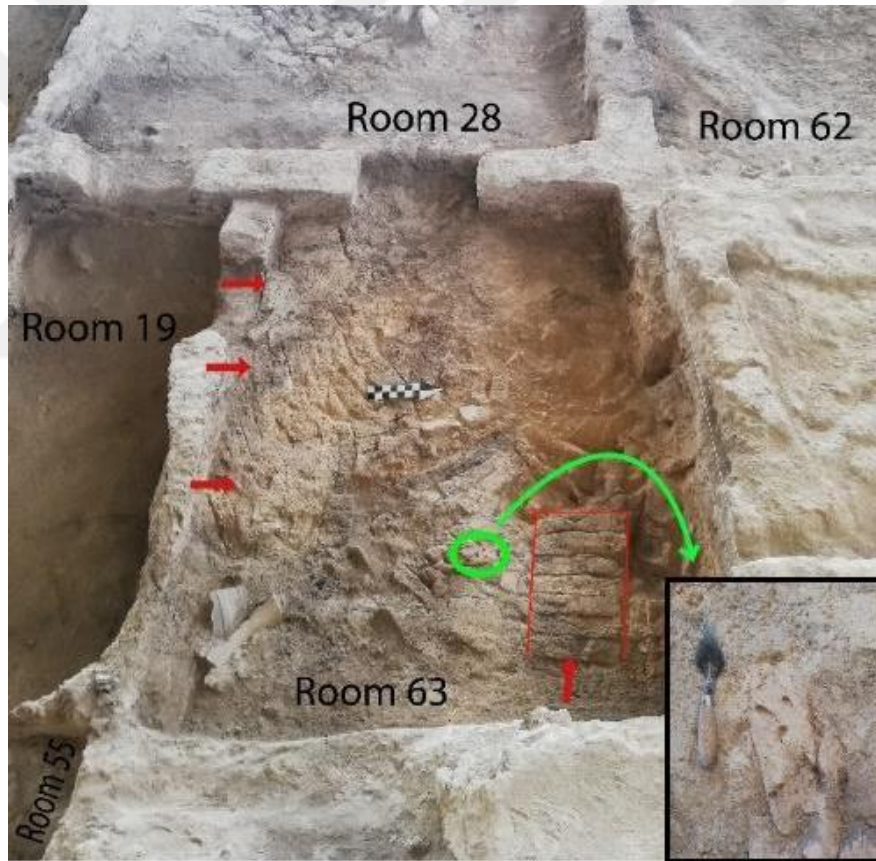


Fig.60: Mudbrick of Room 63 (*Beycesultan Excavation Archive- Illustrated by M.Çarkı*)

It was understood that the mudbrick blocks in the east of the room fell down from the eastern wall, and the blocks in the south fell down from the wall used in common with room 19 towards to north. Moreover, it was discovered that the wall in the southeast of Room 62 fell down into Room 63. The absence of any remains of the roof on the mudbrick blocks gives the impression that the roof collapsed first fell in to room as a result of the fire, and after a while the walls fell into the room in blocks. Three apparent fingerprints were discovered on the side of a block of mudbrick debris fallen from the eastern wall of the room (Fig.61). As a result of this observation, it can be hypothesized that mudbricks were left to dry after they were made were turned upside down or moved before they were completely dry⁴⁰.



⁴⁰ Looking at the clearly visible fingerprints on the mudbrick, it is revealed that shape of the hands appears to be slender, which makes it possible that these prints belong to a woman or a young adult. It will be possible to come to a definite conclusion when a fingerprint analysis is made in the future. Considering the situation, it is possible to think that women and young adults were involved in mudbrick production.

Fig. 61: Mudbricks Detail of Room 63 (*Beycesultan Excavation Archive- Illustrated by M.Çarkı*)

It was observed that there was a 20 cm thick wall in the east-west direction in the south part of the eastern entrance of Room 62 and thus Room 63 was partially separated. It is thought that the wall, which was built thinner when compared to the other walls of the room, was used to create a partition in the room. Since this mentioned wall remains in the eastward section, it is not completely understood for what purpose it was built. A terracotta basin was discovered in the southern part of the thin wall. The sides of the basin are oval, with preserved height of 6 cm, a length of 70 cm and a width of 45 cm (Fig. 62).



Fig.62: Basin from Room 63 (*Beycesultan Excavation Archive*)

On the south side of the basin, 1.32 m long burnt wood remains thought to belong to the roof were discovered (Fig.63). Pottery pieces, bones and spindle whorls were discovered under these wooden remains, which seem to have fallen entirely on the ground. In this area, intertwined plates were discovered along with the wooden remains. Considering this, it is thought that plates were stacked on a potential shelf and fell into this area during the destruction.



Fig. 63: Detail of Room 63 (*Beycesultan Excavation Archive*)

In addition to these finds, a 50 cm wide pithos with a lot of wheat remains was discovered in the southeast of the room. It was understood that the largely destroyed pithos was under mudbrick ruins.

VI.3.2.1.2. Finds Assemblage

These finds (Table 7) were mostly discovered in the central part of the room. They were discovered scattered on the floor and seem to have fallen from a space or a shelf where they were stacked. The finds unearthed in the 0 - 45 cm level range are mostly plates and closed vessels. In the room closed vessels (4), bowls (3), plates (14), goblets and fruit plates (2), a mug and a pithos were discovered along with a crescent shaped loom weight and a spindle whorl (Fig. 64).

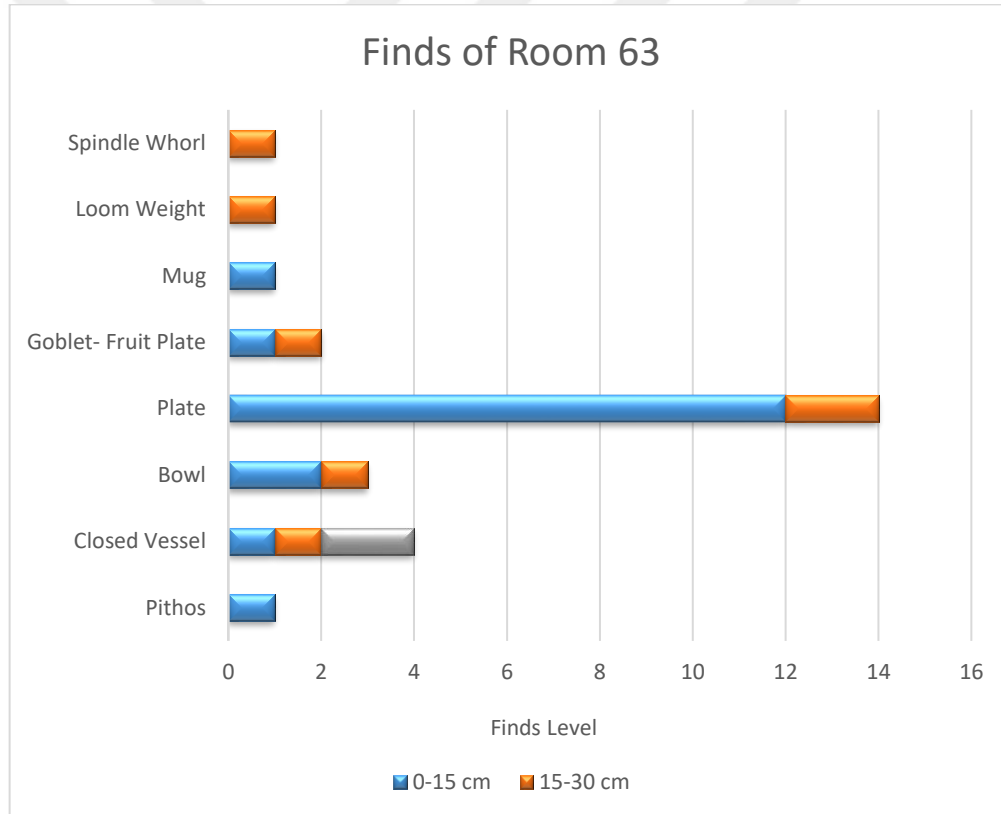


Fig.64: Finds of Room 63 (Illustrated by M.Çarkı)

VI.3.2.1.2.1. Pottery

In general, the pottery recovered in the room was discovered scattered in the middle of the room. When we look at the pottery in question, the largest group is plates with inverted and everted rims (56%), while closed vessels with thickened rims (16%)

constitute the second largest group. In addition, bowls with simple rims (12%), goblets and fruit plates with inverted and everted rims (8%), mugs with everted rims (4%) and thickened-out rimmed pithos (4%) are the other pottery group in the room. (Fig. 65).

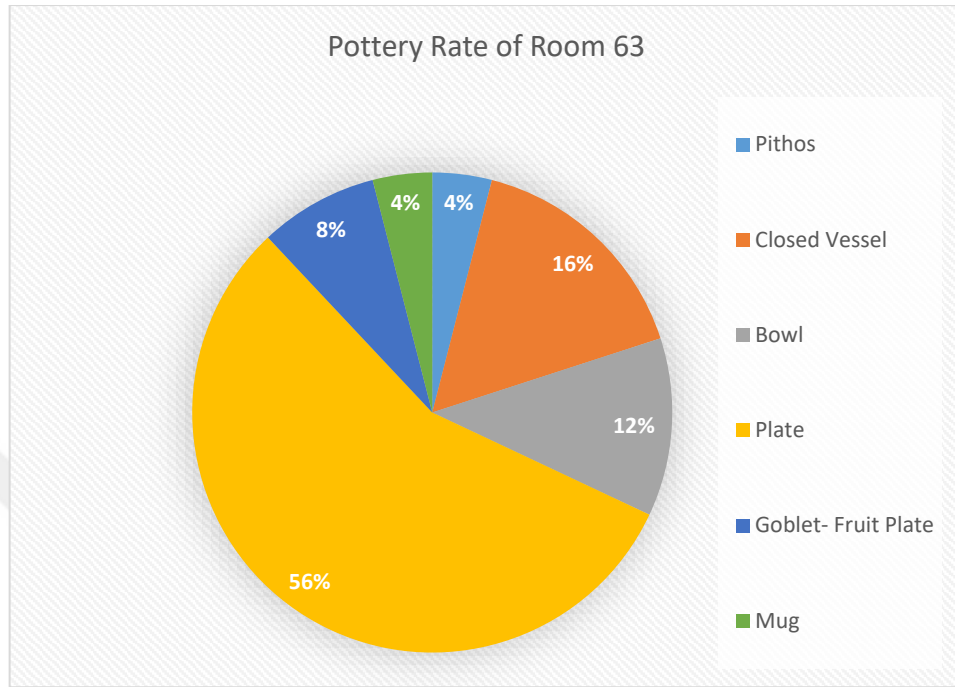


Fig.65: Pottery Rate of Room 63 (Illustrated by M.Çarkı)

Considering the functions of the pottery recovered in Room 63, it is clearly revealed that 3% of them were for daily use. At the same time, it was understood that 17% of the samples were used for service/drinking purposes and 5% were used for storage (Fig.66). Considering the said ratios, it is possible to state that the works related to daily needs are carried out in the room. On the other side, it is possible to consider that the room was used for storage albeit partially from both the pithos and medium-sized closed vessels.

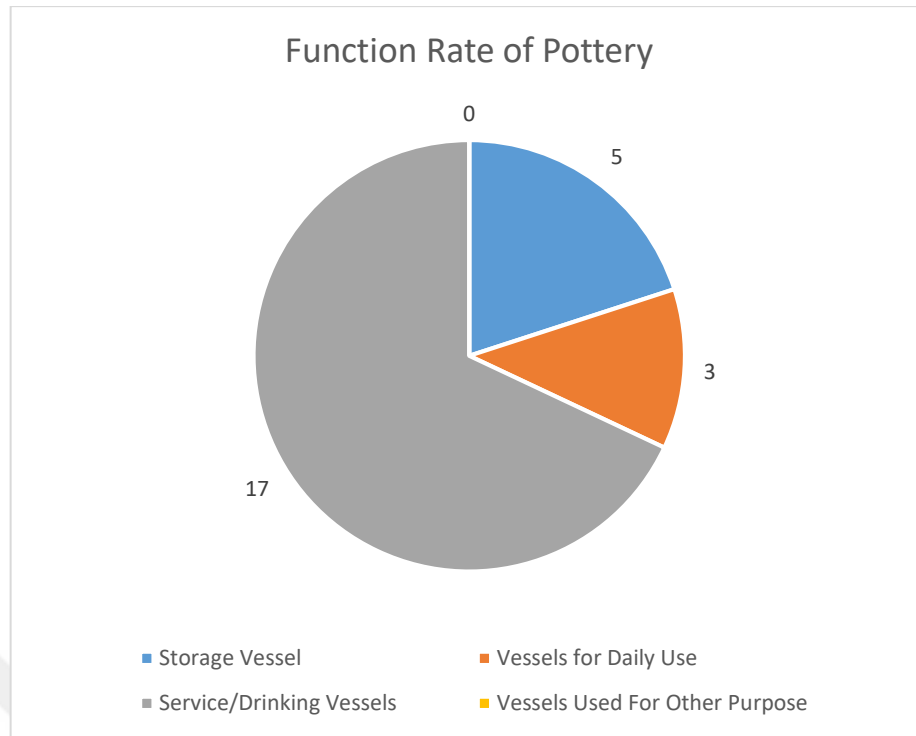


Fig.66: Function Rate of Pottery (Illustrated by M.Çarkı)

VI.3.2.1.2.1. Small Finds

A limited number of small finds, including a spindle whorl and a crescent-shaped loom weight, were discovered in Room 63 (Fig.67). It was understood that small finds were not kept in this room, which is located at the entrance of House 2. Such finds are kept in the main room of houses or in places such as storage rooms.

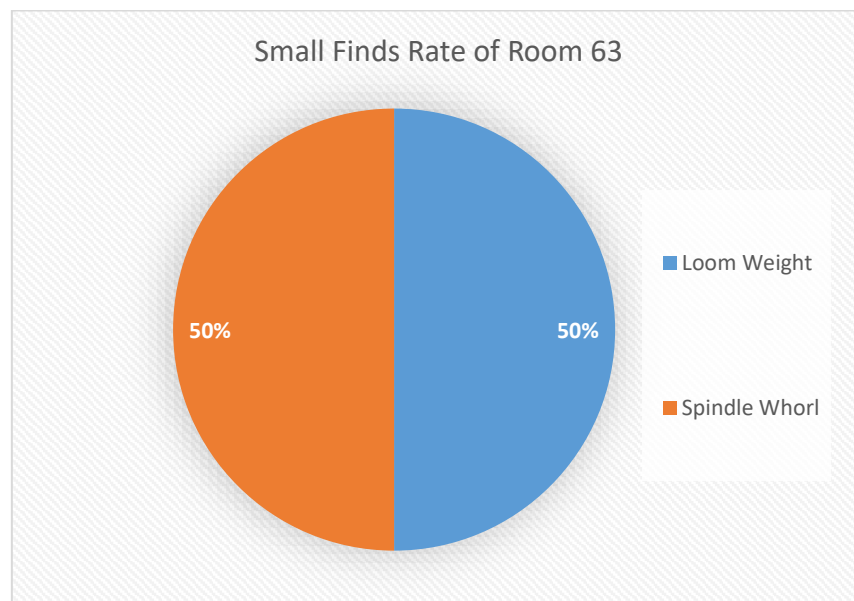


Fig.67: Small Finds Rate of Room 63 (Illustrated by M.Çarkı)

VI.3.2.1.3. Evaluation

It is possible to consider that both with its location and finds, Room 63 had an important function for House 2. It is thought that it is related to the main entrance of the house in terms of accessing the other places of the house from this place. It is possible to state that this place has a similar function to Room 14 of House 1. From the finds uncovered inside the space, it is clearly revealed that the space has an important role in the conduct of daily works to a large extent. At the same time, it is possible to consider that from the pithos and medium-sized closed vessels that it was partially used for storage purposes. In addition, since there is a terracotta basin in this room, it is possible that the room was also used to store food of animal origin similar to Room 55 of House 1.



VI.3.2.2. Room 19

VI.3.2.2.1 Architectural Features

Room 19, located between Rooms 63 and 28 of House 2 and Rooms 14 and 55 of House 1, shares walls with the rooms in question. The eastern part of the said room was largely destroyed by a pit from the Byzantine period (Fig.68).

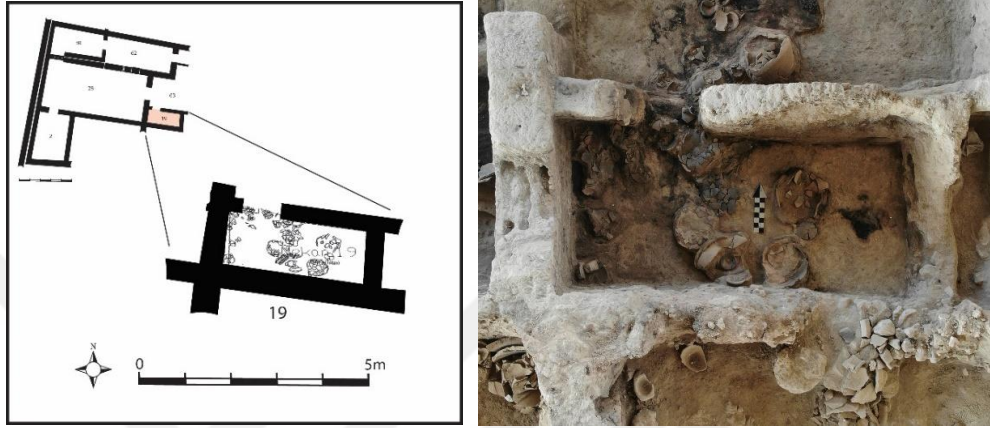


Fig.68: Plan and Photo from Room 19 (*Beycesultan Excavation Archive- Illustrated by M.Çarkı*)

A single row of mudbricks measuring 50x30 cm in dimensions was used in the construction of the space. Particularly, a thin wall (30 cm) separates it from Room 55, which is located on the east side of Room 19. The room has a rectangular form measuring 3.25 x 1.50 m and is connected to Room 63 from the northwest corner with a door (69 cm wide). It was understood that the doorway was narrowed over time. Burnt wood and reeds remains, possibly belonging to the roof, were discovered on the floor of the room. Along with the wooden remains in question, wheat and lentil remains were discovered, especially in the western part of the room. On the other hand, a large amount of pottery was discovered in the room. It is thought that the pottery were meant for daily use, and the room was used for storage. (Fig.69).



Fig. 69: Room 19 (*Beycesultan Excavation Archive*)

In terms of the location and size of the room, it has similar features with room 55 located in house 1. It is possible to state that both Rooms 19 and 55 are similar in terms of the fact that they are connected with the room at the main entrance of the house, as well as with an abundance of pottery for daily use.

VI.3.2.2.2. Finds Assemblage

The finds recovered inside the room were discovered at the level of 0-30 cm but were mostly discovered on the side of western and southern walls. It is thought that the pottery in the centre of the room probably fell into this area from the bottom of the walls. The pottery discovered in and around the doorway attracts attention in this respect. It was observed that the finds (Table 8) were largely destroyed as they were buried under the wooden remains thought to belong to the roof components. The finds discovered in the room mostly consist of medium-sized storage vessels (10). In addition to the closed vessels, bowls (2), sieve (1), plates (3) and crescent shaped loom weights (2) constitute the other finds group (Fig.70)

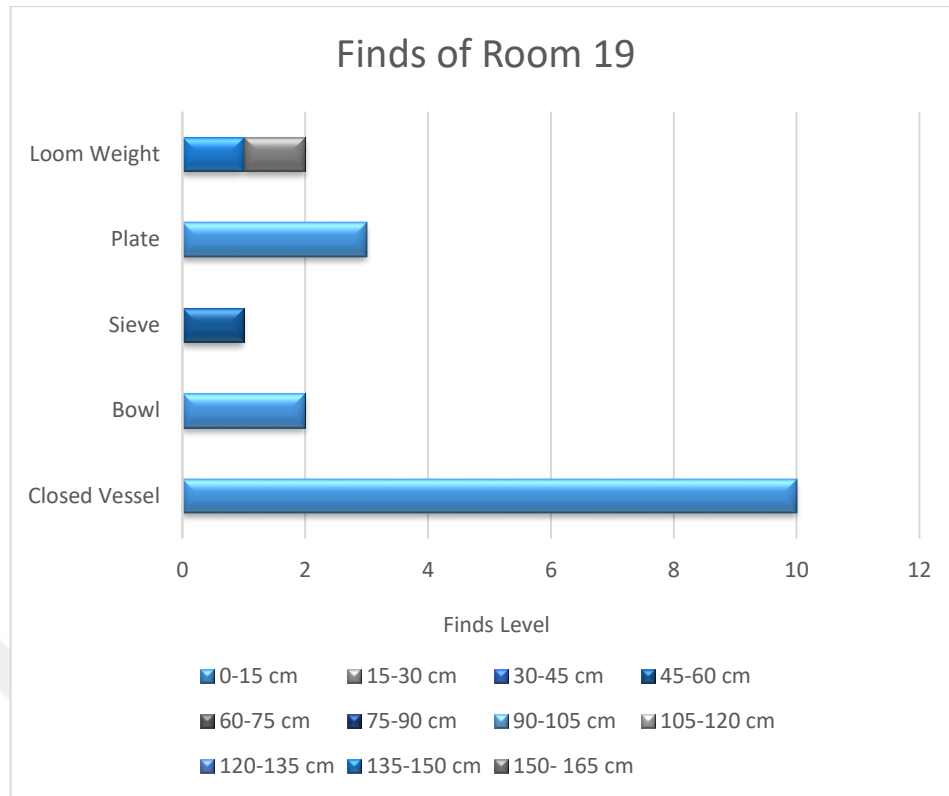


Fig. 70: Finds Graph of Room 19 (Illustrated by M.Çarkı)

VI.3.2.2.2.1. Pottery

When we look at the pottery samples recovered in Room 19, the largest group is the outward thickened rimmed closed vessels (62%). On the other hand, plates with inverted and everted rims (19%) constitute another important ceramic group, while simple rimmed bowls (13%) and simple rimmed sieves (6%) are encountered (Fig.71).

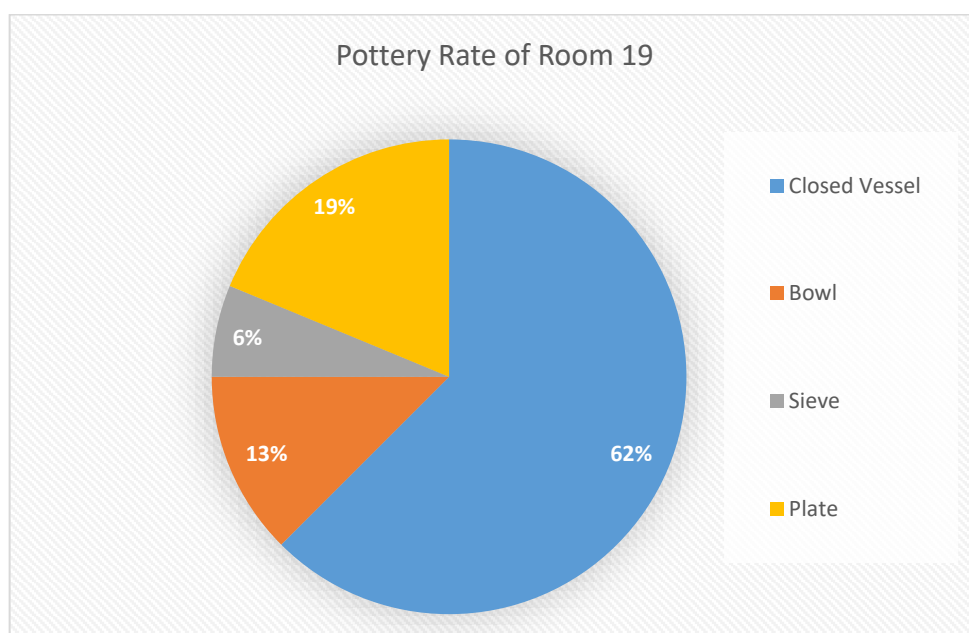


Fig.71: Pottery Rate of Room 19 (Illustrated by M.Çarkı)

When the functions of the pottery discovered in the room are examined, it is understood that they were intended for storage purpose at a rate of 62%. At the same time, there are samples that were used for service and drinking purposes at a rate of 19%. On the other side, there is pottery for daily use at a rate of 5%. Finally, there are 6% of pottery samples that were used for other purposes (Fig.72). Considering these ratios, it is thought that the place was used mostly as a storage area or as an area where finds such as pottery were kept. The presence of wheat and lentil remains in the room, along with medium-sized pots, is another factor that indicates that it was used for storage purposes. Considering the small size of the room and the absence of large storage elements such as pithos, it is possible to state that it functioned as a small warehouse for daily needs. It is possible to state that it has a similar function with the Room 55 in the house 1 in terms of its accessibility and being close to the main entrance.

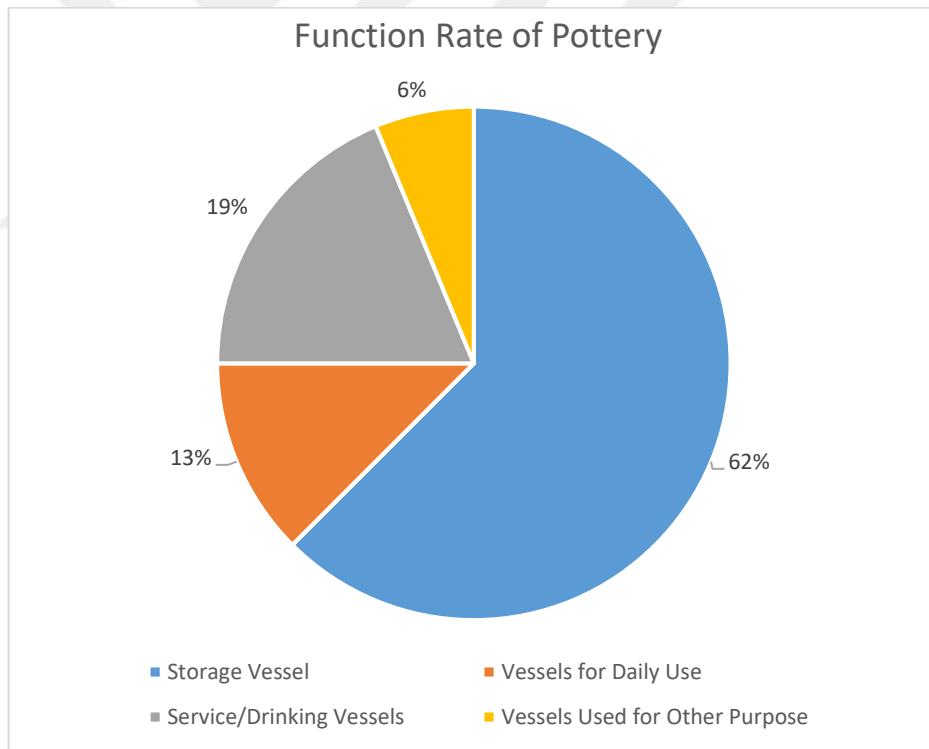


Fig.72: Function Rate of Pottery (Illustrated by M.Çarkı)

VI.3.2.2.2. Small Finds

There are no small finds in Room 19 apart from a crescent-shaped loom weight. No small finds were discovered, possibly because the room was used for storage and for daily needs.

VI.3.2.2.3. Evaluation

From the size of the room and the finds, it is thought that the room was used as an area where items needed for daily use were stored or kept. Especially the direct access from Room 63 and the presence of medium-sized pots, wheat and lentil remains strengthen this opinion (Fig. 26).

VI.3.2.3. Room 28

VI.3.2.3.1 Architectural Features

Room 28, which has a rectangular plan, has a rectangular form with the dimensions of 4.30 x 9 m as it was unearthed. A large number of architectural elements and finds that could define the function of the room were discovered during the works carried out in the western part of the room for the first time in 2011 (Abay-Dedeoglu, 2012, 219). The room has a total of three doorways, one of which is sealed. The main entrance door is located on the eastern wall of the room. The walls of the room were covered with mudbrick measuring 50x30 and 34x30 cm. Although the southern wall was built with a single row of mudbrick, a part of the northern wall and the western wall were built with a double row of the same material. A hearth structure, which is located in the room, is especially important (Abay-Dedeoglu, 2012, 219; Abay, 2014, 179). It is clearly revealed that it was built directly opposite the entrance door, as in the example of the hearth structure in Room 7. (Fig.73).

The main entrance of Room 28, located in the centre of House 2, in the east is 95 cm. And the door opening to Room 2 in the south-west is also 95 cm wide. On the other hand, a transition to Room 30 directly opposite the door opening to Room 2 was discovered in the northwest corner of the room. However, it was understood that the door providing access to Room 30 was closed after a while. In addition, a separate passage was detected with Room 62 located in the north-eastern part of Room 28. It is understood that this passage, which is 1.40 cm, was sealed after a while. These changes in the room show that changes were made in the house due to need. In this respect, it is thought that there

was a partial renovation in the architecture within the Layer 5b and there was a renovation phase. From this point of view, it is possible to state that the architectural elements and finds discovered in house number 2 belong to the period after this renovation.



Fig.73: Plan and Photo from Room 28 (*Beycesultan Excavation Archive- Illustrated by M.Çarkı*)

Although the walls of the room have been preserved up to a height of approximately 1.5 to 2 m, a toppled wall was discovered in the eastern section of the room as a block. This ruin belonging to the south wall of the room provides important data about the structure of the house. It was understood that the plaster on the inner surface of the collapsed wall was darkened by the fire and sealed the room with its finds. The measurements made on the wall in question revealed that the collapsed wall was approximately 4 m long and 50 cm thick. When the remaining part of the south wall of the room is added to these measurements, it has been determined that the wall had a length of approximately 5 m (Fig.74).



Fig. 74: View of Destroyed Wall (*Beycesultan Excavation Archive*)

Various lengths of planks, generally in the north-south direction, were discovered at different levels in the deposit in the room. Looking at the directions of the planks, which are thought to belong to the roof components, it is possible to talk about a roof made of planks placed on long walls. It is possible to consider that from the measurements made on the planks that they are approximately 16 to 18 cm in diameter.

Considering the ceiling heights of the mudbrick houses that we examined in the context of ethno-archaeological studies in Kocayaka village, it was understood that they had an average height of 2.60 m from the ground. In this context, it is known that mudbrick houses are generally built at the above average value. Based on this wall identified in Room 28, as well as the preserved walls of Rooms 2 and 30 built in relation to this place, approximately 1.5 to 2 m apart, it has become certain that House 2 has two floors. Likewise, it is thought that houses 1 and 2 were built adjacent, and house 1 was built as a two-storey building in this context, with the walls of 1.5-2 m height preserved in places, as well as the main walls built with double rows of mudbrick.

Among the most distinctive architectural elements of the place is the hearth structure mentioned above. This hearth structure is located at a central point in the western part of the room. The hearth structure with dimensions of 220 x 150 cm and a height of about 50 cm from the ground is similar to the ones previously discovered. The hearth in question has a rectangular panel (160 x 30 cm), two clay wings adjacent to the panel, and a low and wide platform extending under these structures (Abay-Dedeoglu, 2012, 219; Abay, 2014, 179). The platform of the hearth was enclosed in a wooden frame and many cooking pots were discovered around it. There are two wings with a circular print decoration on the east face of the hearth platform, similar to the hearth seen in Room 7. In the northern part of the hearth, a part of hearth with print decoration and a grinding stone were discovered just to the north of this find (Fig.75).



Fig. 75: Hearth of Room 28 (*Beycesultan Excavation Archive*)

Beads made of seashells, knuckle-bones, numerous spindle whorls and stone tools were discovered in the southern and eastern parts of the hearth (Abay-Dedeoglu, 2012, 219; Abay, 2014, 179). At the same time, a large number of whole vessels and vessel fragments scattered around the hearth constitute the other finds. Outside of the hearth, grain-filled silos built adjacent to the north, northwest corner and south wall of the room were discovered (Abay-Dedeoglu, 2012, 219). On the other hand, two pithoi (Abay-

Dedeoglu, 2012, 219) were discovered side by side on the edge of the entrance providing the passage to Room 2 in the northwest corner of the space, and a pithos was discovered on the side of the main entrance of the place.

Although one of the pithoi leaning against the western wall of the room was completely broken, the other was discovered partially broken. Plenty of barley remains were discovered inside the partially broken pithos 1.30 cm above the ground. On the other side, the pithos on the left side of the main entrance was mostly broken and barley remains were discovered inside.

When the silos identified in the room are examined in detail, it is clearly revealed that the silo structures are generally located at the corners of the room and along the northern wall (Fig. 76).



Fig.76: Silos of Room 28 (*Beycesultan Excavation Archive*)

Located in the northwest corner of the room, the silo (Feature 14) measures 97 x 75 cm and contains burnt grain (wheat). This silo has a thickness of approximately 15 cm and is approximately 52 cm high. Two broken flat stone blocks were discovered on the floor between the silo located in the closed passage of Room 30 from Room 28 and the hearth platform. It does not seem possible to say anything definite about their original context, since there is a possibility that they may have been fallen from another place during the destruction, as well as the possibility of being placed here. Another silo (Feature 15) located just to the east of this silo (Feature 14) consists of two compartments, measuring 43 x 42 and 38 x 24. It is clearly revealed that this silo, which has a wall of approximately 15 cm thickness, has a height of 30 cm from the ground. There is another 64 x 135 cm silo (Feature 18) on the east side of the silo, which was built adjacent to the northern wall of the room. Burnt vetch remains were discovered in the silo, which is approximately 30 cm above the ground. Like the Feature 15, this silo is made in an oval shape and has a wall of the same thickness. Just east of the said silo, another silo named Feature 19 and measuring 250 x 80 cm was discovered. The wall thickness of the silo is

32 cm, and it has an average height of 30 cm from the ground. In addition to abundant barley remains, two open vessels were discovered (Fig. 77).



Fig.77: View from Silo of Room 28 (Feature 19) (*Beycesultan Excavation Archive*)

There is a 65 x 35 cm platform between Feature 18 and 19, as well as another 45 x 36 cm platform on the south side of Feature 19. It is thought that it was placed here for the purpose of sitting in relation to the function of the place or to easily take the grain from the silo.

Another silo measuring 110 x 57 cm was discovered at the entrance of Room 2 adjacent to the south wall of the room. The exterior of the silo, which has a height of approximately 35 cm from the ground, was plastered with clay. It is possible to consider that the eastern wall of this silo containing quantities of vetch was higher.

It was observed that the silo, located in the northeast corner of the room and called Feature 63, was plastered both inside and out. The silo placed in the corner measures 95 x 50 cm and has a thickness of 25 cm. A flat stone was discovered leaning against the west wall of the silo (Fig.78, a)

The silo discovered in the southeast corner of Room 28 is located in the south of the pithos next to the eastern entrance of the room. Unlike other silos, this silo has a 16 cm wide curved wall and measures 95 x 95 cm. No finds were discovered in it (Fig.78, b). However, a large number of potteries were discovered in the western part of the silo.

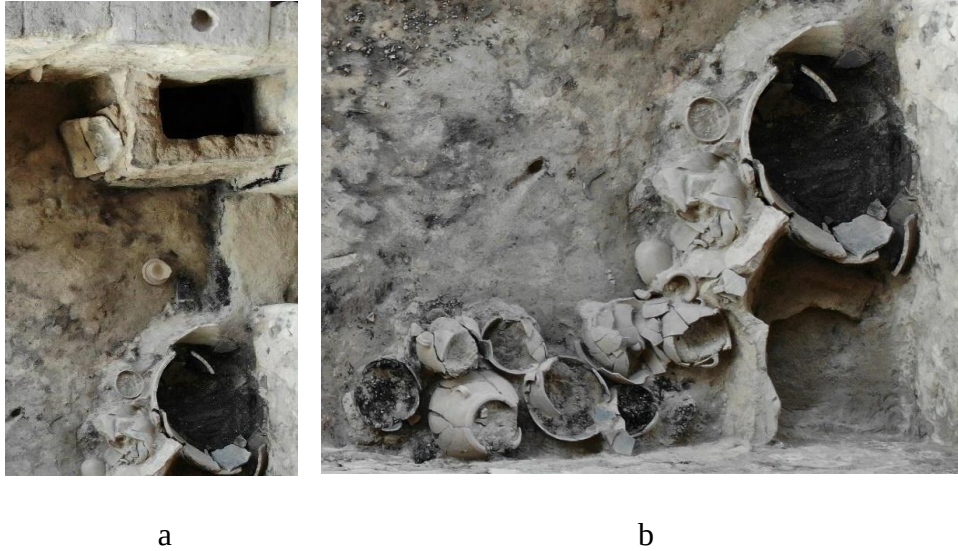


Fig.78: Silos on North-eastern (a) and South-eastern (b) Corner of Room 28
(*Beycesultan Excavation Archive*)

VI.3.2.3.2. Finds Assemblage

The finds (Table 9) were mostly found around the hearth in the centre of the room and in the eastern part of the room. The finds were on and around the platform surrounding the hearth were discovered scattered on the ground. On the other hand, plenty of pottery was discovered at the entrance of Room 2, to the north of the hearth and in front of the south wall of the room. It is thought that some of the finds, which are generally discovered in-situ, fell to the ground during the fire. In this context, during the studies carried out in front of the south wall of the room, whole and integrable pottery and many small finds seem to have fallen from a shelf attached to the wall here. The presence of many burnt wood pieces on the finds in this area supports this opinion. When the pottery and small finds uncovered are put side by side, it shows that the area they occupied was two or more times the area than they in which they were discovered. At the same time, it is thought that the finds discovered in the passage of Room 2 were probably stored with shelves fixed to the walls. Otherwise, the way they are discovered makes it impossible for the finds to be deposited move between rooms. Another important feature is the pottery for daily use, which were discovered between the hearth and the silos lined up in front of the north wall. This pottery, possibly used as cooking pots, were stacked on the edge of the hearth's panel. At the same time, the presence of a grinding stone in the north of the hearth indicates that this area was partially used for grinding purposes.

Likewise, many small finds were discovered scattered in the middle of the room in the eastern part of the room. In addition to this, small finds were discovered along with many vessels stacked at the edge of the wall side by side in the southeast part of the room.. A flat stone based on the western wall of silo named Feature 63 was also found.

In the room, examples of pottery such as open vessels (18), closed vessels (22), bowls(14), plates (8), fruit plates (3), trefoil jugs (6), spouted pitchers (5), cup (1), mug (2), teapots (3), feeding bottle (1), and pottery with spouts (miniature vase- 2) were discovered. On the other hand, crescent-shaped loom weights (4), spindle whorls (57), burnishing stone (1), grinding stone (3), slingshot (1) counting stone (1) and flint blade (1), spearheads (3), bronze dagger (1), silver ring (1), bronze sickle (1), mace-head (1), dressed flints (4), bronze needles (4), dressed rock crystal (1), knuckle-bones (231), bone beads (6), shell beads (173), weaving shuttle (bone)(1), stone idol (1), weaving loom comb (1), woven basket (1) and textile samples were discovered. Finally, three pithoi were discovered (Fig. 79).

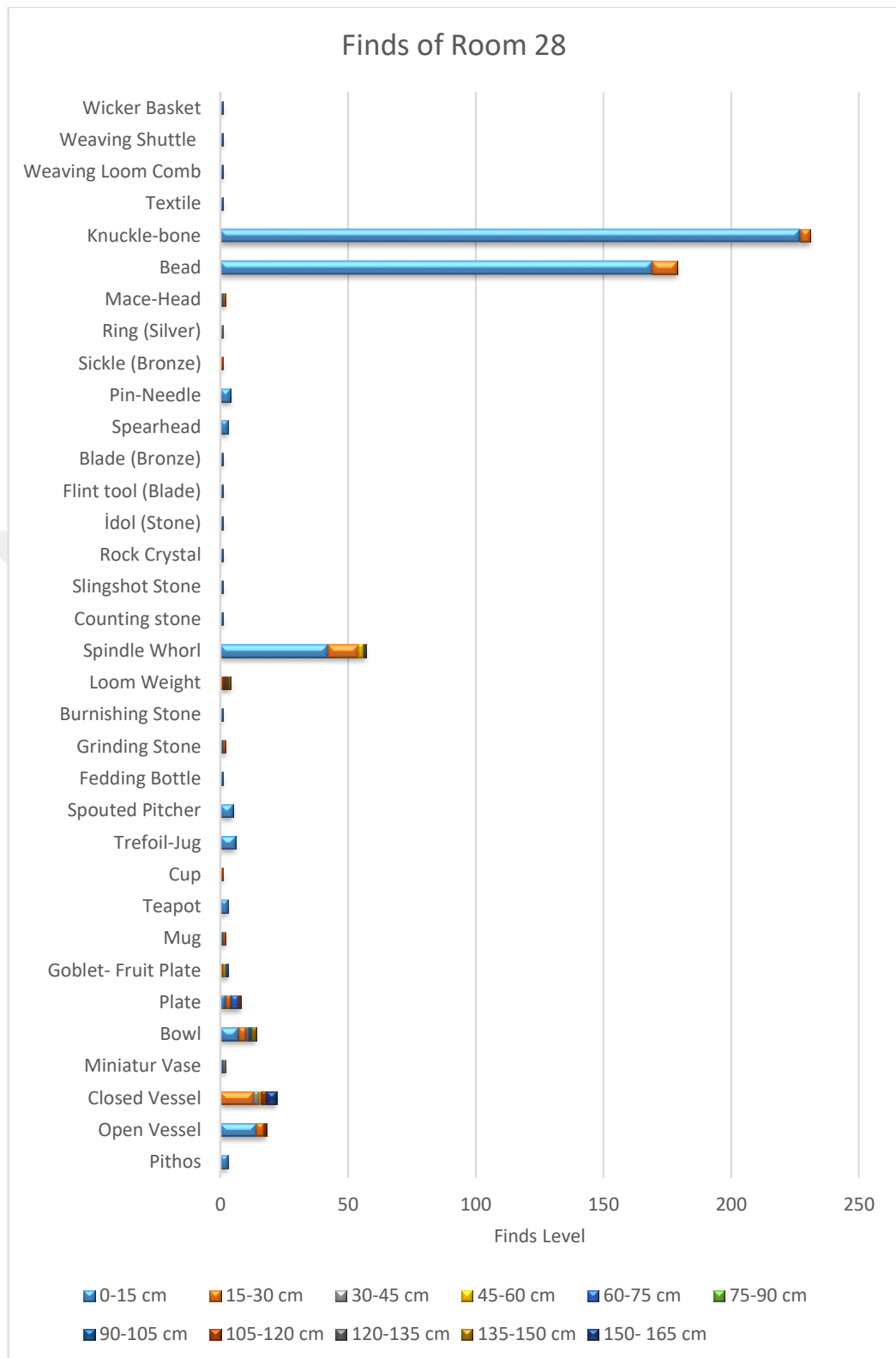


Fig.79: Finds of Room 28 (*Illustrated by M.Çarkı*)

VI.3.2.3.2.1. Pottery

Although the pottery discovered in the room was discovered at different levels, most of these artifacts were discovered on the floor. The pottery in the room are

concentrated in three main points. They were discovered intensively on the north side of the hearth, in the southwest corner of the room (the entrance to Room 2 and its surroundings) and along the south wall. When looking at the pottery uncovered in general; closed vessels (25%) and open vessels (21%) constitute the largest group. Apart from these, vessels with thickened and everted rims (16%) and bowls with everted rims (9%) draw attention with their ratios. In addition to these, trefoil-jugs (7%) and spouted pitchers (6%), as well as teapots (3%), simple rimmed mug (2%), goblet- fruit plates (3%), feeding bottle (1%), miniature vase (2%), and cup (1%) and pithos (4%) were recovered (Fig.80). The presence of pottery, which is generally used for serving purposes, gives important clues about the function of the place.

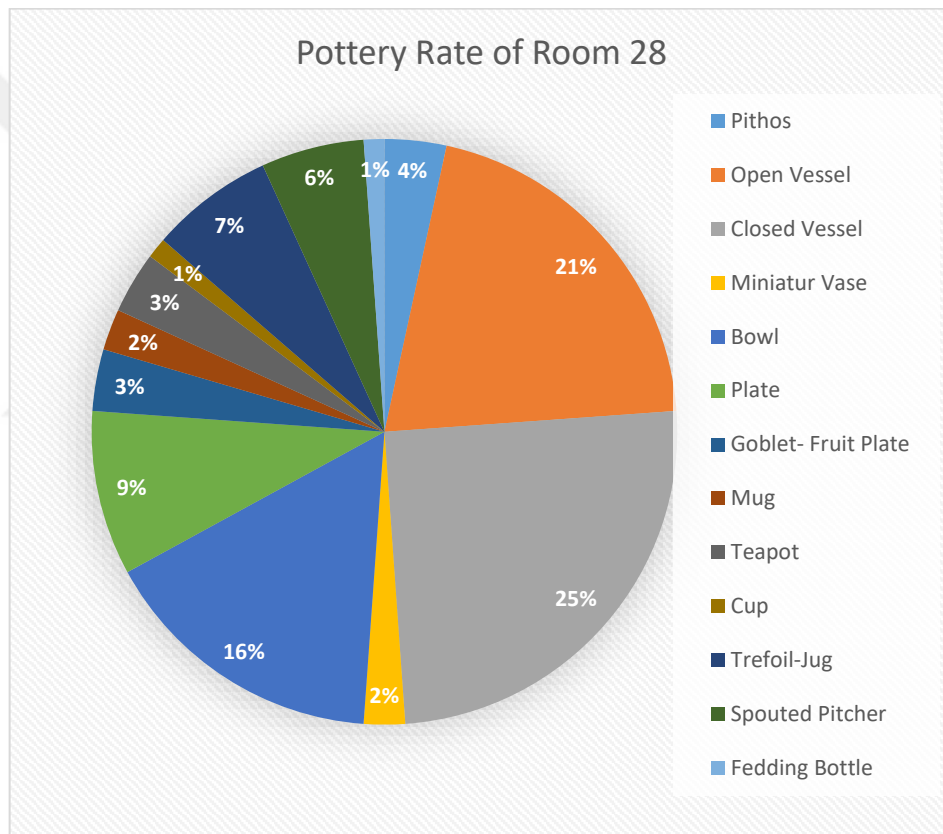


Fig. 80: Pottery Rate of Room 28 (Edited by M. Çarkı)

Considering the functions of the pottery discovered in Room 28, it is clear that they were intended for daily use at a rate of 43%. On the other hand, there are 18% examples for service/drinking purposes, 25% for storage and 2% for other purposes (Fig. 81). From the aforementioned ratios, it is possible to state that activities for daily needs are mainly carried out in the room. At the same time, it is possible to consider that the room was used for storage purposes, both from the pithos and pottery discovered, and

from architectural elements such as silos. In addition to this, it is thought that the place was used for purposes such as gathering, cooking, and eating.

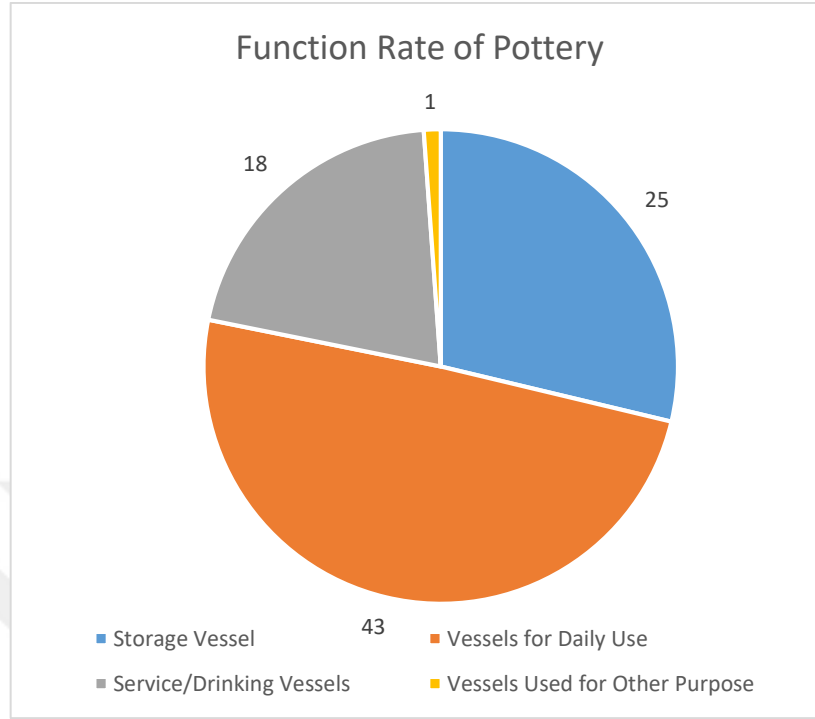


Fig. 81: Function Rate of Pottery (Illustrated by M.Çarkı)

VI.3.2.3.2.2. Small Finds

Small finds in Room 28, which stands out with its richness both in quantity and variety, were generally discovered in front of the hearth, in front of the south wall and in the eastern part of the room. In terms of both quantity and variety, more finds were discovered than in Room 7 of House 1 (Fig.82).

Among the finds, knuckle bones with 47%, beads made of shell and bone 36%, and spindle whorls 12% are the most numerous kinds of finds. Apart from the aforementioned finds, a limited number of crescent-shaped loom weights, burnishing stone, sling stone, counting stone and grinding stone, flint tool (blade), bronze spearheads, bronze needles, bronze dagger, bronze sickle, dressed rock crystal, stone idol, marble mace-head, and a silver rings, as well as a wooden weaving loom comb, weaving shuttle (bone), and textile samples were discovered. These finds, which were uncovered in limited numbers, constitute 1% or less of the small finds in the room.

The textile sample recovered was discovered on the ground at the edge of the silo just south of the hearth structure. It was discovered on the other side of the southern wall

of the room; thus the shuttle and weaving loom comb were discovered together in the same area. In this context, the finds related to weaving loom comb on the southern wall of the room provide important data about the function of the place. From this point of view, it is possible to consider that that production is made in House 2, where textile production is important. On the other hand, the presence of a bronze sickle as well as a large amount of agricultural products reveals the importance of agricultural activities.

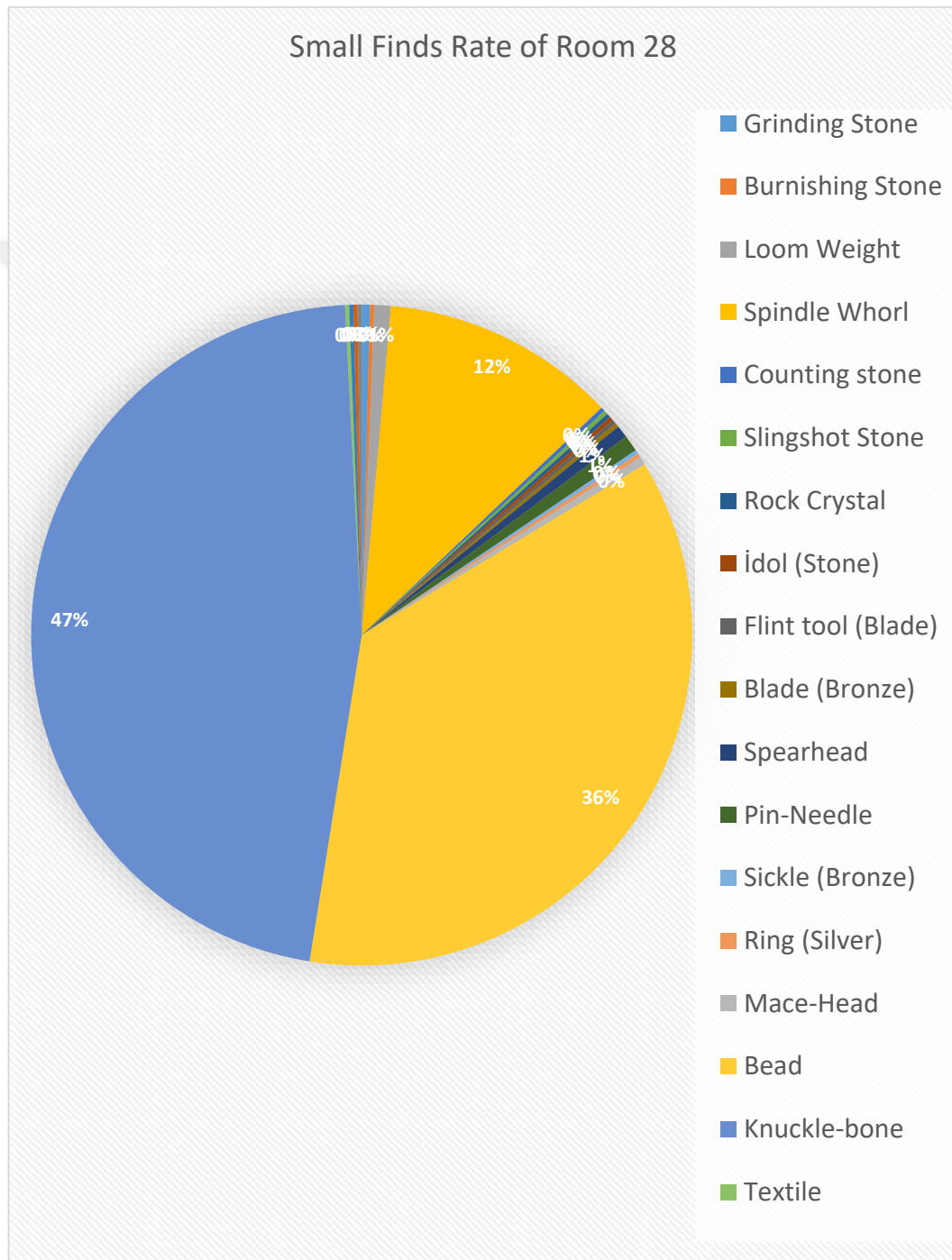


Fig.82: Small Finds Rate of Room 28 (Illustrated by M.Çarkı)

VI.3.2.3.3. Evaluation

Room 28, located in the centre of House 2, appears as a place where important work are carried out in the house, based on both its size and the finds. In this respect, it exhibits similar features with Room 7 of house 1. However, unlike Room 7, there is a silo with many storage elements in Room 28. It can be thought that the amount of storage in the pithoi located in Room 2 could not fully meet the needs of House 2, and this could explain the abundance of storage elements in Room 28. On the other hand, due to the small size and large number of the silos in Room 28, it is thought to be related to the diversity of stored products. In this context, the presence of various products such as barley, wheat and vetch in silos of the room can be seen as an important clue. In particular, the presence of a bronze sickle indicates that agricultural production was carried out by the household. The presence of a hearth in the centre of the room, apart from the silos, and the presence of weights, spindle whorls, bronze needles and small stone tools around the hearth, as well as the grinding stone used for grinding, appear as important evidence of domestic production in the room (Abay, 2014, 180-181). Detection of weaving elements such as loom weights and spindle whorls, as well as weaving comb, weaving shuttle and textile samples indicate that weaving activities may have been carried out in the place. On the other hand, the presence of cooking pots associated with the hearth provides important indications that food preparation activities were carried out in the room.

In addition, the presence of a large number of goblet-fruit plates, plates, bowls and jugs used for presentation purposes in the room is evidence that needs such as eating were fulfilled in this area, also shows that the room may have been used as a gathering area. The finds discovered at different levels of the deposit in the room are of great importance for the determination of the activities related to the second floor of the house, which was built as two floors from the fallen wall discovered in Room 28. However, although it is not possible to make a definite judgement about what kind of activities were carried out on the upper floors of the house from the available data, the finds such as crescent-shaped loom weights, open vessels, closed vessels, bowls and plates, pottery and bone fragments were discovered in the 105-165 cm level of the deposit in the room, it is considered that partial production and consumption activities were practiced (Abay, 2014, 181). At the same time, it is possible that the need for a sleeping was met on the upper floor, since there is not enough space on the ground floor due to the density of the finds

and architectural elements in the space (Abay, 2014, 180-181). To summarise briefly, from the available data, Room 28 on the ground floor may have been used for production, consumption, collection and storage purposes. And on the upper floor, it is thought that sleeping, partly production and consumption activities were carried out.

VI.3.2.4. Room 2

VI.3.2.4.1 Architectural Features

It is connected to Room 28 with a 95 cm wide door in the south-west corner of Room 28. The walls of the room, measuring 4.40 x 2.80 m (Abay Dedeoglu, 2012, 314), were built using mudbrick blocks measuring 50x30 and 34x30 cm (Abay Dedeoglu, 2012, 314) (Fig.83). The eastern wall of the rectangular room was partially destroyed by a pit from the Byzantine period. In general, the architecture and finds belonging to the LBA have been destroyed by these pits, which presents a significant problem.

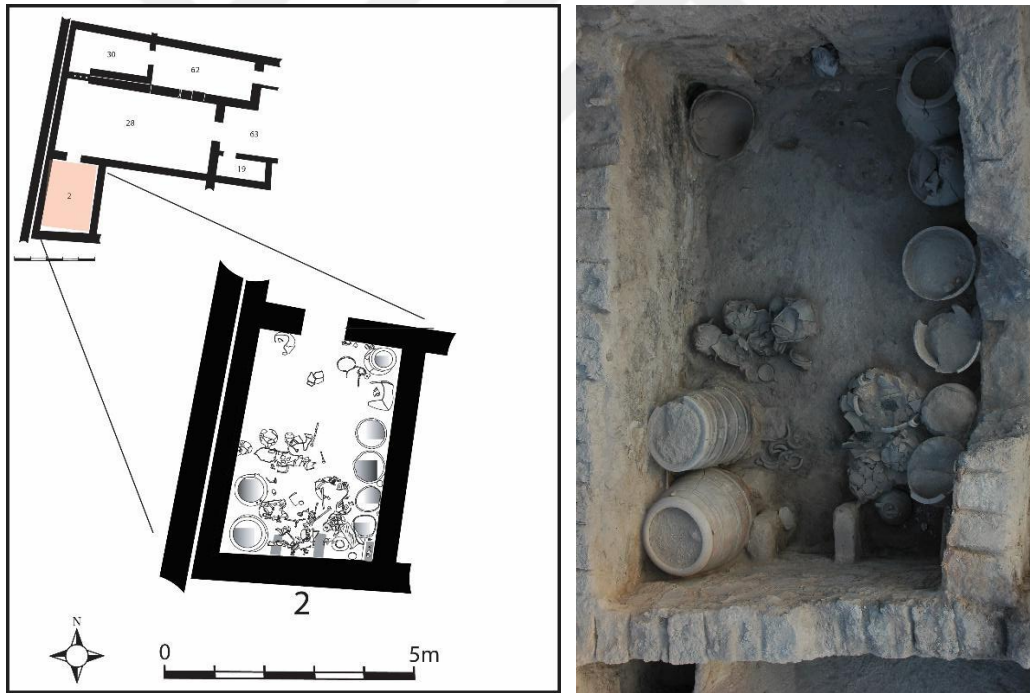


Fig.83: Plan and Photo of Room 2 (*Beycesultan Excavation Archive- Illustrated by M.Çarkı*)

The east wall of the room was used in common with Room 7 of house 1 (Fig. 26). While the northern, southern, and eastern walls of the room were built with a single row of mud brick, the western wall was built with a double row of mudbrick blocks. The walls, formed by placing mudbrick blocks vertically, are 50 cm thick. Adjacent to the west of

the room is the place dated to Layer 5a and called the temple area. In this context, it is possible to consider that that this wall was repaired and reused in Layer 5a. The wall and floor of the room were plastered with clay many times, as in other parts of the house. Although small scale collapses are seen on the floor in places, the base is generally preserved. The floor level of Room 2 is approximately 15 cm higher than the floor level of Room 28, and it was understood that the room was entered through a step. The feet were discovered, which were placed vertically on the south wall of the room and made of mudbrick blocks with a width of 25 cm and thought to be used as shelves (Dedeoğlu-Abay, 2014, 5). The feet, which are similar to those in Room 7, are approximately 70 cm high from the ground (Fig.84). In this context, it is thought that three clay feet formed at varying intervals, starting from the southwest corner of the room, were parts of a wooden shelf.



Fig.84: A View from Clay stands from the Southern Side of Room 2 (*Beycesultan Excavation Archive*)

The fact that many wooden pieces as well as pottery and small finds were discovered in the area where the legs were discovered proves this.

It was observed that the room was destroyed by the great fire that ended the Layer 5b, and the mudbricks and plaster on the walls were baked and turned into a reddish yellow colour due to the severity of the fire. The walls have been well protected from both the severity of the fire and the deposit in the place. There are many pithoi in the place, the bottoms of which are buried in the floor (Dedeoğlu- Abay, 2014, 9). A total of 9 pithoi of different sizes were discovered, 6 of which were discovered along the eastern wall of the room. Burnt grain samples were discovered in the pithoi, which were mostly

discovered broken. The other two pithoi are located in the southwest corner of the room and are relatively well preserved. Another pithos was discovered to be located in the northwest corner of the room.

The large sized pithoi located in the south-west corner of the room were partially buried in the floor, but were fixed with mudbrick blocks. It was observed that other large sized pithoi discovered in houses 1 and 2 were also fixed with mudbrick blocks in this way. However, when the mudbrick blocks were examined, it was understood that they were generally large in size (30 x 50 cm). It is thought that these mudbricks placed for support purposes may have two functions. The first is that it could have been used to fix the pithoi as stated above, and also have been used as a step in order to ensure that the grain placed in the large pithos can be easily collected (Fig.85).



Fig. 85: Pithos and Mudbrick Blocks of Room 2(*Beycesultan Excavation Archive- Illustrated by M.Çarkı*)

These pithoi, which were discovered leaning against the wall, have print decorations on the rims like the pithoi discovered in other places, and burnt grain samples were found inside. Except for the pithos, no silo elements were discovered in the room. In this respect, this room is different from Room 8 of house 1. Possibly, there was no need to build a silo in Room 2, due to the large number of silos discovered in Room 28 meeting the need.

In addition, whole pots and crescent-shaped loom weights, and 4 human skeletons were discovered inside the place, which was destroyed by a fierce fire (Abay - Dedeoglu 2013, 314; Dedeoglu - Abay 2014, 5). The skeletons were discovered at different levels in the fill soil and were recovered in 55 cm of fill soil, starting at a height of 20 cm from the ground (Boz, 2016, 80). It is possible to consider that the skeletons, two of which were discovered in front of the south wall of the room, one in the centre of the room and the other just in front of the door entrance, died as a result of fire (Abay - Dedeoglu, 2012, 314; Dedeoglu- Abay, 2014, 5). However, according to anthropologist Başak Boz, who studied the skeletons discovered in Layer 5b of the mound, the skeletons discovered in Room 2 belong to 5 individuals (Boz, 2016, 81). One of the skeletons, which were separated from each other and heavily damaged, is a 6–7-year-old child, three are adult males, and the sex of the other one cannot be determined exactly (Boz, 2016, 81) (Fig.86). Four of the adult skeletons were discovered in the south and middle part of the room, and the remains of a child skeleton were discovered in the northern part of the room.



ID no	Age	Sex
1- F48 CZI	6-7 yrs	N/A
2-F49 CZH	2 Adult	1 male, 1 indeterminate (commingled)
3- F51 CZJ	2 Adult	2 possible males (commingled)
Total	MNI=5	3 possible males; 1 indeterminate

Fig.86: Age and Sex Distribution of Bones from Room 2 (*Beycesultan Excavation Archive- Boz, 2016: 81, Table 2*)

VI.3.2.4.2. Finds Assemblage

A large number of pottery and small finds were discovered in-situ in the room (Table 10). The finds in the room, which has a very rich repertoire of finds, were mostly discovered in the southern part of the room (Fig. 87).



Fig. 87: Photo and Plan of Room 2 (*Beycesultan Excavation Archive*)

This density of finds can be explained by the possibility that the pottery and small finds stacked on the shelf in front of the south wall were scattered in the same area during the fire. Most of the finds recovered from all levels in the room were discovered on the floor in the range of 0- 45 cm. Considering the pottery discovered, mostly service vessels such as goblets and fruit plates as well as open vessels and closed vessels were seen. On the other hand, beads, crescent-shaped loom weights and spindle whorls constitute the largest group of small finds.

When looking at the finds in the place in general, apart from open vessels (23), closed vessels (17) and goblet- fruit plates (40), bowls (8), plates (4), trefoil jugs (4), flasks (2), juglets (2), sieves (2), funnel (1), cup (1) and shoe-shaped rhyton (1) were discovered.

Besides pottery, crescent-shaped loom weights (23), spindle whorls (8), burnishing stone (1), grinding stone (1), flint tools (blades) (2), spearhead (1), seashells (4), stone and bone beads (29), glass bracelet (1), an iron nail (1), pounders (bone) (2), stone axes (2), a knuckle bone (1) and one bulla were discovered (Fig.88)

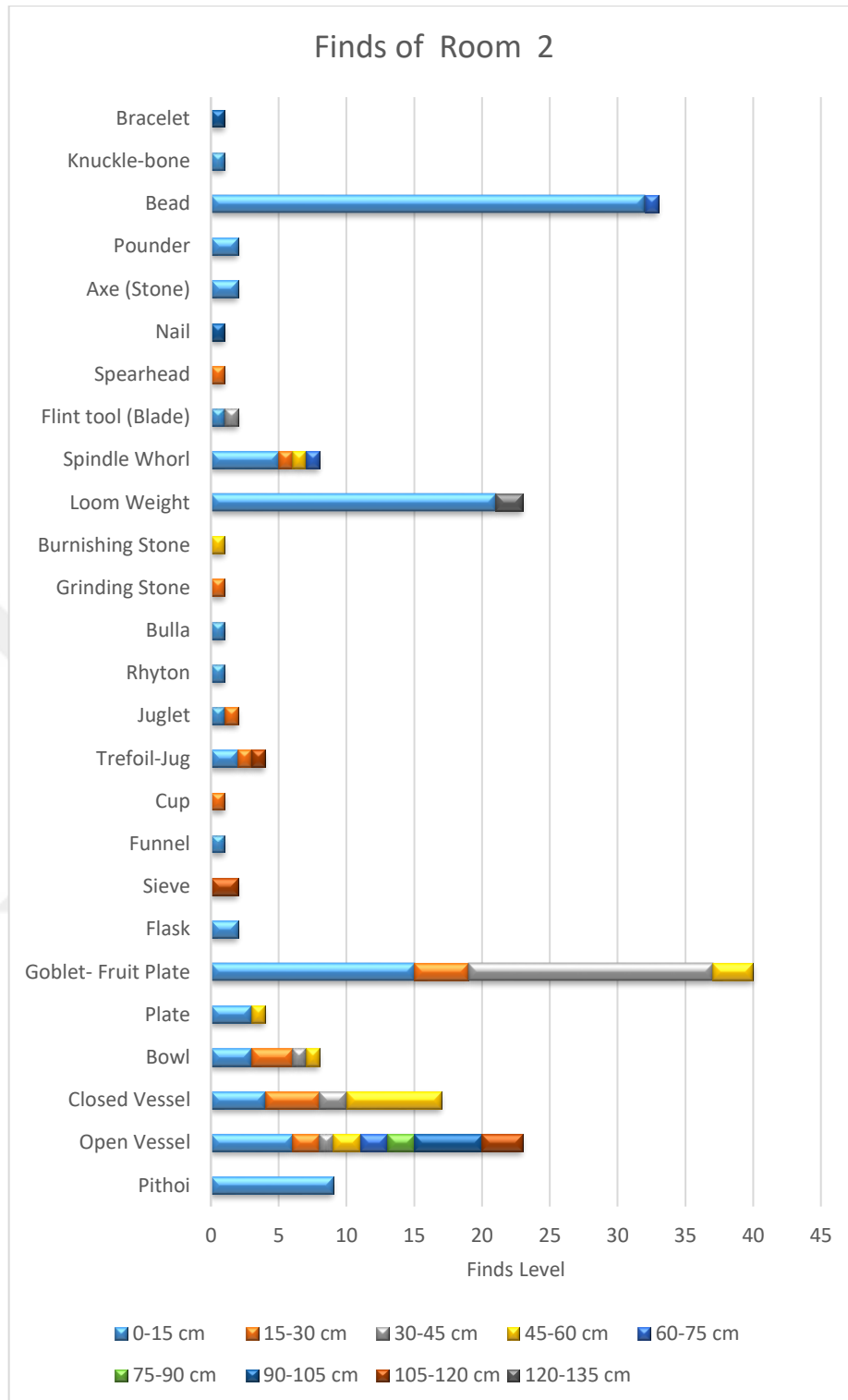


Fig.88: Finds of Room 2 (Illustrated by M.Çarkı)

VI.3.2.4.2.1. Pottery

A large number of pottery of different varieties were discovered in the room. When we look at the characteristics of the pottery assemblage, simple and everted rimmed open vessels (20%), everted rimmed closed vessels (15%), outer thickened rimmed bowls

(7%), inward and everted rimmed plates (3%), sharp-shouldered goblets with everted rims and fruit plates with everted and thickened-out rims (35%), trefoil jugs (4%), flasks (2%), a funnel with thickened-out rim (1%), an everted rim edged and sharp-bodied jugs (2%), trefoil cups (1%) and strainer jug (2%) and pithoi (8%) are amongst important finds (Fig.89). Goblets and fruit plates used for presentation in pottery draw attention with a rate of 35%.

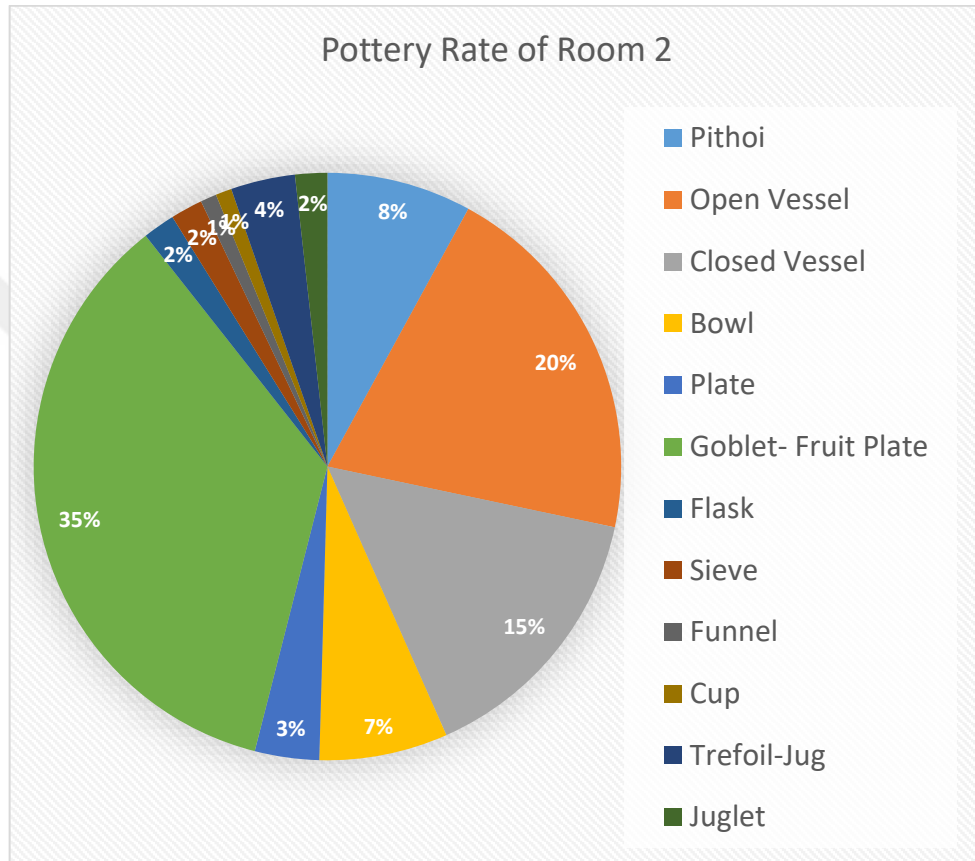


Fig.89: Pottery Rate of Room 2 (Illustrated by M.Çarkı)

Considering the functions of the pottery seen in Room 2, besides the samples used for service purposes at a rate of 41%, the samples for daily use have the largest share at a rate of 33%. On the other hand, storage is 23%, and samples used for other purposes are 3% (Fig.90). In addition to the large number of pithoi discovered in the room, as well as the pottery used for storage, it is important that the place is an area where pottery used for daily needs is stored, as well as the room's function as a storage.

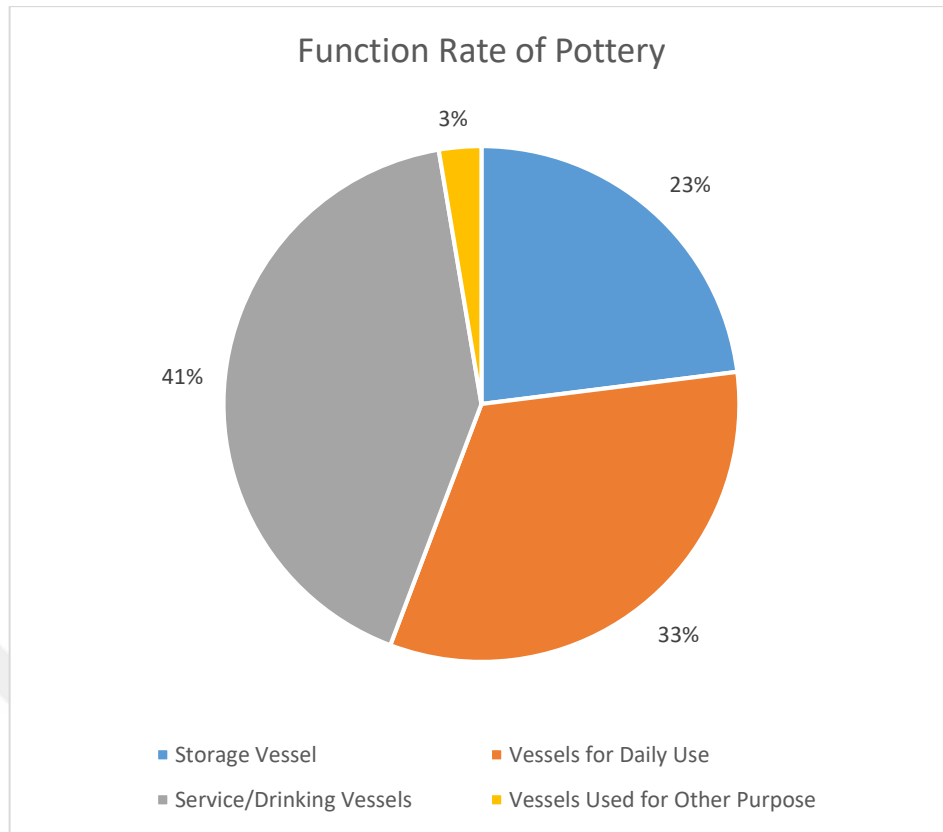


Fig.90: Function Rate of Pottery (Illustrated by M.Çarkı)

VI.3.2.4.2.2. Small Finds

Crescent-shaped loom weights made of clay (30%) spindle whorls (10%), burnishing stone (1%), grinding stone (1%), flint blades (3%), spearhead (1%), beads made of stone, bone and shells (43%), glass bracelets (1%), an iron nail (1%), pounders (bone) (3%), stone axes (3%), a knucklebone (1%) a bulla (1%) and shoe-shaped Rhyton (1%) are among important small finds discovered in the room. (Fig. 91). Among the small finds, beads, weights and spindle whorls constitute the largest group of finds. It is noteworthy that crescent-shaped loom weights were discovered on the edge of the pithoi, similar to Rooms 7 and 8 of House 1.

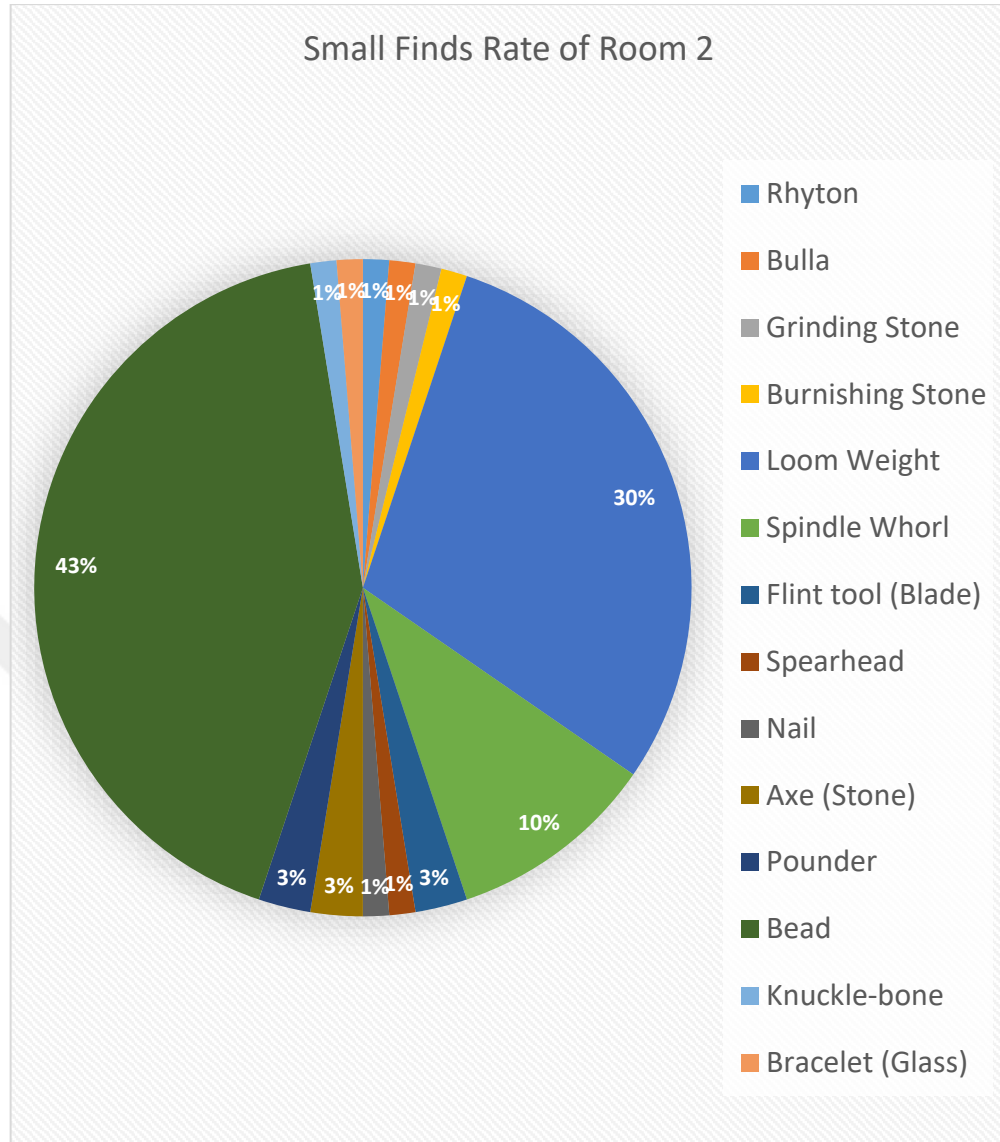


Fig.91: Small Finds Rate of Room 2 (Illustrated by M.Çarkı)

VI.3.2.4.3. Evaluation

In terms of the characteristics, Room 2 is very similar to Room 8, which is the warehouse of house 1. However, it differs from Room 8 in terms of the absence of structures that are part of the architectural element such as the silo. The presence of a shelf on which pottery is stacked in the place, which has high walls and rich finds, is of great importance in terms of not only being used as a warehouse, but also being a room where pottery is kept. Due to its location, the Room 2 located in the most remote corner of House 2 may have been used by certain people. In modern rural settlements such areas are accessed only by certain people (usually family elders) in the house too. In this respect, the existence of applications belonging to this circumstance has been identified at Kocayaka village.

In general, the nine pithoi, which were discovered in-situ in Room 2, as well as numerous pottery and small finds, show that this area was used as the warehouse of House 2 (Abay, 2014, 179). Particularly, the variety of finds are parallel to those discovered in Room 28. It is possible to consider that pottery and small finds that are not used frequently were preserved in this room.

VI.3.2.5. Room 62

VI.3.2.5.1 Architectural Features

Room 62, located to the east of Room 30 and to the north of Room 28, measures 5.50 x 2.70 m and has a rectangular shape (Fig.92).

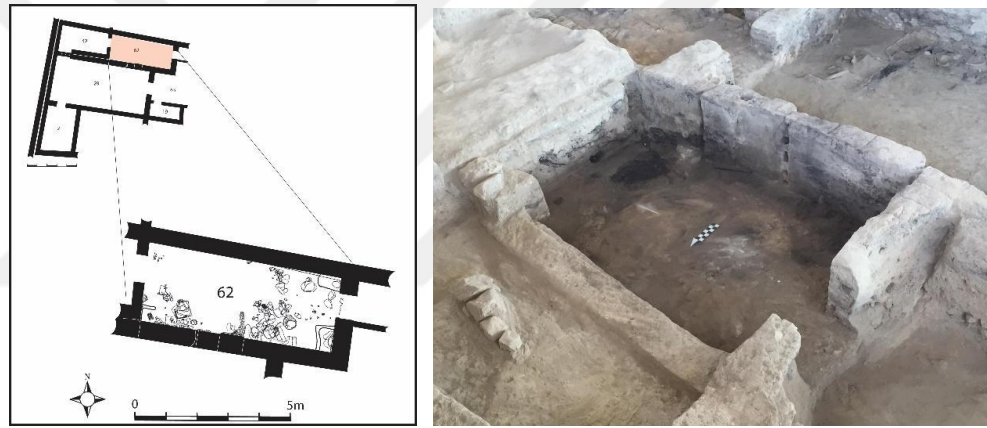


Fig.92: Plan and Photo from Room 62 (*Beycesultan Excavation Archive- Ed. by M.Çarkı*)

A single row of 50 x 30 cm mudbrick blocks were used on the walls surrounding the room. The room is located in the eastern part of Room 30, opens to the east with a 90 cm wide door. Looking at the south wall of Room 62, it gives the impression that the south wall was built in pieces. Particularly, it was understood that the plaster on the wall, which is used in common with Room 28, penetrated into the wall from time to time, and the wall was built thicker in a 60 cm section in the middle of the wall with a thickness of 50 cm. It gives the impression that the wall between Room 62 and 28 was built thickly to support the roof before it was built. Based on these details on the wall in question, it is thought that Rooms 62 and 28 were built as single room in the first phase of use and were divided into two separate rooms after a certain period of time. On the other side, a 1.40

m wide entrance was discovered in the southeast corner of the room leading to Room 63. After a while, it was understood that this entrance was closed. It is important that the entrance providing the connection with Room 28 in the southwest corner of Room 30 is closed after a while, and it shows similar characteristics. From this point of view, it is possible to consider that Rooms 30 and 62 were separated from Room 28 for some reasons and were redesigned. Based on this situation, which seems to be a renovation phase in House 2, it is possible to state that this house consists of two phases. Considering the said additions, it may be due to a special situation that developed in the house. In this context, it can be thought that the house is divided by considering the increase in the number of individuals in the house or the needs of the emerging elementary family. The closing of the doorway (Lloyd-Mellaart, 1955, 46; Lloyd, 1972, 10-11), which provides the connection between Room 48 and Room 51 in the area called Unit D, which was unearthed during the early period excavations, is similar to the changes in House 2 (Fig.93).



Fig.93: A View from Room 62 (*Beycesultan Excavation Archive*)

In the middle section of the south wall of Room 62, there are 5 wooden holes of different sizes, lined up to the floor. From top to bottom, respectively, these holes are measured 11 x 10; 17 x 8; 12 x 7; 18 x 8 and 16 x 11 cm. It was observed that the said holes and their surroundings were plastered. It is thought that they were probably made to attach a large wooden piece to the wall. Next to the holes, a rectangular wooden component was discovered, leaning against the wall. These remains, which are thought

to be pieces of loom, are 60 x 48 cm in size. From this point of view, it is thought that the holes seen in the wooden wall are related to these wooden remains (Fig.94).



Fig.94: Wood Remains and Holes of Southern Wall of Room 62 (*Beycesultan Excavation Archive*)

The wall remains are preserved up to a height of approximately 1.70 m in places, and it was observed that the room sloped towards the northern part from the ruins. It is possible that the slope in question occurred due to the destruction in the northern part during the collapse, and therefore it is possible to state that the destruction is related to the collapse process of the room. On the other hand, in addition to a large amount of burnt mudbrick and wood remains in the room, seal-engraved hearth remains were discovered in the passage of Room 30 (Fig. 95).



Fig.95: Fragments of Hearth from Room 62 (*Beycesultan Excavation Archive*)

Roof parts of the ceiling were discovered at a level of about 30 to 40 cm from the floor. From the remains of the ceiling, it was understood that boards were placed on the planks of the roof part of the room and that these boards were covered with dense reeds and straw (Fig.96).



Fig.96: The Roof Remains of Room 62 (*Beycesultan Excavation Archive*)

Reed and straw, which are used both for insulation and to prevent the ceiling soil from falling, are widely used in modern mudbrick village houses. In this context, it is possible to state that the roof components were made by using similar methods in the mudbrick house architecture of Kocayaka village. Apart from this, it has been observed that straw up to 30 cm thick was used in the roof parts of the mudbrick houses of the villages in Konya Karapınar and Emirgazi districts (Fig.97). It is possible to consider that those methods that may be similar are used even though geographies differ.



Fig. 97: Roof of a House from Karapınar/Konya (*Photo by M. Çarkı*)

Remains of timber, possibly belonging to the second floor, were observed on the roof assembly in question. In addition to the wood remains in the north-south direction, a light grey soil layer belonging to the second floor was discovered, especially in the middle part of the room (Fig.98). A skull which had belonged to an individual was discovered on this grey soil layer, which is probably thought to belong to the second floor. The absence of the body of the skull in question indicates that it fell into this area during the devastation

or was transported in some way. At the same time, very few pottery were discovered in the ruins.



Fig. 98: Light Gray Soil Layer and Burned Roof Remains (*Beycesultan Excavation Archive*)

Especially in the southeast part of the room, pottery were discovered under the remains of the ceiling. Remains of burnt grain were discovered in the pottery recovered in-situ. Generally, wheat and barley remains were discovered in the southern and eastern parts of the room. It was understood that the mudbrick wall in the south and east corners of the room was partially destroyed and fell to the south (Room 63). A rectangular silo (Feature 70) with a width of 90 x 40 cm and a wall thickness of 10 cm, supported by wood, was discovered in the southeast corner of the room. This silo, which contains carbonised vetch residues, is located in front of the closed doorway. As it can be understood, after the doorway was closed, a silo was built and used for storage purposes (Fig.99). On the other side, a second building element, 50 cm in diameter, similar to a silo, was discovered in the south-west corner of the room, which was largely destroyed. No find was discovered inside the silo. Just south of the entrance to Room 30, the remains of a hearth, which is thought to belong to the seal engraved hearth were discovered.



Fig.99: Silo and Doorway on South-eastern Corner of Room 62 (*Beycesultan Excavation Archive*)

The entrance, which was discovered to be approximately 90 cm wide on the eastern wall of the room, is located directly opposite the doorway opening to Room 30. It was observed that the floor was inclined from west to east, and it was understood that there was a level difference of approximately 20 cm between the west and east. It has been observed that the door threshold of the eastern entrance of the place consists of paved stones and is plastered. There is a thin wall 20 cm thick in east-west direction south of the entrance in the east. Since the wall extending to the east remains in the section, it is not fully understood how far it extends and for what purpose it was built.

Finally, a platform measuring 85 x 30 cm was discovered in the northeast corner of the space. A whole flask was discovered on the platform. In this respect, it shows similar features with the platform located in the southeast corner of Room 30.

VI.3.2.5.2. Finds Assemblage

The finds (Table 11) were generally discovered around the silo in the northeast and southeast of the room. The finds were mostly discovered in the 0-45 level range. Apart from the pottery that can be integrated, many small finds were discovered in the room. When the inventory of finds is examined in general, besides examples such as closed vessels (2), plates (2), fruit plate (1), flask (1) and trefoil jug (1), crescent-shaped loom weights (5), spindle whorls, stone idol (1), small stone axe (1), whetstone (2), needle (1), bronze ring (1), beads (5) made of shell and bronze (1), and knuckle-bones (22) were discovered (Fig.100). In addition, more than 20 small stone objects (which may have been used as toys for children) were discovered, which were processed in different ways.

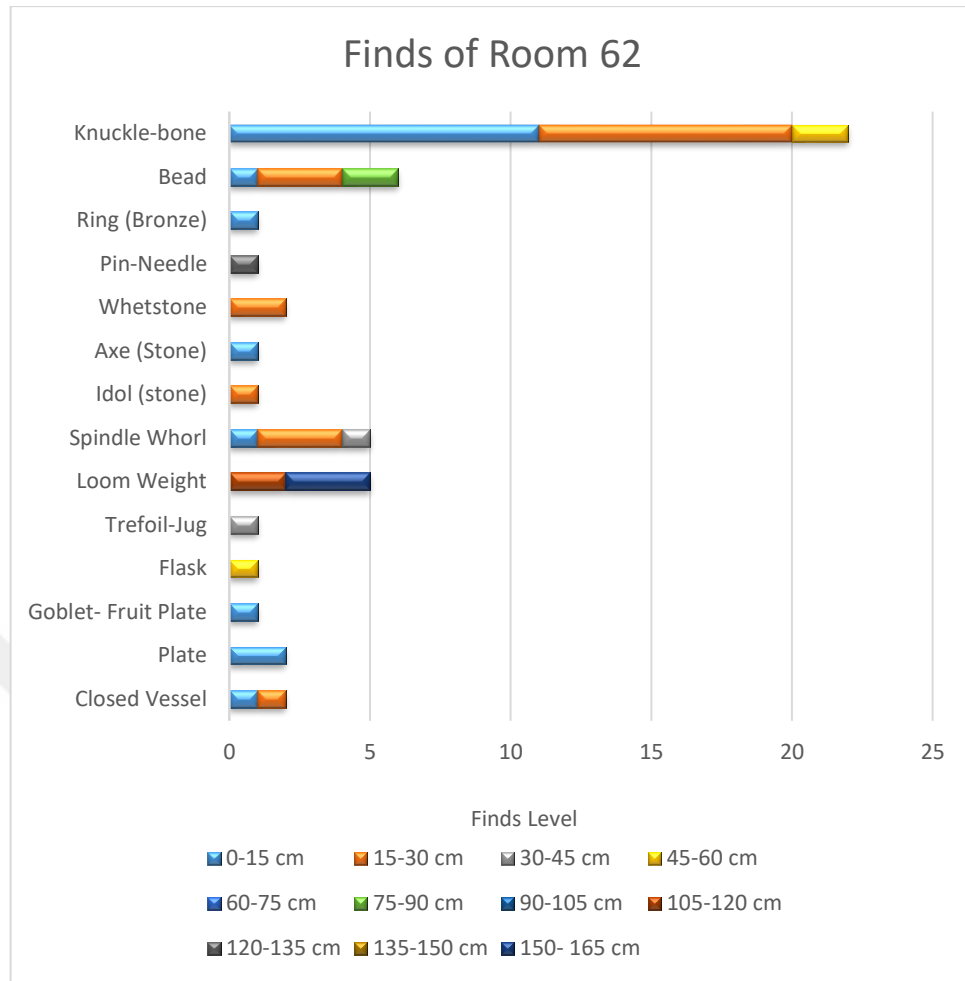


Fig.100: Finds of Room 62 (Illustrated by M.Çarkı)

VI.3.2.5.2.1. Pottery

Pottery samples were discovered near the east and south walls of the room. Fewer samples were discovered here compared to other parts of the house. Some of the pottery unearthed in the room are medium sized and it is possible to consider that that they were used for storage. Necked types were discovered among thickened-out closed vessels. Apart from closed vessels, which make up 29% of finds, inward and outward curved rimmed plates make up the largest group in number with the rate of 29%. Apart from these, inward and everted rimmed fruit plate, trefoil jug and flask make up other important finds with 14% each (Fig.101).

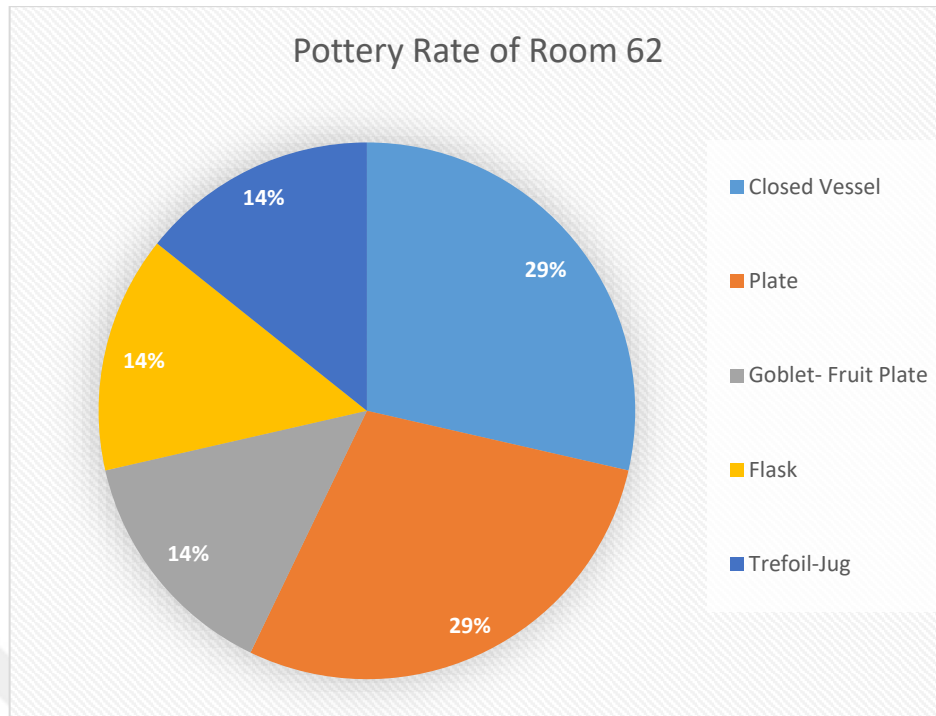


Fig.101: Pottery Rate of Room 62 *(Illustrated by M.Çarkı)*

Considering the usage areas of the pottery discovered in the room, pottery for daily use comprise the largest group with a rate of 43%. On the other hand, pottery used for service makes up the second largest group with a rate of 29%. Moreover, vessels used for storage have an important place with a rate of 28%. Based on these data stated above, it is possible to state that the room is used for storage purposes apart from daily needs (Fig.102).

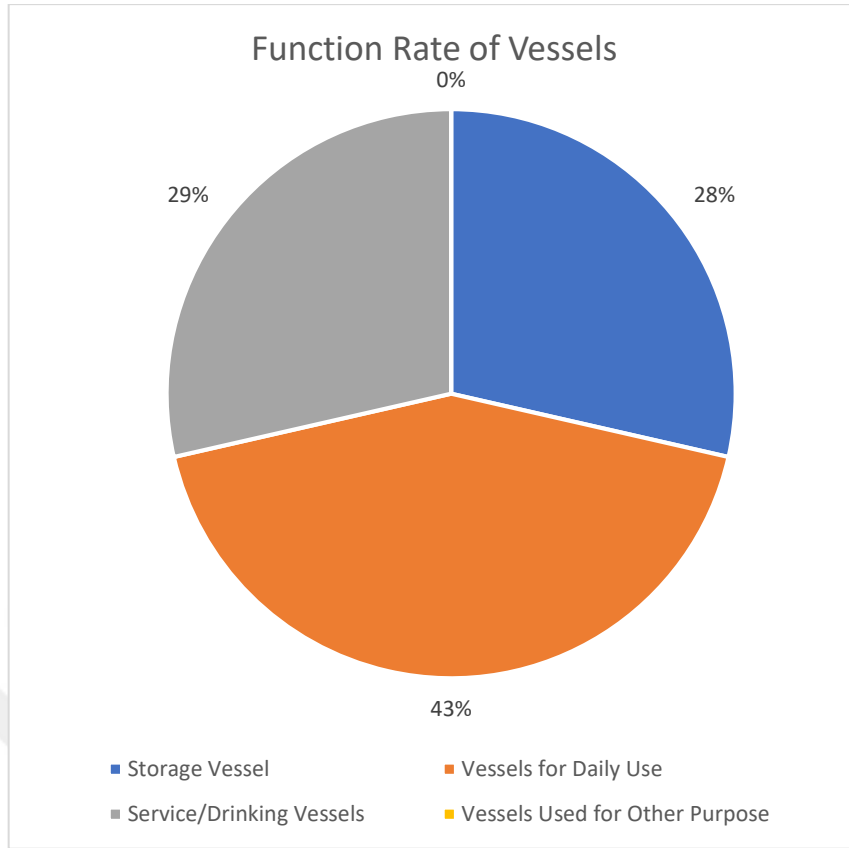


Fig.102: Function Rate of Pottery (*Illustrated by M.Çarkı*)

VI.3.2.5.2.2. Small Finds

Even though the number of small finds in Room 62 was few in number, they can be considered rich in terms of diversity. The finds were mostly located near the entrance. When the finds' ratio is taken into consideration, knuckle-bones are the largest find group within this room with 51%. Apart from knuckle-bones; beads with 14%, crescent-shaped loom weights with 12%, and spindle whorls with 9% are among important finds. Apart from the aforementioned finds, whetstones with 5% and finds such as bronze rings, pin-needles, stone axe, and stone idols with a 2% ratio are among other finds (Fig.103).

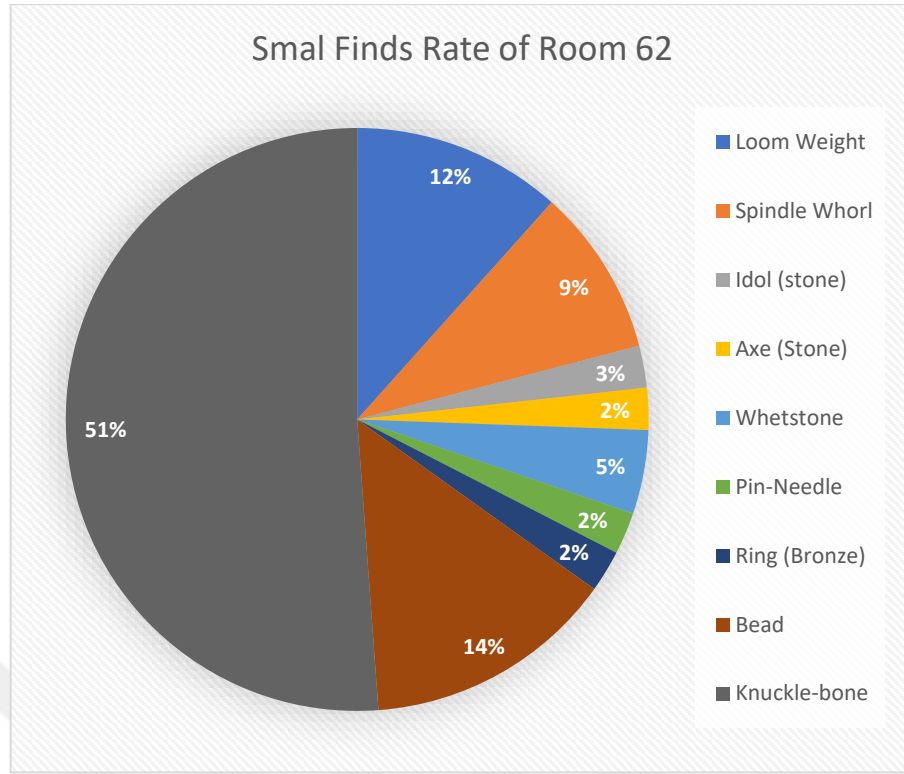


Fig.103: Small Finds Rate of Room 62 (Illustrated by M.Çarkı)

VI.3.2.5.3. Evaluation

Room number 62, which is located between the Rooms 63 and 30, is considered to be the main area that is connected to Room 30. Within the space of House 2, both Room 30 and Room 62 seem to be partially independent of the rest of the house. It is possible to mention that a separate special unit has been created via a wall that has been put up between the aforementioned area and Room 28. As it is mentioned previously, it seems highly possible that the Rooms 30 and 62 might have been separated due to a special domestic situation. It seems highly possible that these changes might have occurred due to the increase in the house's population or possible shifts in the production model within this context. Naturally, it is not possible to identify the first purpose of the aforementioned locations since it is obvious that the finds uncovered and the structure's latest version which was discovered have been used to serve the last purpose of these locations. The now-closed passage in the southeast corner, which was 1.40 wide, and the additions on the wall which are common with Room 28, suggest that this area was a covered courtyard or an open space before the shift of purpose. In addition to pottery and other small finds, the remnant of a hearth that has been found gives the impression that

the location was used for daily needs. However, when this location is taken into consideration with Room 30, it is highly possible for House 2 to have an organic connection with the other rooms due to the limited storage space on this room. Even though it seems to be an independent unit within House 2, the room is highly likely to have a close connection with the other rooms in the house in many aspects.

VI.3.2.6. Room 30

VI.3.2.6.1. Architectural Features

Room number 30, which is located on the west of Room 62 and adjacent to the north of Room 28, is a rectangular building and measures 4.60 x 2.20 m (Abay-Dedeoğlu, 2012a, 219; Abay, 2014, 180). The southern and western walls of the room are surrounded by a double-row wall made of mudbrick blocks. Each of these aforementioned blocks measures 50x30 cm in size (Fig.104).

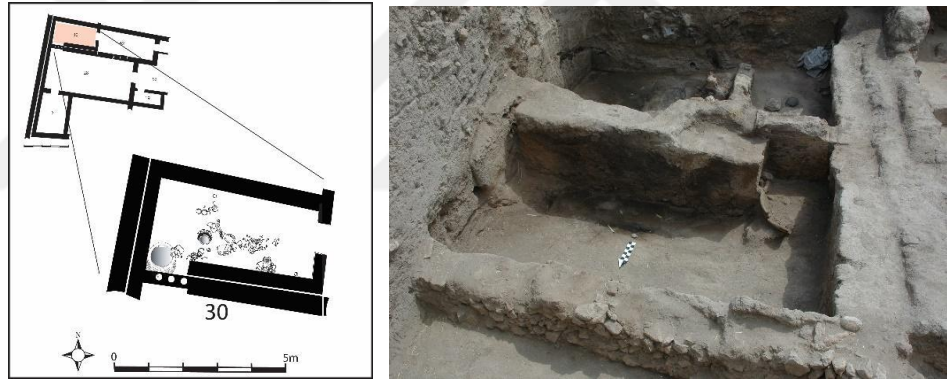


Fig.104: Plan and Photo from Room 30 (*Beycesultan Excavation Archive- Illustrated by M.Çarkı*)

It was discovered that the room had gone under renovations like room number 62 long before the fire that destroyed the room's Layer 5b. It was determined that the northern wall made of mudbrick blocks was destroyed and the wall was rebuilt using stone partially (Abay-Dedeoğlu, 2012a, 219; Abay, 2014, 180). It was also discovered that the room was turned into a double-walled room by putting up another wall next to the southern wall and the passage that was placed in the south-west of the room and was opening to Room 28 has been closed for some reason (Abay-Dedeoğlu, 2012a, 219; Abay, 2014, 180). Therefore, the traces of the passage can be clearly observed in the room's southwest corner. It was also observed that the passage was closed with a single

row of mudbrick blocks, was left as a wall niche, and a large pithos was placed in this room as well. It is possible to mention that the placement of the pithos in the aforementioned room helped to economise the space usage. It has been observed that blocks similar to the mudbrick blocks that's been found in Room 2 and were used as a supporting element for the large pithos, have been also used in pithos in Room 30. However, in this room, the pithos is larger than the mudbrick block and measures 45x35 cm. It is also made of mudbrick and serves as a platform. As it was mentioned previously, it is considered that the platform in question was used both to fix the pithos and to easily access the grains that were stored in the pithos (Fig.105).



Fig.105: A Detailed View from Pithos and Mudbrick Block of South-western Corner of Room 30 (*Beycesultan Excavation Archive*)

Instead of the passage that was closed with Room 28, a door which is 85 cm wide was opened in the centre of the room's eastern wall (Abay-Dedeoğlu, 2012a, 219). It is possible to reach room number 62 through the passage that was opened on the eastern wall.

It is possible to reach Room 62 through the passage that was opened on the eastern wall (Abay-Dedeoğlu, 2012a, 219; Abay, 2014, 180). A cattle skeleton has been discovered in the room, the skeleton was lying in the east and west direction (Abay-Dedeoğlu, 2012a, 219; Abay, 2014, 180; Dedeoğlu- Abay, 2014, 10). According to Abay and Dedeoğlu, the animal somehow entered the room from either a courtyard or street during the fire and died afterward by falling onto the vessels inside room (Abay-Dedeoğlu, 2012a, 219; Abay, 2014, 180; Dedeoğlu- Abay, 2014, 10) (Fig.106).

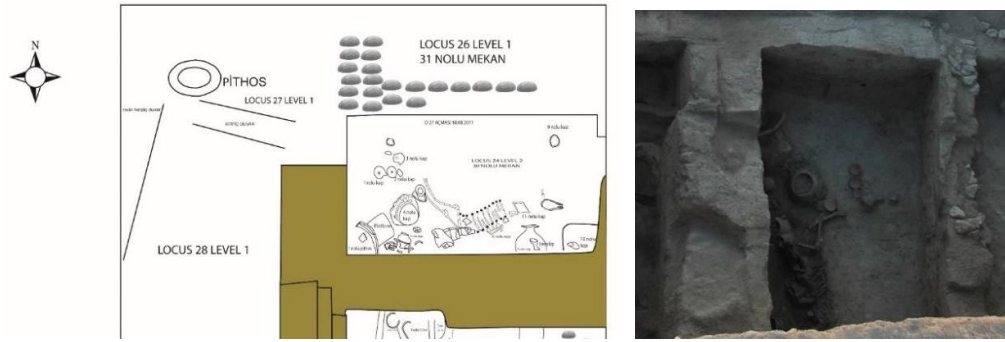


Fig. 106: Sketch Drawing and a View of Room 30 (*Beycesultan Excavation Archive*)

It was discovered that the walls and the floor of the room were plastered with clay several times. Similar to other rooms, there are several slumps on the floor. Many mudbrick blocks and north-south-oriented wooden planks were found in the deposit that is present in the room. It is possible to mention that the wooden planks in question might belong to the roof of this location and the roof of this room might have been covered with wooden planks placed on the northern and southern walls as they have been discovered. A 65x55 cm mudbrick platform was discovered on the ground in the south-eastern corner of room (Abay-Dedeoğlu, 2012a, 219; Abay, 2014, 180). A closed vessel and a bronze vessel were obtained on the partially ruined platform. It is possible that this platform was used as a space where potteries were placed.

VI.3.2.6.2. Finds Assemblage

The potteries and small finds in Room 30 (Table 12) were mostly discovered on the ground and vary between 0-30 cm. It shows that the potteries and small finds which were found in front of the southern wall of the room specifically were preserved in this location. However, many crescent-shaped loom weights were found in Rooms 7, 8 and 2 of the Houses 1 and 2, and similar loom weights were found next to the pithos which was located in the southwestern corner of the Room 30 (Fig.107).



Fig.107: Crescent Shaped Loom Weights of Room 30 (*Beycesultan Excavation Archive*)

The fact that crescent-shaped loom weights are stored in front of pithoi suggests that this type of loom weight may be related to the pithoi. In addition, the loom weight might have been stored by hanging the weight via a rope that is slipped over the pithoi's neck. A large amount of residue grain (wheat-barley) was scattered around the floor possibly from the open vessels. Additionally, two goblets and a bronze needle have been found in a closed vessel, which was discovered in the south-eastern part of the room. These finds are quite important in terms of the location of discovery. Alongside the pithos (1) that has been obtained in this room, the finds include open vessels (6), closed vessels (3), bowls (4), a miniature vase (1), goblets and fruit plates (18), plates (12), a trefoil-jug (1), bronze needles and piercing tools (3), crescent-shaped loom weights (15), knucklebones (8) and spindle whorls (2) (Fig.108).

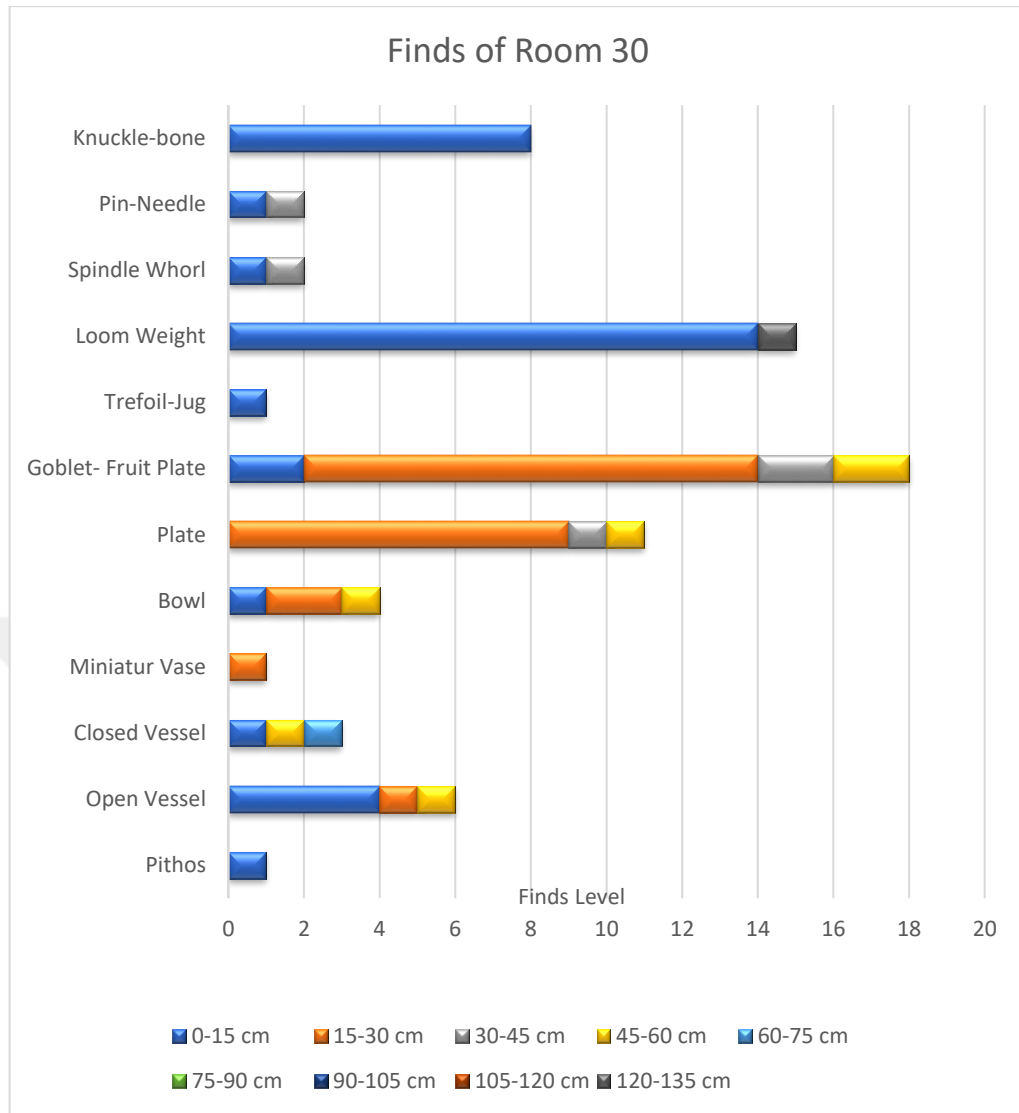


Fig.108: Finds of Room 30 (Illustrated by M.Çarkı)

VI.3.2.6.2.1. Pottery

Goblets – fruit plates, and plates are the largest vessels group among the vessels discovered in this room when the ratio is considered. Certain of the mentioned finds were uncovered on the floor and were found mostly along the southern wall of the room in question. Certain of them were uncovered in an integrable condition. The finds can be classified as it follows: Open vessels with everted and thickened rims (13%), closed vessels with everted and thickened rims (7%), goblets and fruit plates with everted and thickened rims (40%), bowls with everted and thickened rims (9%), plates with everted rims (25%), trefoil-jugs (2%) and 2 pithoi were discovered in this room (Fig.109)

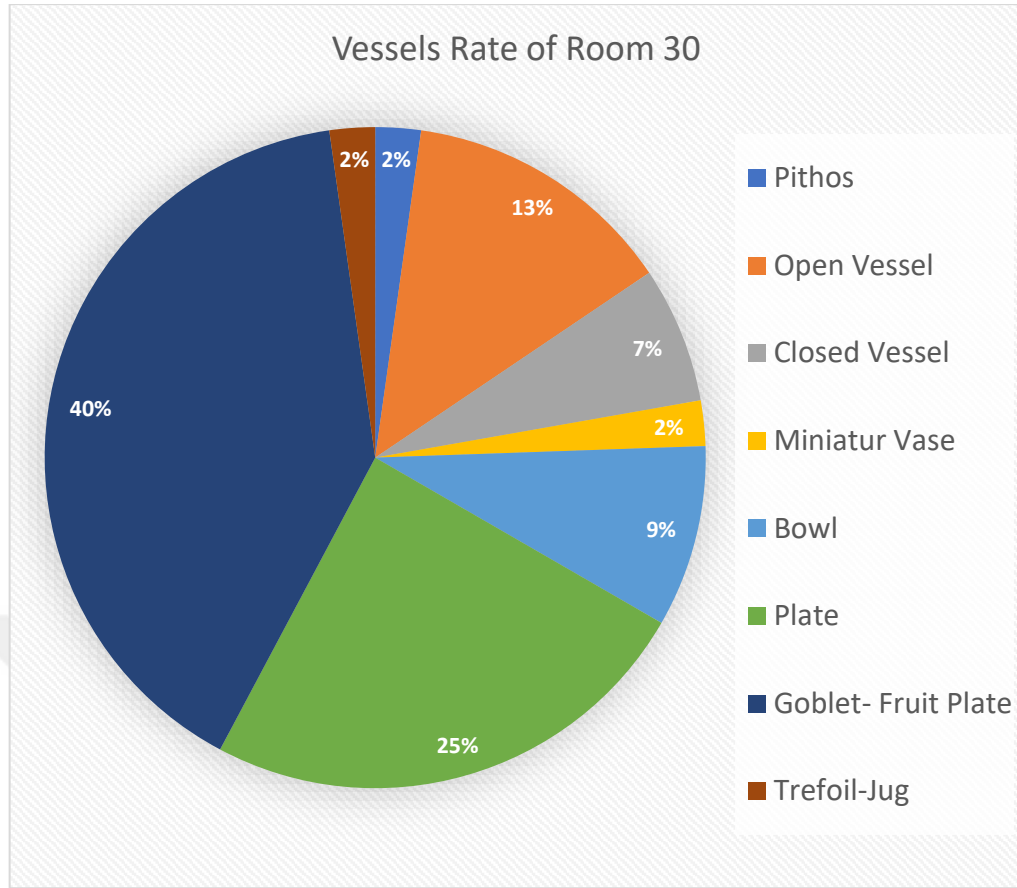


Fig.109: Pottery Rate of Room 30 (Illustrated by M.Çarkı)

When the functions of the vessels which was discovered in this room are considered, it is revealed that 66% of the open and closed vessel finds were used for service/drinking. The vessels used for service/drinking constitutes the largest group of the finds in this room. Along with the samples for daily use with a 27% ratio, a certain amount of samples is related to storage with a ratio of 7% (Fig.110). The pottery vessels, which were suitable for daily needs indicates that this room was used to carry out daily errands. However, it is possible to mention that this room was also used as storage partially.

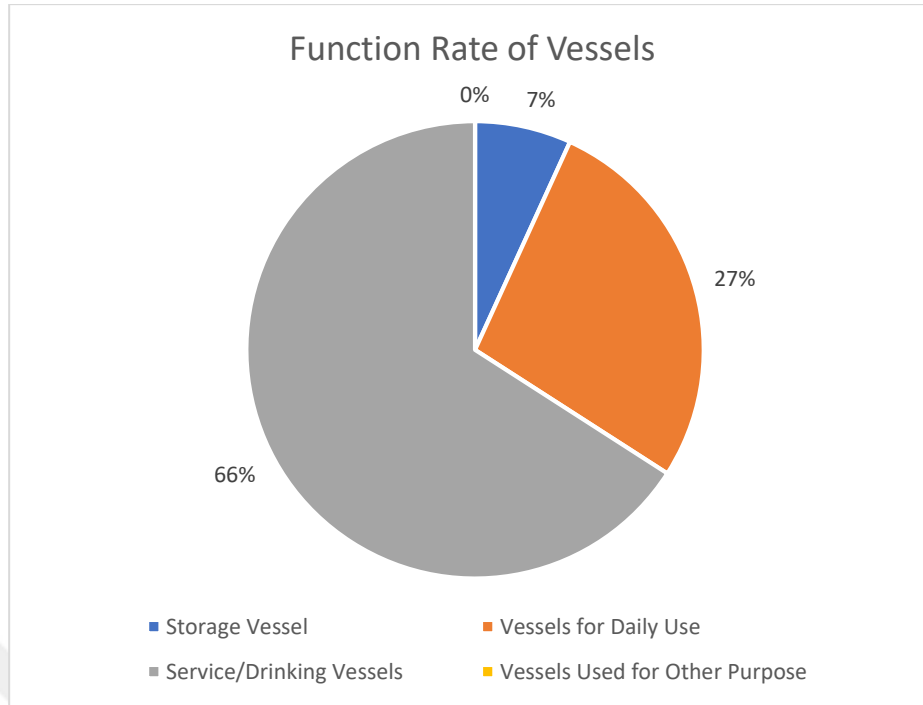


Fig.110: Function Rate of Pottery (Illustrated by M.Çarkı)

VI.3.2.6.2.2. Small Finds

The variety and number of small finds which were found in Room 30 are more limited when compared to the other rooms of Houses 1 and 2. The biggest groups of finds are crescent-shaped loom weights made of clay with a ratio of 56% and knuckle-bones with a ratio of 30%. Apart from the aforementioned finds, spindle whorls with a ratio of 7%, bronze needles, and piercing tools with a ratio of 11% were obtained from this room (Fig.111).

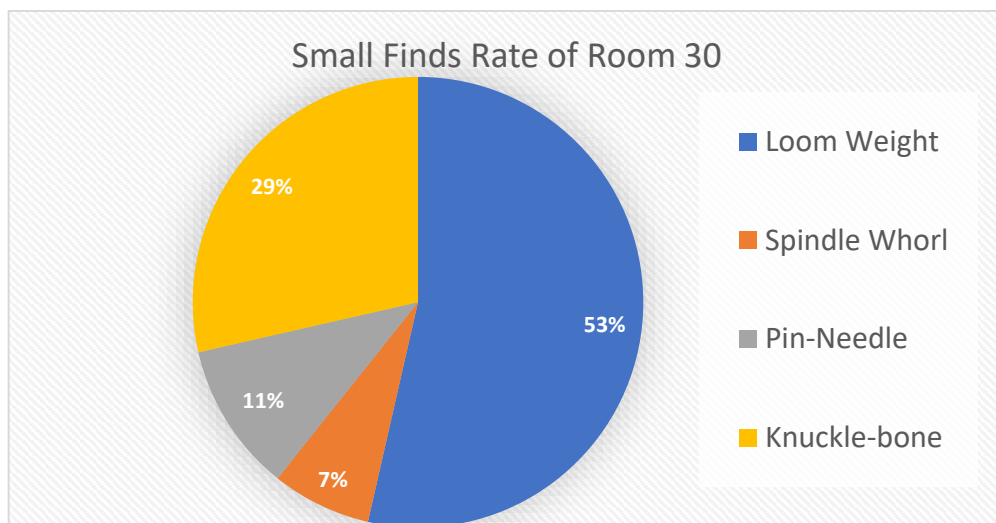


Fig. 111: Small Finds Rate of Room 30 (Illustrated by M.Çarkı))

VI.3.2.6.3. Evaluation

When Room 30 is considered in general, it can be concluded that the finds obtained in this room are related to their usage in the late phase. The fact that the passage that used to connect this room with Room 28 after the first phase is closed and the walls were repaired indicates that the room was re-designed and used for a different purpose. Therefore, it is possible to say that the finds which were discovered in this room belong to the period which occurred after the mentioned renovation phase. Abay suggests that this room may have been redesigned for a nuclear family which was separated from the existing household. Considering the mentioned theory, Abay states that this might indicate the existence of an elementary family concept indirectly (Abay, 2014, 182). In the other words, a pithos and grain remains, crescent-shaped loom weights and spindle whorls, goblet-fruit plates, bowls and plates were found in this room, therefore it is thought that used as a storage room, and played alternative role in weaving activities. Further, from the remains of the large head animal observed in the room, during the fire, the animal escaped and took refuge in the room, and Abay suggests that the animal came here from a possible courtyard or street (Abay, 2014, 180). However, both in early excavations (Lloyd, 1972, 7) and recent excavations, it was observed that the streets stretched in the east-west direction. Within this aspect, the location of rooms belonging to the Layer 5b north of room 30 is more likely than the street possibility that the animal probably came here from a courtyard. On the other hand, due to its relationship with the Room 62, it is possible that the Room 30 is an area where storage is made for the Room 62.

CHAPTER VII. GENERAL EVALUATION OF HOUSE 1 AND 2 IN TERMS OF ARCHITECTURAL REMAINS AND FINDS

Houses 1 and 2, which are located in Beycesultan level 5b and constitute the main subject of this study, provide important data on the LBA society of the settlement with their architecture and in situ finds. Whilst inspecting the architectural elements in this layer, the houses were built with single and double rows of mudbrick, and the walls of the houses that were severely damaged by the demolition. It was observed that walls were preserved at heights ranging from 1 to 2 meters (Fig. 26). Together with the state of the architectural structure before the demolition, the presence of stairs in the house, strong foundations, thick walls as well as finds at the upper level of the floors of the place and high preserved walls indicate that a house was double-storey (Pfalzner, 2001, 130-131; Abay, 2014, 180). In this context, as mentioned earlier, the solid foundations of houses 1 and 2, the high preserved walls and the destruction deposit in the space is the capture of different levels of finds indicate that the houses are double storey. In addition, the height of the wall, which is knocked down as a monolithic in the Room 28 in the House 2, appears to be important evidence that reinforces this evidence. On the other hand, inside the space, there were no staircases or residues in relation to the upper floors. Probably the upper floors were accessed by stairs built outside the houses. The design of the house plan and associated with this plan reveals how the house is used. All architectural elements and finds identified as in-situ within houses are of great importance in terms of the use of houses.

VII. 1. House 1

The size of the areas in house 1 consisting of four separate rooms (Room 14, 55, 7, and 8) differ from each other. All the boundaries of this house, whose main entrance is from the east, could not be determined. However, in this form, it is clearly revealed that it differs in (Lloyd, 1972, 9-15 Fig.3) plan from the houses uncovered in early excavations. In relation to the possible main entrance to this house, which is in the appearance of a complex structure, the room 14 appears (Fig. 112).

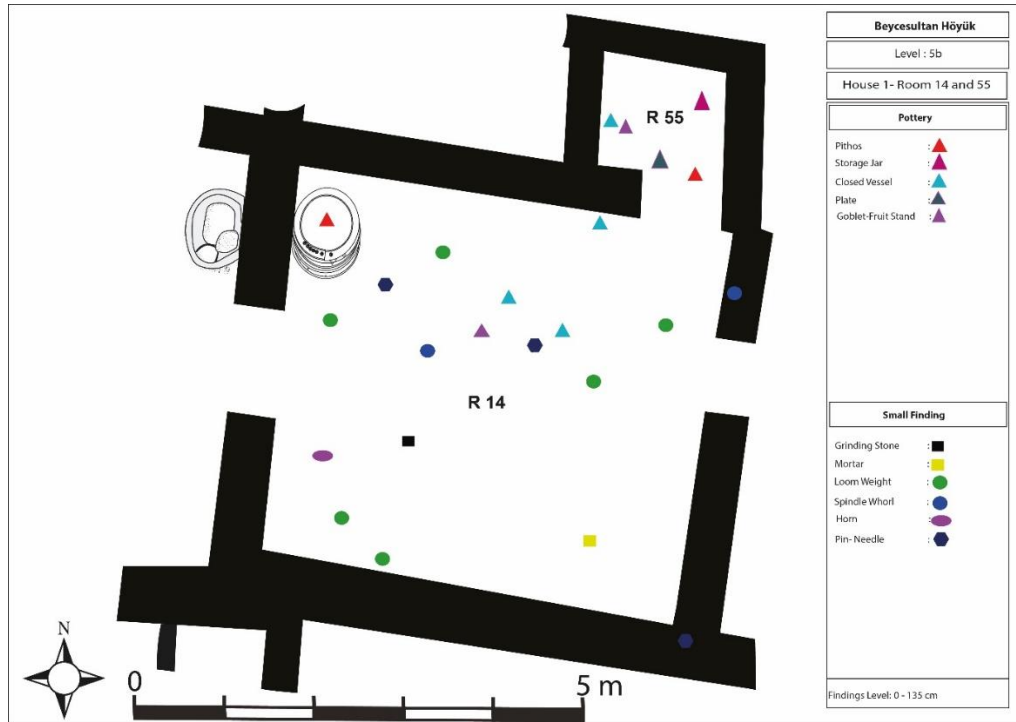


Fig.112: Finds Context of Room 14 and 55 (Illustrated by Mehmet Yurseveri)

It is thought that Room 14 is covered with a roof like other rooms of the house. Transportation is provided from the room in question both to the Rooms 7 and 55. In this room, open vessels, closed vessels, goblet- fruit plates, bowls, plates, trefoil-jug, as well as grinding stone, mortar, pestle, crescent-shaped loom weights, spindle whorls, flint tools, beads from seashells, bronze needles and processed horns and bones are observed. In addition to these finds, a large number of fragments belonging to a pithos have been observed. In the space where the find repertoire is quite diverse, the finds are usually identified in the northern and central part of the room. Whilst inspecting the room finds, open vessels, goblet- fruit plates, and crescent-shaped loom weights appear as the largest observed finds group. Although it is not considered that the exact use of the observed finds in different varieties is used in the room, the room in question has an alternative role in the possible production activities in the House 1 is considered (Abay, 2014, 178). However, given the functions of the open vessels addressed in the room, it is possible to state that they are also used in line with their production activities and daily needs.

Whilst inspecting the uncovered and fairly small size Room 55 associated with the Room 14, the small-sized silo in the space, as well as a small size basin carefully made of clay is located (Fig. 113). In addition to these, a limited number of open vessels, goblet-fruit plates, sieve, mug, trefoil-jug, grinding stone, crescent-shaped loom weight, flint

tools and beads have been identified. In addition to being an area where items are stored for daily needs, both from the size of the room and the contextuality of the observed in the space, probably the preservation of animal foods as mentioned earlier is considered to be an area in which it is made.

It is clearly revealed that Room 7, which is located in the centre of house 1 with a hearth in it, has an important role from the functional point of view (Fig. 150).

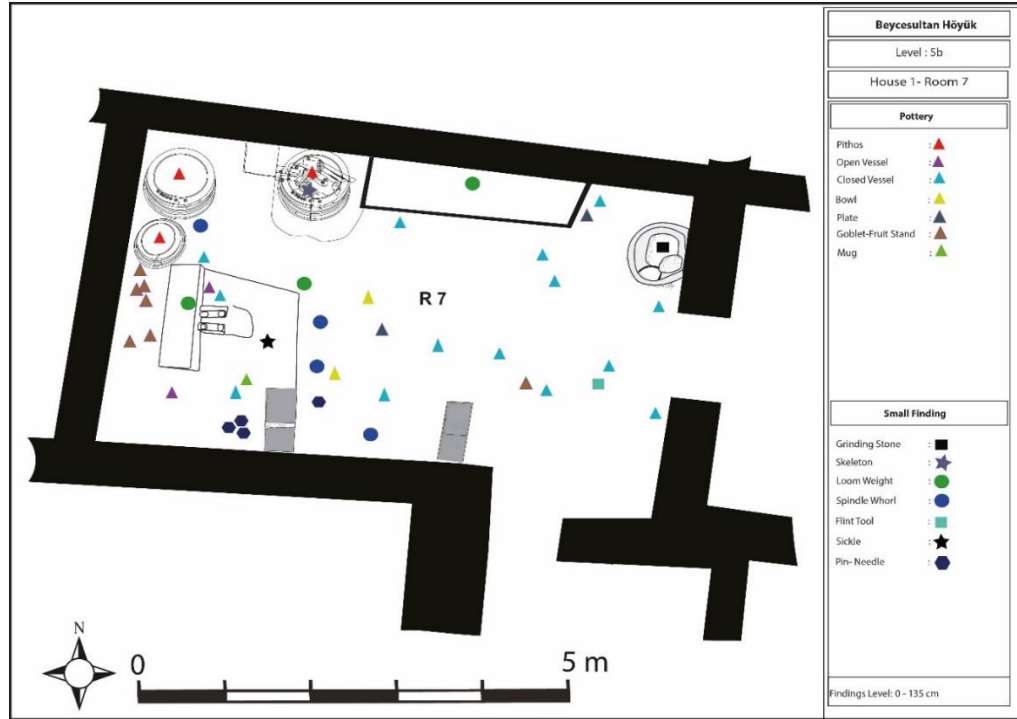


Fig.113: Finds Context of Room 7 (Illustrated by Mehmet Yurseveri)

With connecting Rooms 14 and 8, this room features storage pithoi as well as silo and grain grinding area. In addition to these, samples such as small-sized storage jars, open and closed vessels, goblet- fruit plates, bowls, plates, trefoil-jugs and spouted pitchers, mug and miniature vase were observed in the room, which constitute a repertoire of finds of various kinds. In addition, finds such as crescent-shaped loom weights, spindle whorls, flint blades, beads, grinding stones, burnishing stone, bronze sickle, needles and knuckle-bones were observed at the room. Considering the proportions of the observed finds, beads, crescent-shaped loom weights and goblet- fruit plates constitute the largest group of finds. In general, the presence of storage areas and grain grinding area along with the hearth structure in the space indicates that the space is used as a multifunctional. It is clearly revealed that the space is used primarily for storage purposes, and than cooking, workshop and gathering space. Especially the presence of clay legs located on

the south wall of the space and considered to belong to a shelf is also considered to be used as an area where open vessels is stored. Summarizing it is possible to state that in the central location of the House 1, there is an area where many activities necessary for the house take place.

Considered to have an important function for the House 1 Room 8, architectural elements such as five silos of different sizes, as well as three pithos and lots of pottery and small find observed (Fig. 114).

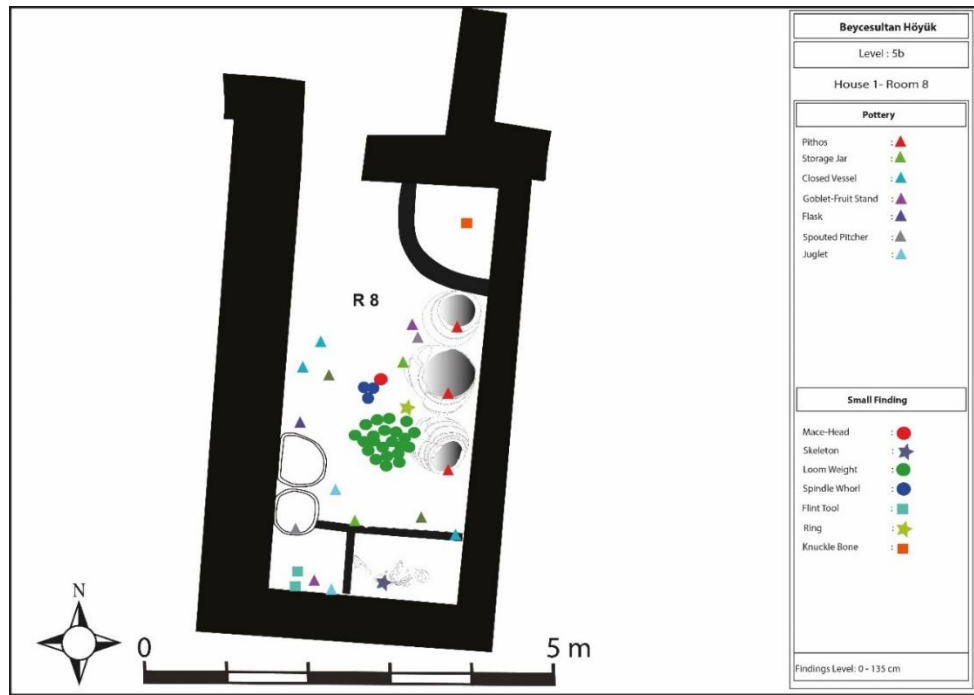


Fig.114: Finds Context of Room 8 (Illustrated by Mehmet Yurseverı)

Whilst inspecting these finds, open vessels, closed vessels, plates, goblet- fruit plates, trefoil jugs and spouted pitchers, flasks, bowls, juglets, crescent-shaped loom weights, spindle whorls, flint tool (blade), beads, knuckle-bones, flint stone core and a golden ring have found. The crescent shaped loom weights and beads constitute the largest group of finds in the space. In terms of their functions, pottery is intended for daily use, as well as samples for storage purposes, were seen to be significant. In addition to the architectural elements listed above, as well as the finds, this room is the storage area of the house 1, as well as an area where pottery and small finds are stored is considered to be used.

VII. 2. House 2

All spaces belonging to House 2 with a larger plan than house 1 have not been exposed. But it is believed that the entrance to House 2 opens to the east, similar to house 1. It is highly likely that it shall be connected to a street that leads to the possible main street with east-west extension. As far as it is revealed, this house complex consisting of 6 spaces (Room 63, 19, 28, 2, 62 and 30) stands out with both its large size (38.7 m²) and finds of Room 28 in the centre of the House 2. It is clearly revealed that the spaces belonging to the house have different functions both in the context of their dimensions and their finds. It is clearly revealed that the House 2, as already mentioned, consists of two construction stages. From the data obtained in the house, a unit consisting of 30 and 62 spaces within the house by closing in the second phase of certain door transitions in the first use phase of the house built in two floors created. However, although it is not known for which purpose and when this architectural change was made, the samples of plaster obtained in different areas of the house were examined in order to provide an idea about it. As part of the ethno-archaeological studies in Kocayaka village, it is understood that the walls are plastered once or twice a year in relation to the use of the spaces in the house within the scope of the maintenance of the inhabited houses. In this way, the house is intended to last longer and remain clean. Naturally, it is clearly revealed that areas such as the kitchen or hall and door passages, in which the hearth is located, are plastered more often due to easily be stained or destruction due to the intensity of use. On the other hand, it is seen that storage room is often plastered less due to less dirty. For this purpose, from the layers of plaster located on the walls of houses, it is possible to obtain evidence on the use of the house. Within this aspect, in order to have an idea of both the use of House 2 and architectural changes made in the house, the plaster layers at different points of the house were examined (Fig.115).

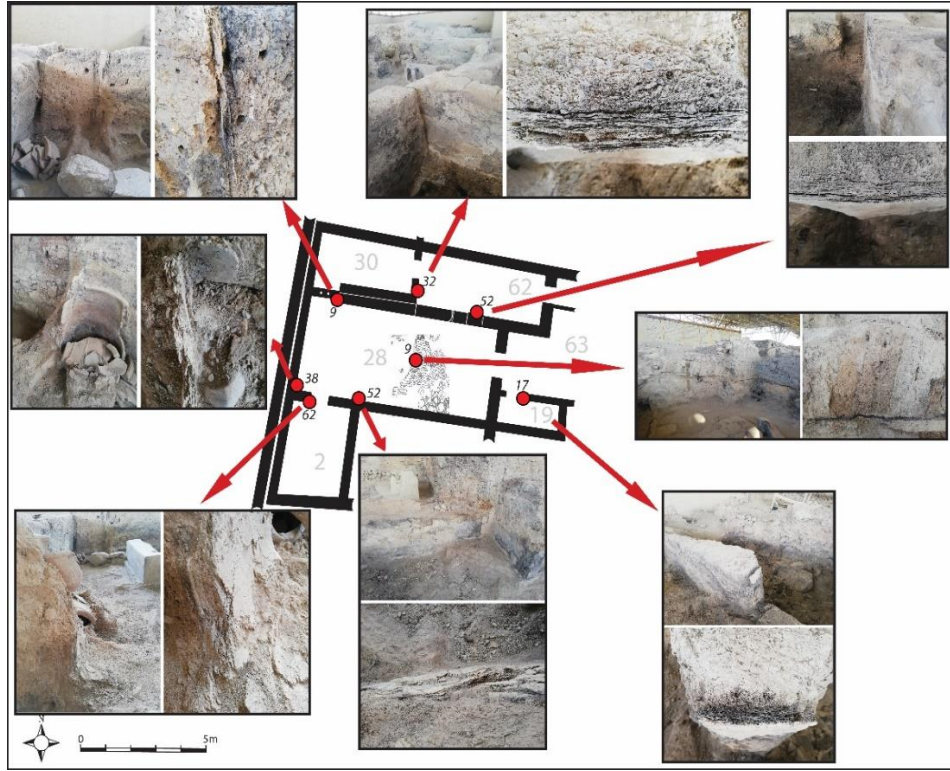


Fig.115: Clay Plaster Examples of House 2 (Photo and Illustrated by M.Çarkı)

Within this aspect, the southwest corner of the Room 28 located in the centre of the house, the south wall, as well as the door pass of the Room 2, and the examples of plaster in the door passage closed between the Rooms 28 and 30 have been observed. The sample of plaster belonging to the wall belonging to the second floor, which was knocked down as a block within the Room 28, as well as the samples of plaster located on the south and west wall of the Room 62 were examined. Finally, the sample of plaster observed at the entrance part of the Room 19 was examined. Two methods of studying plaster on the walls belonging to the house have been tried. The first sample of plaster obtained was examined in the excavation laboratory of Pamukkale University, Leodekiea, with the help of Dr. Murat Tarhan and his team; the sample was put on epoxy and dried in the oven. The sample was cut open with petrographic device and examined under a microscope. However, the desired consequence was not achieved as a consequence of the discoloration of the epoxy functioning into the plaster sample. The second method was to examine the thin layers of plaster samples obtained by separating each other with the help of magnifying glass and scalpel. Within this respect, it is clearly revealed that the second method provides more functional results. Firstly, in the examination made on the plaster located in the door passage between Rooms 28 and 2, it was determined that the door pass was plastered 62 times. In addition, it is clearly revealed that the wall located

in the southwest corner of the Room 28 has been plastered 38 times. On the other side, in the examination of the plaster sample observed on the south wall of the Room 28, it was discovered that this wall was plastered 52 times. It was revealed that this space was plastered 9 times in the examination on the plaster sample located between the Rooms 28 and 30 which was closed after a while. In the same way, it was seen that the wall was plastered 9 times in the examination made in the plaster of destroyed wall into the Room 28. This wall is belonging to the second floor. On the other side, it was revealed that the south wall of Room 62 was plastered 52 times and the west wall of this room was plastered 32 times. Finally, when the plaster located at the entrance of the Room 19 was examined, it was seen that this room was plastered 17 times. It can be considered that different walls belonging to the same space have different layers of plaster is associated with the use or accessibility of the walls of the space. For example, access to this area is limited due to pithos located in the southwest corner of Room 28, or the presence of wooden awnings such as possible shelves on certain walls can be seen as the reason for this difference. On the other side, the use of door passages often, as in the space door pass Room 28 to Room 2, may require more frequent plastering of these areas.

It is very likely that the stucco samples located on the south wall of the room 28 and the south wall of the Room 62 shall provide similar results, because of which the house was plastered 52 times from the initial installation to its demolition. Within this aspect, it is concluded that the house is used for at least 52 years, given that it is plastered once a year, and at least 26 years, given that it is plastered twice a year. Again, it was revealed that door of between the Rooms 28 and 30, and the wall demolished in blocks into the Room 28 gave similar results. Based on this, it can be concluded that the second floor was built at the same time, along with architectural changes in the house built. It appears that the second floor was built by redesigning the house minimum 4.5 years before the house was destroyed, and maximum 9 years before the plastering of the walls detected in both areas.

Considering the data obtained above, as well as the architectural changes made in House 2, it was seen that the initial state and final state of the house were partially different from each other. As shown in the plan, the first use of the house is seen in the plan specified as “A”, while the final state of the house is seen in the plan specified as “B” (Fig.116).

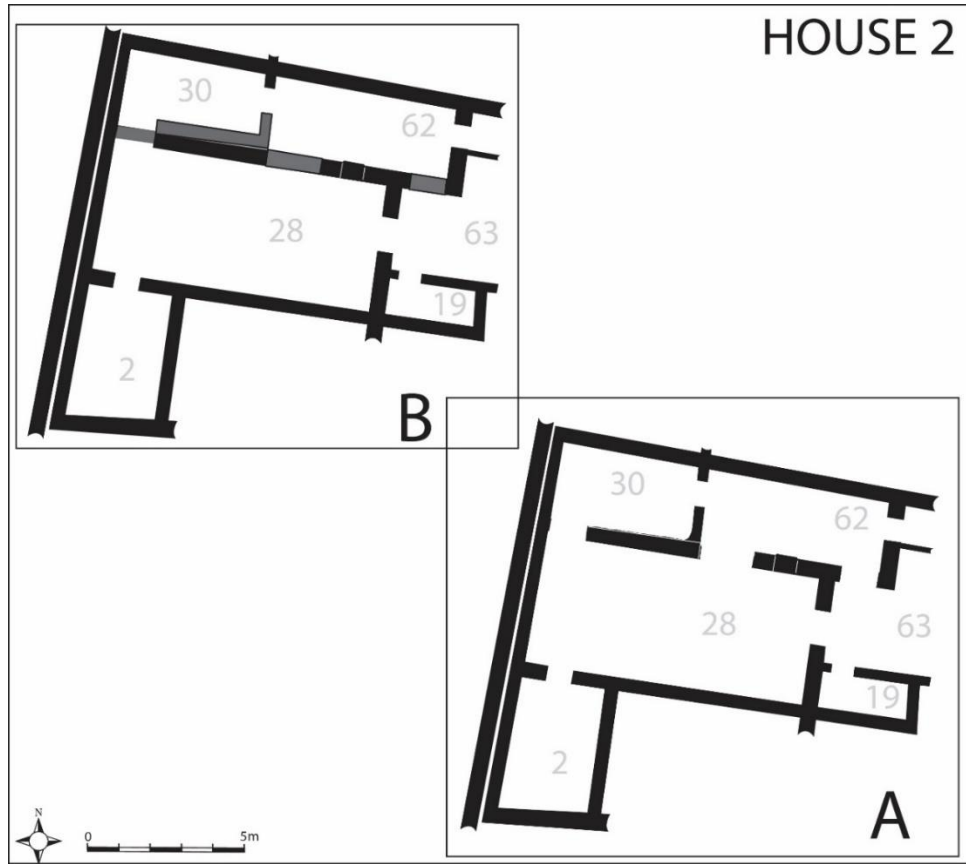


Fig.116: Construction Stages of House 2 (A- Early/B- Late) (Illustrated by M.Çarkı)

It is clearly revealed that the House 2 has different functions in the context of locations and finds of spaces through the last case. In this context, whilst inspecting the Room 63, which is partially uncovered in the easternmost part of the house, it is considered that is similar function to the Room 14 of House 1. As it was revealed, Room 63 is located at the main entrance to the House 2. Through this room is provided with access to other rooms of the house (Fig.117).



Fig.117: Finds Context of Room 63 (Illustrated by M.Çarkı)

The remains of pithos and medium-sized closed vessels, as well as a clay basin covered within the said space, provide an important clue to the function of the space. On the other hand, bowls, plates, goblet- fruit plates, mug, crescent shaped loom weight and spindle whorl have been observed. The finds were more often observed at the door entrance of the Room 19. In the find repertoire covered within the space, it is possible to state that space has an alternative role in production activities. It is also understood that pithos and medium-sized open vessels contained in it are also partially used for storage purposes. In addition, the presence of a boat made of terracotta at the room recalls the possible use associated with the preservation of animal food, as in the Room 55 of House 1.

Considering the Room19's location and size within the house, it is possible to state that the room demonstrates similar characteristics to the Room 55 in the House 1 (Fig.118).

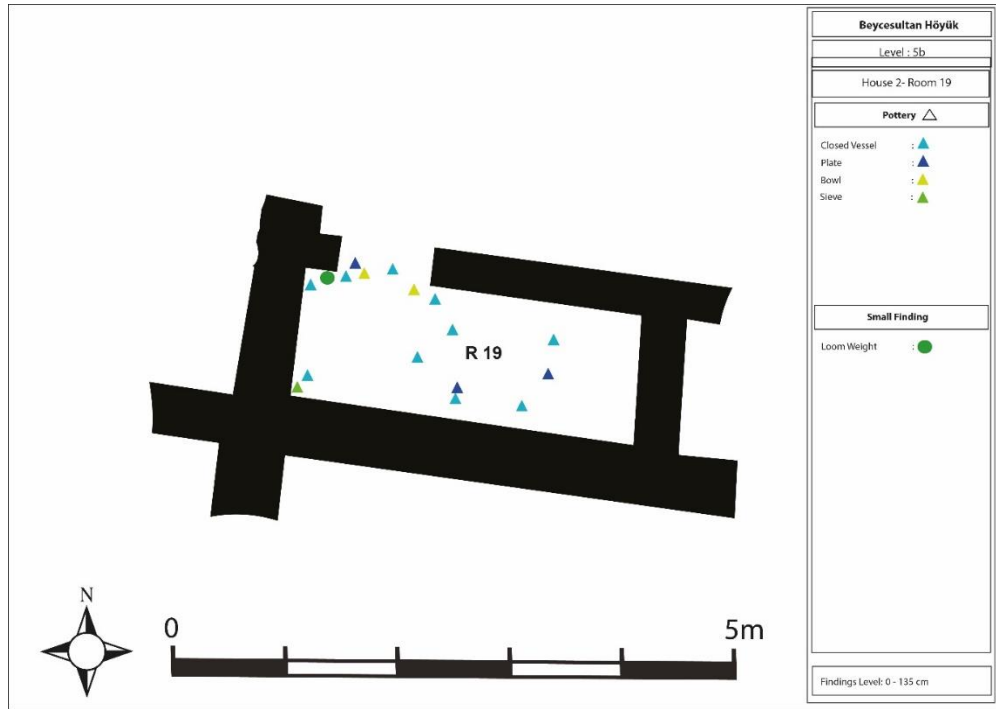


Fig.118: Finds Context of Room 19 (Illustrated by M.Çarkı)

Considering the context of finds in the space, it is largely composed of medium sized closed vessels. In addition to open vessels, bowls, sieves, plates and crescent shaped loom weights have been observed. Whilst inspecting the distribution of the finds, the open vessels provides the impression that they are scattered on the ground, falling off a possible shelf. In this respect, it is considered that the space is used for cereals needed for daily necessities are stored. In this way, it is easily accessed cereals in case of need.

Room 28, located in the centre of House 2, is a room where important works are carried out in the house with both its size and its finds (Fig.119).

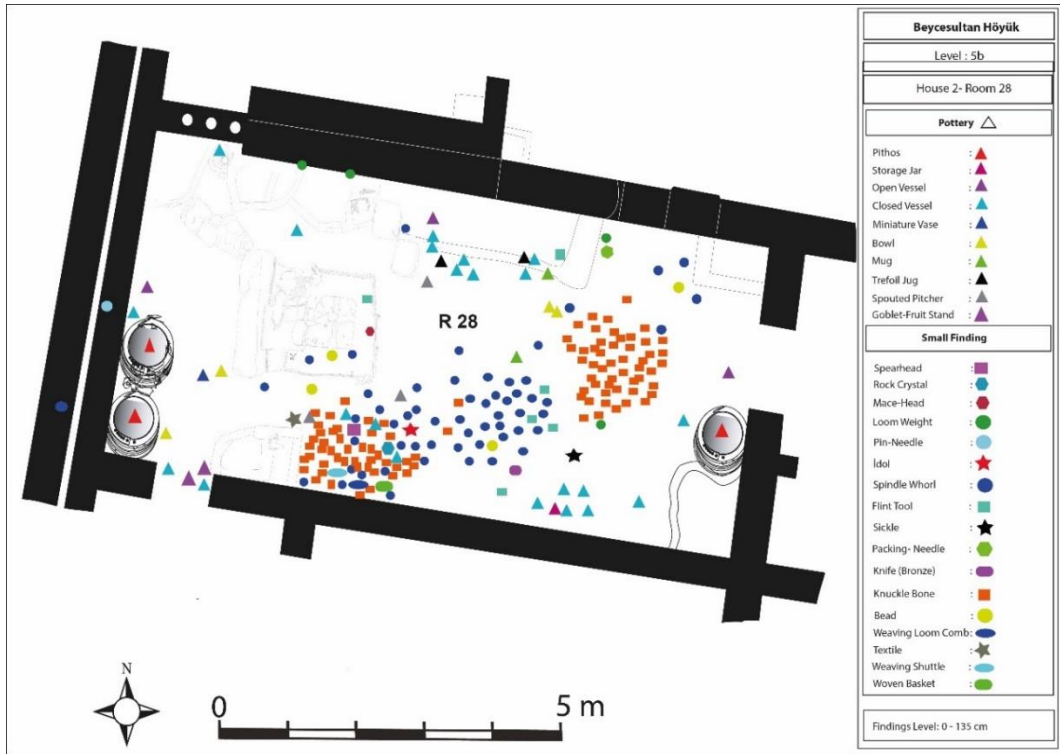


Fig.119: Finds Context of Room 28 (Illustrated by Mehmet Yurserver and M. Çarkı)

In many respects, it demonstrates similar features to the Room 7 of house 1. There are many storage elements in the Room 28 due to the fact that the storage capacity of the pithos in the Room 2 cannot fully respond to the needs of House 2. There are many silos of different sizes in Room 28. There are three pithoi for storage, as well as silos. The fact that silos are both small in size and numerous in number might be explained by the variety of products. Within this context, it is clearly revealed that products such as barley, wheat, vetch, and lentils are stored in silo and pithoi. The presence of a bronze sickle in the space indicates that individuals living at house in the context of agricultural production are personally involved in agricultural activities.

The location of the hearth structure in the centre of the room except the silos and the stone used for grinding around the hearth, as well as crescent-shaped loom weights, spindle whorls, slingshot stone, counting stone and flint tool, spearheads, bronze dagger, silver ring, mace-head, dressed flint stones, bronze needles, knuckle-bones, bone beads, seashell beads, idol made of stone, wooden weaving loom comb, weaving shuttle, woven basket, and textile sample observed.

Based on these finds, it is possible to mention that domestic production is carried out in this room. Within this aspect, loom weights, spindle whorls, weaving loom comb,

weaving shuttle and textile reveal the weaving activities was conducted in this room. On the other hand, the presence of cooking pots associated with the hearth structure in the room might be said that food preparation activities are carried out at the room. At the same time, it is thought that livestock activities are intensively carried out from numerous knuckle-bones, as well as animal bones detected at different levels of deposit. In addition to these activities, jewellery that can be status objects (an object demonstrating wealth), such as beads made of seashell or bone, are observed in greater numbers and variations than house 1 and also they may indicate the presence of individuals with a certain status in the House 2. If we consider the status of residence of such individuals in House 2, it is important in that it reveals the presence of individuals of different status for the general of the settlement.

Apart from the small finds listed above, there are bowls, open vessels, bowls, plates, goblet- fruit plates, trefoil-jugs and spouted pitchers, cup, jugs, teapot, feeding bottle and miniature vases have been observed. In this context, the presence of a large number of medium-sized open vessels on the ground in the southeast corner of the space is also considered to be used as a storage element. In addition, the presence of a large number of goblet- fruit plates, plates, bowls and jugs used for service purposes at the room constitutes evidence that the needs such as eating food have been realized in this area. In this respect, it is considered that the space may have been used as a gathering area. On the other hand, the availability of a large number of open vessels for daily use is important for everyday activities carried out in the room.

In addition to the knocked-down wall observed in the Room 28, pottery of different forms along with finds such as crescent shaped loom weights, bowls, and plates in a level range of 105-165 cm. The presence of ceramic fragments and bone fragments is partially on the upper floors, it is considered that production and consumption activities are carried out these areas (Abay, 2014, 181). At the same time, due to the lack of a fairly large area for sleeping and relaxing from the density of the find in the space, this need is considered to have been largely eliminated upstairs (Abay, 2014, 180-181).

In terms of the finds in the Room 2, it has similar features to the House 1 Room 8 (Fig.120). Pithoi of different sizes lean along the walls, along with numerous open and closed vessels, goblet- fruit plates, bowls, plates, trefoil-jugs, flasks, a rhyton, juglet, sieves, funnels, cups were observed. Other than those observed, crescent-shaped loom

weights, spindle whorls, burnishing stone, grinding stone, flint stone, bronze spearhead, seashells, stone and bone beads, glass bracelet, iron nails, bone pounder, stone axes, knuckle-bones and one bulla are identified.

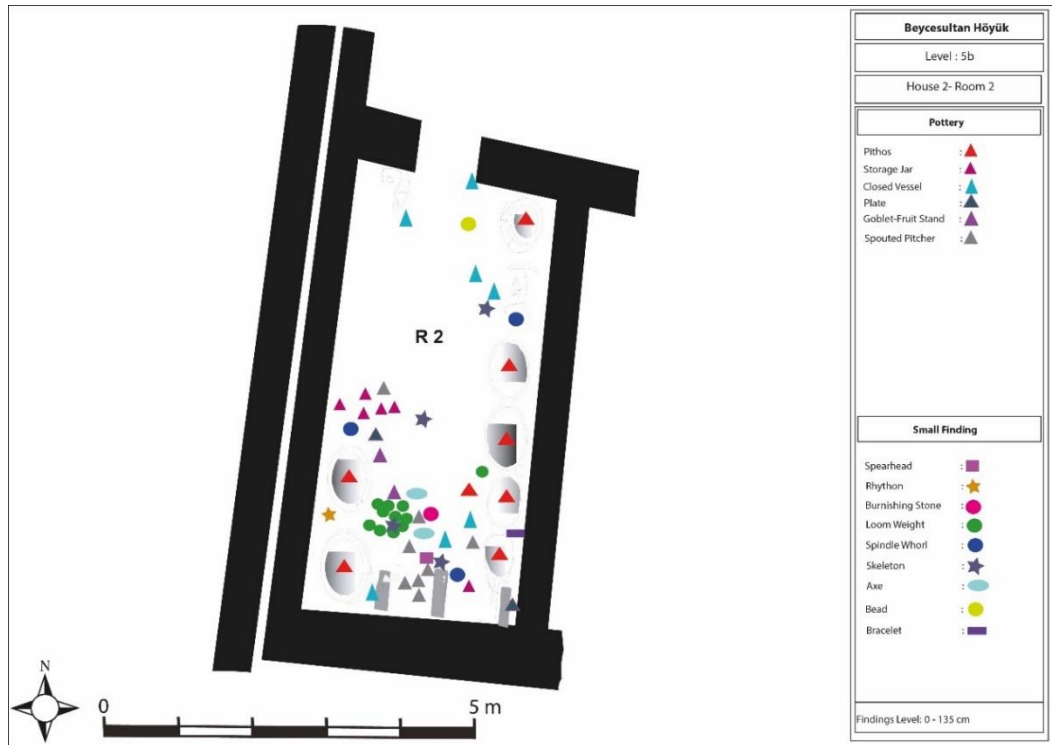


Fig.120: Finds Context of Room 2 (*Illustrated by Mehmet Yurseveri*)

The above finds provide the impression that they are densely observed in the southern part of the space and are preserved in relation to the shelf built next to the southern wall. Based on all these finds, the presence of a shelf where potteries are stacked in a room with rich finds, this room is used as a storage of potteries.

It was observed that this area consisting of Rooms 62 and 30, which was subsequently designed as a special unit in House 2, is weaker than other rooms of the house in terms of the finds it contains. Within this context, primarily, whilst inspecting the Room 62, it provides the impression that the room has partial storage capacity from open vessels along with the silo located in the southeast corner of the room (Fig.121).

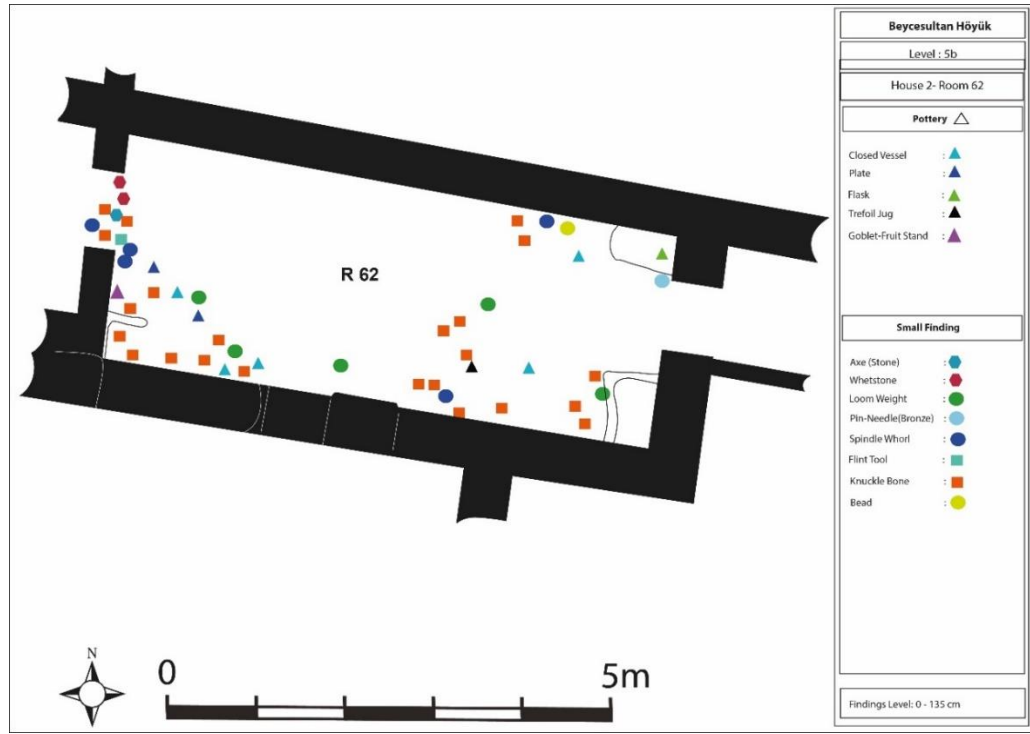


Fig.121: Finds Context of Room 62 (Illustrated by M.Çarkı)

On the other side, seal-printed hearth fragments were observed on the western part of the Room 62. Remains of clay structure built adjacent to the western wall of the room have been identified. It is believed that these residues, most likely associated with the hearth parts, are the remains that belong to the main body of the hearth. In this respect, it is partially similar to the Room 28. However, the limited proportion of storage elements in Rooms 62 and 30 reveals that these two sites depend on the House 2 on certain issues. In other words, it is considered that space 62 is not economically independent of House 2. Although partially independent of activities such as cooking, it is possible to state that it acts in partnership with House 2 in production and storage. Considering the repertoire of finds observed in the space; in addition to examples such as open and closed vessels, dishes, goblet- fruit plates, flasks and trefoil jugs, crescent-shaped loom weights, spindle whorls, an idol made of stone, small sized stone axes, whetstones, bronze needle, bronze ring, beads made of seashell and bronze, and knuckle-bones were observed. The finds are predominantly found in the southern wall and eastern part of the space. Loom weights and spindle whorls used in weaving activities other than potteries in the space, as well as wooden holes located on the south wall of the space and wood that may belong to the loom from the remains of it is believed that weaving activities are carried out in the space. At the same time, house 1 and 2, as well as from bronze finds detected in early excavations

(Murray- Mellaart, 1995), point to the production of bronze artifacts in the settlement. It is possible to mention a possible trade in terms of the supply of such mines as copper and tin, especially necessary in the production of bronze. It is possible to state that the höyük as a location has positive reflections on a possible trade between the Inner Aegean and Coastal Aegean at a strategic point.

Since animal bone fragments observed at different layers of the room, as well as numerous knuckle-bones detected in the Room 62, as in other rooms of House 2, it is possible to state that activities are important in the context of the house economy. The Room 62 is considered to be an area where weaving and daily work is carried out except for partial storage purposes with its location and finds.

Room 62 can be reached with a door pass located on the west wall of the Room 30. This room with a rectangular shape was created by later designing like Romm 62. There are no elements of storage except for medium-sized open vessels and a pithos (Fig.122).

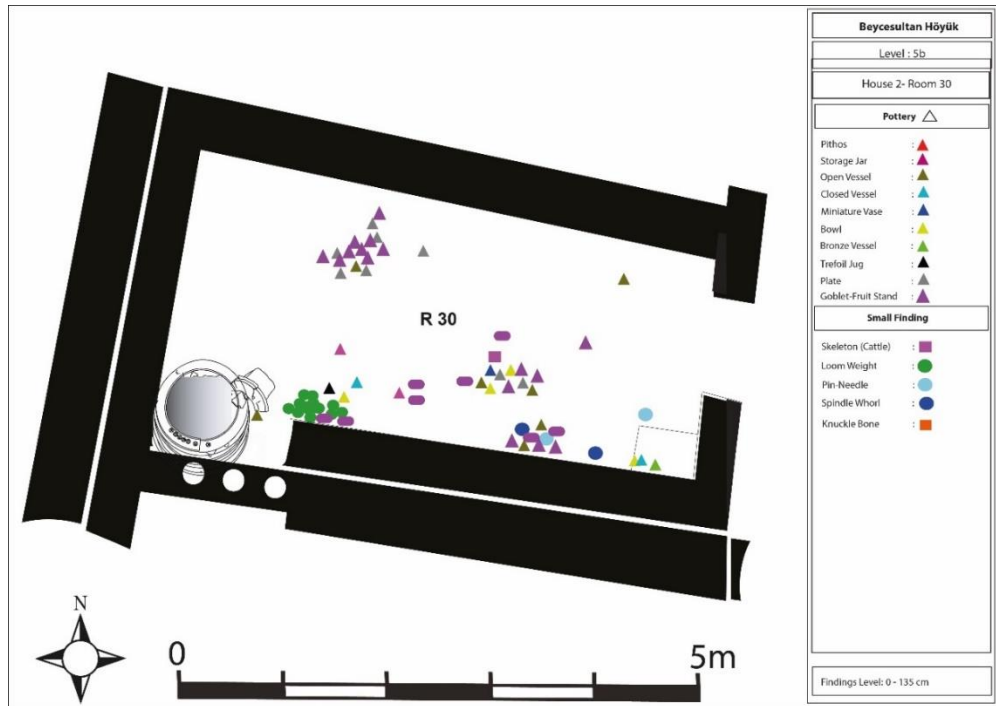


Fig.122: Finds Context of Room 30 (Illustrated by Mehmet Yurseveri)

In addition to the pithos observed the room includes open vessels, closed vessels, miniatur vessel and goblet- fruit plates, plates, trefoil-jug, bronze needles and piercing tools, crescent shaped loom weights, spindle whorls and knuckle-bones. The finds were mostly detected along the southern wall of the room. Whilst inspecting the finds'

repertoire, it demonstrates similar characteristics to the Room 62 finds. Along with these finds, grain remains such as wheat, as well as residue belonging to a cattle animal were identified in the room. Pithos and grain remain (*for storage and agricultural production*) have been discovered in room, as well as a large number of goblet- fruit plates, bowls and plates in the pottery group(*for service/drinking*), as well as crescent-shaped loom weights (*textil production*) and grains. The presence in the space is considered to have an alternative role in weaving activities in relation to the storage and space 62 in the framework of daily needs.

Whilst inspecting the functions of spaces 1 and 2 in general, it appears that the spaces in both houses have similar functions (Fig.123). Whilst considering the location of the rooms and the finds contexts, the houses might have presented functions as food preparation, eating, gathering, production activities, weaving, storage and sleeping.

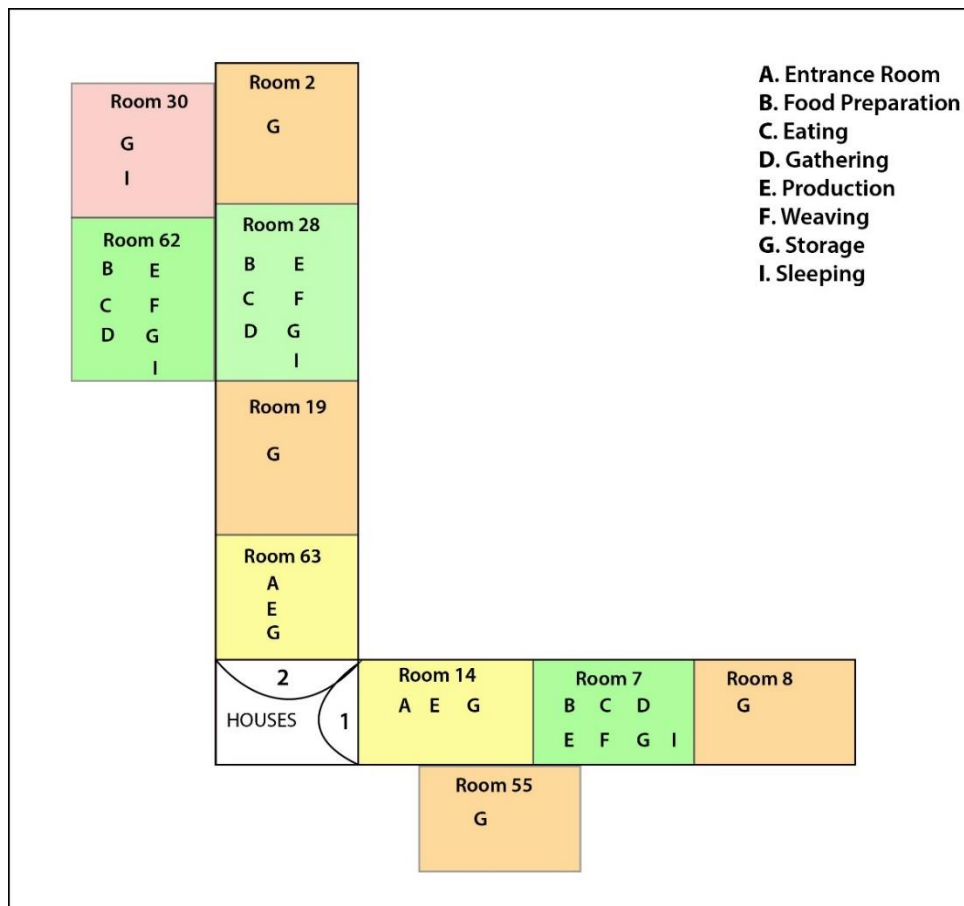


Fig.123: Function Chart of Houses 1 and 2 (*Illustrated by M.Çarkı*)

These house seem to have primarily had a supporting role in the production activities of Rooms 14 and 63 located at the entrance part of both houses, as well as

partially storage function in line with daily needs. On the other hand, it is seen that the spaces 55 and 19, which are built in relation to the 14th and 63 space and are built in small size compared to other spaces of the houses, are used for storage purposes. It is clearly revealed that in it there are hearth structures in Rooms 7 and 28, which are located in the central location of the houses, as well as Room 62 are used for multifunctional purposes. In all three rooms, food preparation, eating, gathering, production activities where products such as cereals are ground, as well as storage, partial sleeping, and weaving activities in Rooms 62 and 28 in particular, were likely carried out. The storage needs of both houses were observed to be met in Rooms 8 and 2. In addition to storing grain, these rooms also come across as areas where open vessels and small finds necessary for daily needs are stored. It is considered that the storage and sleeping needs are met in part in the Room 30, which is associated with Room 62. On the other hand, it is likely that the needs for sleeping, and rest have largely occurred on the upper floors of houses. Because it is considered that from the architectural elements and archaeological finds that there is not enough space in these spaces for such requirements as resting.



CHAPTER VIII. CALCULATION OF POPULATION AT BEYCESULTAN LATE BRONZE AGE LAYER 5B (II)

Population rates in settlements are important in terms of the structure of ancient societies and understanding social mobility (Ökse, 2016, 49). Settlements and regional population movements are considered to have played an important role in the installation and destruction of settlements. At the same time, the calculation of the population in a settlement is of great importance in terms of contributing to the obtaining of finds on the social, cultural and economic structure of the settlement. Environmental conditions and economic changes can be observed as factors affecting the way of life as well as regional population changes (Ökse, 2016, 49). Within this context, analysis on skeletal remains addressed in settlements or residential cemeteries are based on the population structure in the settlement, as well as length of life, causes of death such as child mortality. It is also important in identifying causes such as famine, epidemics, malnutrition, disability and violent death (Perky Vaupel, 2002; Misty, 2016, 49). Within this respect, the skeletons found in the houses in the Beycesultan Layer 5b are of great importance, but the cemetery area of the period in question cannot be identified yet the mentioned death reasons and proportions strengthen make difficult to precise data.

As a consequence of earlier studies on the calculation of the population in a settlement, certain criteria have been established. It is possible to state that these criteria cause certain difficulties since all layers of settlements and cemetery sites used in the settlement process are usually not fully revealed (Kramer, 1979, 131-163). Within this aspect, in addition to the work done by Carol Kramer in the Kangavar valley in the Zagros, Frederik G.L. Gremliza's work in the Dez region in the southwestern part of Iran (Gremliza, 1962) is an important role in revealing the population rate in a settlement. According to studies in the village of Shahabat in the Kankavar valley and the surrounding mountainous area, Kramer suggested that 100 people live per hectare (Kramer, 1979, 131-163). On the other hand, Gremliza's suggestion of 200 people per hectare in research in Iran (Gremliza, 1962; Adams, 1965). However, although Gremliza's proposal is accepted by many researchers, it is believed that this value cannot be fully applied to different regions in the Near East (Kramer, 1979, 131-163; 1980, 315-334). In the Elazığ-Malatya region within the scope of Keban Dam project, Tony James Wilkinson used the value of 100 people per hectare in the surveys of Karababa höyük (Wilkinson, 1990). Although the studies carried out above do not have direct applicability for all

regions, especially in the context of the types of settlements identified as a consequence of surface surveys, to mean values. It is possible to state that there is an important criterion in its achievement. On the other hand, population calculations related to settlements were made in the studies carried out both in the Near East and in the south-eastern part of Anatolia.

In the calculation of the population of the settlement, it was necessary to take into account other factors rather than the size of the settlement. In this respect, when calculating the population of a settlement, it is necessary to consider such elements as the nutritional capacity, the number of nuclear family individuals by number of houses, surface area of indoor and living space per capita (Ökse, 2016, 49-51).

Considering the nutritional capacity, it was considered that 1.5 hectares of agricultural area per capita are needed according to population calculations by agricultural area (Adams, 1981, 180). For example, from the written archives obtained in the Nuzi excavations, the 4-5 people core family needs 350 kg of grain per year, and 31 kg of barley seeds are used per hectare, and the yield of 1:5 has been obtained (Ökse, 2016, 50). On the other hand, especially the slope type settlements identified in Tunceli/Pertek Karaçor region in my master thesis work both limited agricultural land and agriculture in question the location of mountains surrounding their land provided great convenience in the calculation of the agricultural area belonging to the settlement (Çarkı, 2018, 26-32). However, it was not possible to see this situation in plateau or lowland settlements. Therefore, it seems impossible to determine the boundaries of the agricultural area belonging to the Beycesultan höyük and calculate the population ratio based on these agricultural areas.

On the other hand, the population calculation for the Iron Age strata of the settlement of Tell-en-Nasbeh is based on the daily consumption of 2-3 litres of water by an individual (Zorn, 1994, 42-44).

In calculating the amount of population over the area covered by the settlement, analyses are usually carried out in relation to the dimensions of settlements. For example, settlements smaller than 2 hectares are considered small villages or hamlet, 3-6 hectares of settlements as villages, and settlements larger than 6 hectares are suburban (Adams-Nissen, 1972, 18). As mentioned above, a maximum value of 400 at least 100 people per hectare is based on the size of the settlement (Kramer, 1980, 315-334). Naturally, in the

calculation, certain areas such as streets or courtyards in the settlement, as well as the possibilities of settlements inhabited in different periods not using the same areas in each period there may be difficulties (Ökse, 2016, 50).

Another method is the calculation of the number of dwelling and the average core-family ratio. The most important element here is that the ratio of closed and open areas in the settlement is calculated, allowing the calculation of the population in the settlement (Ökse, 2016, 50-51). For example, in ethnological studies conducted in the LBA settlement of the city of Ugarit, the number of nuclear families was calculated as an average of 5 or 6 people (Garr, 1987). Within this aspect, at least 3,115 individuals per hectare were calculated according to the calculation made on the closed area in residential buildings in the city (Ökse, 2016, 50-51). Calculations made on the amount of population of the core family were applied in settlements (Van Loon 1980, 273-274) such as Demircihöyük (Korfmann, 1983, 216-218) and Korucutepe D in Anatolia. In the context of the above calculation, it was concluded that the average of 50-450 individuals live in Elazığ Altınova Etc. settlements (Dikkaya, 2003, 57).

Another method used in relation to population calculations is the calculations made on the living area per capita in enclosed residential areas. Here the calculation is made based on the ground face measurements used in residential buildings (Kramer, 1982). In the mentioned population calculation method, the number of dwellings and facial measurements of the dwellings and the total area covered by the dwellings in the settlement and the living area per capita from the surrounding use areas is determined (Ökse, 2016, 51). In ethnographic studies, closed areas were calculated as one tenth of housing, and within this aspect, 10 m² of the living area per capita (Naroll, 1962). However, in the calculations of the amount of population made in Tell Nashef, 8 m² of the enclosed area per person was calculated (Zorn, 1994, 4). On the other hand, it was calculated based on the value of 5.31 m² of indoor area per capita in the calculation of the population of the city in Nippur (Stone, 1981, 32).

Another important method of population calculation is the calculation made on the areas used for sleeping indoors in houses (Ökse, 2016, 51). This calculation, which emerged as a new method, was applied in rural settlements inhabited in Bronze and Iron ages within the scope of Ilisu Dam and hydroelectric power plant (HPP) project (Ökse, 2016, 51). Within the scope of this method, it is possible to reach an estimated conclusion

about the overall population of the settlement by placing in the context of the proportions of residential areas and open areas such as courtyards and streets. Naturally, it is necessary to consider as a margin of error on the basis of this possibility in public or religious buildings in areas not excavated in the settlement (Ökse, 2016, 51). In this population calculation analysis, it is necessary to apply a five-step method.

a. Proportions of indoor and outdoor spaces to each other are revealed. In this context, since residences are made adjacent to each other in agricultural settlements, the proportion of dwellings to open areas is expected to be high. While the proportion of dwellings in livestock societies is expected to be high among the dwellings in livestock communities, it is considered that the ratio of residential areas to open areas shall be lower (Ökse, 2016, 52).

b. It is necessary to reveal the functions of indoor spaces (Ökse, 2016, 52). Here it is necessary to reveal all boundaries of houses as the most important element, as well as in the context of the functions of all finds uncovered in spaces (Ökse, 2016, 52-53).

c. Population calculations based on sleeping areas appears as another method. This method is based on the calculation of how many people can sleep in areas at houses (Ökse, 2016, 53). The sleeping areas used in houses are 1.60x1.80m in size and cover an area of about 3 m² (*for a mattress*) when the sleeping areas are placed, and they can host two adults or 3 or 4 children, depending on their age, can sleep (Ökse, 2016, 53). In order for this method to provide accurate results, it is necessary to reveal on the basis of square meters of unused parts of the premises in the houses.

d. The calculation of population in the excavated areas is based on the establishment of an equation related to the ratio of the non-excavated areas (Ökse, 2016, 53-54). In this way, an estimated population calculation can be made for the entire settlement.

e. Based on the data to be obtained on the population of the settlements in written documents, the population calculation can also be made (Ökse, 2016, 54). However, the fact that such written documents have not yet been observed in the Beycesultan Höyük is a great challenge in this respect.

Referring to the above-mentioned methods in relation to population calculations Beycesultan höyük, the settlement is a medium scale settlement with 36 hectares of cones

and 73 hectares of spread area (Abay, 2012b, 40) it is possible to state that it has an urban model. However, since the settlement has been inhabited in many periods, it is difficult to determine how much area the city was inhabited in different periods, although it is difficult to determine how much area the city was inhabited in both early and late period excavations, it is clearly revealed that the cone was inhabited intensively. In this context, in light of Kramer and Gremliza's studies in Iran, considering that the cone of the Beycesultan höyük and the spread area are completely inhabited (Abay, 2012b, 40; 2012a, 9-20) in the LBA in the cone of the mound 3600-7200 people lived and 7300-14600 people lived on the entire mound. However, it would be more useful to try different methods on the excavated areas in the settlement or the rooms that have been uncovered. Within this aspect, I believe that many methods should be tried, going beyond the calculation proposed by a single scientist above. Therefore, the possible results may differ from different methods.

Whilst inspecting Beycesultan Höyük in the context of calculations made on agricultural area, the settlement is located in the middle of large agricultural lands on the Çivril plateau. From this point of view, it is unlikely to reach precise information about the determination of the agricultural area belonging to the settlement in the LBA and the utilization rate of the agricultural area. Especially the absence of defining natural boundaries such as mountains or creek in the immediate vicinity of the mound is a significant challenge. However, given that a person goes to the farthest agricultural area during the day and works continuously and returns on the same day, it is possible that the agricultural area belonging to the settlement occupies a greatly large area. It is highly likely that the agricultural area at an average distance of 7-10 km shall be within easily reach dimensions.

On the other hand, there are no water storage elements such as cisterns in the settlement for a population calculation based on water storage capacity. It is considered that the need for water from Küfi stream that surrounds the höyük from the east and south is likely met this need. Therefore, it is clearly revealed that population calculation cannot be made in the Beycesultan höyük through the water storage apasities.

Calculation of housing planned constructed in the Layer 5b of Beycesultan höyük on the rates of indoor and outdoor spaces provides important data on the population of the settlement. In the settlement it is seen that buildings are built next to each other.

Among the residential blocks, streets or courtyards belonging to residential buildings, as well as open spaces are an important element. Especially in the early excavations in the studies carried out on the eastern cone of the mound in a large area, residential blocks are located between the streets parallel to each other with the east west direction. It is clearly revealed that the settlement is inhabited intensively, especially in the cone. Within this aspect, it is necessary to calculate the population of excavated houses. This ratio to be obtained per household can be applied for all, especially the cone of the mound. The dimensions of the spaces where houses were exposed in Beycesultan Höyük and the observed items in the rooms provide important data on the function of the spaces before the demolition. Within this aspect, the dimensions of the premises belonging to houses and storage capacities can be considered an important criterion in calculating the number of people living in the household. From this point of view, whilst inspecting the dimensions of the spaces in the House 1;

$$\text{Room 14: } 4.40 \times 4 \text{ m.} = 17.6 \text{ m}^2$$

$$\text{Room 55: } 1.50 \times 1.75 \text{ m.} = 2.62 \text{ m}^2$$

$$\text{Room 7: } 6.20 \times 4.40 \text{ m.} = 27.28 \text{ m}^2$$

$$\text{Room 8: } 5.50 \times 2.50 \text{ m.} = 13.75 \text{ m}^2.$$

For the purpose of determining exactly the area of use in the house, the external and internal walls of the house are not included in this calculation. Accordingly, the total habitable area of House 1 was calculated as 58.25 m². The fact that all the boundaries of the house are not revealed is a significant obstacle for House 1. Likewise, the inability to fully reveal the boundaries of House 2 presents as a challenge. Whilst inspecting the exposed spaces of House 2;

$$\text{Room 63}^{41}: 4 \times 2.55 \text{ m} = 10.2 \text{ m}^2.$$

$$\text{Room 19: } 3.25 \times 1.50 \text{ m} = 4.87 \text{ m}^2$$

$$\text{Room 28: } 9 \times 4.30 \text{ m} = 38.7 \text{ m}^2$$

⁴¹ Since part of the room 63 belonging to House 2 remains in the sectional section, it has not been completely exposed. Population calculation is carried out through the revealed part of the space.

Room 2: $4.40 \times 2.80 \text{ m} = 12.32 \text{ m}^2$

Room 62: $5.50 \times 2.70 \text{ m} = 14.85 \text{ m}^2$

Room 30: $4.60 \times 2.20 \text{ m} = 10.12 \text{ m}^2$

The external and internal walls of House 2 are not included in the calculation made as in House 1. Accordingly, House 2, as far as it is revealed, has a living area of 91.06 m^2 . Naturally, when considering the areas covered by items such as pithoi, as well as architectural elements such as hearth, silo, shelf and grinding area where potteries is placed and it is possible to state that the area of movement is more limited in houses.

Whilst inspecting the house uncovered in Area A in the early excavation works;

Courtyard : 21 m^2

Porch room : 15 m^2

Room : 35 m^2

This house has a total living area of 72.5 m^2 , including the courtyard. However, given that the population calculation is made on the basis of closed area, the calculation made is made over 50 m^2 closed area. Since there is not much data available regarding the upper floors of the houses in question, it is possible to say something certain about whether the second floors are built on all or certain of the premises of the house does not appear. For this reason, the population calculation is carried out on the ground floors of houses.

According to the calculation made as 10 m^2 indoor area per person within the scope of ethnographic studies (Naroll, 1962), 5- 6 people in House 1, 9 people in House 2, and 5 people in area A house is calculated. However, in the calculations of the amount of population made in Tell Nashaf (Zorn, 1994: 4) based on 8 m^2 of the enclosed area per person; 7 people in House 1, 11 people in House 2 and 6 people in Area A. Finally, based on the value of indoor space of 5.31 m^2 per capita in the calculation of the population of Nippur city (Stone, 1981: 32), 10-11 people in House 1, 17 people in House 2 and 9-10 in house in Area A are calculated (Fig.124)

Houses	M ²	1 person= 10 m ²	1 person= 8 m ²	1person= 5.31 m ²
House 1	58.25 m ²	5-6 person	7 person	10-11 person
House 2	91.06 m ²	9 person	11 person	17 person
House from Area A	50 m ²	5 Person	6 person	9-10 person

Fig.124: Probable Population Ratio According to Enclosed Areas (*Illustrated by M.Çarkı*)

Apart from the population calculations made above on enclosed areas, calculations can also be made on the grain capacity of houses. From this point of view, it is necessary to examine the storage capacity of houses uncovered in Layer 5b (II) of the Beycesultan höyük. Abundant burnt grain remnants have been detected in storage elements such as silo and pithos in houses. Given both the diversity of stored products for the needs of individuals living in houses and the storage capacities of the houses, the population in the houses, as well as the agricultural in the settlement during this period it seems possible to reach important information about activities.

For this purpose, first of all, it was calculated storage capacity in the houses. How much grain can be stored in the resulting capacity is calculated. In the archaeo-botanical studies carried out by Prof. Dr. Emel Oybak Dömez in the mound, the presence of grains such as shelled wheat (*Emmer/Einkorn*) and barley (*Hordeumvulgare*), as well as vetch in the rooms, the legumes such as (*Viciaervilia*) and lentils are observed⁴². Wheat, which is an important consumer product, is the most stored product in terms of proportional terms, as well as being observed in all rooms in houses, we shall make wheat basic in

⁴² <http://www.beycesultan.org>

grain calculations. Depending on the breed, wheat with different weights such as 750-860 kg can be stored in one cubic meter storage area. However, this study is based 800kg value, on average. As for the amount of grain consumption, it is understood in studies that a person consumes 0.87 kg (Hillman, 1973, Fig.2) or 0.61 kg (Bernbeck, 1995, 42) of grain in a day. Similarly, a person is recommended as 320 kg (Hillman, 1973, Fig.2) or 250 kg (Wilkinson, 1994, 483-520) per year. Abay based on the annual consumption of 320 kg of grain on an annual basis in the population calculation made at Houses 1 and 2 (Abay, 2014, 179-180). In this study, Abay calculated based on the consumption of 320 kg of grain per person on an annual basis.

Accordingly, it is worthwhile to take a closer look at the storage elements and their capacities, which are first detected in rooms in the House 1 (Fig.125).

Rooms of House 1	Silo/Pithos	Length (m)	Width (m)	Height (m)	M ³	Grain (kg)
Room 14	Pithos*				0,354	283,2
Room 7	silo	2.50	0,60	0.30	0.45	360
Room 7	Pithos 1				0,354	283,2
Room 7	Pithos 2				0,149	119,2
Room 7	Pithos 3				0,354	283,2
Room 8	silo (Feature 57)	1	1	0,65	0,65	520
Room 8	silo (Feature 52- East side)	1.32	0,90	0,60	0,713	570,4
Room 8	Silo (Feature 52-West side)	0.85	0,90	0,60	0,459	367.2

* The burnt grains and parts of a pithos were observed in Room 14. Apart from this, an open vessel with grain has been detected. It is possible to state that the measurements of pithos, which are considered to be used as a storage element in the Room 14, are similar to the specimens detected in Room 7. In this context, capacity calculation the pithos in Room 14 was made based on pithos 1 of the Room 7.

Room 8	Silo (Feature 55)	0,55	0,50	0,33	0,091	72,8
Room 8	Silo (Feature 56)	0,60	0,55	0,50	0,165	132
Room 8	Pithos 1 (DJG/ BS-2138)				0,262	209,6
Room 8	Pithos 2 (DGI/ BS-2143)				0,240	192
Room 8	Pithos 3 (DGH/ BS-2142)				0,139	111,2
Total	Silo + Pithos				4380	3504

Fig.125: House 1 Grain Storage Capacity (Illustrated by M.Çarkı)

Firstly, in the storage quantities detected in all rooms of the House 1, Room 8 stand out with 2175.2 kg grain storage capacity. This is due to the capture of a large number of small finds along with the products stored in silo and pithoi in the room in question, as well as the closed vessels in which elements such as liquids are placed in the room and possibly liquid indicates that the space is used as the storage room of the House 1. On the other hand, it has a storage capacity of 1045.6 kg of grain in silo and pithoi in Room 7 and from this point of view it is possible to state that the room in question is partially used for storage purposes. Finally, it was revealed that there is a storage capacity of 283.2 kg of grain in the Room 14. In general, it can be understood that House 1 has a storage capacity of 3504 kg, and within this aspect, grain is stored for 10-11 people in the house in question, enough for a year.

Whilst inspecting the storage elements such as silo and pithos detected in the rooms of the House 2, Room 28 in the central location of the house corresponds to the multiplicity of storage elements such as silo in the Room 2 there is a multiplicity of storage elements such as pithos. If diameters and capacities of storage elements in House 2 are inspected, it is seen that Rooms 28 and 2 come to the fore in this context (Fig.126).

Rooms of House 2	Silo/Pithos	Length (m)	Width (m)	Height (m)	M ³	Grain (kg)
Room 63	Pithos				0,152	121,6
Room 28	silo (Feature 14)	0,97	0.75	0.52	0,378	302,4
Room 28	Silo (Feature 15)	0.75	0,40	0.30	0.09	72
Room 28	Silo (Feature 18)	1.35	0,55	0.30	0,223	178,4
Room 28	Silo (Feature 19)	2,50	0.75	0,50	0,938	750,4
Room 28	silo (Feature 35)	1.10	0,57	0.35	0,219	175.2
Room 28	silo (Feature 63)	0.95	0,50	0,50	0,238	190,4
Room 28	silo Feature-Southeast corner)	0.95	0.95	0.35	0,316	252,8
Room 28	Pithos 1				0,421	336,8
Room 28	Pithos 2				0,616	492,8
Room 28	Pithos 3				0,616	492,8
Room 2	Pithos 1 (DJB/ BS-2135)				0,616	492,8
Room 2	Pithos 2 (DIH/ BS-2136)				0,421	336,8
Room 2	Pithos 3				0,139	111,2
Room 2	Pithos 4				0,149	119,2
Room 2	Pithos 5				0,139	111,2
Room 2	Pithos 6				0,421	336,8
Room 2	Pithos 7				0,410	328

Room 2	Pithos 8				0,152	121,6
Room 2	Pithos 9				0,139	111,2
Room 62	silo (Feature 70)	0,90	0,40	0,50	0.18	144
Room 62	silo (Southwest corner)	0,50	0,50	0.30	0,075	60
Room 30	Pithos 1				0,616	492,8
Total	Silo+ Pithos				7664	6131,2

Fig.126: House 2 Grain Storage Capacity (*Illustrated by M.Çarkı*)

According to the above-mentioned calculation, the House 2 has a storage capacity of 3244 kg of grain in the Room 28, which is the most important room of the house. In this respect, based on the storage capacity of the room in question, it was partially used as a warehouse as well as production activities such as the Room 7 of House 1. On the other hand, it was calculated to have a storage capacity of 2068.8 kg of grain in storage elements such as pithos detected at Room 2. In this room, especially in terms of the absence of storage elements such as silo, it differs from Room 8 that is the storage room of House 1. On the other hand, it was revealed that 121.6 kg of grain was stored in Room 63. Finally, it is clearly revealed that it has a grain storage capacity of 204 kg in Room 62 and 492.8 kg in Room 30. In general, House 2 has a storage capacity of 6131.2 kg of grain. Based on the amount of grain in question, it is possible to state that it has enough storage capacity for 19 people per year.

On the other hand, in addition to some pithoi, which constitute a grain storage element in houses 1 and 2, medium-sized closed vessels and jugs present hints of storage for possible liquid consumption (Abay, 2014, 181). At the same time, it is clearly revealed that certain pithoi detected in the courtyards or entrances of houses in early excavations were used for the water needs of the house (Lloyd, 1972).

It is possible to state that the possible population quantities over the storage capacity of houses 1 and 2 are largely similar to the data resulting from the calculation of the area per capita. Within this aspect, similar results are revealed with the calculation made in the calculation of the population of Nippur city (Zorn, 1994, 4) with a value of 5.31 m², which is covered area per capita. From this point of view, it is possible to state

that the population density obtained through indoor spaces in the Beycesultan höyük is similar to the population density of the Nippur settlement. On the other hand, given that the Houses 1 and 2 under review is two-storey, it provides similar results with a value of 10 m² per capita within the scope of ethnographic studies is observed (Naroll, 1962). From this point of view, it is considered that the house uncovered in Area A in early excavations has an average population of 9-10 people.

Based on the values obtained regarding the population ratio of houses, it seems possible to reach the results regarding the possible population amount of the Beycesultan höyük. Although the settlement is not fully excavated as an important challenge, it is possible to reach an estimated consequence on the proportions of enclosed areas in the excavated areas to open areas. Within this aspect, it is more efficient to compare the entire mound over the population ratio of House 1, which provides similar results both in terms of indoor spaces and in terms of grain capacity. The above population calculation was made based on the net usable area of the house in terms of grain storage capacity and the calculation made over indoor spaces.

The proportions of areas such as street, court, living space, stable and wall belonging to spaces in a section of 1140 m² on the architecture of the Layer II unearthed in the eastern cone of the mound during the early excavations are determined primarily. In this defined section, the courtyards constitute the largest area with a ratio of 27.19% (310 m²), open areas such as the street have an area of 15.79% (180 m²), living areas have an area of 24.39% (278 m²), and stables have a rate of 7.63% (87 m²), and finally the walls of areas have an area of 25% (285 m²) (Fig.127).



Fig.127: Space Usage Rate of Beycesultan Höyük (Illustrated by M.Çarkı)

On the eastern cone, according to the characteristics of the areas determined according to the proportions, the first cone of the mound and then the spread area was proportioned. In accordance with the obtained proportions, the streets in the cone of 36 ha of the mound cover an area of 5.68 ha. On the other hand, it is clearly revealed that the courtyards cover 9.78 ha, living areas 8.78 ha, stables 2.74 ha and the walls belonging to the site 9 ha. The resulting proportional values are proportional to the entire mound is calculated with 73 ha, streets with 11.52 ha, courtyards with 19.84 ha, living areas with 17.8 ha, stables with 5.56 ha, and finally, walls belonging to sites with 18.25 ha. (Fig.128).

Space	M ²	Percentage (%)	Top of Site (ha)	All of Site (ha)
Street	180	15.79	5.68	11.52
Court	310	27.19	9.78	19.84

Living Space	278	24.39	8.78	17.8
Stable	87	7.63	2.74	5.56
Wall	285	25	9	18.25
Total	1140 m ²	100%	36 ha	73 ha

Fig.128: Settlement Structuring Rates (Illustrated by M.Çarkı)

Considering the amount of living space belonging to House 1 (58.25 m²) and grain capacity 10- 11 individuals live in House 1, in this context the cone of the mound with 8.78 ha possible living space, it is believed that 15073- 16581 individuals live. On the other hand, it is calculated that between 30566 and 33622 people live across the mound with a possible habitat of 17.8 ha (Fig.129).

Space	M ²	Population
House 1	58.25	10-11 person
Top of Site	87804/ 360000	15073- 16581 person
All of Site	178047/ 730000	30566- 33622 person

Fig. 129: Possible Population Amount of Beycesultan höyük (Illustrated by M.Çarkı)

Consequently, these calculations present numerous risks since they are made on the data in the excavated area with a limited rate. Especially in all the unexcavated areas, the settlement density shall not be like the excavated areas. Any alteration in the number of structures used for non-domestic purposes in excavations shall lead to different results. On the other hand, the calculation was made by considering the annual consumption of agricultural products stored at home. However, storing the products for longer periods of time means that the calculated results change completely. Different types and qualities of the stored product may similarly lead to different results. For instance, the ratio of products such as wheat, barley, lentils, and vetch found in houses could not be determined clearly. Therefore, excess of any of these products may cause different results of the calculation. On the other hand, the high storage capacity of the houses suggests the

storage of products for trade or exchange. It is possible to state that most important element here shall be considered as the application of different methods together in order to evaluate the houses in the settlement from different perspectives and to reveal the possible population amount.

After all, all the calculations made are valuable in terms of revealing the potential of archaeological data obtained in the settlement to analyse the settlement. Within this aspect, comparing the village of Kocayaka and Beycesultan in line with the data at hand, discussed in earlier sections, may provide the chance to examine the settlement from a different window. I believe that this comparison shall yield quite useful results, especially if we consider a time frame of 3600 years between the two settlements.



CHAPTER IX. ETHNO-ARCHAEOLOGICAL STUDY IN KOCAYAKA VILLAGE

In order to reveal how and for what purpose the residential spaces related to the past period were built and utilized, it is particularly important to investigate many aspects of modern village culture in the region. The construction of present mudbrick houses and the functions of the spaces belonging to these houses sheds light on revealing the construction stages and functions of the places in the past. At the same time, modern houses can offer important clues in the context of the roles taken by the people living in the spaces. The livelihood economies, productions, lifestyles, and division of labour among people, especially in rural areas, can assist us to read the lives and daily activities of past communities correctly. The new trend that emerged in archaeology since the 1960s has been an important turning point in the evaluation of archaeological material. In this context, Binford tried to explain past communities and activities based on ethno-archaeological studies on modern settlement and the similarities in the living of people living in the places and the usage of the places (Binford, 1968). Taking Binford's work as an example, C. Kramer conducted out ethno-archaeological studies in Iran (Kramer, 1979, 1982), S. Kent (Kent, 1983, 1984) and K.V. Flanner (Flanner-Winter, 1976), have conducted ethno-archaeological studies in different parts of the world. In short, it is possible to state that ethno-archaeological research has contributed significantly to the of household analyses.

IX.1. Kocayaka Village Geography, Settlement History, Climate and Population

Care has been taken to demonstrate that the village chosen within the scope of ethno-archaeological studies has geographical features similar to Beycesultan höyük. In this context, the focus is on the Kocayaka village located about 5 km west of Beycesultan höyük. The village of Kocayaka is located on the skirts of Burgaz-Çal mountains (called as Yaka Mountains by the Villagers) extending southwest-northeast around 10 km west of Çivril district (Duzcu, 2010, 7) (Fig.130).



Fig.130: Kocayaka Village and Beycesultan Höyük (The view is from Google Earth)

Important agricultural areas are located in the east and southeast of the village. The village, which has a height of 902 meters from the sea, has 4283 hectares of agricultural land and the mentioned agricultural areas extend to the Great Meander (Büyük Menderes) Valley (Değirmen Kır), which passes in the western part of Bozdağlar (Duzcu, 2010, 7). Especially agricultural areas of the village surround Beycesultan höyük. For this reason, it can be thought that Kocayaka and Beycesultan people have utilized common agricultural areas although at different ages. Agricultural activities, generally based on dry agriculture, have been transformed into irrigated agriculture through closed channels built underground by DSI under the Çivril Plain Irrigation Project since 2008.

Yörük tribes and nomadic groups (Nomadic groups of Akıncılı Yörük), who came to the region during the Seljuk period, settled in Çivril and its surroundings since the 13th century. These nomads are located in Marthı (Muratlı), Dereyüzü and Paşacık locations within the boundaries of Kocayaka village (Duzcu, 2010, 17). After the nomads settled in the region, due to some security problems, they moved from their settlements to the present village (Yaka) and came together (Duzcu, 2010, 17). Since the nomads who settled in the village at first, could not have a good relationship with each other, the name of the village was called “Nefsiyaka”, however, the name of the village was named “Kocayaka” on the occasion of hospitality shown to both state elders and guests (Duzcu,

2010, 22. Beycesultan and Şeyh Şibili (Tekke Tomb)⁴³ tombs, which are seen in the region and dated to the Seljuk period, constitute the important structures belonging to the first Turkish settlers who came to the region (Duzcu, 2010, 22). Since the village's first settlers were nomads, they founded the village on the shores of Çal-Burgaz Mountains. The fact that the village is close to both the agricultural areas on the plain and the plateau in the mountains shows that its economy is based on agriculture and animal husbandry (Fig.131).



Fig.131: View of Kocayaka Village from the Northeast (Duzcu, 2010: 98)

The climate of Kocayaka village is under the influence of the so-called Transition Climate, between the temperate Mediterranean Climate and the continental Central Anatolian Climate (Duzcu, 2010, 25). Also known as a kind of terrestrial climate, this summer climate is hot and dry, and winters are cold and snowy, especially in spring (April). The village is under the influence of northwind (*poyraz*) and south (*lodos*) winds during the winter months, and it is observed that there is heavy rainfall in the (*karayel*) winds blowing from the northwest (Duzcu, 2010, 25). However, Isikli lake in the region warms the hard and cold air that exists especially in the winter months. Depending on the climate, temperate plants such as pomegranate, fig, olive, wild carob can be grown in and around Kocayaka village (Duzcu, 2010, 25). Another point related to climate and blowing winds may be the cultivation done according to the precipitation in the agricultural activities conducted by traditional methods. The direction and time of the blowing winds may have been effective in the harvesting process.

Looking at the population of the village, it is possible to see a similar village culture in Kocayaka village in Anatolia. Compared to the past, the population rate in the village gives migration in parallel with the developing urban culture and job

⁴³ Tekke Tomb, belonging to Sheikh Şibili, is located in "Paşıcık" area of Kocayaka village.

opportunities.. It is clearly revealed from the population censuses made in the village that the population in the village has been decreasing especially since the 1980s. In this context, the population (Duzcu, 2010, 25), which was over 2000 (Duzcu, 2010, 25) in the 1960s and 70s, decreased to 1450 people in 1980 and 803 people in 2017 (Fig.132).

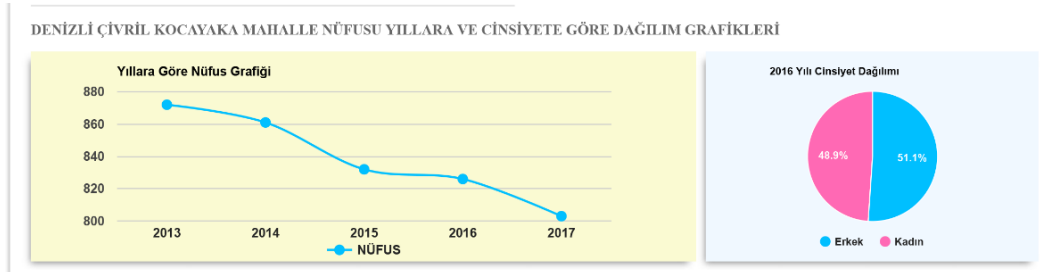


Fig.132: Ratio of Population and Gender of Kocayaka Village Between 2013-2017⁴⁴

Considering the data obtained from the Directorate of Population in recent years, 51.9% of the male population was observed, compared to the 49.9% female population. According to the distribution above, it has been understood that outward migration is similar to each other in terms of gender. The workforce may be shared equally between the two different sexes in terms of the number of people living in the village and gender ratios (Duzcu, 2010, 38).

IX.2. Architecture of Kocayaka Vilage

In this village, which is adjacent to Beycesultan höyük, houses are generally built with stone foundations and mudbrick walls. In this respect, the houses in the village were mostly built by local masters. In one-to-one interviews with one of the surviving masters, Hüseyin Aslan (68 years old), detailed information about mudbrick house construction techniques and house plans in the village was found (Fig.133).

⁴⁴ <http://www.nufusune.com/150429-denizli-civril-kocayaka-mahallesi-nufusu>



a



b

Fig. 133: Meeting with Master Hüseyin Aslan (a) and a House in Kocayaka Village (b)

(Photo by Mümin Aslan and M.Çarkı)

Huseyin Aslan, who continued as a mastery craftsman in this profession, which he learned from his father Nurettin Aslan, for about 50 years, stated that the construction process of many houses in the village was conducted by him. In fact, since the late 1990s and early 2000s, stone-foundation mudbrick architecture has been replaced by concrete architecture.

IX.2. 1. Construction Technique and Process

Both the accessibility of the material to be utilized in the construction of the houses and the proximity of the construction activities are of significant importance. According to Master Hüseyin Aslan, the choice of soil utilized for mudbrick and wall construction is particularly important. According to him, if the feet stick to the mud when it is pressed into the mud after the rain, the soil in question can be utilized in construction. The mudbrick soil utilized in the construction of the houses built in Kocayaka village is supplied from the so-called “Çukurluk” adjacent to the village. The fact that the soil was clay and unprocessed in accordance with mudbrick production, also close to the village and the ease of providing water to be utilized in mudbrick production was the reason for choosing this area. Construction activities begin with mudbrick production. Labor is very important in mudbrick production and there must be at least 6 workers. Of course, it can be considered that more work is done with more workforce. However, in this study, I will try to calculate the workforce in the construction activities of an entire house by

calculating the workforce in mudbrick production and house construction with minimum values. In the mudbrick production, the soil is first excavated, and the soil is cleared of pellet and stones through soil sieves. The collected soil is mixed with finely chopped straw and made suitable for making mud (Fig.134).



Fig.134: Preparation of Mudbrick (Photo-M. Çarkı)

The chaff produced as a consequence of agricultural activities was utilized extensively in animal husbandry in times when modern agriculture was not made. For this reason, old and unutilized chaffs in the haylofts were generally utilized in mud-brick construction. If the straw utilized in the construction activities is insufficient, the straw is provided by the neighbours. One or two days are waited for the water to be absorbed by the soil by adding water to the soil mixture adapted for making mud. The mud obtained is mixed and made suitable for mudbrick making, and the straw in the mud has absorbed enough water and left to rest for the mud to become a homogeneous structure. The rest of the mud is mixed by two people; carried by two people; mud is put in mold by one person and production mudbrick by another person (Fig.135).



Fig.135: Mudbrick Mould and Pouring the Mudbrick to Moulds (Photo-M. Çarkı)

With a study conducted in this way, approximately 250 moulds of mudbrick can be made in one day (Fig.136). Mudbrick moulds are made as 45x60 cm diameter rectangles. These moulds are designed as two *Anaç* (30x30cm) mudbrick and two *Kuzu* (30x15cm) mudbrick. The number of mudbricks poured as 250 moulds by 6 people daily can be calculated as 1000 pieces. For the construction of a 100 m² single-storey house, approximately 2000- 2500 mould mudbrick (approximately 8 to 10 thousand mudbricks) should be poured. From the numerical values obtained, the necessary mudbricks can be produced in 8-10 days with 6 workers in the construction of a single-storey 100 m² house.



Fig. 136: Pouring the Mudbrick into the Mould for Drying (Photo-M. Çarkı)

After the mudbrick is finished, it is left to dry in the sun. Depending on the temperature of the air, it is kept for about 10-15 days and then turned upside down to dry completely. Dried mudbricks are transported near the house to be built and stacked on top of each

other in order to protect them from possible precipitation and if necessary, they are covered (Fig.137). Thus, mudbricks, which are the most important building materials, are made ready for use at any time.



Fig.137: Dried Mudbricks and Stacking of Mudbricks⁴⁵

Opening the foundation in house construction is the most crucial element of the house. Especially to keep the house on a solid floor and longevity of the architecture, opening the foundation is done meticulously. The stones to be utilized for the foundation are generally taken into consideration near the village considering the labour force and cost. In this respect, the need for stones in Kocayaka village is provided in stony areas on the slope of Burgaz-Çal mountains in the northern part of the village. The architecture is usually made using limestone, which is abundant in the region.

Firstly, the house is planned in relation to the number of people living in the household. In this regard, except for the number of rooms, house plans generally exhibit similar characteristics. As a consequence of the evaluation of the house plan by the master, the foundation is excavated. The soil is dug to a depth of about one meter and the works continue until the solid ground is reached. Depending on the strength of the ground, its foundation depths can vary from place to place. If solid ground is not reached, the foundation is supported by large, massive stones and its robustness is tested. After the foundation opening works belonging to the house are finished, firstly, masonry walls are

⁴⁵ <https://twitter.com/ekonyar/status/1139612162303959041/photo/3>

started to be built from massive stones. At this stage, the wall in the section that is under the ground in terms of aesthetics in order to physically secure the wall is knitted roughly in order to save time and labour. The wall, which is roughly built up to the ground level, continues to be built after this level considering its aesthetic appearance (Fig.138).



Fig.138: House Foundation⁴⁶ and Wall Construction⁴⁷

The quality of stones and mud is of foremost importance in the foundation. Especially while assembling the wall of the master, the stones are processed by the stone master and placed on the wall in order to lock the stones together. Wooden beams are laid on the wall, which is built up to a height of about one meter above the ground (Fig.139). Thus, it is provided with both to strengthen the connection of the mudbrick and the stone foundation and to obtain a flat ground for the mudbrick. In this respect, it differs from the Byzantine architecture found in Beycesultan's second layer. In this Byzantine architecture, stone foundations are usually covered by flat tiles, creating a flat ground for mud brick. After the foundation of the stone foundation is finished, it is filled with rubble that increases as a consequence of the basic knitting works of the spaces, and the floor of the spaces is strengthened by levelling it. At the same time, this filling work, without the walls being built, saves labour and time.

⁴⁶ https://www.freepik.com/premium-photo/dug-out-trench-building-works-new-house-concrete-foundation-construction-site_24042089.htm#page=2&query=groundwork&position=0&from_view=keyword

⁴⁷ http://www.urbunhut.com/adobe_building.php



Fig.139: Stone Foundations and Wall Beams (*Photo-M. Çarkı*)

The number of masters and workers working in stone foundation construction is of great importance in finishing the work. This work is done by at least 2 masters and 5 workers. After the basic knitting process, wall knitting work is started by using the mudbrick bricks prepared before and stacked close to the house to be built. Just like in the stone foundation construction, the mudbrick walls of the 100 m² house, which were started by 2 masters and 5 workers, can be finished in about 20 days. One of the construction foremen carries the mudbrick wall construction from the inside and the other from the outside by mutually helping each other (Fig.140). The mud utilized in the production of mudbrick can be utilized as mortar in the mudbrick wall knitting process. In the wall knitting process, the workers use a rope and bob to make the wall smooth and level. Apart from this, a four-legged wooden transportation vehicle, called “tezgele,” is utilized as a chart utilized by two people for mudbrick transportation.



Fig.140: Building the Mudbrick wall⁴⁸

The mudbrick wall, which is built up to the level of the window, is covered with wooden beams. Recollection is applied again at the end of the windows. This makes the wall solid against the earthquakes or impacts that may come from the outside. After the end of the interior and exterior walls of the house spaces, wooden beams are laid on the wall for the last time and a solid floor is created on the wall for the construction of the roof (Fig.141).



Fig.141: Using Beams for Roof Construction⁴⁹

The interior and exterior walls of the architecture may differ from each other. In this context, unlike the outer walls with a thickness of 90 cm, the inner walls, called “*atom*” walls, have a thickness of 45 cm. 2 main (2x30 cm) and 2 small (2x15 cm) mudbricks are utilized for outer walls while 1 main (1x30 cm) and 1 small (1x15 cm) mudbricks are utilized for the interior walls.

The roof of the house, whose inner and outer walls are built, is constructed as a flat roof and for this purpose, it is built using the previously supplied trees (juniper trees grown in Kavak or Çal-Burgaz mountains). A weave of thinner branches is made on the trees lined up parallel to each other on the long walls of the houses. Thin branch weaves

⁴⁸ <https://www.kreatifbiri.com/adobe-kerpic-evler-nasil-yapilir/>

⁴⁹ <https://twitter.com/sdmim/status/831753367840051200/photo/3>

are covered with reeds (Fig. 142). Especially Great Maender, located in the southern and south-western parts of the village, and reeds growing in wetlands on its tributaries, are harvested at certain periods for this purpose. In this respect, reeds still grow around Küfi stream passing adjacent to the east and south of Beycesultan. Most of the reeds grown during the creek in question were utilized in Beycesultan architecture. Reeds, which are of great importance in architecture, are also utilized as a straw in the mudbricks.



Fig.142: Roofing of a Mudbrick House⁵⁰

The roof covered with reeds is covered with mud obtained from a multi-clay soil called "*Geren*" in the region. Thus, this special mud adhering to reeds not only prevents water from flowing into the space during the rainy season, but, also ensures the longevity of the roof. On the other hand, on the roofs where reeds are not utilized, they are covered with mud obtained from hard soil called "*Piren*". The insulation obtained from the soil in question is high like "*Geren*" soil. In order to allow the water on the roof covered with soil to flow easily in rainy seasons, it will be placed at a certain point of the eaves from the wood and the water will flow in this direction with a little slope. In addition, on the eaves made for the protection of mudbrick walls, soil filling is placed higher than the other points of the roof. Thus, water is removed from the eaves. Tree branches about 10 cm thick are utilized for the eaves. At least 7 employees (2 masters and 5 workers) are needed for the roof of a 100 m² house. With the said number of workers, the roof of 100 m² is made in about 10 days.

After mounting the doors and windows of the roof of the house, plastering are started. Generally, light and durable wood varieties such as poplar trees grown abundantly in the region are preferred for the construction of doors and windows whose dimensions

⁵⁰ <https://twitter.com/sdmim/status/831753367840051200?lang=eu>

are taken by carpenters. First of all, the plaster is started from the remotest corners of the house. Thus, the plaster made is prevented from being damaged during the construction works. “Geren” soil provided before plastering is sieved with fine sieves and mixed with plenty of straw. The mixture is turned into mud and left for a day to set. Rough plaster is drawn on the walls with the plaster resting for a day and the gaps between the mudbricks are filled meticulously during the wall lining (Fig.143).

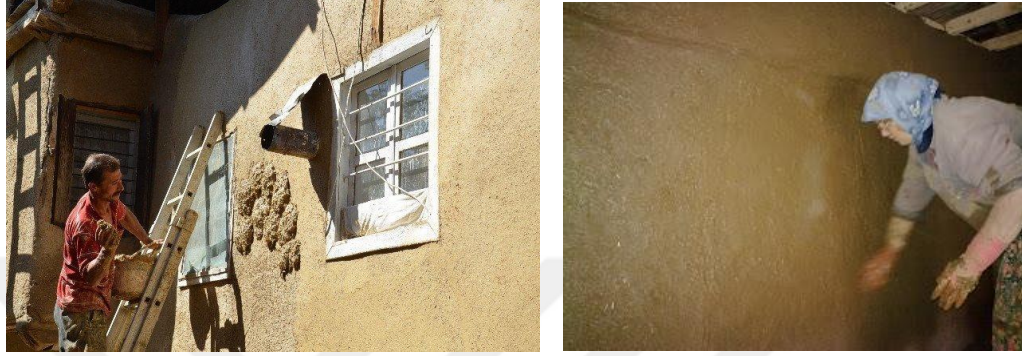


Fig.143: Rough⁵¹ and Fine Plaster⁵² making

At the same time, the ground is created for the subsequent fine plaster. After the rough plastering on the inner and outer walls is finished, it is left to dry. For the cracks formed in the dry plasters, burnishing is done with a wetted cloth. During finishing, the cloth is frequently diluted to completely cover all deep and superficial cracks in the plaster. After the finishing process, white soil showing lime inclusions are added to the mixture obtained by diluting the "Geren" soil for the dry plaster and this syrup mixture is applied to the walls with a soft cloth. With this thin plaster, the walls take their final shape (Fig.144, a-b). This mixture is prepared from time to time for the walls that become dirty after the space is utilized and the houses are provided to be hygienic. Houses that are utilized intensely in winter are cleaned and maintained with the arrival of spring. In this context, the walls are renewed with the mixture obtained from "Geren" soil. Sometimes it can be applied twice a year, in spring and autumn. However, this renewal is made in relation to the usage functions of the spaces. For example, although the main place where the hearth is located has been renewed twice a year due to possible pollution resulted in by the smoke of hearth, the places utilized as a storage rooms are sometimes renewed

⁵¹ <http://www.olay53.com/haber/son-kerpic-ustasi-529242.htm>

⁵² <http://bayramicyenikoy.blogspot.com/2011/01/kerpic-sva-yapyoruz.html>

once a year or less. When the traces of these renewals are examined in the plaster, they demonstrated themselves in the form of thin scales. In this respect, it was determined that there were 37 layers in the examination made on the plaster part obtained in the Room 28 of Beycesultan 5b layer (Fig.144,c). Considering that the place in question is plastered once a year, it is possible to state that it may have been utilized during 37 years.

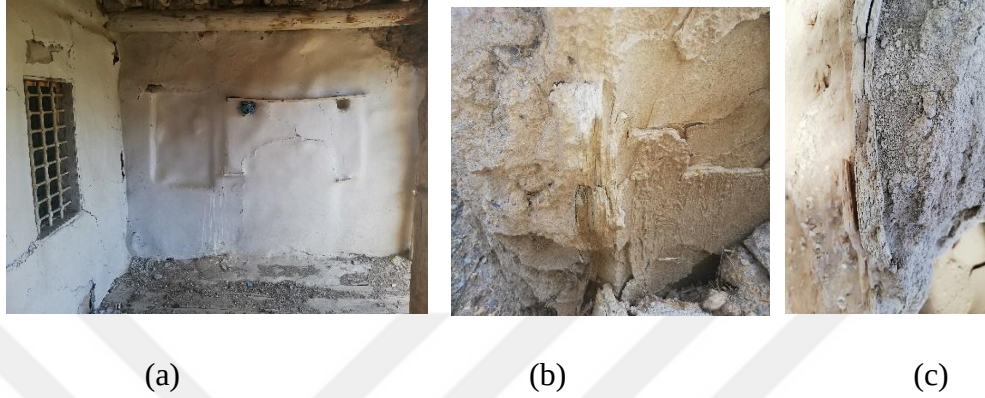


Fig.144: Kocayaka Village Plaster Sample (a); Plaster Layers of a Kocayaka's House (b); Plaster Layers of Beycesultan's Room 28 (c) (Photo-M. Çarklı)

The floors of the houses filled with the remaining rubble at the end of the foundation are flattened after the plaster is finished. After the levelling process, pebbles collected around 10-15 cm in diameter are laid on the floor. This process is done carefully, since it isolates cold and moisture in the soil. Another key point is to ensure that floor is level everywhere. After the stone paving work is finished, it is covered with mud with plenty of straw and levelled. This process is applied in all places belonging to the house, especially the places utilized as warehouses. The sludge left to dry is then patted with the assistance of a diluted cloth and cracks that may occur on the ground are closed. This patching process is repeated at certain intervals in order to protect the floor in direct proportion to the uses of the spaces. After all the construction works are finished, if there is no need for urgent removal, a period of time is expected against the possible dampness in the house, and it is moved to the house after it is completely dry.

IX.2. 2. Spatial Organization of House and Related Units

In the investigations I made in Kocayaka village, it was understood that the house complex was formed in 2 main building groups in relation to the livelihood economy of the people. These two building groups can be built adjacent as well as being independent

from each other. It consists of the buildings inhabited by the people living in the household and the stables where the animals are housed. The village is very suitable for both livestock and sheep and goats. Especially being located on the shore of Çal-Burgaz (Yaka Mountains) mountains has provided great convenience in the development of livestock.

IX.2. 3. Characteristic Properties of Structures

IX.2.3.1. Living Spaces

These consist of 6 units, including a 100 square meter entrance hall. Door passes are generally left as 92 cm in total. While it is utilized as a 90 cm door area, it leaves 2 cm doors for easy assembly during the construction process. On the other hand, the windows are left as 1x1 m. The windows are designed like this because of the harsh climate in the winter and for security reasons. Detailed information about the house plan and its use were obtained from the sketch drawing by Master Hüseyin Aslan. In this context, a 100 m² house consists of 2 rooms with a diameter of 3.50x 3.50 meters (12.25 m²), 1 living room with a diameter of 3.80x3.80 meters (14.44m²) and a kitchen of the same size. There is an entrance measuring 2.40 x 4.80 meters (11.52 m²) and, accordingly, a bathroom measuring 3x5.20 meters (15.6m²), or the space utilized as a "Yüklük" (where the quilts and mattress are placed) (Fig. 145)

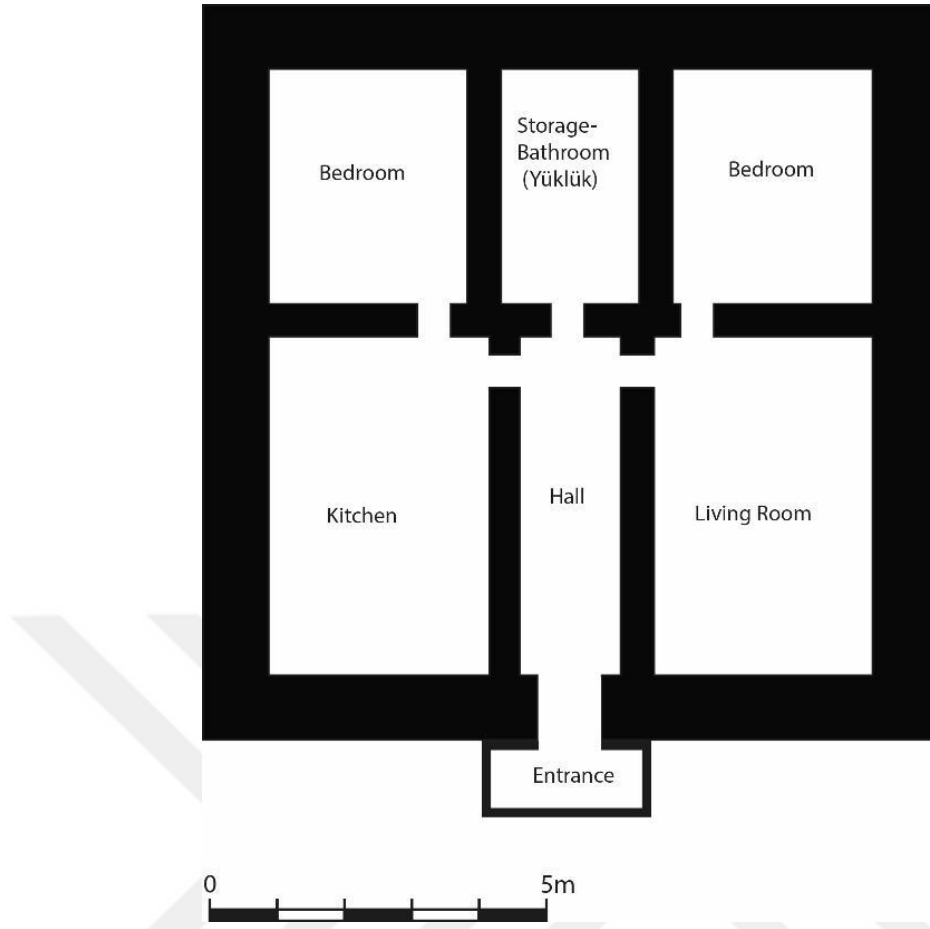


Fig. 145: Plan of a House from Kocayaka (Photo-M. Çarkı)

The place called as a bathroom, or "yüklük" is also partially utilized as a warehouse. There are hearths both kitchen and in the bathroom part of the house. In addition, there is an area on the main entrance door of the house that acts as a small porch supporting a balcony. This area is generally utilized for the protection of household shoes and work clothes from time to time.

In this context, during the examinations of Mehmet Aydın's house, the upper floor of the house, which was built as a single storey at first, was built later. In the first use of the house in question, the living areas were located on the ground floor of the house, while the upper floor was used as a living space with the construction of the upper floor (Fig.146).

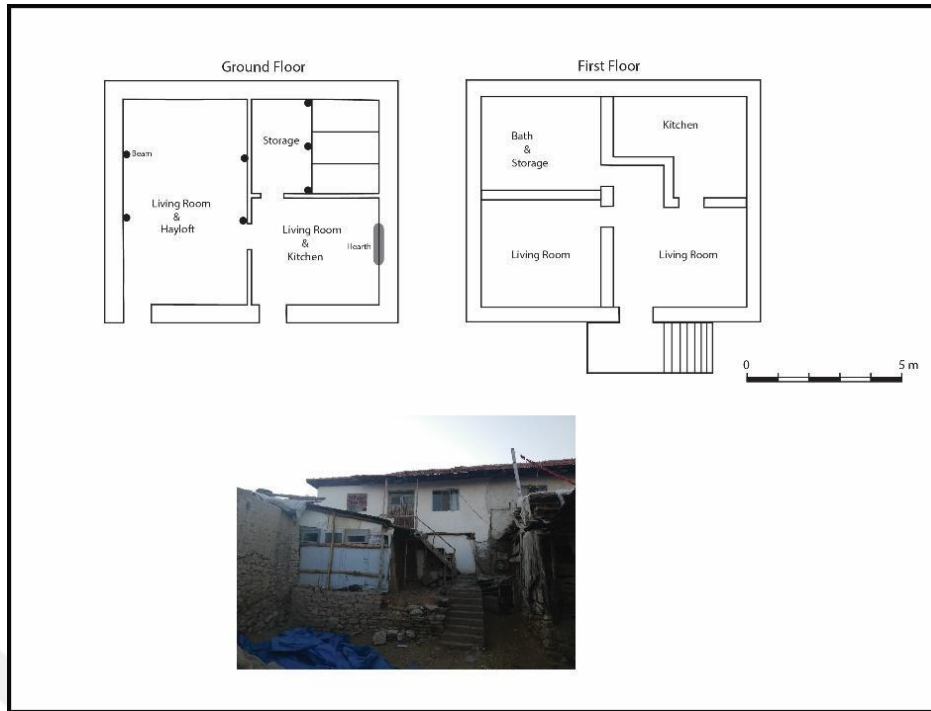


Fig.146: Mehmet Aydın's House (Photo and Illustrated by M. Çarkı)

As it is obviously revealed in the example in question, upper floors in two-storey houses are generally designed as living spaces by family members. With the emergence of possible nuclear families, the upper floors are sometimes occupied by the nuclear family. On the other hand, as a result of the increase in the declaration of family members or the construction activities due to the needs arising from various reasons, the use of the ground floor is generally changed, and these areas can be used as storage rooms, cellars, and stables. It is possible to state that all the houses in the village have the same purpose and functions.

IX.2.3.2. Cellar

The places where agricultural and animal products are preserved in houses built as single or two storeys are important for the vital needs of individuals living in the household. In addition to the agricultural runs harvested in the summer, the products grown in vineyards and gardens should be kept in a good and sheltered area. In this context, in single-storey houses, they are generally kept in places called kitchens or *yüklük*. In two-story spaces, a space on the ground floor is designed and utilized for this purpose. During my visits to the village and face-to-face meetings with the locals living there, storage pithoi were utilized in the cellar rooms utilized as a storage room in the

houses. However, today, metal silos or partitions made cement are utilized instead of these pithoi in the storage rooms. It has been observed that where families with large agricultural lands need more various storage instruments depending agricultural production variety and production amount. In this context, during my visit to the house of Mehmet Ayhan during the 2019 excavation season, the most remote and sheltered room on the lower floor was designed as a cellar. However, in relation to this space, there is usually a front room created for making bread or preparing food. There is a hearth on the wall of this place, which is partially utilized as a kitchen, and shelves with pots and pans with this hearth. The cellar is reached by passing through this front room or kitchen located at the entrance. In this area, for daily-works such as ateliers are used, at the same time, it is also utilized for making bread or cooking. It was understood that these areas were opened to a courtyard and more extensive works were conducted in the courtyard from time to time. It was observed that the cellar belonging to the houses is generally close to the kitchens and is related to the kitchen.

IX.2.3.3. Animal Shelters

It was observed from Kocayaka village that the stone foundation was built high in order to minimize the damages that may occur in the walls originating from animals. The outer walls of the stables, whose windows are designed as small, are plastered. There are courtyards surrounded by bushes and sheltering animals in the summer months. Haylofts, where animal feeds are kept for use in the winter months, are generally built adjacent to the stables. Pebbles are paved on the floors of the haystacks as in the houses, and insulation is made. The sizes of the stables and haylofts are built in relation to the variety and quantity of animals fed. From this point of view, the storage volume of the hayloft may be larger in the barns where large cattle are fed.

IX.2. 4. New Functions Installed in Abandoned Places

One of the interesting architectural practices that stand out in Kocayaka village is that some structures are difficult to maintain or left in line with new needs. For this reason, these structures are out of use when they are moved to houses built in other areas rather than repaired of these houses. It has been observed that the abandoned houses were utilized for different purposes. In this context, abandoned houses can be utilized as places where

tools utilized in agricultural areas are placed. On the other hand, with some newly created needs, some sections added to the houses, and old sections are no longer utilized, these houses or places are utilized either as stable (*Ağıl*) or hayloft. The roofs of these old houses, which are utilized as hayloft, stables or storage area, are sometimes utilized by covering them with waterproof tarpaulins and thus, the house is utilized for a long time. At the same time, the labour required for maintenance can be saved in this way.

IX.3. Economy of Kocayaka Village

The economy of the village is based on agriculture and animal husbandry, as in many village settlements in the surrounding area. In Kocayaka, which is one of the important villages with large agricultural lands, dry farming was generally conducted in the past. In addition to dry farming, vegetables and fruits were grown on irrigable lands (Duzcu, 2010, 23). Harvesting of agricultural products planted in autumn and spring is done in hot summer. Until recent years, agricultural activities in the village were generally conducted to meet the inward consumption. However, since the early 2000s, irrigable lands are planted with industrial irrigation systems built by DSI in order to bring additional income to the home economy. Due to the fact that the village is on the shore of Çal-Burgaz Mountains, animal husbandry is also an important economic activity.

IX. 3. 1. Agricultural Activities and Products

In the years when irrigation systems in Kocayaka village have not yet arrived, products such as wheat, barley, poppy, sunflower, sesame, melon, watermelon, grapes, as well as products such as corn, apple, peach, almond, plum and apricot in irrigable lands were grown (Duzcu, 2010, 23). In addition to these products, intensive tobacco cultivation was conducted between 1989-2002. However, due to the tobacco law introduced in 2002, the quota brought to tobacco has been brought up only for domestic consumption. At the same time, poppy cultivation has decreased significantly due to the quota brought to poppy production in recent years (Duzcu, 2010, 23).

It was understood that agricultural products, which are generally cultivated in autumn and spring, harvested until the months of August and September. With the technological innovations emerging in agricultural production, labour and time spent in harvesting of agricultural products have achieved great savings. In this way, more products were planted in more fields and time was saved in the harvest of the products.

Wheat: Wheat, which has an important place in domestic consumption, was quite common before the irrigation systems came to the village. However, although a significant decrease has been observed in wheat production in recent years, it is still cultivated. Harvesting wheat, which is generally cultivated in November, is conducted in late June and July. The wheat production rate, which utilized to be around 1x15 with the primitive farming methods utilized today, yields 1x30-35 of crops with both spraying and industrial fertilization methods.

Barley: As it is utilized as animal feed, it is a product preferred by livestock farmers and it is generally cultivated in spring months such as March-April. It is harvested in June and July. Considering the primitive methods in barley production, it provides an average of 1x17-20 crops to the region. However, it has been expressed by people farming in the region, where the production is 1x30-35 with industrial fertilization method.

Poppy: Poppy plant (Gümüşçü-Gümüşçü, 1997), which enjoys abundant sunny and hot climates, is an industrial product, as well as being consumed by being crushed. Çivril Lowland is one of the major regional points in Turkey and has an important place in poppy production. Poppy cultivated in spring is harvested in July-August. Due to the difficulties in the poppy harvest (picking cones and extracting seeds), an important workforce is needed in its production (Erdurmuş ve Öneş, 1990). Poppy plant, which is cultivated in quotas where the region is allowed, has a great place in the agricultural economy.

Sunflower: In order for the yield obtained in the cultivated area to be high, it should be watered. In this context, with the arrival of irrigation to the village, it is cultivated in a wider area today than before. This product, which is planted in spring (March-April), is harvested in August or early September. Sunflower agriculture, which is an important industrial plant, has been done intensely in the region in recent years.

Corn: Also called “Maize- (*Darı*)” in the region, this product is cultivated in March and April. Corn, which was cultivated in irrigable limited agricultural lands, is harvested in a wide area today. This industrial product is also utilized in the region as animal feed. It is also cultivated as a secondary product in fertile agricultural lands. This plant, which needs intense water, has been observed to cause calcification in the soil in recent years due to its unconscious cultivation and to decrease the yield in agricultural lands.

Sugar Beet: This product, which was produced in limited irrigable agricultural lands before the irrigation project was conducted in the region, has become widespread with the irrigation project. The beet, which is planted in March-April, is harvested in August and September. This product, which has domestic consumption, is also important in terms of surplus income. Some of the harvested beets are kept in the pits opened to the soil for consumption in the winter. The beets removed in the winter are boiled and consumed.

Sesame: This product, which is cultivated in dry agricultural lands, is utilized extensively in the production of many food products today. The sesame, which is planted in March-April, is harvested in August. In addition to adding added value to the home economy, it is consumed in the form of sesame paste by rubbing like poppy.

Melon-Watermelon: Melon and watermelon cultivated in irrigable agricultural lands are generally produced together as inseparable pairs. These products, which are generally cultivated in April, are harvested in the region in August-September. Some melon species (Winter Melon), which are consumed fresh, are generally stored in the cellar or hayloft for winter consumption. Today, these products, which are cultivated due to their commercial value, are marketed in Çivril and Denizli city centres.

Vegetables: Vegetables cultivated in narrow agricultural lands, where limited irrigation was utilized in the past, are planted in a wide area in order to add surplus value to the family economy with the irrigation project conducted today. Tomatoes, peppers, eggplant, cucumber, zucchini, and products such as rahan and parsley are planted depending on the need. These products, which are generally planted in April, have been given products since July. Especially in the periods when the fresh vegetables did not arrive in the region in the winter, the products listed above were dried in the sunny summer months and stored for consumption in the winter.

Grape: Grape vines, which are grown frequently in arid areas, is a cultural plant. Because the grapes that have been grown in many regions since the early ages have been consumed as they are or have been dried or turned into wine. In addition, dishes such as wrapping from fresh leaves are made. However, vineyards that require careful care are one of the plants that make a significant contribution to the economy of the region. This product is planted especially for the purpose of evaluating the rugged areas with the high sunbathing period.

Peach: The peach, which is planted in irrigable agricultural lands, has recently been planted in a wide area with the irrigation project. This product, which meets in summer and autumn, is marketed by age, depending on the type of product. The peaches collected in the gardens are classified according to product quality and while some of them are marketed to the city centres for consumption, some of them are given to the fruit juice factories located in the region for processing.

Apple: Apple, which was planted in a limited area when there was no irrigation project like peach, was produced in a larger area with the irrigation project. This product, which is planted with the added value of the home economy rather than the need, is classified according to its quality like a peach. While some of them are marketed to city centres for consumption, some are given to factories to make fruit juice. However, in the region, due to the decrease in its economic value from time to time, it has been produced in limited areas recently. In addition to being consumed by local people as wet, it is also consumed by drying.

Plum and Apricot: It is planted in limited areas within the framework of domestic needs rather than its economic value. Especially apricot is dried to be consumed in both wet and winter months.

Almond: It is a product that is generally planted on degraded lands such as grapes. However, recently, grafted breeds have been planted due to their economic value. While some of this preferred product is marketed due to the lack of need for maintenance, some of it is stored for consumption in the winter in line with the needs.

IX.3.1.1. Grain Production and Agricultural Tools

During the times when modern agriculture was not done, local people conducted agricultural activities with primitive farming methods. With the warming of the weather in spring, agricultural activities and starts continuing until the end of November. Tillage, planting the seeds in the soil was a difficult process. First of all, the fields, which were fallowed a year ago in order not to decrease the yield, are ploughed with the assistance of *wooden plow*⁵³ by ox or horses. Ploughing the field is done carefully by strong and

⁵³ “Wooden Plow”, a wooden body drawn by a horse or an ox, with a plow at the end of the tree trunk that pits the soil (Duzcu, 2010, 109)

experienced people. Because a certain depth is required for the seeds to grow. At the same time, in addition to ploughing the field, it was necessary to get the best efficiency in return for the workforce spent on harvesting the crops. For this reason, tools utilized in agriculture were renewed over time in order to increase efficiency. Since 1975, the plough pulled by a pair of harnesses, which were subjected to yoke instead of the primitive plough, began to be utilized; however, with the arrival of motor vehicles (Tractor), agricultural activities evolved completely into mechanization. A lot of workforce and dedication is also required for harvesting crops in the summer months. Products harvested with the assistance of a sickle are transported to threshing floor “*Harman*” locations on both sides of the village with the assistance of ox carts (Delice) (Fig.147,a-b). The stems collected in the blend are cut until they become straw with the aid of threshing board “*Döven*” (Fig.147,c).

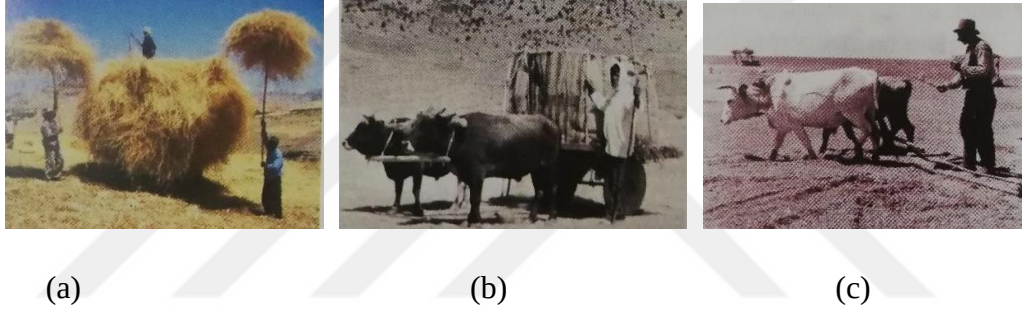


Fig. 147: Usage of Oxcart (a-b); Using Threshing Board (c) (Duzcu, 2010: 110)

After this process, the stems cut in windy weather are blown into the air⁵⁴ and the straws and seeds is separated each other. The seeds obtained are transported to the houses by the help of animals (Horse, Donkey) (Duzcu, 2010, 109-110). While some of them are placed in warehouses for storage purposes, some of them are washed in fountains in the village for grinding and drying. Finally, it is consumed in the winter by grinding in Bulkaz and Çal stream where important mills are located in the region (Duzcu, 2010, 110). The straw in the threshing areas is placed in the hayloft for the animals in winter with the assistance of oxcart. In all this process many agricultural tools are utilized such as, Wooden Plow (*Karasaban- Gara Saban*), Övendere, Yoke (*Boyunduruk*), Whip (*Gamcı*), Sickle (*Orak*), Scythe (*Tırpan*), Rake (*Dırmık*), *Ananat*, *Delice*, Pitchfork (*Dirgen*),

⁵⁴ The separation of the seed from straw and straw with the assist of wind is called "Tossing Tınaz".

Harpoon fork (*Yaba*), *Yabaaltı*, Oxcart (*Gağnı-Kağnı*), *Geri*, Harness (*Koşum takımı*), Threshing board (*Döven-Düven*).

Wooden Plow (Karasaban-Gara Saban): Although it is an instrument with the most important function in agricultural activities, it is shot with horses and oxen. There is a plow at the end of the tree trunk that plows the soil (Fig.148).



Fig.148: Example of a Plow (Photo by M. Çarkı)

Övendere: This tool utilized in the field release process, is utilized as a triangle plate at one end and nails at the other end, however, it is utilized both to keep the oxen under control and to clean the mud adhered to the plow (Duzcu, 2010, 112). It is known by different names in different regions of Anatolia. For example, it is also known that it is named as "*Maise*" in Eastern Anatolia.

Yoke (Boyunduruk): It is an instrument that enables the oxen to move together both in the oxcart version process and in the use of oxen (Fig.149). This tree is made of light wood to ensure that the animals do not get tired anymore.



Fig.149: Yoke⁵⁵ and Usage⁵⁶

Whip (Kamçı- Gamçı): It is a tool created by attaching a rope made of leather to the wooden stick, which is about half a meter long, for the animals working in agricultural activities to work better.

Sickle (Orak): A tool utilized to harvest ripe plants (Fig.150). This tool handle with a crescent-like metal tip is usually made of wood. It is widespread to use in primitive agriculture periods. For example, in the Beycesultan Layer 5b, similar to modern sickle model was found.



Fig.150: Sickle⁵⁷ and Usage⁵⁸

Scythe (Tırpan): A tool made of a sharp crescent-shaped metal attached to the tip of a long handle. This tool, which is commonly utilized for mowing grass, is also utilized for mowing wheat and barley (Fig.151).

⁵⁵ <https://www.dreamstime.com/royalty-free-stock-image-old-oxen-yoke-isolated-wooden-pair-white-image38346516>

⁵⁶ <https://www.dreamstime.com/stock-photo-devon-oxen-two-yoked-together-shaker-village-hancock-massachusetts-image68279781>

⁵⁷ <http://gunas.com.tr/tr/urun/67/tc50-orak>

⁵⁸ <https://profit.pakistantoday.com.pk/2020/04/15/provinces-fail-to-submit-wheat-losses-report-to-centre/>



Fig.151: Scythe⁵⁹ and Usage⁶⁰

Rake (Tirmik-Dirmik): This tool, which is formed from many fingers made of metal on the end of a tree-made handle, usually takes an intermediary role in collecting and carrying the scattered stems. It is utilized for easy harvesting of stems both in the field and in the threshing area (Fig.152).



Fig.152: Rake Example⁶¹

Ananat: It is a three-toothed tool attached to a wooden handle (Duzcu, 2010, 111). In addition to loading barley or wheat, which are turned into bunches or vineyards in the field, to “Delice,” it is also utilized for crops in the threshing area (Fig.153).

⁵⁹ <http://bulmacameraklisi.com/uzun-sapli-orak-bulmaca-cevap/>

⁶⁰ http://arsiv.gidatarim.com/HABERLER/19024_Orakci-Ve-Tirpanclar-Teknolojiye-Direniyor.html

⁶¹ <https://free3d.com/tr/3d-model/wooden-rake-7533.html>



Fig.153: Ananat Example (Photo by M. Çarkı)

Delice: It is a wheeled tool that is utilized to transport crops harvested in the field and turned into bunches with the assistance of animals (Duzcu, 2010, 111).

Pitchfork (Dirgen): A tool with metal fingers attached to a long wooden handle (Fig.154). Generally, Harman is utilized for picking weeds, as well as the stems spread in the place.



Fig.154: Pitchfork (Dirgen) Example⁶²

Harpoon fork (Yaba): This tool, which has a forked tip made entirely of wood, is utilized to separate the seeds of the crops cut in the threshing area from the stems. In other words, it is utilized to knock off the cut stems against the wind.

Yabaaltı: This tool, which is bigger in the wild, is mostly utilized for loading the hay in the car.

Oxcart (Gağrı-Kağrı): This vehicle utilized for transportation is pulled by oxen. This vehicle with a wooden hitch consists of two wheels (Fig.155). This tool, which was

⁶² <https://www.amazon.com/4-Tines-Forged-Pitch-Fork/dp/B005J160S6>

utilized frequently in rural areas in the past, is utilized for the transportation of harvested crops in the field.

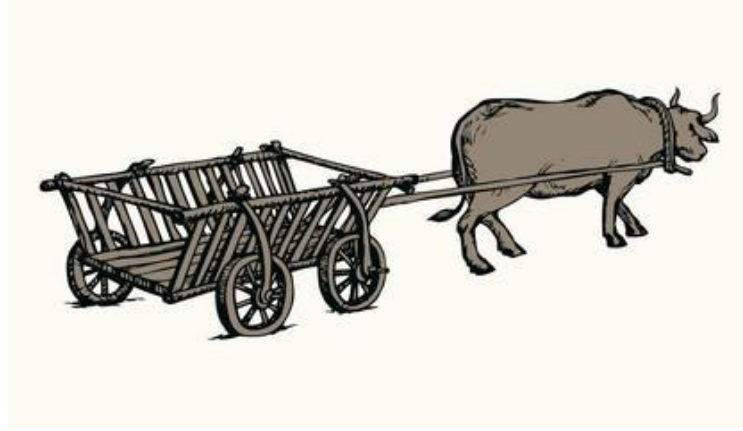


Fig.155: Oxcart (Gağnı-Kağnı)⁶³

Geri: It is the name given to the wood or fabric attached to the oxcart utilized to carry the seed-free straw in the threshing area (Duzcu, 2010, 112). It is mostly utilized for carrying straw.

Harness (Koşum Takımı): It is utilized to protect the horses without limiting the natural movements of the horses utilized in horse carriages and also from the rubbing that will damage the horses. Harness consists of tools such as bit, collar, girt, rein, tug (Duzcu, 2010, 112).

Threshing Board (Döven-Düven): About 1 x 2m wide. It is a kind of tool made by laying flint or obsidian pieces under the planks attached side by side. The stems collected in the blend by pulling with the assistance of an ox or horse are cut and turned into the straw (Fig.156). The stones are checked before each threshing floor season and their sharpness is tested.

⁶³ https://stock.adobe.com/search?k=oxcart&asset_id=416971170



Fig.156: Threshing Board (Döven-Düven)⁶⁴ and Usage⁶⁵

Sieve (Gözer): It is a large-eyed griddle variety utilized for sifting seeds free of stems (Fig.157).



Fig.157: Sieve (Gözer) Examples⁶⁶

Hand mill: It is a tool (Fig.158) which is utilized for practical grinding of wheat, barley or cereals and one of which is fixed, and the other is moved from the double stone. Basalt or andesite stone due to its porous structure is generally preferred.

⁶⁴ <http://sebahattindogan.blogspot.com/2014/03/duven.html>

⁶⁵ <http://evvelzamanda.blogspot.com/2012/04/duven.html>

⁶⁶ <https://www.egemuzayede.com/urun/3838500/osmanli-donemi-elek-osmanli-donemi-elek-kismi-bagirsaktan-mamul-ahsap-elek-cap>



Fig.158: Hand mill and Usage (Photographs are from Konya-Ereğli Museum/ Photo by M. Çarkı)

IX.3.1.2. Products Produced from Agricultural Products

The products obtained from many agricultural products cultivated in Kocayaka are prepared to be consumed mostly in difficult winter conditions. Wheat, which is the main food source, has an important place, especially in modern provincial culture, however, it is utilized in the production of many dishes. On the other hand, some herbs, and fruits, such as vegetables dried in summer, and nettle, are utilized in cooking. In Kocayaka consumption culture, local products such as *Bread*, *Bulgur*, *Hedik*, *Bütme*, *Tarhana*, *Pekmez*, *Poppy Oil* and *Butter* are the most important products.

Bread: Bread, which is the main element in nutrition, is usually made by women. Depending on the number of people living in a house, the amount of bread is determined. It made by at least two people. For this work, bread is made in the stone hearths located in the courtyards of partially covered houses in the summer months, while it is mostly made in the stone hearths located in the interiors of the places in the winter months. The dough utilized for making bread is prepared in the early hours of the morning and yeast is added to the dough and the dough is rested to ferment the dough. It is clearly revealed that the fermented dough is ready for bread making after it swells. The rising dough is rolled out with a rolling pin and baked on the griddle on the stone hearths (Fig.159). One woman turns the dough while the other mixes the fire and takes care of baking bread. Bread, usually made according to the needs of a few weeks, is stored in the cellar or in the kitchen. Before being consumed according to daily need, it is slightly wetted and softened and made ready for consumption.



Fig. 159: Bread Making (*Duzcu, 2010:103*)

Bulgur: As in many regions of Anatolia, bulgur is an important consumption product, it is consumed plainly as well as being consumed with many meals. Firstly, the washed wheat is placed in boilers and boiled, and after boil, it is laid in cloths and dried in the sun (Fig.160, a-b). It is then placed on a pestle and pounded with a wooden mallet (Fig.160,c) and grinded in hand mills. Today, however, dehulling and grinding are done in mills. Finally, bulgur pilaf, which is passed through sieves, is classified according to its size as soup and meatball.



Fig.160: Bulgur Making and Stages / Wheat Boiling (a)⁶⁷; Drying (b)⁶⁸; Pest Beating (c)⁶⁹

⁶⁷ <http://huseyincilga.com/kangalda-bulgur-yapimi/>

⁶⁸ <http://aksarayegemengazetesi.com/Aksarayda-bulgur-yapimi-icin--hedik-kaynatma-donemi-basladi-haber-5665>

⁶⁹ <https://www.fibhaber.com/gundem/nevsehirde-unutulan-asirlik-gelenek-izle-h45546.html>

Boiled Wheat (Hedik): Apart from some important days of making hedik, it is also consumed as a snack on winter nights. It is a type of food in which chickpeas and wheat are boiled together (Fig.161). It is served with walnuts on or near it.



Fig.161: Boiled Wheat (*Hedik*)⁷⁰

Bütme: Bütme for daily consumption is practically done. Having an important place in the region, it generally is made on special days. It can be called by different names in different regions. For example, butme, which is called a börek in Afyon and its surroundings, is also called patila in and around Elazig. It is made from various products such as Pumpkin, Egg, Spinach, Stinging nettle, Poppy, and Cheese in Kocayaka village. In the preparation of the whole, flour, water, salt, tomato, pepper, oil and optionally the products listed above are utilized (Duzcu, 2010, 103). The dough that is kneaded and left to rest is opened with the assist of a rolling pin and the mixture created from the desired plant is put into the dough and closed and it is made by cooking on the griddle on the stone hearths (Duzcu, 2010, 104).

Tarhana: As in many regions of Anatolia, the consumption of tarhana is one of the basic foods, especially in the winter months. Although different herbs and spices are utilized in each region, different flavours can be obtained. In the region, it is generally consumed along with breakfast and evening meals. Tarhana, obtained from the mixture of vegetables ripening in summer in Kocayaka, is made from tomato, red pepper, onion,

⁷⁰ <https://www.enhizlitarifler.com/hedik-tarifi>

hot pepper, parsley, mint, dill, garlic out, strained pouch yoghurt, flour and salt (Duzcu, 2010, 105). Since Tarhana is made as a consequence of a laborious process, it can be done jointly by a few family members.

Molasses (Pekmez): While some of the vineyards in the village are sold to the city centres, some of them are either dried or as a molasses to be eaten in the winter. It is given to children and elderly people especially in the region due to its blood-forming feature. The ripe grapes are washed first in the fountains and the must is removed by putting them in cloth sacks. After this process, some amount of grape must be put in the boilers is taken from the boiler for later use and molasses soil is added to the boiler instead. Thanks to the lime it contains in the molasses, it helps to remove the sourness and acid in the wort. This soil is obtained in the village called İncirli Bunarı and approximately 3 kg of molasses soil is added to a boiler (Duzcu, 2010, 107). Usually, foams and pulp formed on the wort boiled on fire in the courtyards or in hearths installed in open areas are taken periodically and the molasses soil is completely collapsed. After the boiling is finished, the unboiled grape must have been added before. After this process, the cauldron covered with a thin cloth is left to rest for about 24 hours to settle in the bottom. As the last step, the wort free of sediments is put into another pot and filled with jugs from there and stored for consumption in the winter in a cool and damp-free environment (Duzcu, 2010, 107) (Fig.162).



Fig.162: Molasses Production Stages (Duzcu, 2010: 106)

Poppy Oil and Its Paste: Poppy oil is an oil that is liked in the village and before 1980, there were four production facilities in the village (Duzcu, 2010, 108). The poppies brought depending on the need are first roasted on a sheet, and then the roasted poppies are placed in sacks made of goat hair and squeezed (Fig. 163). Poppy oil obtained in this squeezing process is put into jugs and made ready for use. While some of the pulp in the sack is consumed, the rest is fed to animals (Duzcu, 2010, 108).

Poppy paste, also called poppy rub in the region, is still a common type of food and is frequently consumed. It is especially utilized in the production of Bütme or Katmer, although it is eaten at breakfast. While poppy is rubbed by flat rubbing stones found in almost every house in the old days, this process is performed in manufacturing houses today. First, the washed poppies are dried and then placed on the rubbing stone placed on the ground by roasting and rubbing is obtained by rubbing with the other stone (Duzcu, 2010, 108).



Fig.163: Poppy Paste Making⁷¹

IX.3.1.3. Consumption

Considering that a person consumes an average of 400 gr of bread daily, a family of 5 consumes 2 kg of bread a day. Considering these measures, one person consumes 12 kg of bread in one month and makes 144 kg of bread a year. According to this calculation, a family of 5 consumes an average of 720 kg of bread per year. Considering the above calculations of the wheat obtained in the field, seed wheat is stored according to the width of the land to be planted next year, apart from the wheat reserved for the need. Apart from

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<https://afyonkarahisartr.tumblr.com/post/649174899278086144/ha%C5%9Fha%C5%9F-ezme-ta%C5%9F%C4%B1-ve-i%C5%9Flemi-afyonkarahisar>

all these needs, wheat is also reserved for *bulgur* and *hedig* making. An average of 70-80 kg of wheat is reserved for a family of 5 for bulgur wheat. Apart from wheat, fruits and dried vegetables are stored as needed.

IX. 3. 2. Livestock Activities of Kocayaka Vilage

Due to its geographical location, livestock activities are generally conducted in the Yaka Mountains in the north and northeast of Kocayaka, which is a village suitable for animal husbandry. Since the first settlers of the village are nomads (Akıncılı Obası Nomads), the animal husbandry tradition is quite common here . However, farming has become prominent in recent years due to the arrival of irrigation systems and conducted policies, as well as an increase in feed prices. Many families engaged in animal husbandry activities in the village are also engaged in farming and are especially preferred by large families. In the village with a large pasture area, cattle breeding is conducted in addition to small ruminants such as sheep and goats.

IX. 3. 2. 1. Feeding Animals and Reasons for Preference of Animals

Sheep: In addition to the *Sakız* Sheep breed, hybrid varieties are fed in the region (Fig.164). It is benefited from meat and wool, especially milk. On the other hand, the high economic value appears as an important reason for raising the sheep. It is important in this respect that it has a wide market when needed.



Fig. 164: View from Sheep Raised in the Village (Duzcu, 2010)

Goat: Goat, which is easier to breed than sheep, also provides more durable and longer milk than the sheep (Fig.165). Unlike sheep, low-fat content in milk facilitates the evaluation and consumption of goat milk. It is also preferred because it is more efficient in reproduction. On the other hand, since it was thought that the first settlers in the village were nomads and that the most important element of this culture, bristle tents as well as products such as ropes could have been made, it was also fed preferentially.



Fig.165: View from Sheep Raised in the Village (Photo-M. Çarkı)

Cow: The most important feature of a cow, which is more sensitive than sheep or goats, is its long-term milk yield. The cow that provides milk in every period of the year can meet the milk needs of the family in every season. At the same time, milk yield and ease of milking are other reasons for preference. However, in any case, the death of a cow due to illness or other reasons may pose an important risk as a major economic loss. In this respect, the value given to the cow by other animals is always high.

IX.3.2.2. Care of Animals

Although there are different types of care depending on the animal type, there are two important care phases spring and summer and winter care. For example, the Sakız Sheep breed, which is fed in the region, does not like the hot weather as in many sheep breeds and therefore it is usually grazed in the early morning or at night. At the same time, feeding times and care of small cattle and bovine animals are different from each other.

IX.3.2.2.1. Care in Spring and Summer Months

In the spring months (late March-early April), the animals are taken to grazing with the growing of grass in the village surroundings and pasture areas, as the weather gets warmer. Generally, grazing is done by family members. In the spring, when the

weather is cool, small animals are taken to grazing early in the morning (around 6 am) and brought back to the folds in the evening when the weather gets dark. Because, during these periods, the animals with the offspring need to feed their offspring for a while. However, with the warming of the weather from May, the animals are taken to graze at night, and they are usually taken out around 21:00 in the evening and brought back to the pens for milking around 8 or 9:00 in the morning. In order to increase the milk productivity of the animals milked in the morning and evening, care is taken to consume fresh herbs during milking periods. Milking work is usually done by women. In the summer, when the weather gets warmer, the animals that come to the corral in the morning are taken to grazing around 16-17:00 in the afternoon, and sometimes grazing can continue until the morning. In the autumn months, as the weather cools down (until November or until December when the weather is hot), the animals begin to be fed in the corral as the grass turns completely dry in both the pastureland and the agricultural lands harvested as a consequence of agricultural activities.

Unlike small ruminants, bovine animals are taken to the field in the morning and brought back to the pens before dark. This grazing, which is usually done by a shepherd, continues until November. However, the cattle breeding method has come to the forefront today. Irrigation of the agricultural area with the irrigation project and the production of more animal feeds by modern methods in agriculture may be one of the important factors that make the breeding stand out.

IX.3.2.2.2. Care in Winter Months

With the cooling of the weather, winter nutrition is started in the animals. Both cattle and small cattle are fed and looked after in the stables for about 4 months. However, this period can be extended in years when the winters are long. The animals can be supplemented with bait in the morning and evening, especially since the grass does not grow sufficiently in the early spring. In winter, small ruminants are fed on average three times, however, sometimes they can be fed 4 times a day when the animals are not getting enough nutrients. This feeding is done in areas surrounded by fences in front of the corral and water requirement is met in wells or close fountains during periods when there is no water network. For example, during the excavation season in the village during my visit to Mehmet Aydın's house in the village, there was a water well in the wide courtyard of

the house. Until recently, it was learned that all kinds of water needs of the house were provided from here.

Unlike small ruminants, bovine animals that are not very resistant to cold are mostly fed in the barn. In the feeding of cattle, besides straw and broken barley, the pulp obtained from beet and corn from beets has been given recently. Especially pulp and silages utilized to increase the amount of milk obtained in cows are utilized by many feeders today. The amount of hay consumed by bovine animals in winter may be between 1.5 and 2 tons per animal. On the other hand, in cattle, in winter, 150 kg of straw can be consumed per month. In order to be able to breed livestock from the available data, a significant amount of agricultural land must be processed. Since agricultural products are needed for animal husbandry, agriculture and animal husbandry are conducted together by some families and are especially preferred by extended family.

IX.3.2.3. Animal products of Kocayaka Village

In addition to agricultural products, animal products are of great importance in the nutrition of the village people. Already both animal and agricultural products complement each other in nutrition. In this context, products such as milk, meat and wool obtained in small and bovine animals are made ready to be consumed and utilized after passing through certain stages. The amount of milk obtained in animals such as cows, sheep and goats can change periodically. For example, a cow provides between 5 and 8 kilograms of milk per day, however, there is a difference in milk rates depending on the freshness and quantity of the grass consumed in the cows sent to the pasture. On the other hand, an average of 250 ml of milk can be obtained per day in the sheep, while this amount can go up to 500 ml in time. However, milk obtained from both sheep and goats decreases significantly since the end of summer. Cheese, yogurt and butter are produced from milk obtained from animals.

IX.3.2.3.1. Cheese Production

Depending on the animal type, the amount of cheese produced in relation to the fat content in milk varies. In this context, An average of 4-5 kg of cow's milk yields 1 kg of cheese, while 3 kg of sheep's milk produces 1 kg of cheese. On the other hand, 1 kg of cheese is obtained from an average of 3.5-4 kg of goat milk, which is considered equivalent to cow's milk.

In the production of cheese, rennet is added to the milk placed in the cauldrons and the yeast milk, which is kept until the morning, becomes cheese. In addition to the cheese being more homogeneous, it is placed in small cloth bags in order to take mould and the water in it is filtered and cheese production is realized in this way. Today, milk obtained surplus needs is given to dairy farms.

IX.3.2.3.2. Yogurt and Butter Production

Yogurt, which is utilized intensely in daily nutrition, has an important place in Anatolian culture. While some of the yogurts is consumed daily, the rest is utilized in oil production. The milk is milked into the cauldrons and winged to destroy the organisms in it. After the boiling process, the milk that is left to cool is left to wait for it to be pasteurized by adding yeast (yogurt). Usually, the fermentation is done in the evening and is ready to be consumed the next day.

In butter production, yoghurt needs to undergo certain processes. In the past, butter production was produced by traditional methods, and today it is produced with the assistance of butter machines. This production, which is generally made by women, has been put into overalls made from processed animal skin in the past. The yogurt put in the leather jumpsuit spreads here by adding a certain amount of cold water and the oils accumulated in the jumpsuit are filtered with the assistance of a cloth strainer. While the oil accumulates in the filter, the remaining condensed water is consumed as buttermilk. If needed, buttermilk is placed in boilers and boiled, and the crumbled boiled buttermilk is taken again with a strainer. As seen above, different types of products can be obtained from yoghurt, which is passed through different stages.

IX.3.2.3.3. Wool Production

In summer, the wool of sheep is sheared with the warming of the weather (Fig.166). As it is known, sheep do not like the hot weather very much and their growing wool may cause both milk yield and sickness risks. Wool production may vary depending on the type of goat and sheep. Although it is important especially for keeping the dye when sheep wool is dyed, it has a wide range of usage.



Fig.166: Sheep Shearing⁷²

Wool is utilized in the production of different products in different regions of Anatolia. It is also utilized in the production of products with prestige as well as daily needs. The wool obtained from the sheep is washed in fountains and then dried and processed by hand drying. Of the processed sheep wool, it is made yarn by spinning by hand with the assistance of a spinner (spindle), and these yarns are utilized in the production of sacks, carpets and carps, as well as in the production of bedding and quilts. In this context, spindle whorls found in the LBA layers of Beycesultan höyük demonstrate the importance of wool and textile production. From here it can be understood how important animal husbandry is in the settlement.

IX.4. Social Structure and Organization of Kocayaka Village

Activities related to social organization in Kocayaka village can be handled as the "family", which is the smallest unit of social stratification. Joint activities and division of labour within the family unit can be evaluated on the scale of women, men and children. Until recently, while "extended families" were present in the village, it has evolved into the "nuclear family" form. In the village where a patriarchal family structure is generally found, the division of labour is mostly determined by the type of work done. It is useful to consider the division of labour, which is done by taking into account the work done in the summer rather than being busy with the preparation of winter food and storage works in the summer season when the work is done intensely. While light and skilled jobs are done by women in the business, heavier work is done by men. While women usually

⁷² <https://www.yuksekovahaber.com.tr/haber/koyun-kirpma-zamani-8437.htm>

undertake work done in the home and its surroundings (living space, garden and stable), men mostly deal with outside (farm, animal nutrition) jobs.

First of all, if we look at the jobs for which women are responsible for⁷³, the house is compiled and swept after the milking of the animals that are taken to graze in the early morning. After the domestic arrangements are made, courtyard and stable cleaning are dealt with. Meanwhile, the production of milk (yogurt, butter and cheese-making) and bread making work is done by women. They are involved in food preparation and as well as picking, drying and storing vegetables and fruits in the garden. On the other hand, the processing of the wool obtained from a certain period of the year (rope, bed quilt, *cacim* and sack making) also constitutes other important works done by women. In the work done by a few people, if the family members are not enough, some works listed above are performed by getting assistance from neighbours or relatives.

Jobs by men require more crude labour than women. Men are mostly engaged in non-home jobs such as agricultural activities and animal nutrition. Planting, and harvesting the fields are among the most important duties of men. In the period when there was no mechanization in agriculture, agricultural work was taking a long time, and sometimes, when more workforce was needed for the work to go, sometimes assistance from women, neighbours and relatives. However, today it is observed that this need has been eliminated except for mechanization in agriculture. In the absence of irrigation systems in the past, irrigated farming was conducted in a limited area, and generally, gardens irrigated with tap water were planted in orchards and vegetable cultivation to meet the need. Since traditional gardens and vegetables were irrigated with traditional methods such as release irrigation, the irrigation of plants, especially the construction and cleaning of waterways, was done by many men. However, since irrigation is done using modern methods (drip irrigation), the systematic irrigation labour force can be saved. In other words, agriculture can be done on more irrigable land with fewer people and labour force.

In addition to outside jobs, men have some duties within the household. Especially the repairs, painting of the houses and the arrangement of damaged plasters and roofs at the beginning of every winter are made by men. On the other hand, grazing of animals,

⁷³ There is no fixed template in the variety and ranking of the work done.

in winter, the general care and cleaning of animals in the stable are also conducted by men. In the summer months, the shearing of animals such as sheep goats is done by men. Children often assist them with work done by their parents. Apart from the school and the work they undertake, children play some games among themselves. The "knuckle-bones game" comes first among the games children play (Fig.167). There are many varieties of the game played with knucklebones (Duzcu, 2010, 97).



Fig.167: Knuckle Bones⁷⁴

For example, the knuckle bones placed in a circle in a game are played by trying to get out of the circle with the knuckle bone thrown from a few meters away. The player who does not fall out of the circle loses his bones (Duzcu, 2010, 97). Of course, these games are no longer played with the developing technology today.

The Mukhtar is to be the most authoritative person in social stratification of village. The headman elected by the election is responsible for implementing all the official works of the village as well as the decisions taken about the village. Apart from the headman, village imams and guards are other people with authority in the village. Problems related to the village are discussed and resolved by the village headman, guard and the notables of the village (elders and elders). In addition, socialization in the village is usually conducted at weddings and funerals. At weddings and funerals, the whole village comes together and fulfils the necessary ceremonies. For example, besides congratulating the wedding owner after the wedding, condolences at funerals are among the important values of the village.

⁷⁴ <https://www.atasporlari.org.tr/egitimler/oyunlar/asik-oyunu>

It is another example of socialization that the locals go to the mosque for worship on Fridays and religious feasts. In addition to visiting the cemeteries during holidays, visiting the tombs, visiting the relatives, and making wishes are important places for socialization.

Apart from the socialization areas listed above, the “javelin game” played by men, especially on weddings and some special occasions is among the rooted traditions of the village both for socialization (Duzcu, 2010, 94). The game, which was played by village men as well as the players invited from the surrounding villages, was a game played in the village until the 1970s, however, it has lost its importance today.

IX.5. Evaluation

In this section, the architecture of modern village, agricultural and animal husbandry activities and social structure are discussed in detail with the division of labour. In line with these data, it is aimed to make evaluations related to architectural, economic activities and social organization and division of labour in particular with the concrete data obtained in the settlement of LBA Beycesultan. Undoubtedly, it is impossible to completely adapt the data obtained in modern rural life to the past. However, these data may provide the opportunity to make comments on the lives, economic structures and social organization of past societies.

When the architectural structures in the Kocayaka village settlement and the features of these structures are analysed, it was seen that the architectural elements (stone, mudbrick and wood) utilized in Beycesultan LBA architecture are similar. However, in the houses built in Kocayaka village settlement, the dimensions of the foundation stones and mudbricks utilized as building materials differ from those in Beycesultan settlement. While the foundation stones of Kocayaka are generally in large sizes and the height of the foundation varies between 0.4-1 meters from the ground, it was observed that small, massive stones were utilized as the foundation stones in the Beycesultan architecture, and the foundations of the houses were at a maximum height of 20-25 cm from the floor. On the other hand, 30x30x10 and 30x15x10 cm mudbricks were utilized in the village house construction, while 50x32x15 and 34x30x15 cm mudbricks were utilized in the Beycesultan sample. Although the spaces in the houses built in both settlements are constructed as rectangular, the houses in Kocayaka consist of 6 spaces (including the

entrance hall, according to the plan given by Master Hüseyin Aslan). on the other hand, the House 1 of Beycesultan consists of 4 spaces. Considering the ground floor of the house belonging to Mehmet Aydın, which was examined in Kocayaka, it was understood that the house has a living area of approximately 65 m² (+2m²). It was observed that Beycesultan House 1 has a living area of 58.25 m². As seen above, although the houses utilized in different periods have different plans, the living area of both houses is very close to each other. Of course, it should be taken into consideration that apart from these examples, the size of the family living in houses in the village and Beycesultan (extended or nuclear family) or house sizes in proportion to the number of individuals may change.

Considering the interior arrangement of the houses and the properties of the places in the house, it is the main room where the daily works are done in both houses and a storage room or cellar associated with this main room are in the houses. From this perspective, it is possible to state that the houses are generally built and arranged in line with similar needs.

The presence of grain storage elements (silo, pithos etc) in the houses both periods and the presence of cereals clearly demonstrate the existence of agricultural activities. Especially in the houses on the höyük, the presence of stone and metal tools (Abay, 2014, 178) (sickle, grinding stone, and mortar, pestle) associated with agriculture is another evidence of the existence of agricultural activities. In this context, it can be thought that the division of labour among family members may have been shaped in line with these activities

Another important collection of finds in terms of Beycesultan are clay weights, spindle whorls, which are found both in the storage rooms of the houses and in the main rooms. As it is mentioned above, although livestock and agriculture are seen to be an important economic activity in Kocayaka village, it is possible to state that animal husbandry at the höyük is important in the domestic economy as in Kocayaka. The knuckle bones (Rooms 7 of House 1 and Room 28 of House 2) of around the hearths are constitute another important finds assemblage at he beycesultan. The fact that the knuckle bones played by children in the village until the past were also present in the höyük indicates the existence of a similar play tradition probably. From the similarities we have listed above in terms of both settlements, it is likely that the economies of both

communities are based on agriculture and animal husbandry, and that the social organization and division of labour are shaped within these elements.



CHAPTER X. GENERAL COMPARISON OF BEYCESULTAN HÖYÜK (LBA-LAYER 5B) AND KOCAYAKA VILLAGE

Whilst inspecting the house architecture, which has changed from past to present, it is possible to state that the houses built are closely related to geography and economic situation. Especially in rural areas, this situation is more clearly seen. With the addition of new spaces in line with the necessary needs of the houses built, new functions can be installed in the spaces in the houses in line with changing economic activities. For example, a family whose house economy is based on agriculture, expanding its economic activities over time and carrying out its economic model based on animal husbandry together, or the whole economic model of the house by changing the design of the house architecture according to the new economic model may be a requirement. Within this aspect, it has to either install new functions to existing spaces or add new spaces to existing architecture. From this point of view, the sites that were uncovered in the early excavations of Beycesultan and located in the area called “Unit C” (Lloyd, 1972, 13-17) were probably designed in relation to the economic model in the settlement. At the same time, it is considered that certain minor changes in the houses identified in the Layer 5b (II) of the mound shall also be evaluated from this point of view.

In addition to the production model of Kocayaka village investigated in ethno-archaeological context with Beycesultan Layer 5b (II), It shall be useful to compare Beycesultan höyük architecture and Kocayaka village mudbrick house architecture in many aspects. In this context, the house architecture identified in the Layer 5b (II) of Beycesultan höyük, and the mudbrick house architecture located in the village of Kocayaka is used in the construction activities as well as the use of spaces in the building activities comparative consideration of materials is of great importance. In addition, I believe that important information about the workforce shall provide a better understanding for the construction process of mudbrick houses in Kocayaka village and the labour force spent on house construction, if the construction process of houses located on the Layer 5b (II) of Beycesultan höyük is examined.

X.1. Comparison of Beycesultan Höyük and Kocayaka Village in terms of Economic Model

Agriculture in Kocayaka village, like many villages located in Çivril plain, come across as an important element of economic activities. Especially in the agricultural area of the village after 2000s, there was an increase in the variety and quantity of agricultural products with the construction of closed irrigation system. In periods when there was no irrigation system, dry agriculture was carried out in a large proportion except limited agricultural areas. Denizli agriculture and forestry directorate have analysed on agricultural lands belonging to Kocayaka village. It was understood that especially, Beycesultan höyük and surrounding agricultural areas have second class good agricultural soil ⁷⁵(Fig.168).

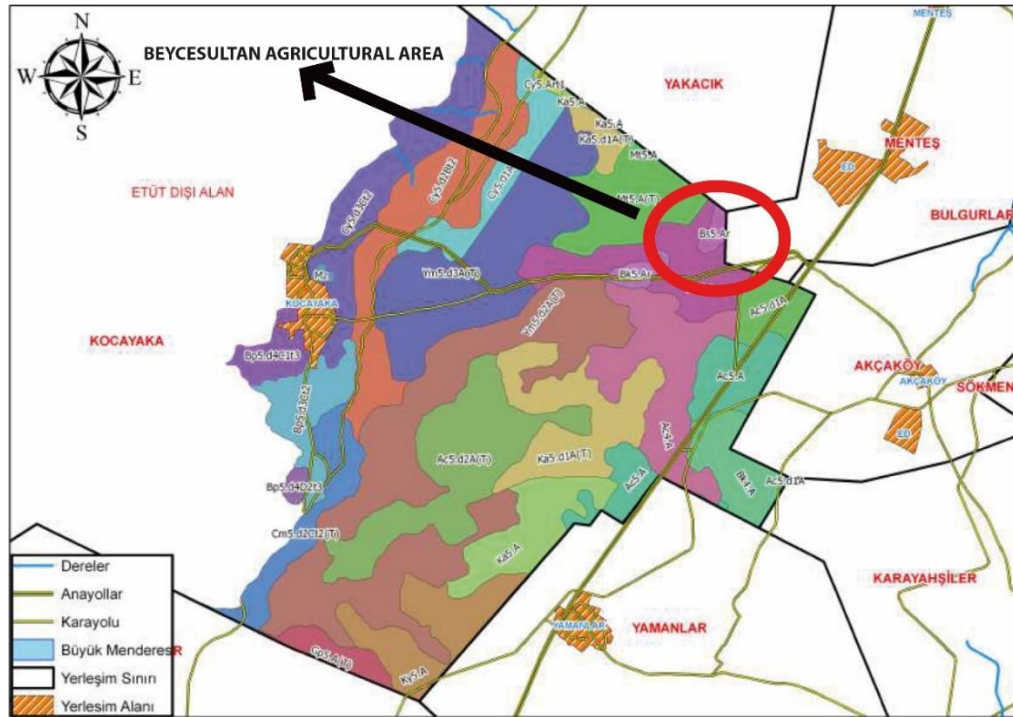


Fig.168: Kocayaka Village Agricultural Areas Map⁷⁶

In the agricultural soil analyzes made by the said directorate, it has clayey and midlevel calcareous soil structure. In these areas, besides fruits such as pears, apples,

⁷⁵<https://denizli.tarimorman.gov.tr/Belgeler/Download/Toprak%20Haritalari/%C3%87ivril%20Kocayaka.pdf>

⁷⁶ <https://denizli.tarimorman.gov.tr/documents/download/soil%20Maps/%C3%87ivril%20kocayaka.pdf>

apricots, cherries, sour cherries, quince, grapes, walnuts, almonds, vegetables such as tomatoes, peppers, melons, watermelons, onions and zucchini can be grown⁷⁷. Apart from these, it is suitable for growing plants suitable for irrigated and dry agriculture such as wheat, barley, oats, rye, sunflower, corn, poppy, chickpeas, lentils, pods, peas, beans, corn, clover and vetch⁷⁸. Considering both climatic conditions and soil characteristics, almonds, grapes, wheat, barley, oats, rye, poppy, thyme, anise, chickpeas, lentils, trefoil, lathyrus are possible to be grown in and around the Beycesultan höyük. It is clearly revealed that such plants grow in accordance with dry agriculture⁷⁹. Given that dry farming was more common in the early stages in and around the mound, it is likely that plants suitable for dry farming were widely grown above. The presence of plant residues (Dedeoğlu-Abay, 2014, 7) such as wheat (Emmer/Einkorn), barley, lentils and vetch in houses detected in the mound LBA strata, dry agriculture is widespread in the field as evidence.

In the village of Kocayaka, animal husbandry outside its agriculture appears as another important element in the economic context. It is possible to state that the proximity of the village to the mountains of Burgaz-Çal (Yaka mountains) and its large pasture areas provide great convenience in the operation of livestock husbandry. The large area of the pasture allows small livestock to be carried out more widely. In addition to small animals such as sheep and goats, cattle farming has also been carried out in recent periods. While need-based livestock farming until 30 years ago, today it has started to occupy an important space in the livelihood of families in the commercial context. The abundant presence of bones belonging to small animals in Beycesultan Layer 5b (II) are stated that livestock husbandry occupies an important site in the economic activities of the settlement. Especially in the early excavations, the presence of stables (Lloyd, 1972, 13-17) related to animal husbandry in the Layer II “Unit C” area and surrounding spaces revealed the importance of livestock husbandry from an economic point of view Putting,

⁷⁷<https://denizli.tarimorman.gov.tr/Belgeler/Download/Toprak%20Haritalari/%C3%87i%20Kocayaka.pdf>

⁷⁸<https://denizli.tarimorman.gov.tr/Belgeler/Download/Toprak%20Haritalari/%C3%87i%20Kocayaka.pdf>

⁷⁹<https://denizli.tarimorman.gov.tr/Belgeler/Download/Toprak%20Haritalari/%C3%87i%20Kocayaka.pdf>

From the data obtained both in the village of Kocayaka and in the Beycesultan höyük, it is possible to state that agriculture and animal husbandry occupy an important site in both residential economies.

X.2. Comparison of Architectural Features

Beycesultan architecture built within the framework of political and economic conditions in the first half of the II millennium BC and the modern Kocayaka village architecture built in the recent past is undoubtedly face-to-face compare is impossible. However, given the living needs of families in both settlements, it can help us learn about the settlement of Beycesultan through modern village settlement. It is possible to state that it is especially important in the context of architectural structures and the use of the spaces that make up these structures, as well as the features of the use of the items used in the spaces. From this point of view, it shall be considered that comparing modern village settlement and Beycesultan Layer 5b (II) architecture features shall offer a better understanding.

X.2.1. Comparison of Living Spaces

In Kocayaka village, certain houses were built independently of each other, as well as certain houses were built together as in the case of Beycesultan. Especially old mudbrick houses were built next to each other. But recently built houses have been observed to be independent of each other and gardened. An average house of 100m² in the village of Kocayaka consists of a hall, two rooms, a kitchen, a corridor and a bathroom or a “*yüklük*” where things are stored. Animal shelters belonging to the houses in question are usually built next to the house. In this way, the building material used in the construction of spaces and the labour force spent in construction can be deducted. The most important room in the house is the kitchen. The kitchen with a hearth in it comes out as a room where daily household chores are done intensively when needed. In addition to being a room where both cooking and animal food are processed, it can also be used to eat when necessary. In relation to its size, kitchens can also be used as an area where certain agricultural and animal foods are stored. The rooms outside the kitchen can be used to address the needs of rest and sleeping. Rooms also appear as areas of residence of the nucleus family, which arise depending on the situation. Another important room in the house is the space, which is called both a bathroom and a “*yüklük*”. This room has wooden shelves and is a room where items such as bedding and quilts are stored, as well as certain everyday materials (Fig.169).

Although the house plans identified in the Beycesultan Layer 5b (II) are different from the modern village settlement, it is possible to state that it has functionally similar spaces. These houses have a main space in the centre of which there is a hearth, and storage spaces in which the relationship with this space is built. However, there are certain differences between houses uncovered in early excavations and plans for houses uncovered in recent excavations (Fig.169).

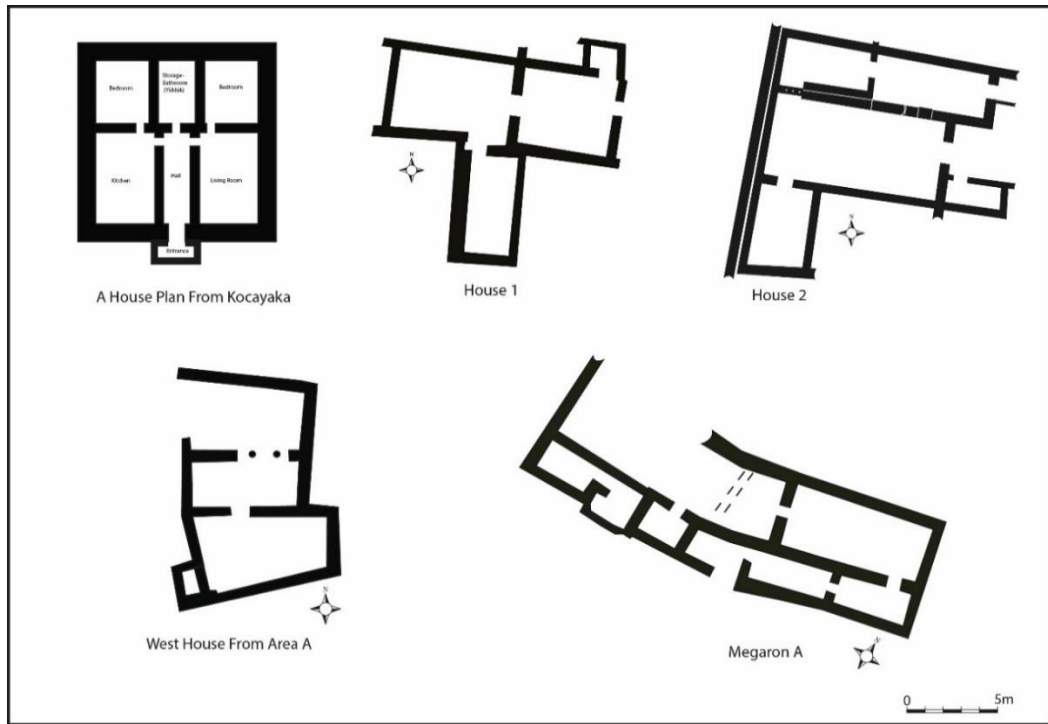


Fig.169: Kocayaka and Beycesultan House Models (*Illustrated by M. Çarkı*)

Although houses with megaron and porch were observed in early excavations, in recent excavations, areas such as patios or courtyards have not yet been identified in the excavated area. But it is clearly revealed that the houses have a complex architecture. Although they demonstrate similar characteristics in terms of their functions, it is seen that houses are generally different from each other in terms of their plans. The main question here is, what is the main reason for the difference in house plans? Overall, Beycesultan Layer 5b (II) provides the impression of a systematically constructed settlement with its streets and houses. The fact that houses have different plans is likely to be related to the economic structure of families living in the household. Another important factor is related to the number of individuals living in the household, as well as the core and extended family structure. In this context, when Megaron A structure is observed, it provides the impression that a extended family resides in the house due to a

large courtyard and the number of spaces opening to this courtyard, while the house in area A has a simpler plan and gives the impression of a house where the nuclear family resides. Likewise, the fact that House 2 has a more complex plan than House 1 and that some parts of the house are separated by later changes can be explained by the nuclear family. Another important point is that, as mentioned above, the economic model on which the subsistence economy is based is important. In this context, it provides the impression that the economy of this house is related to textiles from the textile residues, as well as crescent shaped loom weights and spindle whorls. On the other hand, the fact that certain houses have predominantly farming economy and certain part of them have predominantly livestock economy may be related to the difference between houses. In addition to the presence of stairwells belonging to the house in area A and double walls of the House 2 are important showing the presence of vertical axis architecture. Due to the lack of plans belong to the second floor, it difficult to make a definite judgment about the functions of all the spaces in the houses

Whilst inspecting the houses in both Kocayaka and Beycesultan, there are rooms that are used as storage or cellars outside the living areas in the houses. Within this aspect, it has been understood that the kitchens of certain houses are used for storage purposes as “*yüklük*” or bathrooms in single-storey houses built in Kocayaka village. On the other hand, in houses built as two floors, a space located on the ground floors is used for this purpose. In case of Beycesultan, besides the main rooms with a hearth, there are also places where the pottery and small finds, which were built related to these spaces and not used daily, were kept, as well as grain products. The presence of similarly used spaces in both settlements indicates the presence of storage on a household basis rather than a centralized system for storing manufactured products. In this context, it provides the impression that the production mechanism is made on a household basis.

X.2.2. Comparison of Animal Shelters

Another important point is the presence of built spaces associated with livestock in both settlements. As mentioned before, in Kocayaka village, stables were usually built next to houses, but in addition to rooms that have recently lost their function, they were built separately from houses are being. In ancient times, shelters were built next to houses to be safe from animal thefts, but recently they were separated from houses due to the disappearance of the security problem. Animal shelters are built according to the breed of animals contained. While ovine breeding was widely held in the village in the old

times, it is observed that cattle husbandry is carried out effectively with the increase of agricultural production today. In the case of Beycesultan, in the early excavations, the rooms located between two streets in the eastern cone and around the area called “Unit C” as animal shelters used (Lloyd, 1972, 13-17) (Fig.170)



Fig.170: Stable from East Cone at Beycesultan (Lloyd, 1972: 13-17; Fig.3- Illustrated by M. Çarkı))

It is clearly revealed that these spaces with a complex structure open to large courtyards (Lloyd, 1972, 13-17). On the other side, it is believed that a boat detected in the Room 55 of House 1 is associated with animal production. In this context, the intensive detection of animal bones in other houses identified in the mound indicates the importance of livestock in the production economy of the settlement. In front of animal shelters in the village of Kocayaka there are courtyards surrounded by shrub whisks and where animals are housed during the summer months. Likewise, the opening of animal shelters identified in Beycesultan into large courtyards can be considered to serve a similar purpose with the example of Kocayaka. Overall, the presence of animal shelters in both Kocayaka and Beycesultan indicates the importance of livestock husbandry in the production and consumption economy of both settlements.

X.2.3. Comparison of New Functions Installed in Abandoned Places

It has been seen that houses that have worn out or lost their function in Kocayaka village are used for different purposes. These abandoned houses are used as storage, stable or hayloft. Another important point is that the spaces on the ground floors lost their functions and were used for different purposes due to the construction of the upper floors in line with the needs of the houses that were previously built as a single storey. Within this context, the reviews made in the house belonging to Mehmet Aydın in the village, where the house was one storey before, and then the second floor was built, and the rooms located downstairs as cellar and haystack is used (Fig.171).

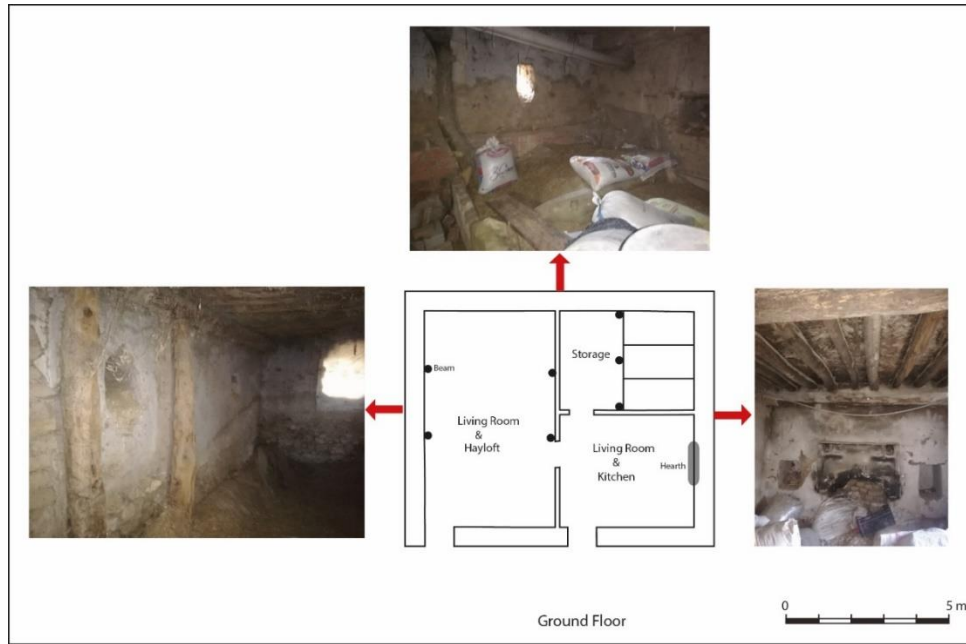


Fig.171: Mehmet Aydın's House Ground Floor (Photo and Illustrated by M. Çarkı)

As shown in the plan, this house consists of three rooms and the entrance room of the house was used in the early days for the kitchen, other room is storage, and the space on the left was used for needs such as sleeping. But with the construction of the second floor, the kitchen lost its function, and it was used as an area where animal products were stored. The room behind of the kitchen was redesigned and three silos were made and used as cellar. The room used for sleeping and resting purposes has been redesigned as a hayloft. On the other hand, with the construction of the upper floor, the upper floor was used as new living spaces (Fig.172).

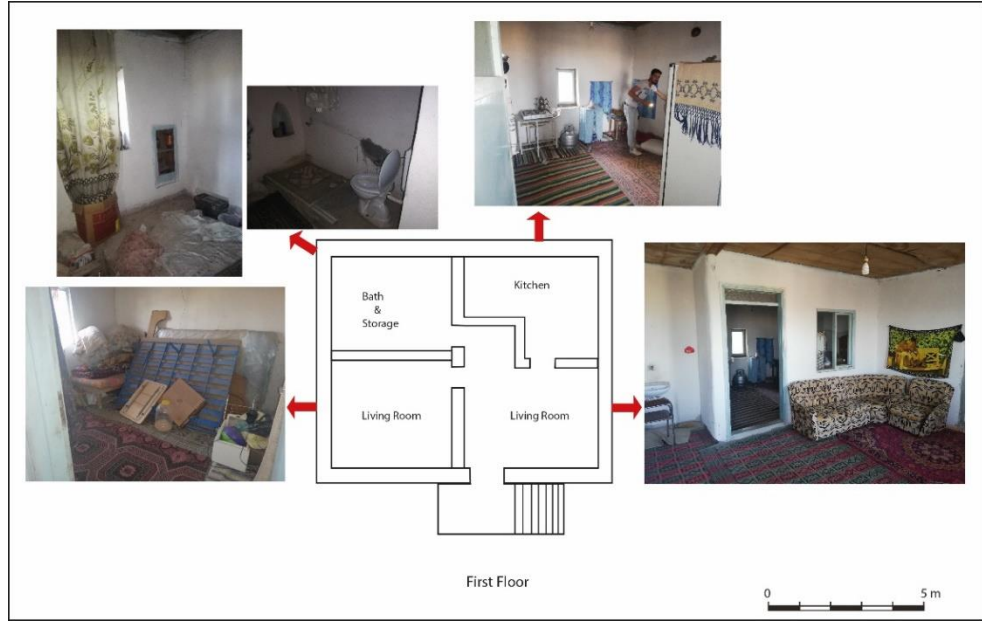


Fig.172: Mehmet Aydın's House First Floor (Photo and Illustrated by M. Çarkı)

Whilst inspecting the plan of the upper floor, the room located at the entrance to the house is used as a hall. The space used for kitchen, storage and bathroom purposes, as well as the rooms used for rest and sleeping purposes, all open to the hall. Since only the final uses of houses are detected in Beycesultan, it is difficult to make a definitive judgment on their first use. However, small changes made in certain houses can provide the impression that the initial use of these houses may be different. In this context, certain changes made in House 2 and separation of 30 and 62 spaces from 28 space and redesign of the house provide important evidence of its initial use. At the same time, in early excavations, cancellation of the door connecting Rooms 48 and 51 in the area called "Unit D", located south of the south street, points to the presence of the two stages use of rooms (Lloyd- Mellaart, 1955, 46 (Fig. 2); Lloyd, 1972, 10-11).

X.3. Comparison of Construction Materials and Techniques

X.3.1. Comparison of Construction Materials

There are two important elements in the context of the process of the construction process. The first is the provision of materials necessary for construction activities. The second is the use of the supplied building materials in building activities. Primarily, the necessary materials for building activities can be sorted as stone, mudbrick, wood and reed. The need for stones in Kocayaka village is provided in stony areas on the slope of Çal-Burgaz mountains located in the northern part of the village. In order to deduct labour force, quarries are preferred especially close to the area where the construction activities

are carried out. Stonemasonry is often used only in foundation construction, as it is laborious and costly. Massive stones are preferred for underground parts of stones used in foundation construction in Kocayaka house samples. In the case of Beycesultan Höyük, stones were used for similar purposes. But it is clearly revealed that certain walls are built from stone walls up to a certain level. It is often understood that the foundations in the direction of the slope are built high so that houses built in sloping areas have a flat floor. For example, the wall (Parapet Wall), located in the northern part of area A, was built for this purpose (Lloyd- Mellaart, 1955, 40-52). On the other side, it was seen that certain of the walls of the rooms associated with the street identified in recent excavations were weave for similar purposes. The stones used in the foundation and certain walls of houses identified in Beycesultan appear as solid limestone. Within this aspect, it is likely that limestone, which is abundant in the environment, might have been supplied in stony areas on the slope of Çal-Burgaz Mountains, as in the construction activities in the village of Kocayaka. Because whilst inspecting the number of houses detected in the mound, it seems that a large amount of stone is needed in each period. From this point of view, it is clearly revealed that the sources closest to the settlement are stony areas on the slope of Çal-Burgaz Mountains.

For the mudbrick, it is another important building material consisting of soil, water, and chaff, is of great importance. It is clearly revealed that the soil necessary for the production of mudbrick in the village of Kocayaka is supplied from the area called “çukurluk” in the northern next to the village. This area is important in terms of being close to the water source and the village. The need for chaff in mudbrick making is usually met from old straws that are not used for animal feed. Within this aspect, it might be an important requirement to have agricultural activities for chaff production. Judging by the example of Beycesultan, it is clearly revealed that the Küfi stream environment located east and south of the mound is suitable for mudbrick production. The abundance of clay alluvial soil carried by küfi stream, in addition to meeting the water needed for the production of especially necessary mudbrick, reveals the importance of this area for mudbrick production. At the same time, being close to the mound is important in that it can greatly deduct the labour force. On the other hand, agricultural activities were carried out intensively, as evidenced from the grain residues detected in the mound. From this point of view, it is highly likely that the straw necessary for the production of mudbrick shall be obtained as a consequence of these agricultural activities.

The sizes of the mudbrick used in houses built in the village of Kocayaka were observed to be different from those observed in the Beycesultan höyük. In Kocayaka, mudbrick are produced from moulds with a rectangular shape with a diameter of 45X60 cm. Two 30x30cm and two 30x15cm size mudbrick can be produced from these moulds and there are four pieces of mudbrick in each mould (Fig.173). However, Beycesultan mudbrick samples were observed to be 50 x 30 and 34 x 30cm (Fig.173). Due to the relatively large dimensions of the mudbrick, it does not seem possible to make a definitive judgment as to how many mudbrick is produced in each mould.



Fig.173: Kocayaka Village Mudbrick Examples (a); Beycesultan Mudbrick Wall and Mudbrick Examples (b) (Photo by M. Çarkı)

The use of wood in the activities of the construction is of great importance. Both the walls are more solid and the importance for the roof is quite large. Within this aspect, trees such as juniper growing in Çal-Burgaz mountains located north of Kocayaka village are of great importance. At the same time, trees such as poplar grown in Kocayaka village have been used in construction activities. It is clearly revealed that trees such as juniper grown in the Çal-Burgaz Mountains are preferred in the selection of roofs of old houses built in the village and the posts bearing the roof. The fact that the juniper tree has a hard and durable structure can be cited as a reason for preference. In this context, a large amount of wood remains used for roofing and beams purposes have been identified in the spaces uncovered in Beycesultan (Fig.174).



a

b

Fig.174: Roof Remains of Room 63 (a) and Sample of Roof in Kocayaka (b)

(Photo by M. Çarkı)

Considering the amount of wood used and its properties, the wood used in the construction activities in Beycesultan was likely to be obtained from Çal-Burgaz Mountains as in the case of the Kocayaka example. (Fig. 174).

Finally, the supply of reed, which is mainly used as insulation material, as well as roofs of houses, comes across as another important building material. Usually it has an insulating function between the mud and the wooden part by making wicker or placing small bundles on the wooden part on the roofs (Fig. 175).

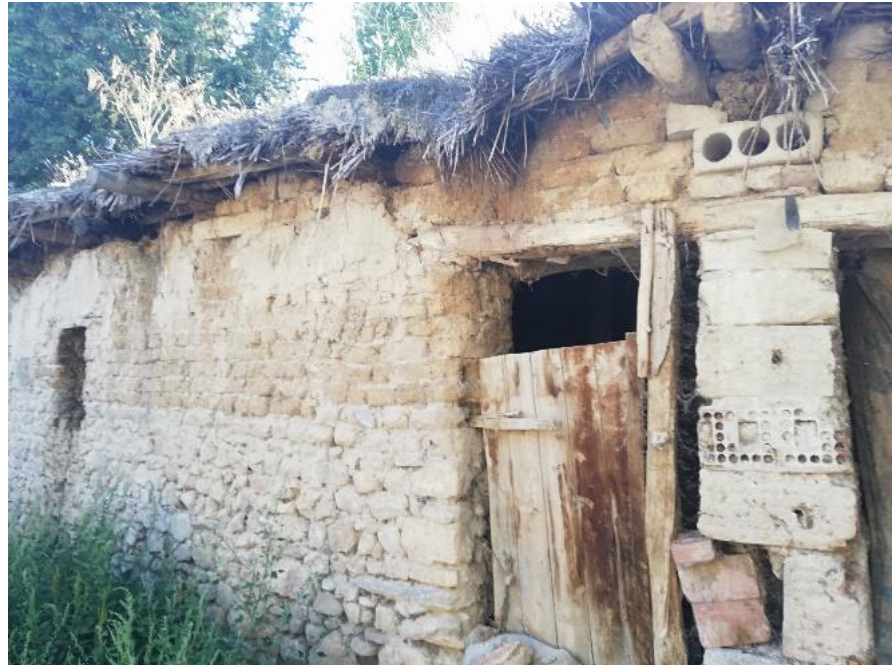


Fig.175: The Use of Reed in the Roof in Kocayaka village (Photo by M. Çarkı)

At the same time, it prevents mud or soil used on the roof from flowing into the space. It has been seen that all the old houses built in the village of Kocayaka are used a

lot on their roofs. In the case of Beycesultan, the finds of burnt reed samples with the roof parts detected in the houses shows that the roof construction method is similar to the example of Kocayaka. However, chaff remains were detected on the roof remains at the Room 62. Based on the remains of chaff, it is possible to state that it is preferable to straw on the roofs of houses on the mound (Fig.176).

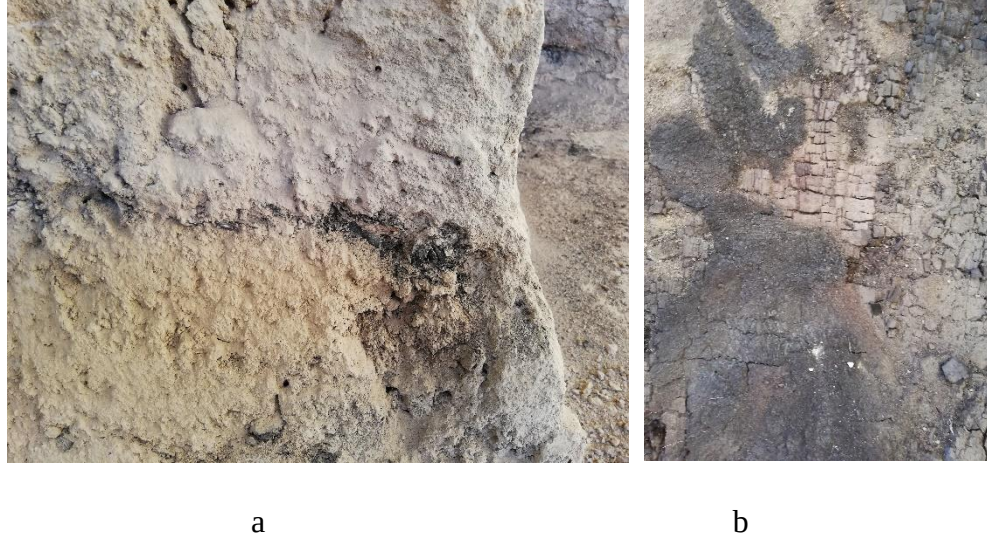


Fig.176: Roof residue (reed) (a) of Room 28 and Roofing Residue (straw) of Room 62 (b) (Photo by M. Çarkı)

X.3.2. Comparison of Construction Techniques

Both mudbrick houses built in Kocayaka and houses located in Beycesultan demonstrated great similarity in terms of construction technique. In the village of Kocayaka, the foundations of the house that are intended to be made firstly in the construction of houses are excavated and foundations made of stone are placed. It is especially important that the house is more robust and that the mudbrick wall to be placed on the foundations is not affected by the moisture that shall form in the soil. After the foundation building process is finished, a flat floor is created for both the foundation to be intact and the mudbrick wall to be built up. Generally wood beams are used over foundations of the buildings. However, in certain cases, small or plate-shaped flat stones are placed on the stone foundation and are present in examples that form the floor on the mudbrick wall (Fig.177). It is revealed that massive stones are partially processed and used in foundation construction.



Fig.177: Stone Foundation Examples in Kocayaka (Photo by M. Çarkı)

In the case of Beycesultan, it was observed that a similar application was conducted for house foundations. It was revealed that the basic building process was made within the framework of the house plan created on this ground, which was levelled and corrected before the beginning of house construction in Beycesultan. It is understood from the correction debris that was previously placed in the area in the process of floor correction. In certain cases, it was observed that at an earlier stage there were built foundations on solid walls. In this context, the use of foundation stones on certain walls of houses 1 and 2 belonging to the Layer 5b is a good example (Fig.178-b). Wood beams were used on the stone foundation similar to the basic examples of Kocayaka (Fig.178-a).

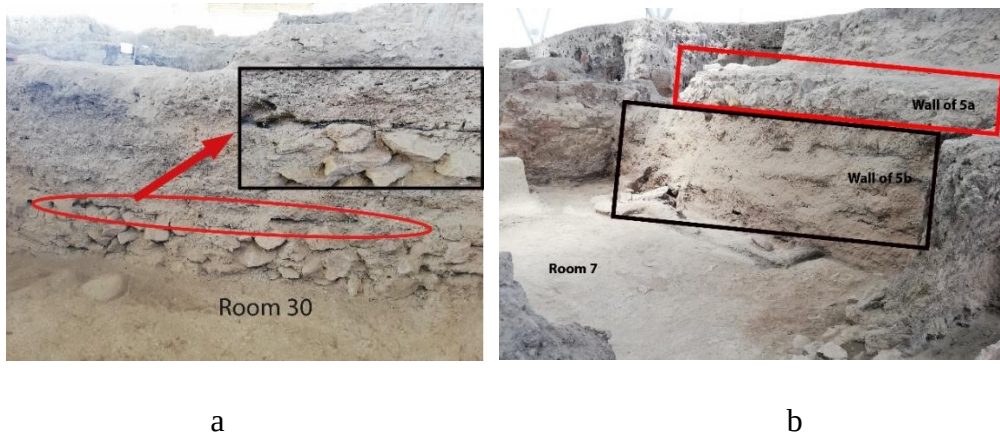


Fig.178: Beycesultan Beam Sample (a) and Mudbrick Wall (b) (Photo by M. Çarkı)

The mudbricks that were prepared and transported to the construction site in Kocayaka are built upon the previously created foundation. In each row of the wall, the big (Anaç) and the small (Kuzu) mudbrick blocks are switched places while building the wall. While placing the mudbricks, previously prepared mud mixture and plenty of straws are used. In addition, in order to build the walls smoothly enough, tools such as thread

and plummet are used. It is ensured that the wall built by repeatedly placing beams on the wall that reaches the upper levels of doors and windows. After the wall is completely built, it is prevented from easily demolishing for any reason by seating the roof construction on the formed lines (Fig.179-a). Whilst inspecting the example of Beycesultan, it is understood that the mudbrick wall was built on the beams which were built after the stone foundation was built. The mud is used between the mudbricks, similar to the examples of Kocayaka houses. At the same time, it was noted that the joints of each row of mudbrick placed on the wall differ from each other. In this way, it is ensured that both the mudbrick holds each other, and the wall is more solid. Similar to the example of Kocayaka, it was revealed that the mudbrick was mixed into the wall. In this context, traces of wood beams were detected on the mudbrick wall located between Room 28 and Room 19 (Fig.179-b)



Fig.179: Beam Detail a House at Kocayaka (a); Beam Detail House 2 at Beycesultan (b)

(Photo by M. Çarkı)

After the mudbrick wall masonry work is completed, as in the case of Kocayaka, the houses in Beycesultan höyük, wood beams should have been used to ensure that the roofs are strong on a smooth floor. Until now, houses are partly revealed, so it makes it difficult to make a definitive judgment on this issue.

On the other hand, on the roofs belonging to Kocayaka houses, planks bearing the roof are formed by placing on long walls. The reed or mat is placed on planks arranged side by side with spacing between 30 and 50cm. After this process is finished, the roof is covered with prepared mud (Fig.180).



Fig.180: Kocayaka Houses Roof Sample (Photo by M. Çarkı)

The roofs of old houses located in the village are usually made in the same way as above. But it shall be worth to discuss the technique of building roofing in a house that their construction has been completed in recent times. In this roofing technique, covering an area of about 100m², two long planks are first placed across the roof. With these planks, four medium-sized planks and eight short planks connected to these planks are placed to cover the four corners of the space. Finally, in order to narrow the square formed in the middle a little more, to coincide with the medium-sized planks placed in the four corners, four more planks are placed and the roof construction is completed (Fig.181) .



Fig.181: Roof Structure of a House from Kocayaka Village (Photo by M. Çarkı)

The most important point here is that an area of about 100 m² is completely covered by the technique of overlay without using of wooden pillar. Naturally, as seen in this example of the roof, although it covers a very large area, it was observed that the roof was completed by placing tiles on the roof construction. From this point of view, its

suitability for flat and grounded drips is open to debate. But it should be taken into account that large areas can be covered using different techniques, as can be seen from this example.

Whilst inspecting the example of Beycesultan, it was revealed that planks were used to fit the long walls of the spaces in the roof parts detected in the space. Within this aspect, it is possible to mention two different techniques. First of all, planks with a thickness of about 18 x18 cm were used from the roof remnants detected in Room 28. Samples of burnt reed together with planks in the area in question have been identified. From the remains, it is clearly revealed that planks arranged with certain intervals were then covered with reed, and then probably the roof was built with mud (Fig.182).



Fig.182: Roof Remain of Room 28 (*Beycesultan Excavation Archive- Illustrated by M.Çarkı*)

On the other hand, wooden remnants were detected on planks placed perpendicular on long walls from the roof remnants detected in Rooms 7 and 62. It is clearly revealed that it was covered with straw on these boards. Finally, this part is covered with mud or soil (Fig.183, a-b).



Fig. 183: Roof Remain of Room 7 (a) and Room 62 (b) (*Beycesultan Excavation Archive*)

X.4. Comparison of Beycesultan (LBA Layer 5b) and Kocayaka Village in terms of Construction Labour Force

In one-to-one talks with master Hüseyin Aslan in the village of Kocayaka, at least 6 people are needed for the production of the muds necessary for the construction of a house. An average of 250 moulds (1000 pieces) per day with 6 people in mudbrick production with production stages such as digging, sifting, mud mixing and pouring into moulds required for mudbrick production of the soil required for mudbrick production can be produced.

The mudbrick measurements used in the architecture in the village of Kocayaka and Beycesultan höyük are different, but the mudbrick blocks are sized of 30 x30 x 10 and 30 x 15 x 10 in Kocayaka; and in the case of Beycesultan, mudbrick blocks are sized 50 x 30 x 10 and 34 x 30 x 10 cm (Fig.184). However, since the walls in the mound are largely constructed of mudbrick with a size of 50 x30 x 10, calculations, on the basis of labour force, are made taking into account the measurements of these mudbrick.

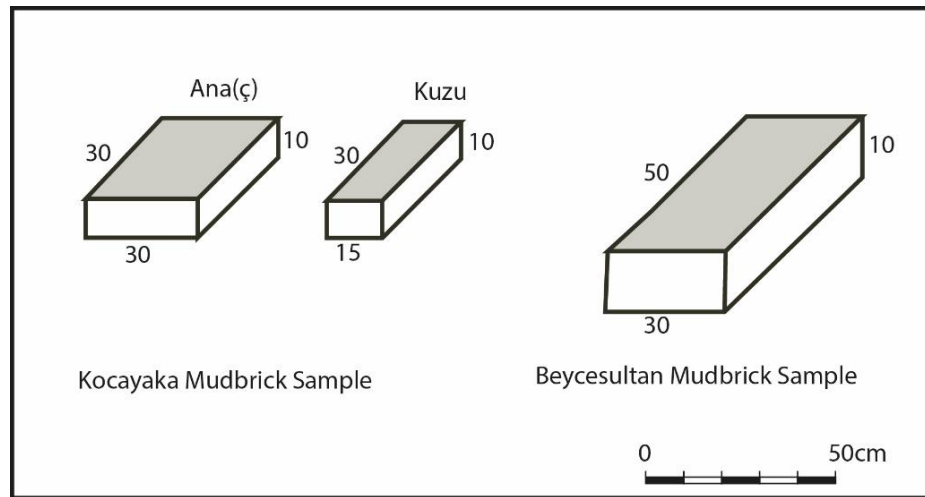


Fig.184: Mudbrick Samples from Kocayaka and Beycesultan (*Illustrated by M. Çarkı*)

In the mudbrick walls of the houses located in Kocayaka, 15 blocks (7.5 Anaç and 7.5 Kuzu) in the size of 30 x 30 x10 and 30 x15 x10 in the area of 1 m² are located. In light of these data, a total of 150 blocks of mudbrick (15 x 10 = 150 (75 Anaç/75 Kuzu) were used in the area of 1 m³ in the wall. Since 4 pieces of mudbrick (2 Anaç/2 Kuzu) are produced in the moulds used in the production of mudbrick, 37.5 mould mudbrick for 1 m³ area on the wall (150: 4 = 37.5) is understood to be manufactured. From here, it is

understood that 6 workers per day for the production of 250 mould mudbrick 6.66 m³ mud (250: 37.5 = 6.66 m³) produce (Fig.185).

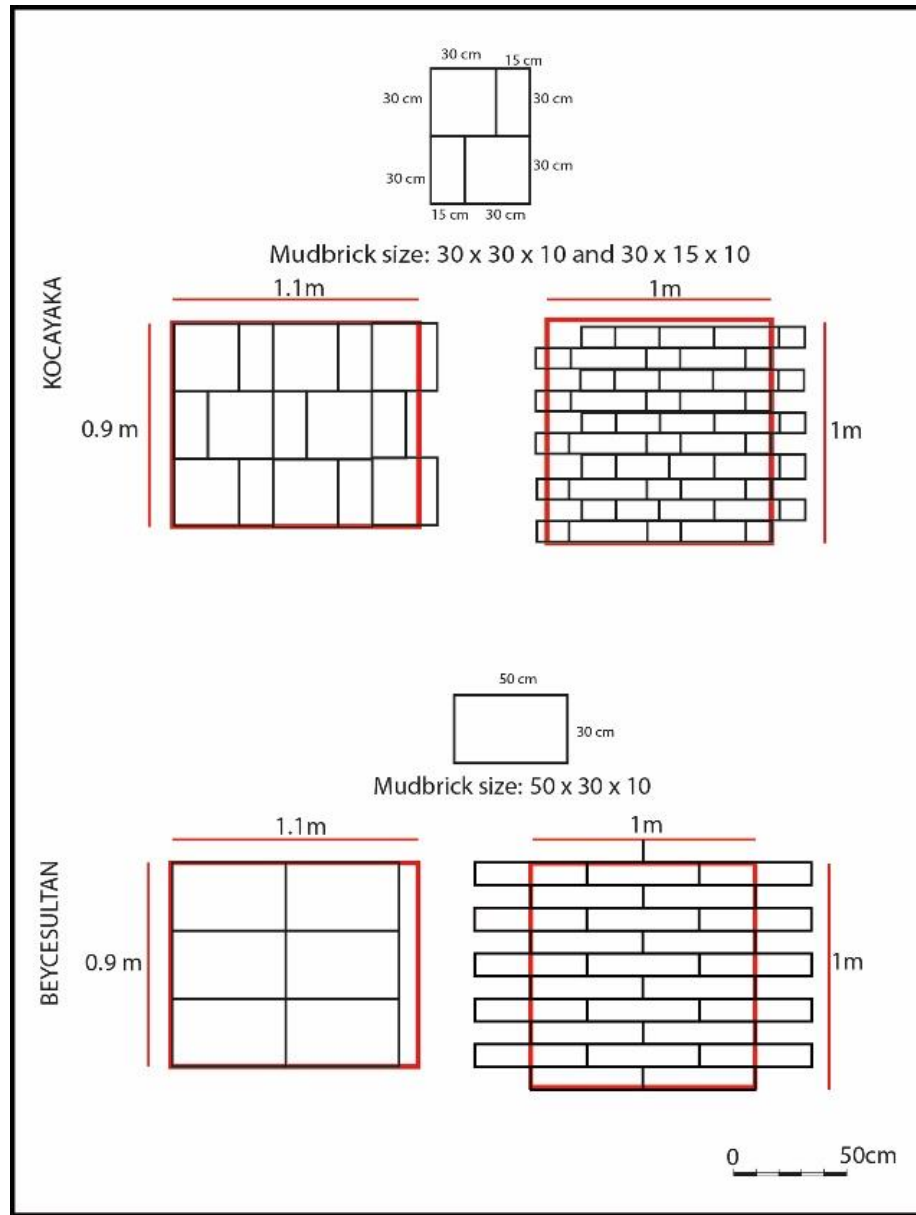


Fig.185: Kocayaka and Beycesultan Höyük Mudbrick and Wall Sample

(Illustrated by M. Çarkı)

Whilst inspecting the example of Beycesultan, there are 6.3 mudbrick blocks measuring 50 x 30 x 10 in 1 m² wall. Within this aspect, since 10 rows of mudbrick are located in 1 m³ part of the wall, 44.1 pieces (10 x 6.3 = 63) block mudbrick was used. When considering the amount of mudbrick produced from 6.66 m³ mud in 1 day by 6 workers in Kocayaka village in the context of the Beycesultan case, 6 workers in the settlement by 419.5 pieces per day (63x 6.66 = 419.5) produced mudbrick (Fig.185).

For a single-storey house of about 100 m² in Kocayaka, it is necessary to produce 3922 (15690 pieces of mudbrick) mudbrick mold. The outer walls of the built houses are 90 cm thick, while the inner walls, called the “*atomic wall (Atom Duvar)*”, are built 45 cm thick. The windows of the houses seen in the village of Kocayaka vary depending on the size and function of the spaces. At the same time, we do not have precise data on the number of windows and sizes of houses present in the Beycesultan höyük, and the doors in both Kocayaka and Beycesultan house samples gaps are not included in mentioned labour activities. Within this aspect, a single-storey house, whose plan was proposed by Usta Hüseyin Aslan, has a total of 6 doors, including the main entrance. Leaving an average width of one meter and 2 meters high, a door has an average gap of 2m². In this respect, given that there is an average of 6 doors in a house, there are 12m² door spaces in total. On the other hand, given that the wall height of the houses is 2.60 m on average, the outer walls with a width of 90 cm in the context of wall lengths of a house of 100 m² in Kocayaka. It has a length of 35.4m (0.9+0.9+0.9+0.9+8.2+8.2+8.2+7.4=35.4m) and has a length of 18.7m (3.75+3.75+1.6+1.6+1+1.6+3+3=18.7m) of the inner walls, which is 45cm. When the outer walls of the house are considered on the basis of cubic meters (m³), the outer walls in question are 31.86 m³ (35.4x0,9= 31.86 m³), but the inner walls are 8.4 m Calculated as³ (18.7 x 0.45= 8.4 m³). Given that the walls with a total of 40.26m³ (31.86+8.4= 40.26 m³) are built at a height of 2.60m, a total of 104.6 m³ (40.26 x 2.60= 40.26 x 2.60= 104.6 m³) it is clearly revealed that mudbrick is used. Within this aspect, one cubic meter on the wall, based on the mudbrick blocks used in the dimensions of 30 x 30 x 10 (*Anaç*) and 30 x 15 x 10 (*Kuzu*) in the construction of houses in Kocayaka An average of 150 mudbrick blocks are used for the area (Fig.186).

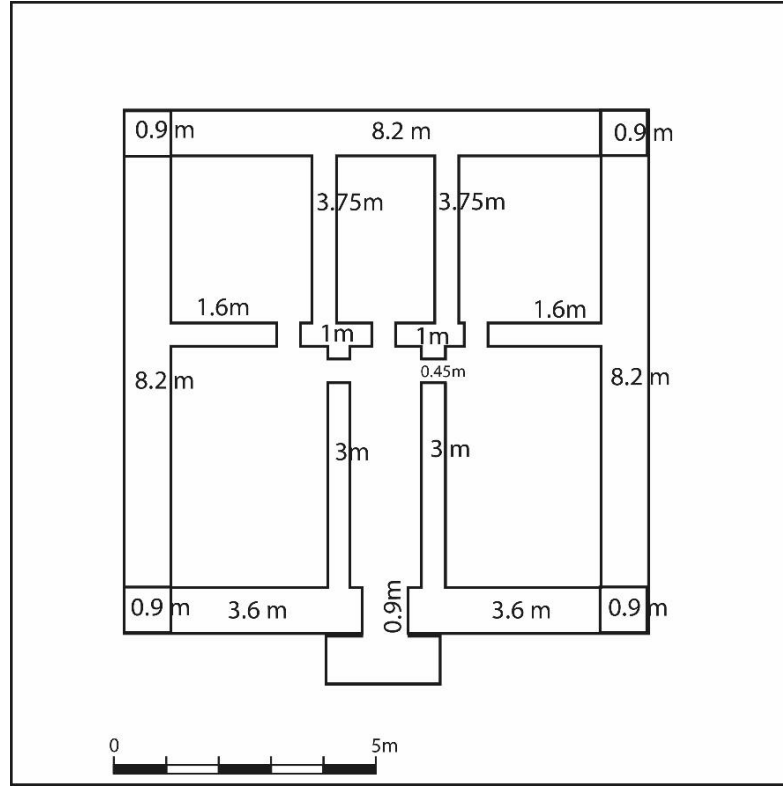


Fig.186: A House Plan from Kocayaka (*Illustrated by M. Çarkı*)

At least 2 masters and 5 workers are required in the construction of the foundation of the house. However, factors such as the processing of stones used in foundation construction and the height of the foundation play an important role in the finishing time of the work. Due to these factors, an exact period of time could not be given by the master Hüseyin Aslan for the finishing of the foundation construction. But it is clearly revealed that the mudbrick wall belonging to a house is finished in 20 days with 2 masters and 5 workers. Within this aspect, the average 5.23m^3 per day with said workforce ($104.6: 20 = 5.23\text{ m}^3$) mudbrick masonry can be completed.

In light of the above data, it would be useful to evaluate the fully uncovered house located in the western part of Area A in the western part of Area A in the early and recent excavations in the Beycesultan höyük. Within this aspect, first of all, whilst inspecting House 1, the foundations of the house with a living area of about 58.25m^2 are formed from massive stones with dimensions of 15-35cm (Abay-Dedeoğlu, 2012b, 313). The number of masters and workers working in stone foundation and mudbrick wall construction is of great importance in finishing the work. In the village of Kocayaka, this work is carried out by at least 2 masters and 5 workers. Whilst inspecting the plan of House 1 in Beycesultan, it is calculated that the walls built with an average thickness of

50 cm have a length of 53.1 m ($4.2+5+6+3.3+5.2+1.5+7+2.2+1.1+1.5+2.2+1.1+11.3+1.5=53.1$ m). The 51.3m long and 50 cm wide mudbrick wall belonging to the house in question is 26.55m (51.3: It is clearly revealed that it has a length of 2=26.55m) and a width of 1 m. Considering that the walls belonging to the house are built at a height of 2.6 m, it seems that for this house a total of 69 m^3 ($26.55 \times 2.6 = 69 \text{ m}^3$) mudbrick is used. As understood in the case of Kocayaka village, the average of the mudbrick walls belonging to this house in the case of Beycesultan, considering that an average of 5.23 m^3 mudbrick is built per day by 2 masters and 5 workers 13.1 per day ($69: 5.23 = 13.1$ days) (Fig.187).

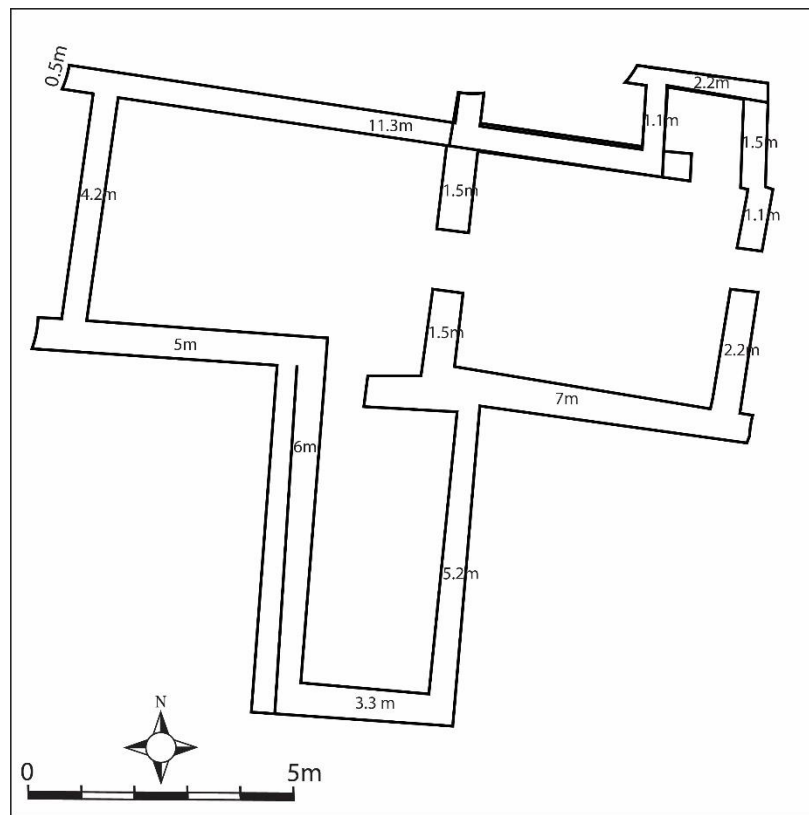


Fig.187: Size of Wall from House 1 (Illustrated by M. Çarkı)

Whilst inspecting the house located in the western part of Area A, which is located in the Beycesultan höyük and considered in the context of the labour force, a total of 72.5 m^2 living with its courtyard and veranda has the area. The walls of the house with mudbrick walls based on stone are 50cm thick. Whilst inspecting the plan of the house in question and the length of the walls, it is clearly revealed that the walls have a total length of 48.2m ($7.2+7+0.5+2.5+4.5+4.5+4.5+3.5+4.5+1.2+1+9=48.2$ m). The 48.2m long and 50 cm wide mudbrick wall belonging to this house is 24.1m (48.2: It is clearly revealed that it has a length of 2=24.1m) and a width of 1 m. Considering that the walls belonging

to the house are built at a height of 2.6m, it seems that for this house a total of 62.6m^3 ($24.1 \times 2.6 = 62.6\text{m}^3$) mudbrick is used. Considering that an average of 5.23m^3 mudbrick per day is weaved by 2 masters and 5 workers as in the case of Kocayaka village, the mudbrick walls belonging to this house in the Beycesultan case mean 11.9 per day ($62.6: 5.23 = 11.9$ days) (Fig.188).

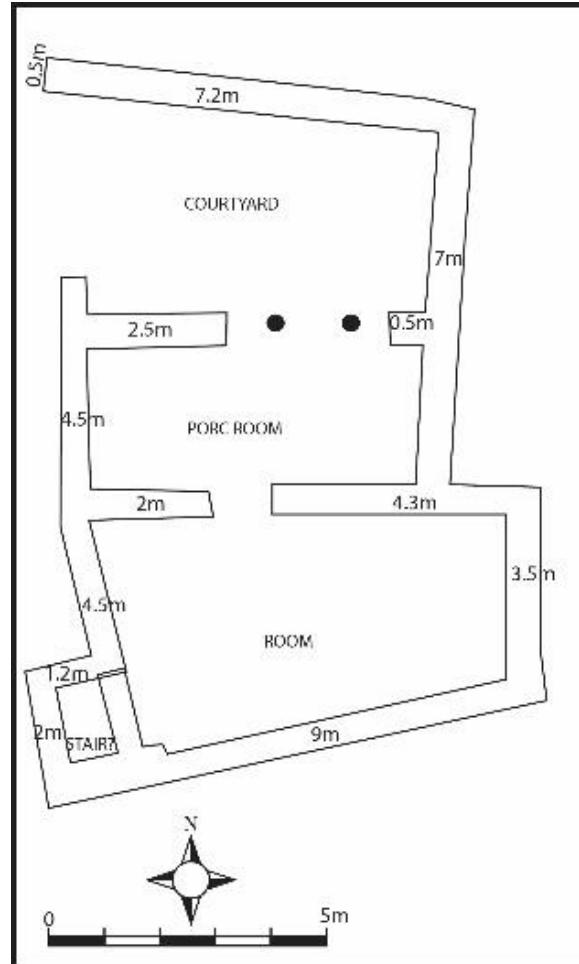


Fig.188: Wall Size of West House from Area A (Illustrated by M. Çarkı)

At least 7 employees (2 masters and 5 workers) are needed for the roof of a 100m^2 house with walls to be in Kocayaka village. It was expressed by Master Hüseyin Aslan that the roof of 100m^2 house with the number of employees in question was made on average in 10 days. Within this aspect, when 26.55 m² walls were added to the living area of 58.25m^2 of House 1, the first of the Beycesultan house examples, 84.8m^2 of the total area of 84.8m^2 It is necessary to close with the roof ($58.25+26.55=84.8\text{m}^2$). It is possible to state that the roof of the House 1 in Beycesultan with 2 masters and 5 workers was built in 8.4 days. On the other hand, whilst inspecting the house in Area A, the house with a living area of 72.5m^2 , including the courtyard, is 24.1m^2 to the calculation made

considering that the house is completely closed with the roof When the walls were added, it was observed that the area to be covered with the roof was 96.6 m² (72.5+24.1= 96.6 m²) in total. On the example of Kocayaka, it is concluded that the roof of this house can be built in 9.6 days (Fig.189).

Architectural Elements and Parts	Number of employees	House from Kocayaka (100m ²)	House 1 (84.8m ²)	West House from Area A (96.6m ²)
Mudbrick Production	6 Workers	15.6 days	10.3 days	14 days
Foundation	2 Master and 5 Workers	Not Defined	Not Defined	Not Defined
Wall	2 Master and 5 Workers	20 days	13.1 days	11.9 days
Roof	2 Master and 5 Workers	10 days	8.4 days	9.6 days
Total	2 Master and 5 Workers 6 Workers	45.6 days	31.8 days	40.9 days

Fig.189: Kocayaka and Beycesultan Höyük Houses Construction Process
(Illustrated by M. Çarkı)

The required labour force for the mudbrick production (6 workers) and for the construction of the walls and the roof (2 masters, 5 workers) of a 100 m² house in the Kocayaka village. It was discovered that the construction of a 100 m² house would require an average of 3922 moulds of mudbrick (which is the equivalent of 15690 mudbricks) as a result. For the house in question, 6 workers work on average 15.6 days (3922:250 = 15.6) and produce the necessary amount of mudbricks. On the other hand, it is clearly revealed that the construction of the walls, which is 104.6 m³, is completed in 20 days, and the roof is completed in 10 days. For the construction of a house of 100 m², an average of 45.6 days of work is required.

The production of mudbrick required for House 1 with 84.8m² area in Beycesultan (6 workers) is primarily whilst inspecting the mudbrick production (6 workers), An average of 10.3 working days is required for 69 m³ wall. In addition, for wall construction (2 masters 5 workers) 13.1 days, and for roof construction (2 masters 5 workers), an average of 8.4 working days is required. It is possible to state that for the construction of House 1, an average of 31.8 working days is required. On the other hand, in Area A with a total area of 96.6 m² with similar labour force, the house in which the required mudbrick production can be made on average 14 days for walls (62.6 m³) is understood. In conclusion, by 2 masters and 5 workers that the walls of the house in question are completed in 11.9 days and the roof in 9.6 days. An average workforce of 40.9 is needed for the construction of this house. Naturally, the number of working days in parallel with the number of employees can be more or less. In addition, it should also be taken into account that overtime is spent on the supply of elements such as stone, mortar or timber used in construction activities.

X.5. Comparison of Beycesultan (LBA-Layer 5b) and Kocayaka in terms of Agricultural Product Diversity and Production Efficiency

The Çivril plain has a terrestrial transition-type climate in terms of climatic characteristics. The dry summer months provide rise to the need for water in agricultural production. Agricultural irrigation systems carried out in recent years in the plain have made a great contribution to the variety of crops and agricultural production in the plain. In all 149,900 decare area, Çivril district has 33% of possibility to create agro-conducive areas, while 65% is not suitable for agriculture⁸⁰. In periods when there were no irrigation systems in the plain, agricultural production was based more on dry agriculture. Therefore, fluctuations in agricultural production between the years are observed depending on the climate. In dry agricultural conditions, the most farmed products are wheat, barley, oats, rye, poppy, thyme, aniseed, chickpeas, lentils, sainfoin and lathyrus. These crops can be grown without irrigation in regions with more than 450mm annual rainfall. In the region, these plants need an average temperature of 20-30 °C in summer, while meeting their water needs (Zengin-Özbahçe, 2011,3). In this aspect, Çivril Plain has favourable conditions for the production of these agricultural products in terms of

⁸⁰ General Directorate of Village Services

precipitation and temperature. Plant dry farming products such as wheat (Emmer/Einkorn), barley, lentils and vetch have been identified in the Beycesultan höyük LBA layers (Dedeoğlu-Abay, 2014, 7). Within this aspect, it is worthwhile to focus primarily on the product yield rate based on the grain products observed in the mound.

Wheat produced in the context of dry agriculture in the Çivril plain has yielded 249kg per of a decare in recent years, while barley yields 275kg. Naturally, developing agricultural technology and agricultural drugs used play a big role in this production rate. On the other hand, lentils, which are a cold-resistant plant, can be taken on average 92 kg of product per of a decare. According to TÜİK⁸¹ data, the annual consumption per person is calculated as 5.1 kg⁸². The vetch, which is in the legumes class, yields an average of 100 kg of product per of a decare in its production (Özköse, 2003). It is highly likely that the productivity rate of these crops that are farmed by traditional methods in the early stages shall be lower. However, in today's conditions, in terms of the efficiency of the products obtained above, it can be cultivated from the settlement through the possible agricultural area belonging to a house in Beycesultan shall present of great importance (within the minimum and maximum value range). In this aspect, grains such as wheat, barley, as well as legumes such as lentils and vetch were identified in pithos and silos, which are house storage element 1 and 2 located in the settlement. For the minimum and maximum values of the said agricultural products in the arable agricultural area; It is concluded that in today's conditions, it is necessary to calculate on barley (275 kg/da), which produces the highest yield per decare, and lentils (92 kg/da), which yields the least.

In total, it was revealed that House 1 has a storage capacity of 3504 kg of grains and legumes. In this aspect, in the case of barley in total 3504 kg of product covered in House 1, the minimum of agricultural area belonging to the house in question ($3504: 275=12.74$ da) should be 12.74 decares ($12.74 \text{ da}=1.27 \text{ ha}$). On the other hand, considering that the product stored at house is all lentils, the maximum ($3504: 92= 38$ da) 38 decares ($38 \text{ da}=3.8 \text{ ha}$) agricultural area is required (Fig.190).

It is clearly revealed that House 2 has a total storage capacity of 6131.2 kg of grain. If all of the product stored in the house in question is barley, the minimum of the possible agricultural area belonging to this house ($6131,2: 275=22.29$ da) should be 22.29

⁸¹ Turkish Statistical Institute

⁸² Turkish Crops Office General Directorate *2018 Pulses Sector Report* Ankara, 2019

decares (2.22 ha). If the stored crop is all lentils, the maximum of the possible agricultural area ($6131,2 : 92 = 66.64$) should be 66.64 decares (6.66 ha) (Fig.190).

Beycesultan Grain Type	Production Rate Decare (da)	House 1 (Living Space 58.25m ² =3.5 tons)	House 2 (living Space 91.06 m ² =6.13 tons)
Wheat	249 kg	14 da= 1.4 ha	24.62 da= 2.46 ha
Barley	275 kg	12.74 da= 1.27 ha	22.29 da= 2.22 ha
Lentils	92 kg	38 da= 3.8 ha	66.64 da= 6.66 ha
Vetch	100 kg	35 da= 3.5 ha	at 61.31 = 6.13 ha

Fig.190: Beycesultan Possible Agricultural Area and Production Quantity

(Illustrated by M. Çarkı)

Naturally, these results were presented considering today's production conditions. Considering the lower yield per decare of these products, which were cultivated with traditional methods in the past; it is highly probable that more land was used for agricultural activities in the context of the storage capacity in House 1.

As far as it is revealed, House 1 with 58.25 m² living area is required in today's conditions of mound cone with 36 hectares net over agricultural area or 73 ha can provide an average idea of the possible agricultural area for all of the settlement with a spreading area. In the calculation made on the basis of a cross section of 1140 m² created in the excavated area in the settlement, the living areas account for 24.39% of the settlement. It corresponds to 8.78 ha of habitat when viewed over the cone which is 36 hectares. For all of the settlement, which is 73 hectares, it corresponds to 17.8 hectares of habitat. Considering that the House 1 with 58.25 m² living area requires a minimum of 1.27 ha

maximum 3.8 ha agricultural area in today's conditions, the cone with 8.78 ha living area for an average of 5281.81 tons of agricultural production requires a minimum of 1920.65 ha and a maximum of 5741.09 ha of agricultural area. On the other hand, in accordance with the data obtained from the proportional point of view, for all settlements with 17.52 ha of habitat, for 10710.33 tons of agricultural production, there is a need for minimum 3894.66 ha and maximum 11641.66 ha of agricultural area (Fig.191).

Beycesultan Höyük	M ²	Agricultural production (Tons)	Barley/ha (Minimum)	Lentils /ha (Maximum)
House 1	58.25 m ²	3.5 tons	1.27 ha	3.8 ha
Top of Site	87804m ²	5281.81 tons	1920.65 ha	5741.09 ha
All of Site	178047m ²	10710.33 tons	3894.66 ha	11641.66 ha

Fig.191: Beycesultan Agricultural Area and Production Quantity, in terms of House 1

(Illustrated by M. Çarkı)

Possible agricultural production for Beycesultan cone and propagation area over storage capacity (6.13 tons) in House 2 with 91.06 m² living area as far as it is revealed. If we make an assessment of the quantity and production area, then for the cone of the mound with a habitat of 87804 m², an average of 5911.96 tons of possible agricultural production is required is understood. For the agricultural production in question, a minimum of 2141.03 ha and a maximum of 6423.10 ha of agricultural area is required. On the other hand, considering the mound with² possible habitats of 178047m², there is a need of minimum 4341.55 ha for agricultural production of 11988.16 tons, maximum 13024.65 ha agricultural area (Fig.192).

Beycesultan Höyük	M ²	Agricultural production (Tons)	Barley/ ha (Minimum)	Lentils /ha (Maximum)
House 2	91.06 m ²	6.13 tons	2.22 ha	6.66 ha
Top of Site	87804m ²	5911.96 tons	2141.03 ha	6423.10 ha
All of Site	178047m ²	11988.16 tons	4341.55 ha	13024.65 ha

Fig.192: Beycesultan Agricultural Area and Production Quantity, in terms of House 2

(Illustrated by M. Çarkı)

As a consequence, based on the data obtained in House 1 and 2, the 1 m² of living space in Beycesultan höyük minimum (12700 m²: 91.06 m²= 139 m²) 139 m², maximum (66600 m²: 58.25 m²= 1143 m²) 1143 m² agricultural area is the requirement. This method of calculation is based on the dimensions and storage elements of houses 1 and 2 in Beycesultan. These data may vary in direct proportion to the sizes and storage capacities of houses.

Comparison of Beycesultan höyük and Kocayaka village in many respects offered an opportunity to analyse the settlement better. Although the results obtained as a consequence of certain calculations are not entirely accurate data, it is possible to obtain important data on issues such as labour force, agricultural area, and population in residential building activities It is possible to state that it allows. In addition to the data obtained in this section, a look at the LBA settlements in surrounding areas such as Beycesultan höyük shall benefit the understanding of the issue.

CHAPTER XI. BEYCESULTAN LAYER 5B IN INTERREGIONAL CONTEXT: COMPARISON WITH SURROUNDING REGIONS IN TERMS OF SOCIAL AND ECONOMIC ORGANIZATION

XI.1. Historical Geography of Beycesultan

Beycesultan höyük can be asserted to be located at a strategic point. The höyük, located in the fertile Çivril plain, is also located in the basin where the Great Meander (Büyük Menderes) River originates, which is of great importance in its relations with the surrounding regions. Especially the Great Meander River and the valley formed along the river have a very positive effect on transportation with the coastal Aegean. Central Anatolia is likely to have been affected by possible commercial or political relations between the Lake District and Western Anatolia. The Hittites, who were founded in the LBA centred in Central Anatolia and established both war and trade relations with the surrounding regions in certain periods, had important effects on the political structure of the region. Within this political structure and network of relations, Beycesultan lacks written sources that would reveal its place in the political structure of Western Anatolia. However, the settlement's architecture and artifacts may provide clues as to its place in this political structure. In this period, Western Anatolia is remembered as a region of different political organizations rather than political unity.

Whilst inspecting the political structure of Western Anatolia during this period and the localization of political formations in the region shall be of great help in understanding the subject. In the 2nd millennium B.C., the region was house to many polities. In this context, archaeological evidence and Hittite texts there were many states in the second millennium B.C. in Western Anatolia including Arzawa - Wilusa, Mira-Kuwaliya, Seha River Land, Hapalla- Assuwa, Karkisa, Masa, Lukka, and Ahhiyawa (Macqueen, 2001, 42; Dinçol, 1982, 24). These states sometimes revolted against the Hittites and sometimes formed alliances with them. Name of Arzawa sometimes mentioned as a city (URUAr-za-wa) sometimes as a state (KUR URUAr-za-u-wa) or as a confederation (KUR.KUR MES URUAr-za-u-wa) in written sources (Heinhold-Krahmer, 1977, 4). The Arzawa that was mentioned in the Hittite written sources was initially also mentioned to on cuneiform tablets discovered in Tell El-Amarna in Central Egypt (Lehmann, 1977, 31). Two written letters were found in the Hittite language and these letters deal with a marriage alliance between Egypt king Amenophis III and Arzawa king Tarhundaradu (Hawkins, 2015, 17).

After certain amount of research, it was revealed that the Western Anatolian region is actually the Arzawa land mentioned in the Hittite written sources. During the early days of Hittitology, just like many other geographical locations, Arzawa's location was sought in incorrect places (Kinal, 1953, 43). However, after Kizzuwatna was placed near Cilician Plain, its location was revised and placed in Western Anatolia (Ünal, 2003, 1). The weakest point in Anatolian - Arzawa research is the lack of written sources in the region. Yet, Luwian Hieroglyphic inscription found around Karabel and Afyon, graffiti discovered at Beşparmak Mountains near Bafa Lake, and certain hieroglyph inscriptions with uncertain origins fill this gap. These archaeological finds provide clues about the geographical borders of Arzawa but do not offer much information on the history of Western Anatolia (Ünal, 2003, 1). Therefore, the main resources shedding a light on the history of the region are cuneiform inscriptions discovered in Boğazköy-Hattusa.

Many suggestions have been made regarding the actual locations of Western Anatolia states in 2nd millennium B.C. and it still is a discussed subject. First information regarding Arzawa was obtained from the Hittite King Hattusili I (Gurney, 1990, 16) and it is well known that the boundaries of the Arzawa Land were changed as a consequence of historical events, but scientists agree that it is bounded by the sea. Therefore, John Garstang and Oliver Robert Gurney suggested Arzawa land have must be located between Gediz Valley and Meander River (Garstang-Gurney 1959, 84). In addition to this, Mellaart and James G. Macqueen agree with Garstang and Gurney idea, and according to them since it had close relationship with the Hittites, Arzawa have must be located between Gediz and Little Maeander rivers (Mellaart, 1968, 197; Macqueen, 1968, 174-175). On the other hand, Friedrich Cornelius (Cornelius, 1958, 395), George Leonard Huxley (Huxley, 1960, 33) Süleyman Özkan (Özkan, 2016, 405-413) also suggested this idea about location of Arzawa. On the other hand, J. David Hawkins mentioned that Arzawa lands are located in western Anatolia on the Aegean coast from the Troad to the mouth of the Meander River (Hawkins, 2015, 25- 26).

Due to the similarity of voice between Troy and Ilios and Taruisa in Homer's famous book, Wilusa was localized in Troad (Biga peninsula) by Paul Kretschmer (Kretschmer 1924, 207) and Emil Forrer (Forrer 1932, 150). However, Mellaart and Macqueen reject this view and According to them, Wilusa must be situated around the provinces of modern city Bursa and Eskişehir (Mellaart, 1968, 197, Fig.1; Macqueen, 2001). However, recent research reveals that Wilusa was actually located in Troad region (Bryce, 2005, 41-44, Map. 3; Hawkins, 1998, 23; Güterbock, 1986, 41; Gurney, 1992,

221). In addition, this view accepted by Frank Starke (Starke 1997, 454), Niemeier (Niemeier 1999, 143) and Joachim Latacz (Latacz 2002, 199).

Another important country is Seha River Land, which was mentioned Mursili II written documents such as Manapatarhunta Treaty which is belong to in the Mursili II (Alparslan, 2015, 137). According to Macqueen and Mellaart Seha River Land must be situated around modern Balıkesir city (Macqueen 1968, 175; Mellaart, 1993, 416). On the other hand Garstang and Gurney suggested that it must be located Bakırçay valley (Garstang-Gurney, 1959, 96). However, according to Hawkins Seha River Land must be located between Gediz and Bakırçay region (Hawkins, 1998, 23), and he mentioned that Karabel is nature frontier of Arzawa proper and the Seha River (Hawkins, 2015, 25).

The written documents of the Mursili II and Tuthalia II are of significance references for understanding of the Hapalla location. According to the documents (Alparslan, 2015, 132), Garstang and Gurney have suggested that Hapalla must be between modern Afyon and Eskişehir cities (Garstang-Gurney, 1959, 100). However, Macqueen proposed it should be around Beyşehir and Eğirdir lakes (Macqueen, 2001, 60). On the other hand, according to Hawkins, it must be situated south side of the Sultan Mountains which are located between modern Konya and Isparta cities (Hawkins, 1998, 14).

The name of Assuwa is mentioned in written texts at the time of Tuthalia II and Arnuvanda I (Garstang-Gurney, 1959, 92). And also, Assuwa name is mentioned on one sword which was discovered in Hattusa (Ünal et al. 1991, 46-52; Alparslan, 2015, 135). The location of the Assuwa is still discussed but there are many suggestions about location of Assuwa. Generally it mentioned that Assuwa should be located Troad region (Garstang-Gurney, 1959, 107) or around Balıkesir region (Ünal, 2002, 73).

Karkisa and Masa name are firstly mentioned at the time of Tuthalia II, Suppiluliuma I, Mursili II and Muwattali II. In addition, Karkisa and Masa name is mentioned a passage of the Alaksandu Treaty, which was treaty between Muwattali II and Alaksandu king of Wilusa (Hawkins, 2015, 27). The location of Masa still is discussed. The Garstang and Gurney suggested that the Masa must be located around modern Isparta city (Garstang-Gurney 1959, 109). However, according to Pavuk, Masa should be located İznik region due to pottery groups (Pavuk, 2015, 102). On the other hand, Mary R. Bachvarova suggested that Masa should be inland and north of Mira-Kuwaliya (Bachvarova, 2015, 153). Due to similarity in names of Karkisa and Caria, many scholars suggested that the Karkisa must be located in Caria region (Albright

1950, 168; Huxley, 1960, 33). However, this suggestion rejects by other scholars, such as Zsolt Simon (Simon, 2015, 791). On the other hand, according to Ahmet Ünal, Karkisa must be located around modern Balıkesir and Bursa cities (Ünal, 2003, 4).

The Lukka was mentioned in written texts of Tuthalia II, Arnuwanda I, Mursili II, Muwattali II, Mursili III, Tuthalia IV and Suppiluliuma II period. According to Hittite written sources, the Lukka is located a sea coast, however, it is not clear whether it is located near Aegean or Marmara sea. According to Heinrich Otten, Macqueen and Mellaart, Lukka was situated to the south of Marmara Sea (Otten 1961, 112-113; Macqueen, 1968, 175; 2013, 43- 44; Mellaart 1993, 416). On the other hand, due to similarity in names of Lukka and lycia, Garstang-Gurney, Huxley, Cornelius suggested Lukka must be located in Lycia region, on the other word southwestern Anatolia (Garstang-Gurney, 1959, 81; Huxley, 1960, 33; Cornelius, 1958, 381).

Another important state is Ahhiyawa. There are three different suggestions on its location; north-western Anatolia, Aegean islands and mainland Greece; therefore, its location is a big problem for scholars. In this respect, campaigns of the Mursili II are of great significance to understand its location. According to Albrecht Goetze, Macqueen and Mellaart it must be located north-western Anatolia in terms of their interactions with the Hittite (Goetze, 1957, 183; Mellaart, 1968, 190; Macqueen, 1968, 179). However, Gurney and Boysal suggested that Ahhiyawa must be situated Aegean islands such as Rhodos or Crete in terms of Hititte written sources (Boysal 1971: 72). On the other hand, due to similarity in names of Ahhiyawa and Achaeon it has been located in mainland Greece by Huxley, Hans Guterbock and Niemeier (Huxley, 1960, 33, Guterbock, 1983, 138; Niemeier, 2002, 521). In addition of these above suggestion Hawkins has also recommended that Ahhiyawa must be located in outside of the Anatolia (Hawkins, 2015, 15-17).

The lastly, I would like to mention about the location of Mira Kuwalia. Kupantakurunta treaty is a good source to understand location of Mira-Kuwalia. It is also a discussed subject for archaeologists. According to Garstang and Gurney it must be situated in Meander valley with reference to Kupantakurunta treaty (Garstang-Gurney, 1959, 91). On the other hand, Macqueen suggested that it must be west of the modern Afyon city (Macqueen, 1968, 177). However, according to Cornelius, Mira-Kuwalia should be located in Karia region (Cornelius, 1958, 394-395). Hawkins has mentioned that the Mira-Kuwalia country maintained dense political contact with the Hittites (Hawkins 1998, 21-25). Beycesultan's location in the Upper Great Meander Basin makes

it likely that the settlement was within the Mira-Kuwalia political structure. Especially since there are no other large mounds like Beycesultan in the region localized as Mira-Kuwalia, it can be assumed that Beycesultan had an important site in the political structure of Mira- Kuwalia.

Although it is not known exactly what role the Beycesultan political settlement played locally, it is considered to have an important site in terms of its location and size. In this context, the buildings and all kinds of artifacts observed in the settlement provide important data on the political structure of the settlement.

XI.1. Settlements of Surrounding Regions

In line with the data obtained from the early and late period excavations at the settlement, its rich architectural structure and finds were evaluated in the previous sections. Especially the streets unearthed in the early excavations and the houses built in relation to the streets present a planned settlement model. The houses located between the east-west oriented streets are mostly built in relation to the open courtyards. Among the building complexes, megaron style buildings are important for the period. At the same time, especially in the studies conducted in the western cone, houses with verandas are another important house type in terms of both plan and use. Although the architectural features of the houses 1 and 2 unearthed during the late period excavations demonstrate certain similarities with the houses unearthed during the early period excavations, there are major differences between them in terms of plan. However, in terms of construction technique and wall thickness, the architecture of Layer 5b (II) demonstrates similar characteristics. On the other hand, the use of houses and the roles played by the spaces are similar, perhaps because they share the same economic model. Houses usually have a central space with a courtyard and associated storage and daily use spaces of different sizes. The plan and size of the houses, the storage rooms and the storage capacity of the house provide important data on the economic model of the settlement.

The functions of the spaces and the subsistence economy from the artifact contexts retrieved from Layer 5b (II) of the settlement shall contribute to the understanding of the settlement. It is particularly important to identify what kind of economic model exists in relation to the storage capacity of households. For example, the presence of storage spaces in the houses unearthed in Layer 5b (II) and the large amount of agricultural products observed in these spaces suggest that the household economy was independent in terms

of agricultural production. On the other hand, the fact that the storage elements are almost non-existent in the buildings dated to Layer 5a (Ib), which were reoccupied after the destruction of the buildings belonging to this layer by a great fire, points to an economic centralization in this period.

Although the burnt palace unearthed during the early excavations in the eastern cone of the mound and dated to the Middle Bronze Age (Lloyd- Mellaart, 1965, 3-35) indicates that the settlement had a strong political structure during this period, the absence of such structures in the Late Bronze Age indicates that political centralization lost its importance to a certain extent. Although the central structure and the economic structure seem to be interrelated, there may be certain differences between them. For example, it is possible that households with an independent economic model are politically tied to a strong central authority. In this respect, in the case of Beycesultan, although the houses in Layer 5b (II) appear to be independent in terms of storage capacity and subsistence economy, it is highly probable that they were part of a possible political organization. On the other hand, the architectural structures unearthed in Layer 5b (II) present a planned city model, which provides the impression that the settlement was built according to a certain plan.

This section focuses primarily on the economic structure of the settlement, its livelihood and production economy, and its socio-cultural and political organization in comparison with the surrounding regions. In particular, whether the economic and political model of the settlements in the surrounding region is similar to the Beycesultan example, as well as the production economy shall be discussed. Is there a cultural coexistence between Beycesultan and the settlements in the surrounding region in terms of possible political and economic similarities or differences? Or what are the reasons for possible cultural differences? We shall look at the surrounding settlements in order to answer such questions. For this purpose, I designed a comparison with the surrounding sites, which are both chronologically close to Beycesultan 5b (II) and prominent with their rich finds and architecture, shall yield accurate results.

Many settlements in the coastal and inland parts of Western Anatolia were settled during the LBA. These settlements are mostly located in alluvial plains and coastlines as well as depressions called grabens. In this context, if Kusura höyük is inspected, which stands out with its proximity to the Beycesultan höyük; the mound is located within the

borders of Sandıklı in Afyon province and is dated to the Late Bronze Age in Period C (Lamb, 1937, 11-14. *Pl. IV*). This phase of the settlement stands out with complex architectural structures like the Beycesultan höyük (Lamb, 1937, 11-12) (Fig.193). During the studies conducted in areas I, III and VI-VIII, the interior walls of the houses with stone foundations and mudbrick bodies were plastered (Lamb, 1937, 11). In the middle of the door thresholds of the houses, jamb stone was used as a door instrument (Lamb, 1937, 11-12).

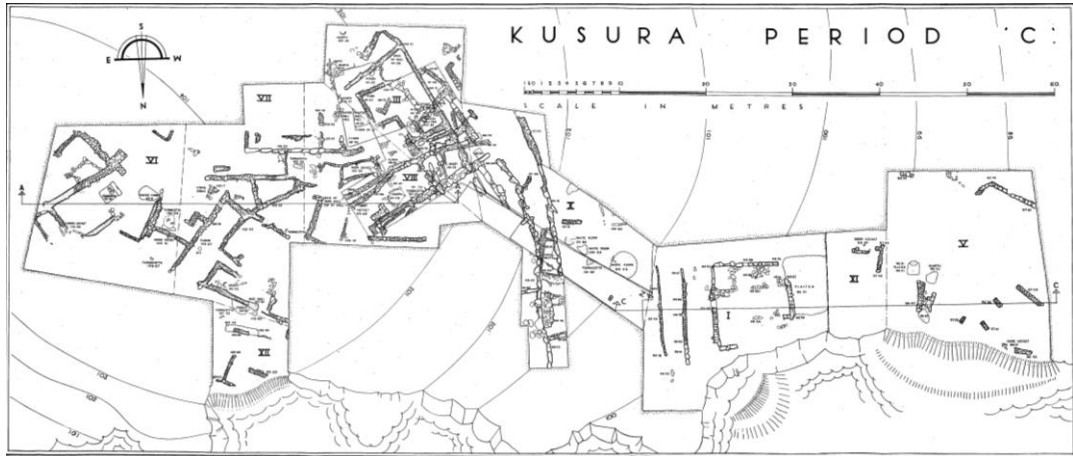


Fig.193: Architecture Remains of Kusura (Period C) (Lamb, 1938:217-273, pl. LXXVIII)

Although the floors of the houses are usually plastered, in addition to the plastered floor observed in Area VI-1, there is a hearth in the centre of the rectangular space in the northeast direction. The hearth resting on a platform made of clay is similar to the examples from Beycesultan Layer 5b. In addition to trefoil-jugs and spouted pitcher fragments; pottery, bowls, burnt seed remains and a skull of a bovine (ox) animal were observed inside the site. Based on these finds and the location of the site, the excavator thinks that this was a worship area. It is observed that these types of houses in the settlement have similar characteristics with the houses in Layer 5b of Beycesultan. Especially in the context of the seal-printed hearth structure and the platform on which the hearth was placed, it shows parallels with the domestic spaces of Beycesultan. On the other side, in Area III, in addition to architectural remains in a similar style, walls measuring 3.5 -2.5 meters, which are considered to be fortification walls, were unearthed (Lamb, 1938, 230-232, fig.6). The outer wall of the rampart, built of large block stones and consisting of two parallel walls, was added later (Lamb, 1938, 232). An entrance was observed in this wall surrounding the city. The city wall built of rectangular block stones

was used in three different phases (Lamb, 1938, 234). In addition to the city wall, the settlement with its temple and domestic spaces indicates the existence of a politically organized structure. Except for the city wall, it is similar to Beycesultan höyük in terms of domestic spaces and worship areas. On the other hand, human remains along with pottery sherds were observed in the rooms (Lamb, 1937, 13-14). In sum, the absence of both architectural and storage remains in the LBA layer of the settlement may indicate an economically centralized structure. In this context, it can be paralleled to Beycesultan Layer 5a (Ib). The excavator states that the pottery is contemporary with Thermi and Alisar Layer II (Lamb, 1937, 23-27). Apart from these, crescent-shaped loom weights, spindle-whorls, beads, terracotta pounders, as well as small finds such as lead rings, copper pin-needles and flint tools were retrieved (Lamb, 1937, 28-64; 1938, 235-273). It is similar to Beycesultan in terms of finds. It can be concluded from these finds that it has similarities with Beycesultan höyük in terms of production economy. In conclusion, the fact that Kusura and Beycesultan höyüks have similar characteristics in the same geography is likely to be related to the similar political structure in the region during the LBA.

On the other hand, when Troy is examined, one of the important LBA centres in Western Anatolia, Layer VI of the settlement is contemporary with Beycesultan Layer 5b and the settlement is characterized by a citadel and a lower city (Becks, 2003, 42) (Fig.194). The outer city, which surrounded the inner fortress with Troy Layers VI and VIIa and continued to be inhabited in the VIIb period, provides the impression of a planned city (Becks, 2003, 42). Late Troy Layer VI and VII. At the beginning of the stratum, the citadel has an area of 2-3 hectares (Jablonka, 2010, 853). Built of limestone, the city walls are 5 meters wide and 8 meters high and are supported by towers and buttresses (Korfmann, 1997; Jablonka, 2010, 853-855). The fortification wall and the structures within the citadel were built of smoothly cut block stones and no mortar was used between the stones. On the other side, similar block stones were used in the construction of the walls and buttresses surrounding the Lower city. In terms of these architectural structures and their features, it is possible to state of the existence of a class specialized in construction activities.

During this period, in addition to the city walls, the city was surrounded by a moat carved into the bedrock (Jablonka- Brian Rose, 2004, 619-620). The presence of another ditch about 100 m south of the ditch of Troy VIIa is associated with the expansion of the

city during this period (Jablonka, 1996, 80). These trenches built for defence purposes can be considered as effective as the city walls in protecting the city.



Fig.194: Troy Late Bronze Age City Plan (Jablonka - Brian Rose, 2004: 617, Fig.1)

During Troy VI, the citadel was accessed through four different entrances. However, the main entrance is located in the south. A street with a drainage system leads into the citadel from the stone-paved south gate. This gate, which was used during the Troy VI period, continued to be used in the VIIa period by equipping it with sewers (Korfmann, 2001, 348, 395). The southwestern gate (VI U) of the Citadel was closed during this period and the eastern gate (VI S) was opened to reinforce the fortifications. During the VIIa period, many small two-room houses were built inside the citadel (Blegen et al. 1958, 6). According to Blegen, these changes within the citadel are related to the population growth in the settlement and the inhabitants of these houses do not belong to an elite class (Blegen et al. 1958, 6). On the other hand, archaeobotanical studies conducted at the site suggest that the production of cereals such as einkorn and emmer increased, which is considered to be related to the increased population growth during the VIIa period (Riehl, 1999, 73, 79). Troy Layer VI pottery forms have changed by 90% (Korfmann, 2001). The source of this change is considered to have been brought by the new inhabitants of the settlement. This is also supported by the similar change in architectural and small finds.

Within the Citadel there are large two-story houses built independently of each other (Jablonka, 2010, 853) (Fig.195). In this respect, the terraced structure "VI-I" has two floors and a statuette and a bull-headed vessel, which are considered to have been used for cult purposes, were observed. It is considered that such structures in Troy with columns inside were used for religious ceremonies. During this period, there were a total of eight buildings in three main phases within the citadel, which was about 2 hectares wide (Korfmann, 1998, 369-385).

On the other hand, the use of Megaron type houses continued during this period (Jablonka, 2010, 853-855). There are three megaron type houses (House VIE, VIC and VIF) in the Troy LBA layer. There are wooden beams in the construction of the houses and mudbrick walls supported by wooden parts, especially on the upper floors. The walls are plastered with clay (Korfmann, 1998, 369-385). The thick walls of the houses as well as the windows, which are considered to have been built for defence purposes, indicate the presence of a possible threat (Jablonka, 2010, 853-855).

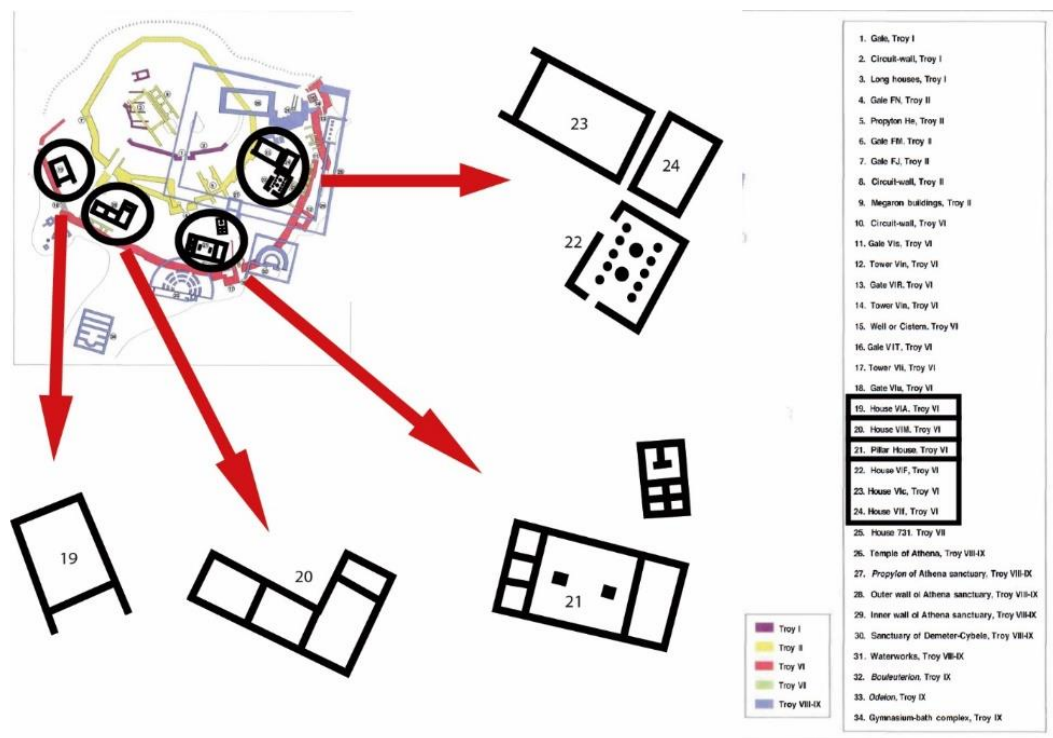


Fig.195: Houses in Citadel (Jablonka, 2010; Illustrated by M. Çarkı)

In the outer city, which is approximately 25-35 hectares in size, the houses were built in blocks between the streets extending north-south and east-west and were built with mudbrick bodies with stone foundations (Jablonka, 2010, 853-854, Fig. 63). The

architecture of citadel of this period, which was largely destroyed by the Late Hellenistic architecture, demonstrates similar characteristics with the LBA layers of Beycesultan höyük. The streets cutting through the settlement are similar to the complex plan of the houses Beycesultan. Apart from these, the citadel unearthed at Troy and the fortification walls built in connection with it indicate the presence of a strong central authority in the settlement. At the same time, the presence of a sanctuary might be observed as another important indicator. In addition to the temple structure unearthed in Beycesultan höyük area R, the architecture of the complex located between the streets is similar to Troy. In this context, the "Megaron" style structures (Jablonka, 2010, 853-855) that appeared in Troy I and reached a high level in Troy VI were similarly uncovered in the eastern cone of Beycesultan. However, the presence of dense storage elements in Beycesultan höyük houses is not completely different from Troy. It seems that production and consumption is local in Beycesultan and Troy VI. Many storage pithoi were found in the houses at Troy. In this context, agricultural production and husbandry were popular in the Troy VI (Thumm-Doğrayan - Pavúk – Pieniążek, 2019). As a result of this, it is mentioned that an elite class was in the site (Thumm-Doğrayan - Pavúk – Pieniążek, 2019). However, Troy and Beycesultan differ from each other in terms of their geography. The settlement of Troy in particular is likely to have been more exposed to both trade and invasions due to its seaside location. It is therefore highly likely that trade is at the centre of the economic model.

Limantepe, another important LBA site, is located on a promontory extending to the Aegean Sea, east of the modern harbour in the Iskele neighbourhood of Urla district, Izmir province (Erkanal- Şahoğlu, 2012, 219). The excavations revealed that the settlement was inhabited from the Middle Chalcolithic period until the Roman period (Erkanal- Şahoğlu, 2012, 220). However, the presence of Neolithic pottery in the settlement indicates that the settlement was also inhabited during the Neolithic period (Erkanal, 2008, 92). Limantepe Layer II is dated to the LBA (Erkanal- Şahoğlu, 2012, 228). The architectural elements of the LBA (Manning, 1999; Erkanal, 2008, 99) are divided into three distinct phases (Layer II.3-II.2-II.1) and Layer II is contemporary with the Late Helladic IIIA2- IIIB and IIIC periods respectively (Mangaloğlu-Votruba, 2011, 44; 2015, 648). Therefore, even though it is not exactly contemporary with Beycesultan Layer 5b (II), it was included in the study since it is one of the most important excavated LBA centres in Western Anatolia and provides important data.

The settlement is represented in the LBA by independent buildings separated by streets (Erkanal- Şahoğlu, 2012, 228) (Fig.196). In this respect, it is possible to state that the settlement architecture of Beycesultan has similar characteristics in terms of streets and independent houses. The architecture of the settlement belonging to the LBA was unearthed in three different phases. The architectural remains of the Late Bronze Age settlement, which were identified to a limited extent, were mostly unearthed in the southeast of the northern excavation area in a well-preserved condition (Erkanal-Akyurt, 2008, 226-236; Erkanal, 2008, 92).

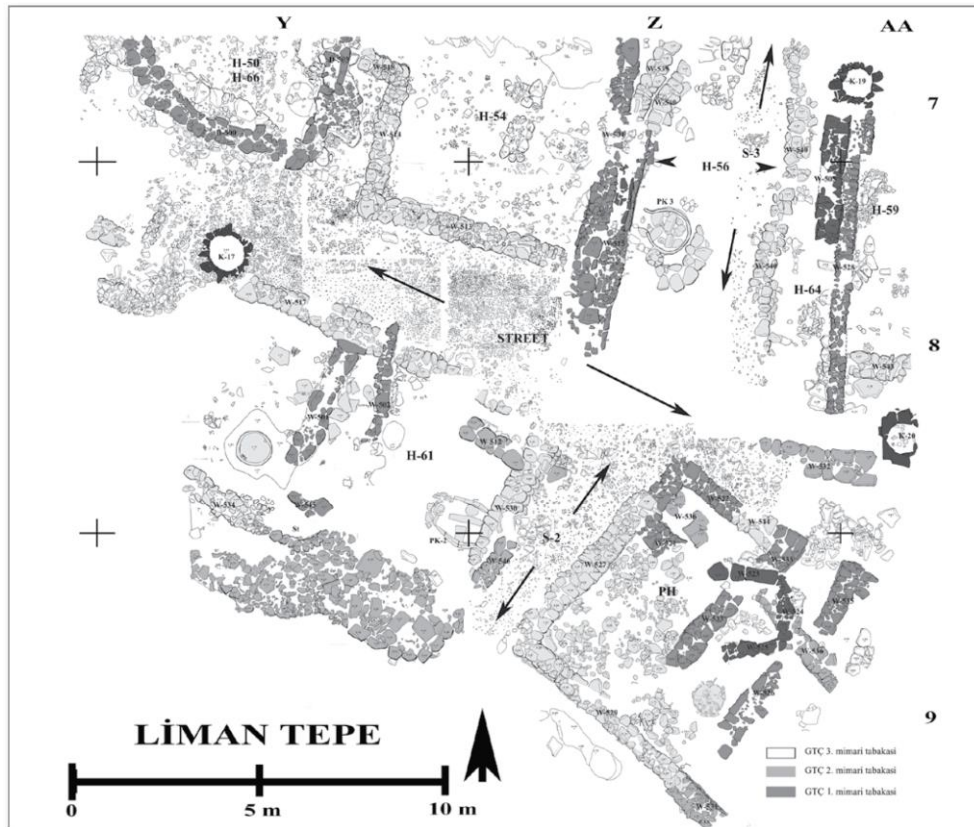


Fig.196: Plan of Limantepe Late Bronze Age Architecture (Erkanal, 2008: 93, Fig.1)

The architectural elements of building phase II.3, which represents the earliest phase of the LBA settlement, were unearthed in a very well-preserved condition (Erkanal-Aykurt, 2008, 226; Erkanal, 2008, 92). A settlement model consisting of a wide street extending northwest-southeast and narrow streets connecting to this street from the south and north (Erkanal, 2008, 92) (Fig.196). The street in question is 3 m wide and about 20 m long, and its base is paved with pebbles (Erkanal-Aykurt, 2008, 226; Erkanal, 2008, 92). In this respect, it has similar width and characteristics with the streets in Beycesultan höyük. The streets connected to the street and oriented south and north were uncovered

(Erkanal-Aykurt, 2008, 226; Erkanal, 2008, 92). A building located to the north of the western extension of the street measures 3.50-5.90 m and its walls are under the architecture of building phase II.1 (Erkanal-Aykurt, 2008, 226; Erkanal, 2008, 92) (Fig. 197).

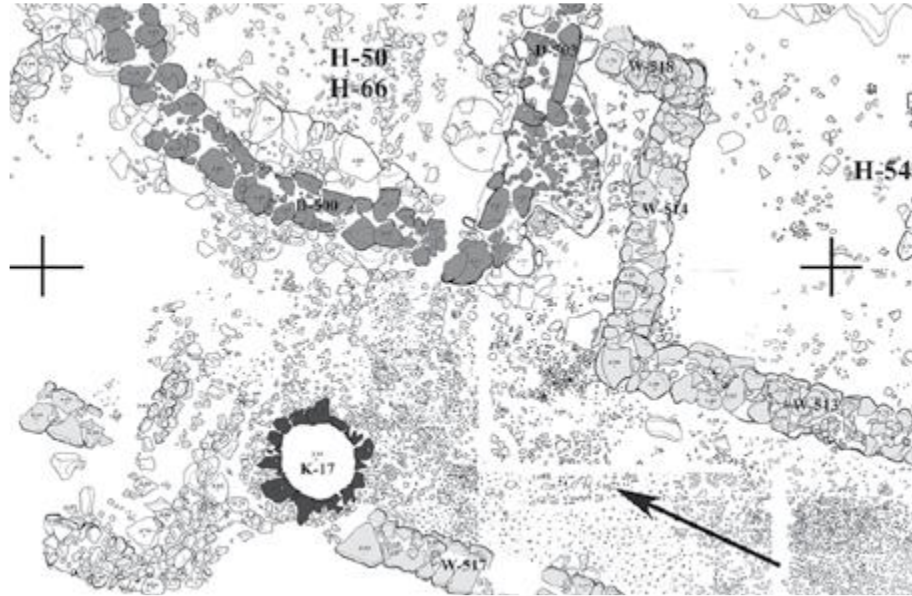


Fig.197: Building Plan from North-west of Street (Erkanal-Aykurt, 2008: Erkanal, 2008)

The south and east walls of the space were built with medium and large sized massive stones and the floor was formed by placing small sized stone fragments (Erkanal-Aykurt, 2008, 226; Erkanal, 2008, 92). In addition to a large number of potteries, a fragment of a Minoan type (Erkanal-Aykurt, 2008, 226-227; Barber, 1991, 104-105) weight was observed inside the building (Erkanal, 2008, 92). Another building in the northeast-southwest direction was observed to the east of this building, which was unearthed together with its finds (Erkanal-Aykurt, 2008, 227; Erkanal, 2008, 92). The 4 x 5 m section of the space yielded furnace fragments as well as local and imported Mycenaean pottery (Erkanal-Aykurt, 2008, 227; Erkanal, 2008, 92). On the other hand, an oval shaped pottery hearth made of clay and measuring 1.21 x 1.46 m in diameter is located to the east of this room (Erkanal-Aykurt, 2008, 227; Erkanal, 2008, 92) (Fig.198).



Fig.198: Kiln of Limantepe Layer II.3 (*Erkanal, 2008: 94*)

Another building belonging to this layer was partially unearthed to the north of the street and east of the northern street (*Erkanal-Aykurt, 2008, 228; Erkanal, 2008, 94*) (Fig. 196). The northern part of this building, which measures 7.90 x 1.87 m in size, was paved with small stones, while an area covered with ash was exposed in the south-eastern part (*Erkanal, 2008, 94*). Local and Mycenaean pottery were observed together inside the building. On the other hand, there are two buildings on the southern part of the street (*Erkanal-Aykurt, 2008, 228; Erkanal, 2008, 94*) (Fig. 195). They are located to the east and west of the street that cuts the street vertically and heads south (*Erkanal-Aykurt, 2008, 228; Erkanal, 2008, 94*) (Fig.199).

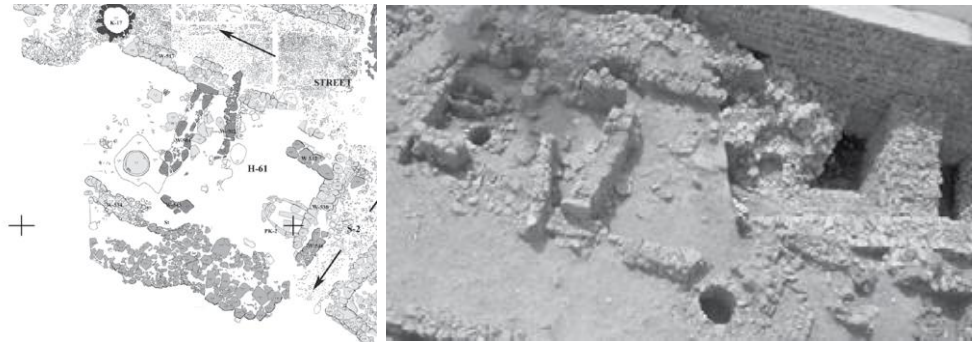


Fig.199: Plan of South-west Structure from Limantepe (*Erkanal-Aykurt, 2008; Erkanal, 2008*)

In the south-western part of this structure there is a chamber with a diameter of 0.95 m and a depth of 0.31 m (*Erkanal-Aykurt, 2008, 229; Erkanal, 2008, 94*). To the northeast of the chamber, an atelier with a floor made of large flat stones was observed

(Erkanal, 2008, 94). In addition to local pottery, Mycenaean potteries⁸³ with Late Helladic III A2/B period characteristics were observed (Erkanal, 2008, 94). To the east of this large-sized building, a hearth different in form and technique from the previously discovered ceramic furnace was observed (Erkanal-Aykurt, 2008, 229; Erkanal, 2008, 95). This 1.20 x 1.32 oval shaped ceramic furnace was built with medium sized solid stones and mudbrick (Erkanal-Aykurt, 2008, 229; Erkanal, 2008, 95) (Fig.200).



Fig.200: Kiln of Limantepe Layer II.3 (*Erkanal-Aykurt, 2008; Erkanal, 2008*)

A grate on stones was observed inside the furnace (Erkanal, 2008, 95). This furnace is partially similar to the example observed in Miletos II (Weickert, Hemmel, Kleiner, Mallwitz and Schiering, 1959, 11) and is dated to the Late Helladic IIIA1-2 period (Erkanal, 2008, 95).

Located to the east of the south-oriented street is a 5.60 x 6.87 m a building with a northeast-southwest extension (Erkanal-Aykurt, 2008, 230; Erkanal, 2008, 95) (Fig. 201). Mudbrick was used on the foundation built of solid stones.

⁸³ A kylix embroidered with a devil's minaret motif in Mycenaean pottery found in Mycenaean pottery is dated to the Late Helladic IIIA2/B1 period. (Mountjoy, 1999a: 216, 381)

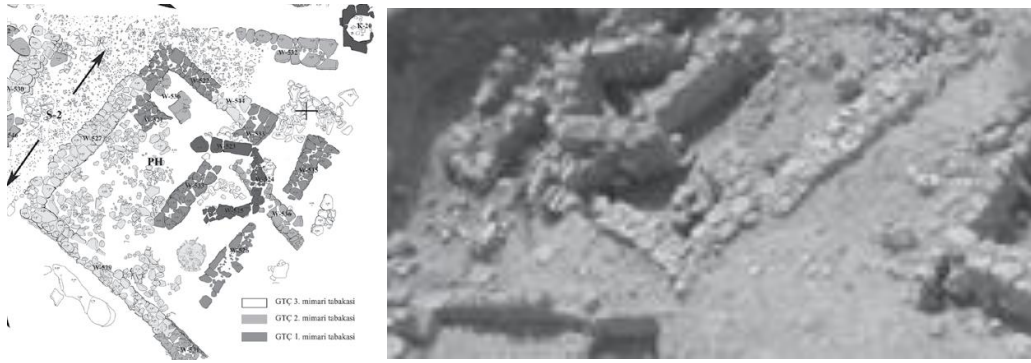


Fig.201: Plan of South-east Structure from Limantepe (Erkanal-Aykurt, 2008; Erkanal, 2008)

In the southern part of this space there is a 0.85 m wide doorway which was apparently closed in later phases (Erkanal, 2008, 95). The building was named "*Structure with Pithos*" due to the large number of pithos fragments considered to belong to 12 pithos (Erkanal-Aykurt, 2008, 230; Erkanal, 2008, 95). This building, which is considered to have been used for storage purposes from the context of the finds, is considered to have lost its function at the end of building phase II.3 and was used for a different purpose by levelling the floor in building phase II.2 (Erkanal-Aykurt, 2008, 230; Erkanal, 2008, 95).

Apart from this architecture identified in Limantepe II.3 building phase, there is a well with a diameter of 2 x 2.10 m and built with massive stone masonry in the western part of the area (Erkanal- Günel, 1997, 232-233). Local and Mycenaean potteries as well as a Mycenaean idol head were retrieved from the well (Erkanal- Günel, 1995, 264-265). On the other hand, during the excavations in 1979, another ceramic hearth with similar characteristics to the ceramic furnaces observed in building phase II.3 was observed about 30 m northwest of this area (A. Erkanal- H.Erkanal, 1983, 166; Erkanal-Aykurt, 2008, 231; Erkanal- Günel, 1983, 166). This ceramic furnace, which is considered to be contemporary with building phase II.3 in terms of its characteristics, yielded a large amount of pottery sherds (Erkanal-Aykurt, 2008, 231; Erkanal, 2008, 96). Due to the density of ceramic furnaces observed in building phase II.3, the area was identified as an "*atelier zone*" for pottery production during this period (Erkanal, 2008, 96). In the light of the above data, it is possible to conclude that pottery production was of great importance in building phase II.3 belonging to the early phase of the Late Bronze Age at Limantepe and that there was a specialization in this direction at the settlement. In particular, the presence of a small amount of imported Mycenaean pottery as well as a large amount of local production in the LBA layer provides important data on the intensity of production activities at the settlement.

It is clearly revealed that the architectural elements observed in Limantepe LBA II.2 architectural phase were intensively damaged by Layer II.1 (Erkanal-Aykurt, 2008, 231; Erkanal, 2008, 96). In this building phase, the main street, the south street and the building with pithos were reused with certain modifications (Erkanal-Aykurt, 2008, 231). It is clearly revealed that the 7.66 x 4.87 m pithos structure in building phase II.2 lost its storage function (Erkanal-Aykurt, 2008, 231; Erkanal, 2008, 96). In addition to large solid stones, medium-sized flat stones were used in the construction of the building (Erkanal, 2008, 96). Local and Mycenaean pottery (Mountjoy, 1999a, 342,552, 669; Erkanal-Aykurt, 2008, 231) were observed together in this structure (Erkanal, 2008, 96).

In addition to the remains of what may be a road to the west of the pithos, the remains of a partially preserved building to the northwest of the building, the walls of which were built with large-sized massive stones, were unearthed (Erkanal, 2008, 96). On the other hand, a silo adjacent to the street was observed to the west of the *Building with Pithos* (Erkanal-Aykurt, 2008, 231). The architectural elements identified in building phase II.2 continued to coexist with local and Mycenaean pottery dating to the Late Helladic IIIB period (Erkanal, 2008, 96). Although Limantepe Layer II.2 is weaker in terms of architecture, it is important in terms of the uninterrupted continuation of the settlement (Erkanal-Aykurt, 2008, 237). In addition, although the area loses its characteristic of being a pottery atelier in this layer, there is an increase in Mycenaean pottery as well as locally produced pottery (Erkanal-Aykurt, 2008, 237).

Layer II.1 representing the late phase of the Limantepe LBA is architecturally very well preserved (Erkanal-Aykurt, 2008, 232) (Fig.196). The southern walls of a building were exposed to the northwest of the excavated area (Erkanal, 2008, 97; Erkanal-Aykurt, 2008, 232) (Fig.202).

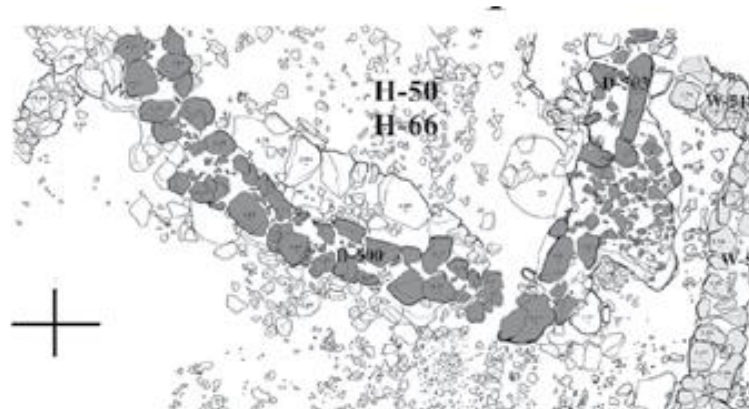


Fig.202: Building Walls from North-west of Excavated Area (*Erkanal, 2008: 97; Erkanal-Aykurt, 2008:232*)

The south wall of this building is 6.22 m long, while the west wall is 3.65 m long (*Erkanal-Aykurt, 2008, 232; Erkanal, 2008, 97*). Although large and medium-sized massive stones were used in the construction of the south wall, large flat stones were used in the west wall. On the west wall of the space located in the northwest part of the area, there is a 1.40 m wide doorway covered with flat stones (*Erkanal-Aykurt, 2008, 232*). Local and Mycenaean pottery⁸⁴ dating to the early Late Helladic IIIC phase was observed in the space (*Erkanal-Aykurt, 2008:233; Erkanal, 2008, 97*). To the east of this building there are two parallel structures (*Erkanal, 2008, 97*) (Fig.203).

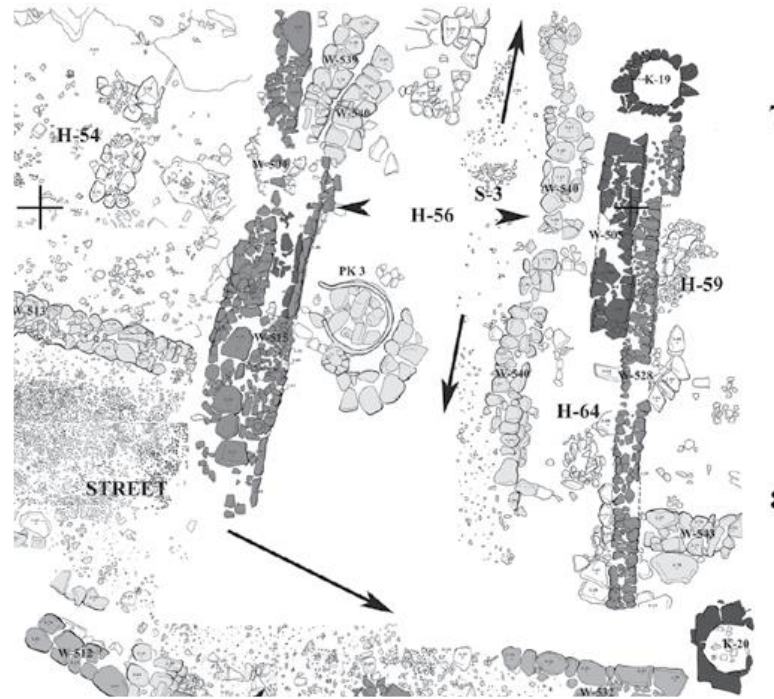


Fig.203: Parallel Structure of Limantepe Layer II.1 (*Erkanal, 2008: 93, Fig.1*)

The structure in the western part of the building measures 6.15 x 5.85 m in dimensions (*Erkanal-Aykurt, 2008, 233; Erkanal, 2008, 97*) and contains a large number of local and Late Helladic IIIC Mycenaean pottery as well as the remains of a hearth (*Erkanal-Aykurt, 2008, 233*). Only an 8.05m long wall of the building to the east was exposed and it was built mostly of large and medium sized massive stones (*Erkanal-*

⁸⁴ Deep bowls with horizontal handles with wave decoration (*Mountjoy, 1999a, 226, 282*)

Aykurt, 2008, 234; Erkanal, 2008, 97). According to the studies conducted in the area, it is considered that the entrance to the space is in the north (Erkanal, 2008, 97). In addition to Mycenaean pottery dating to the Late Helladic IIIC period⁸⁵, an oval-shaped seal made of stone and terracotta spools used in textile production were observed (Erkanal-Aykurt, 2008, 234).

The building located in the south-eastern part of the site and identified as the *Building with Pithos* from Layer II.3 onwards was also used in Layer II.1 with certain innovations (Erkanal-Aykurt, 2008, 234-235; Erkanal, 2008, 98). In this layer, the building was extended by 2.23 m towards the north (Erkanal, 2008, 98) (Fig.204).

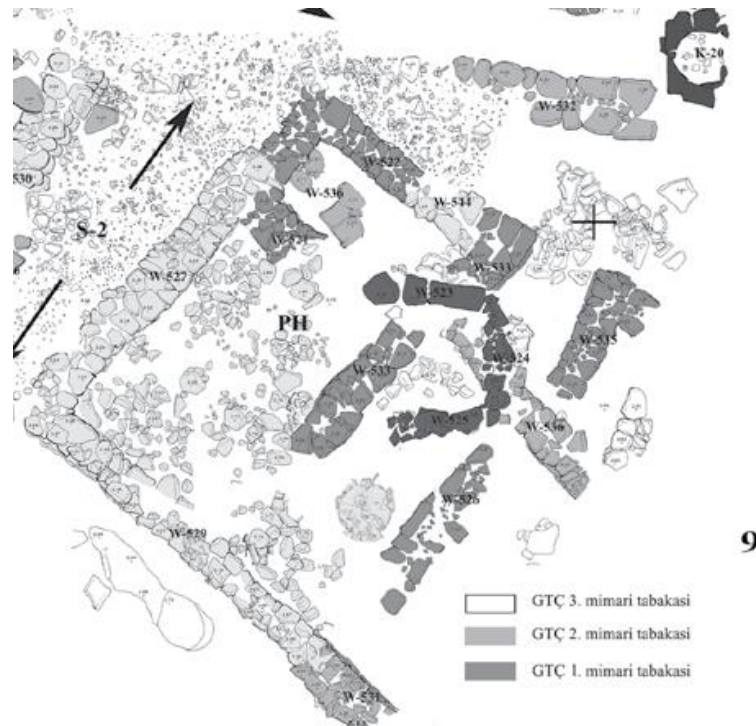


Fig. 204: Usage "Structure with Pithos" During Layer II.1 at Limantepe (Erkanal, 2008: 93, Fig.1)

During this period, the building was divided into three sections by new walls (Erkanal-Aykurt, 2008, 235). Its structure consists of a corridor and rooms on both sides of the corridor (Erkanal, 2008, 98). It is believed that the entrance was made from the area considered to be used as a corridor (Erkanal-Aykurt, 2008, 235). In addition to

⁸⁵ The Mycenaean bowl is handmade and has double handles. On the other hand, this bowl with a double row of wave decoration is dated to the Late Helladic IIIC period (Mountjoy, 1999a, 179, 188, 594)

Mycenaean pottery I dated to Late Helladic IIIC (Furumark, 1941, 250-255; Mountjoy, 1999a, 226) and decorated with birds, fish and geometric figures, sherds of locally made pottery were observed (Erkanal-Aykurt, 2008, 235-236). Although the architecture is relatively better preserved in Limantepe Layer II.1, large rectangular buildings are the most important architectural elements (Erkanal-Aykurt, 2008, 237). It is considered that the area was used as a settlement during this building phase (Erkanal, 2008, 98). The finds retrieved from this Layer indicate that Mycenaean activity increased in the settlement (Erkanal-Aykurt, 2008, 237).

In conclusion, Limantepe II, which is dated to the Late Bronze Age, presents a regular settlement model with its rectangular planned houses as well as the streets and alleys unearthed in the layer (Erkanal, 2008, 99). In this respect, it is possible to state that they are similar to the streets and alleys of Beycesultan Layer 5. However, while the houses in Limantepe have a simpler plan, Beycesultan houses have a complex architecture plan. The presence of storage areas as well as open spaces in both settlements is a similar feature. In the Beycesultan example, one room of each house was mainly used for storage purposes, while certain of the spaces unearthed in Limantepe were used for this purpose. This difference in Limantepe can probably be explained by the fact that the houses do not have a complex architecture as in Beycesultan. In both settlements, it can be assumed that the household economy was similarly independent. In this context, it is possible to state that the economic economy of production and consumption in Limantepe was partially decentralized. Moreover, the absence of public buildings in the settlement supports this situation. Therefore, it is possible that the social structure shall be shaped within the framework of this production and consumption model.

On the other hand, in addition to the imported Mycenaean potteries observed at Limantepe, the pottery production ateliers (Erkanal-Aykurt, 2008, 229; Erkanal, 2008, 95) and the locally produced pottery suggest a strong interaction with overseas regions (Aegean Islands and Greece) through trade or other means. The identified ateliers indicate the existence of a significant layer of specialization in pottery production and thus the existence of an artisanal class in the settlement.

Çine Tepecik Höyük, which has an important place among the Western Anatolian LBA centres, is located within the borders of Çine district of Aydın province and Layer II.1a-b of the settlement represents the Late Bronze Age (Günel, 2008, 130-139; 2014,

83-85; 2014, 245). During this period, there is a fortification system built in harmony with the topography of the settlement and based on the defence system (Günel, 2011, 1-2; 2014, 348-349; 2019, 195). The wall structure is 2.20 m thick and is supported by square towers measuring 6.32 and 1.32 m (Günel, 2014, 245-247; 2019, 195). Apart from the fortification architecture, architectural structures with storage function stand out both in terms of architecture and finds (Günel, 2011, 2; 2011 a; 2014, 247) (Fig.205).

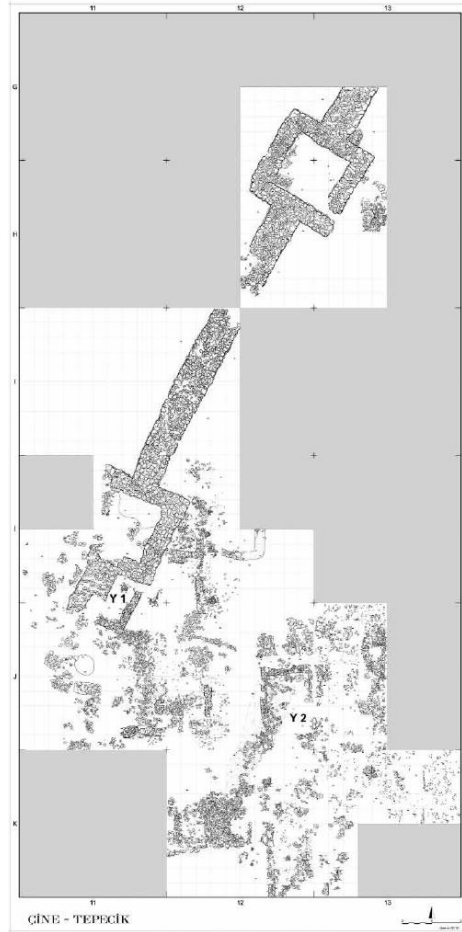


Fig.205: LBA Architecture of Çine Tepecik (Günel, 2011b: 2)

The storage structures were unearthed in the western part of the settlement and close to the city wall (Günel, 2014, 247-248). Other architectural remains belonging to the LBA were observed in the southern part of the settlement (Günel, 2011b, 2). In the light of the data obtained from the studies, it appears as a settlement surrounded by a city wall as well as warehouse structures (Günel, 2011b, 2; 2011a, 69-80). Especially in the architectural remains belonging to the last phase of the LBA, the storage structures have different sizes and rich finds (Günel, 2011b, 2). In this context, the 3.50 x 2 m rectangular building, which was built adjacent to the tower of the city wall, provides the impression

that it was built in relation to the city wall (Günel, 2014, 247) (Fig.206). The south and east walls of this space, which is based on the city wall, are 0.45-0.50 cm thick and built of small stones (Günel, 2014, 247). Remains of the mudbrick walls and timber remains were observed in the fire-destroyed space (Günel, 2011b, 2; 2014, 247). On the other hand, it is noteworthy that the potteries, which are considered to have been nested or placed on top of each other and observed scattered on the floor (Günel, 2014, 247).

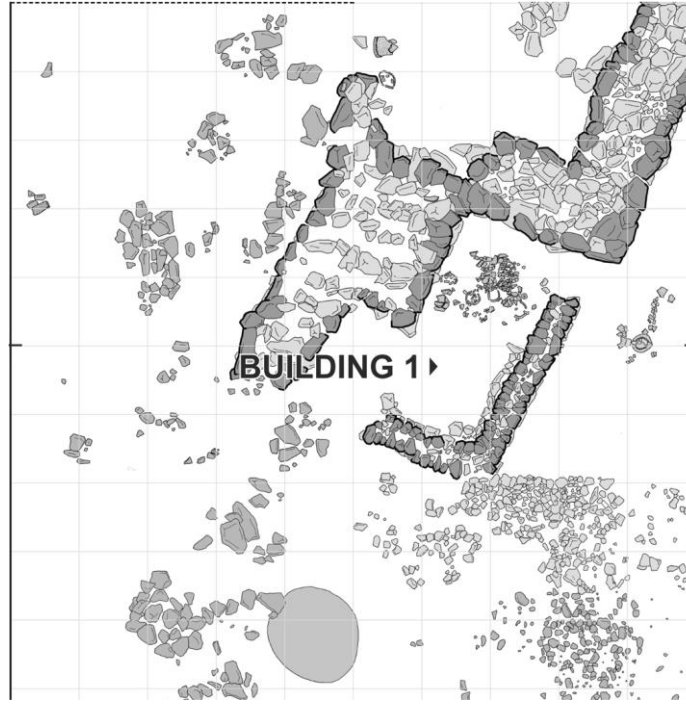


Fig.206: Plan of Building 1 (Günel, 2011b: 2; 2015: 633)

The remains of wood observed with the potteries scattered on the floor suggest that the potteries were kept on a wooden shelf and that they were scattered on the floor from the destruction and headlights (Günel, 2011b, 2; 2014, 247). In this respect, it is possible to state that it is similar to the possible shelf system in Beycesultan.

The materials and technical features used in the production of the potteries observed in different varieties and forms are noteworthy (Günel, 2014, 247). The open vessels, bowls, shallow plates, and coarse closed vessels observed in the site were observed to be mostly for daily use (Günel, 2011b, 2; 2014, 247). With these characteristics, it is possible to state that the storage areas of Beycesultan Houses 1 and 2 are similar to the storage areas of potteries for daily use.

In this site unearthed at Tepecik in Çine, imported Mycenaean potteries were observed along with locally produced pottery (Günel, 2011b, 2). The presence of

Mycenaean pottery in the settlement, as in many other LBA settlements in Western Anatolia, is important in terms of showing the Mycenaean interaction in Western Anatolia (Günel, 2021b, 126-127). The retrieved Mycenaean pottery is dated to Late Helladic III B/C phases in terms of typology and construction characteristics (Günel, 2010, 30-39; 2011, 4-6; 2014, 247; 2015, 635). In addition to the potteries, terracotta double cone spindle whorls and round shaped weights represent the other artifact assemblage (Günel, 2011b, 3). Based on its architecture and the artifacts observed in it, Günel suggests that this space had a storage function (Günel, 2015, 635-637).

To the east of the storage structure built in relation to the city wall and named as building 1, another space named as building 2 by Günel was observed (Günel, 2011b, 3; 2015, 635) (Fig.207).

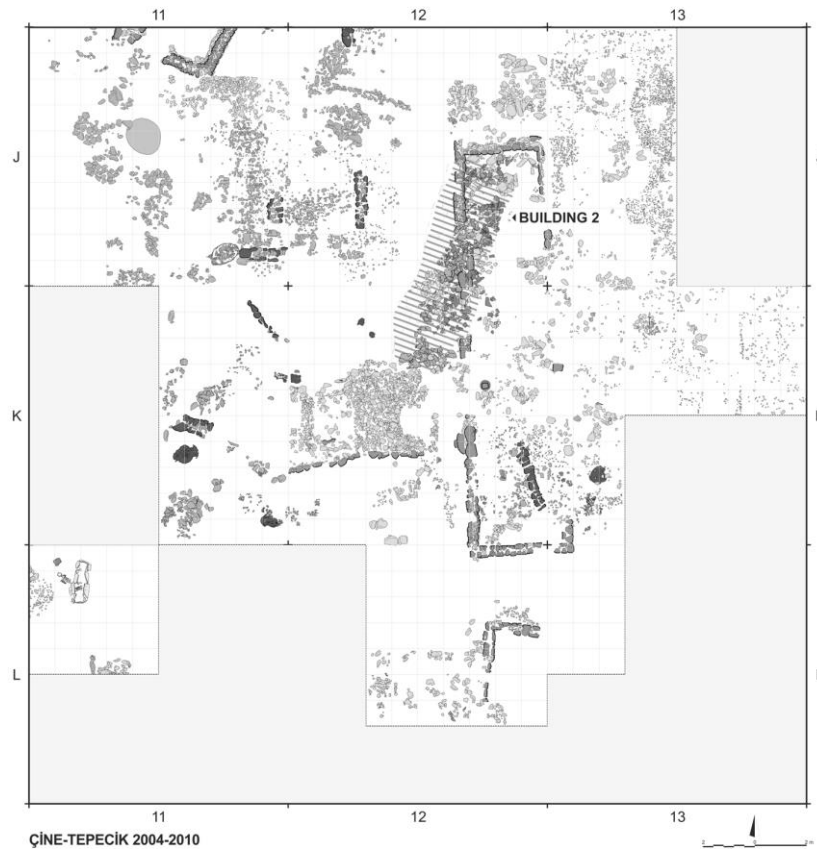


Fig. 207: Plan of Building 2 (Günel, 2015: 635)

This building, which was destroyed by a large fire, measures 16.50 x 4.50 m. and has a rectangular form (Günel, 2014, 247; 2011, 3). Numerous thick-walled pithos fragments were observed in the space (Günel, 2011b, 3; 2014, 247; 2015, 636). Along the western wall, in addition to broken pithoi that seem to have been placed on the base in a

certain order, a solid pithos was observed in situ with its mouth closed with a flat bit stone (Günel, 2011b, 4; 2014, 247-248). In addition to the pithoi, pottery of different forms and varieties such as closed vessels, jugs, mugs, shallow plates, deep bowls, and painted Mycenaean potteries were observed in this structure (Günel, 2014, 247-248; 2015, 636). The bowl and crater-type Mycenaean potteries retrieved include depictions of birds, fish, deer, and warriors (Günel, 2015, 636-637). With these features, Late Helladic III C -early and middle phases represent the ornamental understanding (Günel, 2011b, 4). While 90% of the potteries retrieved from the settlement is local pottery, 10% is Mycenaean potteries (Günel, 2010, 28). The presence of imported and local Mycenaean pottery in the settlement is associated with a possible migration wave between Western Anatolia and the islands (Rutter, 2010, 420; Günel, 2011b, 6). Günel suggests that Mycenaean influences have an important site in the cultural structure of Western Anatolia, based on the Mycenaean potteries retrieved from the site (Günel, 2011b, 6).

Apart from the potteries, bronze aguille, arrowheads, and bronze needles were retrieved from the site (Günel, 2011b, 4). When the size of the space in question and the finds are considered, it is possible to mention that the space was used as a magazine (warehouse-storage) (Günel, 2015, 636; 2011b, 4). Two seal impressions were retrieved from the site along with potteries and small finds (Günel, 2019, 196). The first seal impression with a Hittite hieroglyphic inscription observed at the bottom of the western wall of the site is dated to the Hittite Imperial period (1350-1200 BC) (Günel- Herbordt, 2010, 9; Günel, 2011b, 4; 2015, 638-639). From the seal impression observed in the magazine, it is suggested by the excavator that the site had a commercially active role in Western Anatolia as well as Hittite influences (Günel, 2011b, 4). On the other hand, this warehouse structure has an effective site in connection with the Hittites in terms of administration and indicates the existence of a certain economic activity (Günel, 2011b, 4). The second seal impression shows a figure in the centre with a bow on his shoulder and inscriptions on both sides and demonstrates Hittite imperial period features (Günel, 2019, 198).

The archaeological data and the strong fortification system at Tepecik höyük in Çine-Tepecik suggest that the settlement had close cultural and commercial relations with the Aegean world as well as its connection with the Hittites during the Aegean Period (Günel, 2011b, 6). At the same time, the existence of a local administrative system in the settlement and the coexistence of local and imported Mycenaean pottery traditions

emphasize the regional relations of local administration (Günel, 2019, 195). In addition, the seal impressions observed in the settlement reinforce the direct Hittite relationship of the local administration in the settlement (Günel, 2019, 198).

In conclusion, the settlement with its fortification wall, spaces and artifacts indicates the existence of a strong political organization. Especially the coexistence of imported and local Mycenaean potteries observed in the rooms reveals a clear relationship with continental Greece and the islands, especially in trade. As in Limantepe, it is possible to speak of a relative specialization in locally produced Mycenaean potteries. At the same time, the presence of elements such as storage rooms and the discovery of a seal from the Hittite period (Günel- Herbordt, 2010, 9; Günel, 2011b, 4; 2015, 638-639) reveals the effectiveness of centralization in the settlement as well as a central storage. Therefore, it demonstrates different characteristics from Beycesultan Layer 5b (II) in this respect. Naturally, the fact that Beycesultan Layer 5b (II) and Çine Tepecik höyük LBA layers are not exactly parallel to each other can be seen as the main reason for this difference. Because the lack of strong political structures in Anatolia during the period of Beycesultan 5 (II) settlement, which is dated to approximately 1700 BC, may be reflected on the economic and political structure of the settlement. On the other hand, the cultural influence of the Mycenaean culture in Çine Tepecik höyük (Günel, 2011b, 6) is likely to affect the shaping of the social structure in the settlement. It does not seem possible to speak of a complete cultural cohesion with Beycesultan, both politically, culturally and socially.

The LBA layers of *Maydos Kilisetepe* settlement one of the important LBA centres, are evaluated in this section since they are contemporary with Beycesultan Layer 5b (II). In this context, although the settlement in the Eceabat district of Çanakkale province seems to be associated with Thrace and the Balkans, it is of great importance that the settlement is associated with Anatolia (Sazci, 2012, 13; 2016, 57-58). With a diameter of approximately 180 x 200 m and a height of 33 m above sea level, it is the largest mound on the Gallipoli peninsula (Sazci, 2012, 13). The mound was first discovered by Prof. Dr. Mehmet Özdoğan. It was identified by Özdoğan and his team within the scope of the "*East Marmara and Thrace Research Project*" carried out in 1982 on the Gallipoli peninsula (Özdoğan, 1984, 64-65; 1986, 55). Excavations at the mound were carried out in 2010 by a team led by Göksel Sazcı (Sazcı, 2011; 2016, 57-58). The mound has a cultural fill of about 14 m (Sazci, 2016, 58). In the ongoing studies, it has

been determined that from 3. Millennium BC it was inhabited by different cultures to the early 20th century AD (Sazcı, 2013; Sazcı- Başaran Mutlu, 2018; Başaran Mutlu-Bamyacı, 2020, 67). According to the layering of the mound, the representations are provided as follows: Layer VIII - Early Bronze Age III; Layer VII - Early-Middle Bronze Age, Layer VI - Late-Middle Bronze Age, Layer V Late Bronze Age, Layer IV - Late Bronze Age-Early Iron Age (Başaran Mutlu- Bamyacı, 2020, 67) (Fig.208).

TARİH (M.Ö.)	DÖNEM	TROIA	MAYDOS KİLİSETEPE	
			TABAKA	C14 (M.Ö.)
1000	EDÇ	VIIb2/3	IV a	1127-931
1100		VIIb1		
1200		VIIa		
1300	GTÇ	V _{1h}	b	1340-1305
1400		V _{1g}	a	
1500		VIe/f	V	1685-1520
1600		V _{1d}	b 1	
1700		VIIb/c	2	
1800		VIa	c	1745-1620
1900	OTÇ	V	a	1850-1770
2000			b 1	
2100			2	2080-2060
			a 1	
	ETÇ	IV	b 2	
			c	
			d	
			VIII	

Fig. 208: Second Millennium Chronology Table of Maydos Kilisetepe Höyük (Başaran Mutlu, 2019: 12, Fig.2; Başaran Mutlu- Bamyacı, 2019: 30, Fig.1)

According to the dating obtained from the mound, the Late Bronze Age (1745-1305 BC), which represents Layer V, is divided into three main phases, namely Vc (1745-1620 BC) Vb3-1 (1685-1520 BC) and Va (Başaran Mutlu- Bamyacı, 2019b, 30, Fig.1; Başaran Mutlu, 2019a, 5; 2019b, 29-30, Fig.2). The radiocarbon dates obtained from

phases Vb and Va are dated between 1685- 1520 / 1450-1380 BC and 1340-1305 BC, respectively (Başaran Mutlu, 2019a, 12, Fig.2; Başaran Mutlu- Bamyacı, 2019b, 30, Fig.1; Sazcı, 2016, 59, Res. 3) (Fig.208). Maydos Layer V is contemporary with Troy Layer VIb/c and VIh (Başaran Mutlu, 2019b, 29) (Fig. 208). Although a limited number of pottery forms retrieved from Maydos Layer V are similar to those of Troy Layer VI, the settlement in general has a different pottery repertoire from Troy (Başaran Mutlu, 2019a, 5). On the other hand, Maydos Vc is contemporary with Beycesultan höyük Layer 5b (II) and Maydos Vb with Beycesultan Layer 5a (Ib).

The earliest phase Vc, the earliest of the three phases of the LBA uncovered during the excavations in the western part of the mound, is generally represented by clay plastered pits (Başaran Mutlu, 2019b, 29; 2019a, 5) (Fig.209). VI, which represents the last phase of the Middle Bronze Age. The remains of the stratum were reorganized and reused (Başaran Mutlu, 2019a, 5). In Phase Vc of the settlement, 7 pits with a diameter of one meter and 5-10 m thick sides plastered with clay plaster were observed (Başaran Mutlu, 2019a, 5). Certain of the pits were plastered more than once and certain had traces of ash on their floors (Başaran Mutlu, 2019a, 5). On the other hand, 4 pits with a diameter of 50 cm, unplastered and relatively shallow were identified (Başaran Mutlu, 2019a, 5). Except for the pits, there is no construction belonging to this phase. It is probably considered to be the transition from the late phase of Middle Bronze Age to the early phase of the LBA or the installation phase of the LBA (Başaran Mutlu, 2019a, 5).

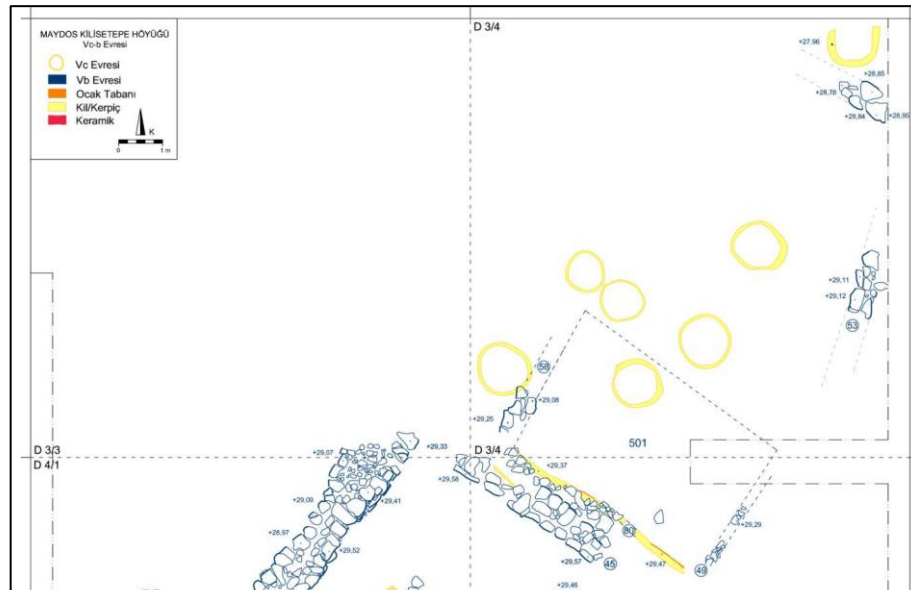


Fig.209: Maydos Kilisetepe Layer Vc Pits (Yellow Colour) (Başaran Mutlu, 2019:15, Fig.5)

Maydos Phase Vb is the phase with the most finds and architectural data (Sazcı-Başaran Mutlu, 2017; Başaran Mutlu, 2019a, 6) (Fig.210). The achatectural characteristics of this layer continue to develop from Layer VII (Başaran Mutlu, 2019a, 6). The höyük is surrounded by walls built on the defence wall of Layer VI (Başaran Mutlu, 2019a, 6). The buildings were built side by side, perpendicular to the defence wall (Başaran Mutlu, 2019a, 6). These rectangular structures consist of buildings (Sazcı-Başaran Mutlu, 2017) or open spaces that narrow towards the centre of the settlement (Başaran Mutlu, 2019a, 6).

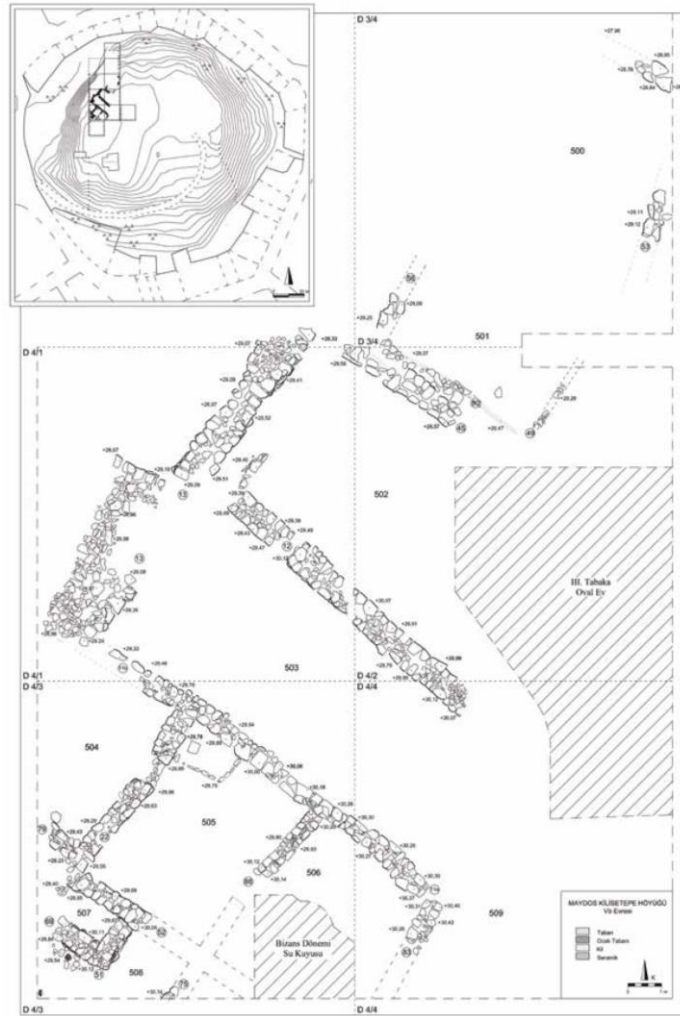


Fig. 210: Maydos Kilisetepe Höyük Layer Vb Architecture (Başaran Mutlu, 2019: 31, Fig.3)

It is clearly revealed that the walls consisting of stone foundation and mudbrick body are decorated on the walls (Başaran Mutlu, 2019a, 6; 2019b, 27-40). The walls were decorated with coatings called "Relief Mudbrick" (Başaran Mutlu, 2018; Başaran Mutlu, 2019a, 6; 2019b, 27-40) (Fig. 211). This layer yielded 169 fragments of mudbrick with reliefs (Başaran Mutlu, 2019b, 27-40). These wall coverings were mostly observed in a

single building (Başaran Mutlu, 2019b, 27). The ornamentation is made by coating the wall with carved and paint decorated coatings that are previously turned into plates (Başaran Mutlu, 2019b, 36).

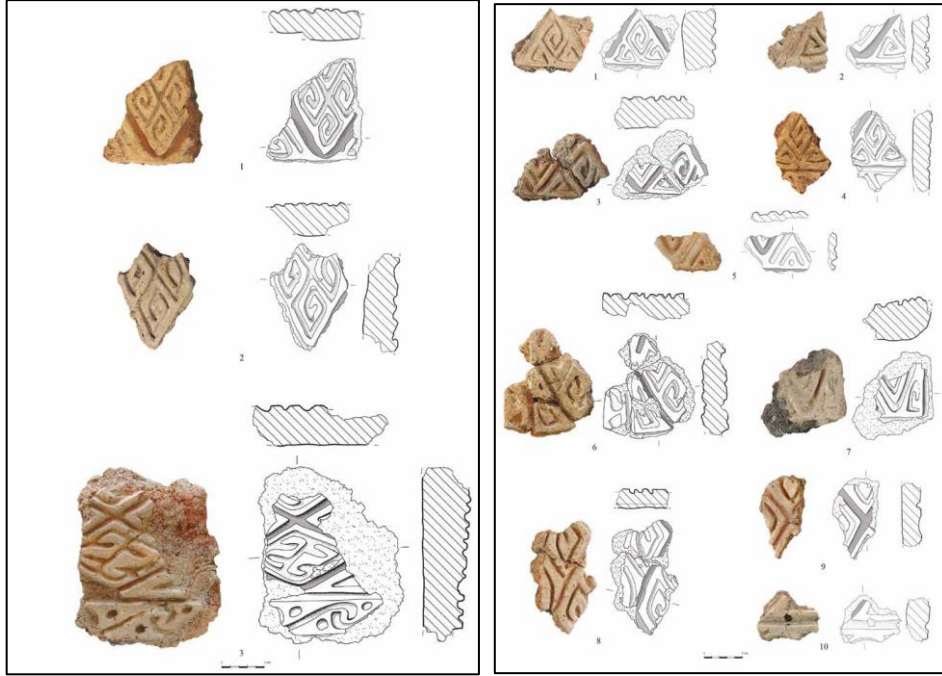


Fig.211: Examples of Wall Decoration Maydos Kilisetepe Höyük (Başaran Mutlu, 2019: 34-35, Fig.6-7)

Similar examples of wall decorations are not observed in Anatolian cultures of the 2nd millennium BC (Başaran Mutlu, 2019b, 27-40). However, similar examples can be seen in Bronze Age cultures in the river (rivers and tributaries such as the Vardar, Morava, Danube, Tisa) and land communication networks stretching from Macedonia to Central Europe v. On the other hand, similar wall coverings are observed at Mesimeriano Toumba in the Halkidiki Peninsula, close to the Gulf of Thessaloniki and dated to the Early Bronze Age (Grammenos/Kotsos 2002, 208, 243-244; Başaran Mutlu, 2019, 36). The fact that the tradition of wall decoration was seen in the Balkans and Central European cultures before Maydos is important in terms of cultural relations (Başaran Mutlu, 2019b, 36). At the same time, similar examples of decorated walls observed at the Maydos höyük are observed in Minoan, Mycenaean and South-eastern European cultures, suggesting that these rooms had special functions (Başaran Mutlu, 2019b, 39).

The fact that the motifs belonging to this ornamental tradition seen in the Balkans and Central Europe were first seen on the pottery observed in the early phase of Layer V of Maydos and later used as architectural decorations is important for the intensity of

possible cultural interaction (Başaran Mutlu, 2019b, 39). However, it is clearly revealed that the structure of the walls in Europe, which have decorated wall coverings and are built with wattle-and-daub technique, is different from the walls in Maydos Höyük (Başaran Mutlu, 2019b, 39).

It is considered that these layer houses (Sazcı- Başaran Mutlu, 2017), which have a rectangular form and narrow towards the centre of the mound, were built in two storeys (Başaran Mutlu, 2019a, 6). The back walls of certain houses were used as defence walls (Başaran Mutlu, 2019a, 6). The open areas between the houses were used as ateliers and certain rooms considered to be used for storage purposes were identified next to the ateliers (Başaran Mutlu, 2019a, 6). On the other hand, a complex structure consisting of a three-room structure and additional rooms connected to this structure was observed in the south of the open area in the settlement (Başaran Mutlu, 2019a, 6). It is clearly revealed that the open area adjacent to this building was used as an atelier (Başaran Mutlu, 2019a, 6). The building complex (Sazcı- Başaran Mutlu, 2017) was destroyed by a large fire and one of the spaces within the building contains a silo and basin with grain, as well as an atelier area created within the space (Sazcı- Başaran Mutlu, 2017, 329-342; Başaran Mutlu, 2019a, 6-7). After the fire, the complex was reused with certain modifications (Başaran Mutlu, 2019a, 7). In the Layer Va, the settlement started to be abandoned and the locations of certain buildings continued to be used as waste areas (Başaran Mutlu, 2019a, 7). While the settlement was under the influence of Western Anatolia until the beginning of the 2nd millennium BC, the settlement started to change with the trade network established with the northern cultures by the middle of the 2nd millennium BC (Başaran Mutlu, 2019a, 8). Traces of this change are seen in certain additions in architecture as well as in pottery and small finds (Başaran Mutlu- Bamyacı, 2020; Başaran Mutlu, 2018; 2019a, 8). The limited changes in the architecture indicate a continuity in the ethnic composition of the community in the settlement (Başaran Mutlu, 2019a, 8). On the other hand, it is considered that there is a change in the social structure due to the relations with different cultures (Başaran Mutlu, 2019a, 8). The wide network created with different cultures is closely related to the location of the settlement (Başaran Mutlu, 2018; 2019a, 9). In the settlement, the multi-room buildings built against the defensive walls narrow towards the centre of the settlement (Başaran Mutlu, 2019a, 8). Wooden beams were used on the walls built with stone foundation and mudbrick body (Başaran Mutlu, 2019a, 8).

In conclusion, the houses observed in the early phases of Layer V of Maydos Kilisetepe settlement, and the storage and atelier areas uncovered in the houses (Başaran Mutlu, 2019a, 6) indicate that the families had a partial domestic production. Apart from this, the use of the spaces identified outside the houses as ateliers (Başaran Mutlu, 2019a, 6) can be considered to serve common use and possible social organization. It is similar to Beycesultan höyük in terms of the presence of atelier in the houses. Therefore, the presence of open spaces in both settlements is important in terms of revealing the existence of possible social organizations. Although Beycesultan höyük Layer 5b (II) and Maydos Kilisetepe Layer V are historically parallel, it does not seem possible to mention of a political and cultural coexistence between the two settlements during this period.

Finally, the settlement of Akrotiri (Doumas, 1983; 1988; 1992; 2016), located in the southern part of the island of Santorini in the Aegean Sea, is a particularly important settlement in terms of architecture. The settlement on the island is chronologically contemporary with Beycesultan Layer 5b (II). Excavated since 1967, the settlement reflects typical Minoan culture characteristics. The settlement was abandoned after the eruption of the Thera volcano in the northern part of the settlement (Doumas, 2016). This natural event is considered to represent the end of the Middle Bronze Age and the beginning of the LBA in the region.

Santorini Island has many coves suitable for settlement on the island due to its topographic structure (Doumas, 2016, 21). It is estimated that the number of these bays was higher before the eruption of the Thera volcano (Sarpaki, 2004, 23; Doumas, 2016, 21). The settlement is located on a small cape between the bays (Doumas, 2016, 21) (Fig.212).

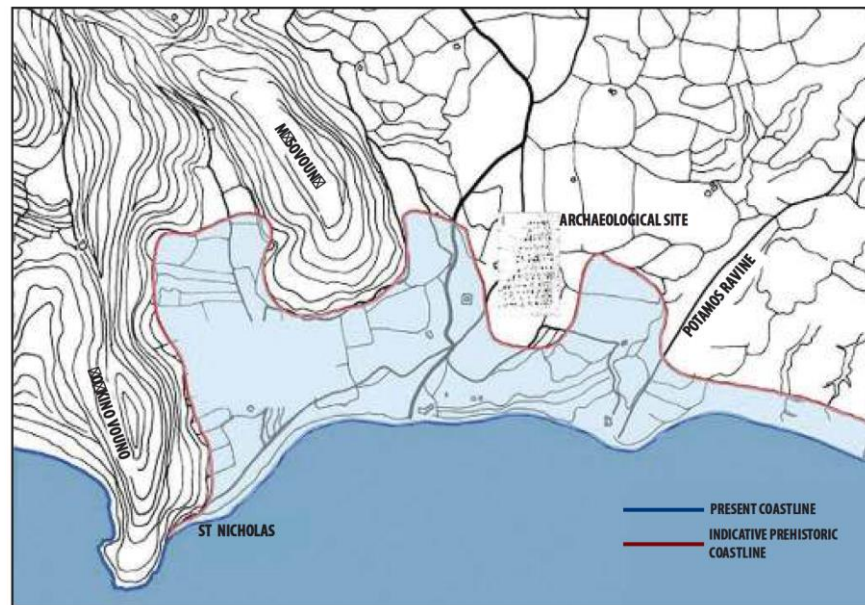


Fig.212: Location of Akrotiri (Doumas, 2016: 21)

The settlement is known as *Middle Cycladic Town* (2000-1650 BC) in the II millennium BC (Doumas, 2016, 26-27). During this period, the settlement expanded to the north and the city has systematic plan (Doumas, 2016, 26) (Fig.213).



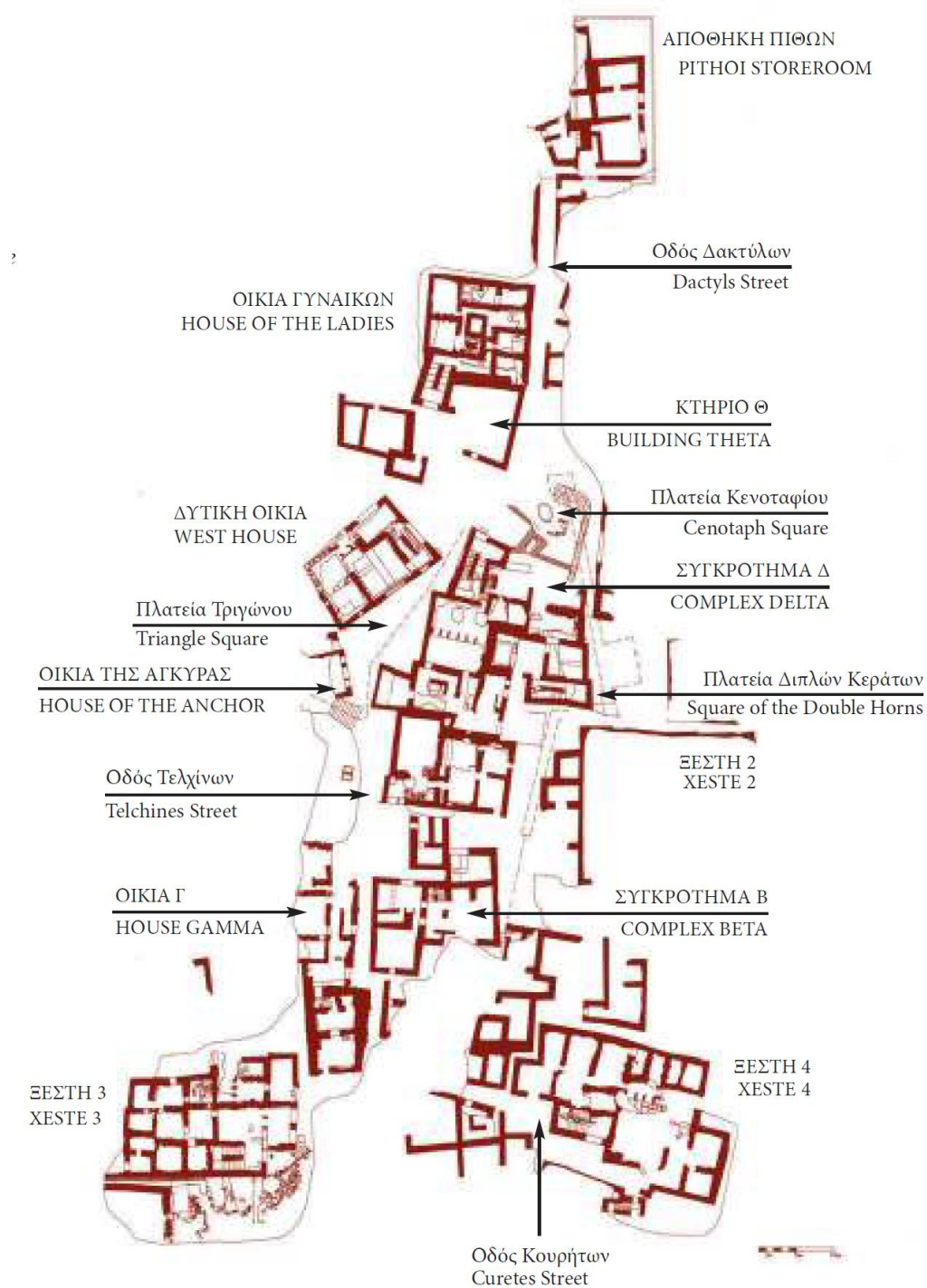


Fig.213: Plan of Akrotiri (Doumas, 2016: 21)

The houses are multi-storied and the settlement has a complex structure (Sarpaki, 2004, 24, fig.1; Doumas, 2016, 26-28) (Fig.213). Houses built for different purposes are connected by streets and alleys (Doumas, 2016, 27). The settlement has streets and alleys as well as squares, drainage and sewage systems (Doumas, 2016, 26-28). These architectural elements with urban elements indicate a possible political structure in the

settlement (Doulas, 2016, 26-28). Otherwise, the construction and maintenance of the settlement plan and the common areas built in accordance with this plan is impossible (Palyvou, 1990, 44-55; Doulas, 2016, 26-28). It is understood from both architectural structures and archaeological finds observed within the structures that seafaring and therefore trade was intensively carried out (Doulas, 2016, 26-28). This indicates the existence of a hierarchical society in the settlement.

It is clearly revealed that commercial products such as Minoan conical cups (Gillis, 1990, 98-115), metal (copper) and agricultural products (Sarpaki, 2004) were imported from centres such as Crete and Cyprus during this period (Doulas, 2016, 26-28). It is possible to state that these commercial activities with the surrounding regions were effective in the emergence of a class specialized in both metalworking and trade (Michailidou, 1990; Doulas, 2016, 26-28). The settlement's construction and wealth were damaged by a major earthquake in the middle of the 17th century BC (Doulas, 2016, 26-28). However, in a short time, the existing structures were repaired, and reconstruction was entered (Doulas, 2016, 30-34). This last period settlement is named *Late Cycladic I period* (1650-1615 BC) (Doulas, 2016). At the end of this period, which represents a short time, the volcano Thera erupted, and the settlement was completely buried under the volcanic tuff (Sarpaki, 2004; Doulas, 2016, 30-34).

Considering the location and topography of the settlement in general, it is possible to state that the sea and the roads associated with maritime trade (Gillis, 1990) played an important role in the establishment and development of the settlement. Although Akrotiri is similar to Beycesultan in terms of having a regular settlement model and the houses having more than one storey, Akrotiri is different from Beycesultan in this respect, as it is the centre of commercial life (Doulas, 2016). While in Akrotiri the wealth was mostly trade-oriented, in Beycesultan it was more production-oriented.

Although there are elements indicating the possible existence of an authority in both settlements, it is highly probable that they have a different cultural organization. In contrast to the public buildings in the harbour city of Akrotiri, domestic buildings (Palyvou, 1990, 44-55) are more prominent in Beycesultan Layer 5b (II).

In conclusion, when important LBA centres in the vicinity of Beycesultan höyük are examined, it is possible to speak of cultural communication between Beycesultan and certain other settlements. In this context, the architectural elements and potteries observed

in the nearby settlement of Kusura (Lamb, 1937) demonstrate great affinity with the Beycesultan settlement. The proximity may be related to the fact that Beycesultan and Kusura are within the borders attributed to the kingdom of Mira-Kuwalia, which was localized in the region. On the other hand, the presence of megaron structures as well as similar pottery and small find assemblages observed in the eastern cone of Beycesultan in the settlement in Western Anatolia indicates the existence of a possible network of relations. However, it is not possible to detail of a possible cultural coexistence based on these finds.



CHAPTER XII: CONCLUSION

In this study hereby, the socio-economic and cultural structure of the LBA society was examined based on the domestic structures unearthed in Beycesultan Layer 5b (II) and all finds obtained in these structures. Especially the houses 1 and 2, which were unearthed in the late period excavations in the western cone, are discussed in terms of household archaeology. Along with these houses, the structures belonging to the Layer 5b (II) during the early period excavations were also evaluated in this respect. The results obtained were compared with the modern Kocayaka village and the important LBA centres in the surrounding regions, which were examined in terms of ethno-archaeology, and it was examined whether there was a possibility of cultural unity.

Located on the fertile Çivril plain, the höyük is 73 hectares⁸⁶. It represents the largest settlement in the region with its spread area (Abay, 2012b, 40). Layer 5b (II), which stands out with its architecture and finds in the early and late period excavations, is dated to between 1700-1595 B.C. (Dedeoğlu- Abay, 2014, 39; Dedeoğlu- Konakçı, 2015, 193). According to the obtained radiocarbon dating, *Beycesultan Layer 5b (II) Troy VIa-b and c phases* (Blegen, 1953, 12); *Kaymakçı, Late Bronze Age 1* (Roosevelt et al, 2018), *Maydos Kilisetepe phase V c* (Başaran Mutlu, 2019; Başaran Mutlu- Bamyacı, 2019) settlement of Akrotiri with *Middle Cycladic Period Late Cycladic I period* (Doulas, 2016, 30-34) with end appears to be contemporary (Fig.213).

⁸⁶ The boundaries of the settlement, determined as 73 hectares (Abay-Dedeoğlu, 2009: 53-79), are based on the range of pottery and the cemetery area (Abay-Dedeoğlu, 2009: 53-79). For this reason, the population calculations made in the thesis study, the interpretations related to the boundaries of the settlement were made based on the range of pottery.

BC	BEYCESULTAN	TROYA	KUSURA	MAYDOS KİLİSETEPE	AKROTIRI	LİMANTEPE	ÇİNE TEPECİK	PANAZTEPE	KADIKALESİ	BADEMĞİDİĞİ	AYASULUK TEPESİ	MİLET
1200						II1 (LH III C) (1200/1190)				II (LH III C) (1180-1050/1030)		
1250						II2 (LH III B) (1360/1325- 1200/1190)	II1a (LH III B1-III C) (1320/1300- 1100/1090)					IV (LH III B-C) (1320/1300- 1200/1190)
1300		VIIh (1325-1275)								III (LH IIIA2) (1300)	X (LH IIIA2) (1400-1200)	
1350		VIIg (1375-1325)				II3 (LH IIIA2) (1390/1370- 1360/1325)		Ia (1460-1180) (Atelier)	Layer III			
1400		VIIi (1425-1375)								IV-V (1430-1375)		V (LH III B-C) (1450-1300)
1450	4			Va (1520/1380- 1305)								
1500												
1550	5a (1600- 1500)	VId (1575-1500)										
1600	5b (1700- 1600)	VIIc (1650-1575)		Vb 3-1 (1685-1520)	Late Cycladic I Period (1659-1615)							
1650		VIIb (1725-1650)	Period C									
1700					Middle Cycladic Town (2000-1650)							
1750	6	VIIa (1725)		Vc (1745-1620)				Ib (1750) (Atelier)				
1800	7											

Fig. 214: Chronology Table of Late Bronze Age (Edited by M. Çarkı)

The radiocarbon dates obtained in Layer 5b (II), which ended with a great fire, are based on organic finds that were carbonized as a result of the destruction of the houses in this layer. Therefore, it is clearly revealed that the establishment of the houses is older. Within this respect, it is possible to state that he brought a new perspective to the controversial LBA chronology in Western Anatolia. Ethno-archaeological studies were carried out in the modern village of Kocayaka, about 5 km west of the Beycesultan höyük. It is clearly revealed that the mudbrick houses examined were maintained annually. In this respect, plaster is of great importance in the preservation of the house. Plaster is applied to the interior walls of the houses at certain intervals related to the intensity of use. It was stated by the people living in the village that these plasters were made once or twice a year. From this aspect, it is possible to comprehend that from the plaster samples found in the House 2 examined in Beycesultan höyük Layer 5b that this house go back a maximum of 52 years and a minimum of 26 years. Based on these data, Beycesultan Layer 5b, dated to 1700-1595, was built in BC. It is possible to consider that it can be dated to the years 1752/1726-1647/1621. Therefore, the beginning of LBA, which is controversial for Western Anatolia, dates back to BC. It is possible to state that Beycesultan played a key role in its withdrawal to the middle of 18th century and in this

respect, in the Western Anatolian LBA stratigraphy. At the present stage, it means that the Middle Bronze Age layer in the settlement also retreated at this rate. As the Layer 5b (II) of Beycesultan is contemporary with the layers found in Troy (Blegen, 1953), Maydos Kilisetepe (Başaran Mutlu, 2019; Başaran Mutlu- Bamyacı, 2019) and Akrotiri (Doumas, 2016) settlements, a detailed examination of these settlements may be important in terms of shedding light on the chronological problem.

In the early period excavations carried out in the eastern cone of Beycesultan, a large building complex from the Middle Bronze Age called the "*Burnt Palace*" was unearthed (Lloyd-Mellaart, 1965, 3-34). This palace structure, which has an important place for Western Anatolia, is important in terms of representing a concept such as centralization. This palace structure, which has an important place for Western Anatolia, is important in terms of showing the existence of a central authoritarian class in the settlement during this period. This palace and the MBA architecture unearthed in the limited area came to an end with a great fire (Lloyd-Mellaart, 1965). After the demolition of this palace structure, which can be considered as an important proof of centralization, the settlement was resettled (Lloyd, 1972). During this period, there were palace structures in the surrounding regions, especially in Central Anatolia. In this period, called the "*Assyrian Trade Colonies Period*" (1950-1750 BC), the trade network started by Assyrian traders in Kültepe/Kaneş (Höyük level 10-6 and Karum Level II and Ib-a) (Kulakoğlu, 2011, 1012-1030) and Acemhöyük near Aksaray (Level III-I) (N. Özgüç, 1966; Öztan, 2008, 26; Dardeniz-Öztan, 2020, 838-840). Many centres in Anatolia, especially in Anatolia, began to prosper (Özgüç, 2002, 402; Işık, 2020, 13-18). It is clearly revealed that this wealth causes political and economic consequences. (Küçükbezci, 2011, 1-24). In this period, semi-precious stones together with imported products constituted an important repertoire of finds, except for domestically produced goods (N. Özgüç, 2015). This wealth has brought with it a strong political and economic structure (Özgüç, 1986; 2005; Kulakoğlu, 2011, 1012-1030; 2014, 85-92). In this period, it is possible to state that the hierarchical structure diversified with the developing trade network as well as the magnificent public buildings (Kulakoğlu, 2011, 1015-1018, Fig.47.2). As a result of the instability that emerged in Assyria, commercial activities were hit and with the shift of trade to different regions such as Syria, there was a collapse in the mentioned system (Barjamovic, 2011, 9; Erol, 2015, 431). After this period, which ended with a great fire, there was a political and economic collapse. (Kulakoğlu, 2011,

1017-1018; Işık, 2020, 16). Kultepe Karum II and Ib (Işık, 2020, 16-18) and Acemhöyük III (N. Özgüç, 1977, 623) a similar fire was seen in the palace building in Beycesultan. Naturally, even though it is not considered to be caused by the same factors, the destruction that occurred in this period caused the centralized structure in the settlements to come to an end. After the destruction in the Middle Bronze Age, it was clearly revealed that the mound was inhabited again in levels LBA 6 (III) and 5b without a strong centralized structure. Especially in Layer 5b (II), a new settlement model has emerged. In this emerging new model, it is highly probable that an autonomous entity emerged. In this context, the emergence of a possible elite class is of great importance in shaping the political structure in the settlement. In this respect, there may be a structure similar to the elite class in Mitrou (Maran- Van De Moortel, 2014) settlement in Continental Greece. Especially in the eastern cone, in the areas (Lloyd, 1972) claimed by Mellaart and Lloyd to have been used as stables, it is possible to consider that there are stables associated with a certain class. It is possible to see the class structures similar to those that emerged in Beycesultan höyük in the surrounding settlements such as Kusura (Lamb, 1937), Troy (Doumas, 2016), Akrotiri (Doumas, 2016). In this context, it is revealed that especially in Troy (VI) settlement, storage gained speed again and accordingly elite class buildings became prominent (Thumm-Doğrayan- Pavúk –Pieniążek, 2019). It is considered that the political structure that emerged in this period is closely related to the economic model and production structure. In particular, the storage capacity of the houses in Beycesultan mound and the production activities such as textiles in the houses can be shown as further evidence for the diversity of economic activities in the settlement.

When the other LBA settlements in Western Anatolia are examined, it is observed that there are certain differences between them and Beycesultan. Within this context, Troy (Blegen, 1953; Blegen *et al.* 1958; Korfmann, 1992), Çine Tepecik (Günel, 2011b, 1-7) while there is a defensive fortification system in settlements such as Beycesultan, no defensive structure has yet been found. In terms of city plan, Kusura (Lamb, 1937, 11-12), Troy (Blegen *et al.* 1958; Korfmann, 1992), Limantepe (Manning, 1999; Erkanal, 2008, 99), Akrotiri (Doumas, 2016), demonstrates similar characteristics with settlements such as. However, the fact that the settlements located on the coastal part need defense should be related to the possible threats from the Continental Greece and the Islands. In this context, the location of Çine Tepecik mound might be shown as an example of the aforementioned relationship networks (Günel, 2011b, 6). In the settlements in question,

it is seen that the buildings that shall be referred as public are located in the area surrounded by the walls. This situation can be explained by the ruling class and the elite class. Apart from the eastern and western cones on Beycesultan höyük, there is not much data yet on what kind of construction was done in this period. Therefore, even though the architectural structures found in the cones look like ordinary houses, they may have been used by an elite class.

It is possible to consider that there was a cultural break with the Layers 6 and 5b (II) that was occupied after Middle Bronze Age. However, similarly the temple area built in MBA in area R was built in the same area in LBA, and similar items were used in some pottery forms and small find types, suggesting that the settlement was not completely abandoned after it was destroyed, and it is possible to state that the settlement continued with the new arrivals.

When the conducted early excavations, whilst the LBA architecture unearthed in the recent excavations is examined; the settlement consists of east-west oriented streets with a width of 3 meters and buildings located between these parallel streets (Fig.215).

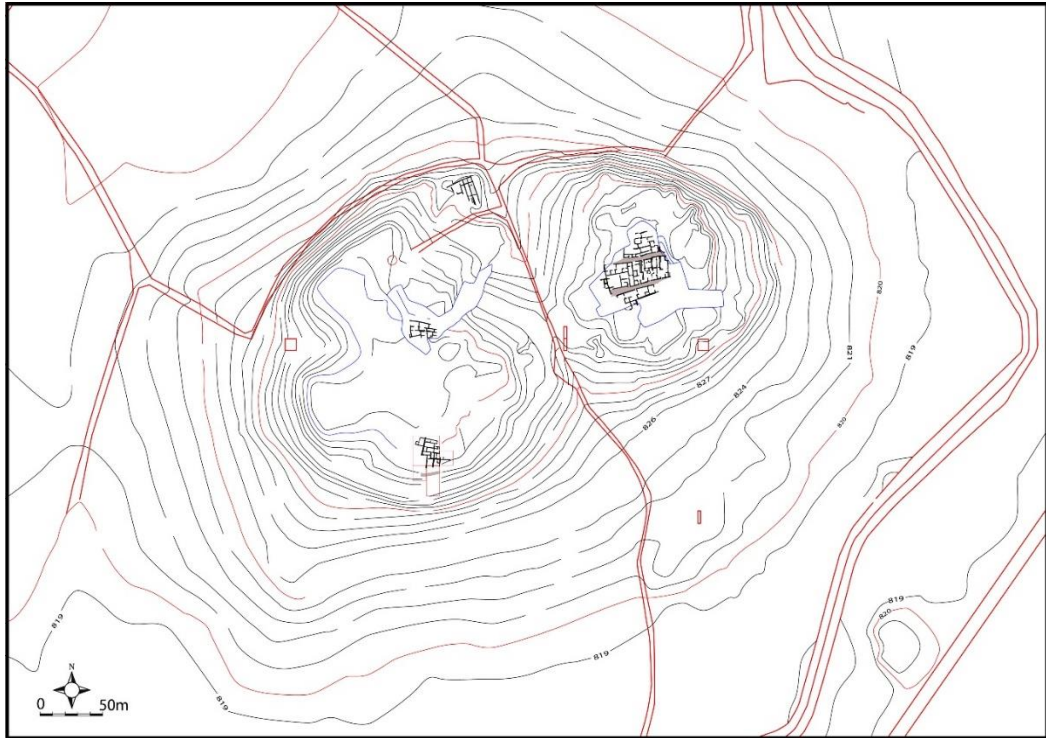


Fig.215: Late Bronze Age Architecture of Beycesultan (*Beycesultan Excavation Archive- Illustrated by M.Çarkı*)

The houses, which were built with stone foundations and mudbrick walls, consist of many rooms. Traces of renovation were found in some houses. In this regard, a new unit was created in House 2. It is possible to see the changes made in the House 2 in the early excavations carried out in the eastern cone of settlement (Lloyd, 1972, 10). Among these architectural changes in house numbered 2, it is clearly revealed from the plaster analyzes that certain walls of the house were strengthened and the construction of the second floor took place at this stage. It is considered that the use of the rooms of the house was redesigned in the new plan that emerged architecturally. In other words, new functions were given to the spaces in the house. In this context, there can be many reasons for the architectural change in the house. It is possible to state that this was created depending on the increasing amount of population in the house.

It has been observed that the new unit created in house numbered 2 has limited storage capacity. In this respect, it is understood that the unit in question is not economically independent. Most probably, it can be said that the new unit created is partially independent in terms of food preparation and consumption, despite the joint action on production activities. Especially the remains of the hearth found in the unit are important evidence in this respect. On the other hand, it is considered that this unit has an alternative role in House 2 in terms of textile production activities, from the finds related to textile production in the house and the wooden remains thought to belong to the weaving loom

As it is revealed from the planned architecture of the Late Bronze Age in the settlement, it is possible to state that the labor force spent in the construction and renovation of the structures is large. In this respect, it is understood that certain works such as construction activities were done collectively in the examinations made in Kocayaka village. Especially in the supply of workers who work with the construction masters during the construction process, sometimes there is cooperation between the neighbors. Because the spread of construction activities to a certain period and the operation of this process depending on the workforce necessitated this cooperation. Under these circumstances, it is highly probable that the architectural structures built in Beycesultan mound were the result of a collective effort, as in the case of Kocayaka village. It is considered that cooperation is important in terms of not interrupting animal and agricultural production. To summarize clearly, the households act independently in

terms of production activities. On the other hand, it is considered that they act together in works such as construction activities.

As the consequence of the cooperation between the households during the construction process of the houses, social organization and a possible relationship network may be mentioned in the settlement. It is considered that areas such as streets, streets and courtyards are used for common works. For many works other than construction activities, it is likely that there might be additional inter-household solidarity. For instance a complex communication network is needed to make decisions about the maintenance and repair of buildings, as well as the planting, irrigation and harvesting of agricultural products (Wittfogel, 1957, 271-273). In fact, in this period, whilst considering the production and storage capacity in the settlement, as well as production activities such as livestock and textile, it is possible to state that there was a complex social structure (Wittfogel, 1957, Carneiro, 1970) operating in different production areas.

During the occupation process, which represents the Layer 5b (II) of the settlement, residential domestic structures were built intensively. In this period, a building called "*Little Palace*" is mentioned in the eastern summit (Lloyd, 1972, 7-12) (Fig.216 (a)). However, when this structure is examined, it is clearly revealed that it is not much different from the other structures in Layer 5b (II) in terms of plan by Mellaart and Lloyd (Lloyd, 1972, 7-12). Rich pottery and small finds were found in this building, which is considered important (Lloyd, 1972, 5). Although it has been identified, it is considered that it is probably inhabited by individuals with important status. Consequently, it is considered that this building was utilized for domestic purposes. On the other hand, it was suggested by Mellaart and Lloyd that this place was used as a "store" (Lloyd, 1972), from the rich pottery and small finds repertoire, as well as the pithoi found in spaces 13 and 14 in the eastern cone (Fig.216 (b)) . However, similar finds were unearthed in the storage rooms of buildings such as houses numbered 1 and 2 during the recent excavations. Within this respect, it is considered that these structures proposed by Mellaart and Lloyd were probably the storage rooms of the houses.



Fig.216: Plan of Little Palace (a) and Stores (b) (*Lloyd, 1972: 10, Fig.3*)

Whilst inspecting the houses uncovered in Level 5b (II), it is clearly revealed that agricultural products were generally stored in the front rooms of the houses, apart from the storage and main rooms. In this respect, houses have the storage capacity of a large amount of agricultural products. For instance, House 1 has a storage capacity of approximately 3504 kg, while House 2 has a storage capacity of 6131.2 kg in direct proportion to the size of the house. Both the storage capacity of the houses and the presence of small finds in the main spaces of the houses, which are defined as ateliers, reveal that the settlement had an economically autonomous structure in this period.

It is clearly revealed that the high storage elements in the houses are not only for consumption purposes. Within this context, it is considered that they meant be used for different needs and the labor force needed and seed (for sowing) in the settlement is met with the surplus product stored in the houses.

On the other hand, metal finds and small finds, as well as pottery found in the houses, shall have been produced in ateliers as production requires expertise. Therefore, it is considered that these goods, which are found in almost every house, were acquired within the framework of a systematic exchange tool. The exchange system, which is generally preferred by communities that show the characteristics of a peaceful society (Renfrew, 1969, 151-169). It is considered that it was used actively in the Layer 5b (II), which has a certain amount of prosperity and wealth.

Finally, it is possible to state that the data on the political structure in the settlement are quite limited. The temple structure in Layer 5b (II) (Lloyd, 1972, 24-32). In addition, a possible public structure to be uncovered in areas that have not been excavated yet will provide important data about the political structure in this layer. As the Layer 5b (II) was destroyed by fire, the settlement continued uninterruptedly. In this

respect, architectural structures after Layer 5b (II) is represented Layer 5a (Ib) (Abay, 2012b, 53). Architectural structures of Layer 5a(Ib) was partially built on the walls of Layer 5b. However, there is a major break in the architectural structure of the settlement and the houses were built with a simpler structure (Fig.11). On the other hand, there are significant changes in the storage capacity of houses. During this period, it was possible to observe that there was almost no storage element in the houses. It is considered that these houses were inhabited by individuals belonging to the same class (worker class maybe?) due to the simple plan of the houses and the limited finds and storage capacity of the houses.



Fig.217: Bowls of Silos at Room 22 (*Dedeoğlu-Abay, 2014: 5 Fig.11, 19*)

Within this context, it is considered that the shallow plates (*Dedeoğlu-Abay, 2014, 5 Fig.11, 19*) found in the silo structures in Room 22 belonging to Layer 5a (Ib) are related to possible food distribution and consumption (Fig.217). Therefore, it is possible to state that the autonomous structure in the economy in Layer 5b (II) is replaced by a dependent economic model in Layer 5a (Ib). This situation shall be explained by a possible political power in the settlement.

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TABLES

Rooms	Pithoi	Storage Jar	Open Vessel	Closed Vessel	Miniatur Vase	Bowl	Plate	Goblet-Fruit Stand	Flask	Sieve	Mug	Teapot	Funnel	Cup	Trefoil-Jug	Spouted Pitcher	Juglet	Bottle	Feeding Bottle	Rhyton	Bulla	Grinding Stone	Mortar	Pestle	Burnishing Stone	Loom Weight	Spindle Whorl	Counting stone	Singhori Stone	Rock Crystal	Flint tool (Blade)	Sickle	Spearhead	Arrow Head	Pin-Needle	Ring	Nail	Axe	Pounder	Mace-Head	Bead	Knuckle-bone Textile	Weaving Loom Comb	Weaving Shuttle	Wider Basket	Bracelet						
Room 14	X		X	X		X	X	X						X								X	X	X		X	X			X				X							X											
Room 55				X				X		X	X				X											X					X												X									
Room 7	X	X	X	X	X	X	X	X			X				X	X						X		X	X		X	X			X	X		X	X						X											
Room 8	X		X	X		X	X	X	X						X	X	X									X	X			X													X	X								

Table 1: Finds of House 1

Room 14	Findings Level	Pithos	Open Vessel	Closed Vesse	Bowl	Plate	Goblet- Fruit Stand	Trefoil-Jug	Grinding Ston	Mortar	Pestle	Loom Weight	Spindle Whorl	Flint tool (Blade	Pin-Needle	Bead
	0-15 cm	1	3	9	5	4	4	1	0	1	1	2	2	2	1	0
	15-30 cm	0	0	8	0	0	2	0	1	0	0	9	1	0	0	0
	30-45 cm	0	1	2	0	1	2	1	0	0	0	1	0	0	0	2
	45-60 cm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	60-75 cm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	75-90 cm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	90-105 cm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	105-120 cm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	120-135 cm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	135-150 cm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 2: Finds of Room 14

Room 55	Findings Level	Closed Vessel	Goblet- Fruit Stand	Sieve	Mug	Trefoil-Jug	Loom Weight	Flint tool (Blade)	Bead
	0-15 cm	1	0	0	0	1	0	3	2
	15-30 cm	0	0	1	0	0	1	0	0
	30-45 cm	0	2	0	1	0	0	0	0
	45-60 cm	0	0	0	0	0	0	0	0
	60-75 cm	0	0	0	0	0	0	0	0
	75-90 cm	0	0	0	0	0	0	0	0
	90-105 cm	0	0	0	0	0	0	0	0

Table 3: Finds of Room 55

Table 6: Finds of House 1

Room 63	Findings Level	Pithos	Closed Vesse	Bowl	Plate	Goblet- Fruit Stand	Mug	Loom Weight	Spindle Whorl
	0-15 cm	1	1	2	12		1	1	0
	15-30 cm	0	1	1	2		1	0	1
	30-45 cm	0	2	0	0		0	0	0
	45-60 cm	0	0	0	0		0	0	0
	60-75 cm	0	0	0	0		0	0	0
	75-90 cm	0	0	0	0		0	0	0
	90-105 cm	0	0	0	0		0	0	0
	105-120 cm	0	0	0	0		0	0	0
	120-135 cm	0	0	0	0		0	0	0
	135-150 cm	0	0	0	0		0	0	0

Table 7: Finds of Room 63

Room 19	Findings Level	Closed Vesse	Bowl	Sieve	Plate	Loom Weigh
	0-15 cm	10	2	0	1	0
	15-30 cm	0	0	0	0	0
	30-45 cm	0	0	0	0	0
	45-60 cm	0	0	1	0	0
	60-75 cm	0	0	0	0	0
	75-90 cm	0	0	0	0	0
	90-105 cm	0	0	0	0	0
	105-120 cm	0	0	0	0	0
	120-135 cm	0	0	0	0	0
	135-150 cm	0	0	0	0	1
	150-165 cm	0	0	0	0	1

Table 8: Finds of Room 19

Room 28	Findings Level	Pithos	Open Vessel	Closed Vessel	Miniatur Vase	Bowl	Plate	Goblet-Fruit Stand	Mug	Teapot	Cup	Trefoli-Jug	Spouted Pitcher	Feeding Bottle	Grinding Stone	Burnishing Stone	Loom Weight	Spindle Whorl	Counting Token (Stone)	Slingshot Stone	Rock Crystal	Idol (Stone)	Flint tool (Blade)	Blade (Bronze)	Spearhead	Pin-Needle	Sickle (Bronze)	Ring (Silver)	Mace-Head	Bead	Knuckle-bone	Textile	Weaving Loom Comb	Weaving Shuttle	Woven Basket
	0-15cm	3	14	0	1	7	2	0	1	3	0	6	5	1	1	1	0	42	1	1	1	1	1	1	3	4	0	0	1	169	227	1	1	1	
	15-31cm	0	3	13	0	3	2	1	1	0	1	0	0	0	1	0	1	12	0	0	0	0	0	0	0	0	0	1	0	1	10	4	0	0	0
	30-45cm	0	0	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	
	45-61cm	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	60-75cm	0	0	0	0	1	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	75-91cm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	90-105cm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	105-120cm	0	1	2	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	120-135cm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	135-150cm	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150-165cm	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 9: Finds of Room 28

Room 2	Findings Level	Pithoi	Open Vessel	Closed Vessel	Bowl	Plate	Goblet- Fruit Plate	Flask	Sieve	Funnel	Cup	Trefoil-Jug	Juglet	Rhyton	Bulla	Grinding Stone	Burnishing Stone	Loom Weight	Spindle Whorl	Flint tool (Blade)	Spearhead	Nail	Axe (Stone)	Pounder	Bead	Knuckle-bone	
	0-15 cm	9	6	4	3	3	15	2	0	1	0	2	1	1	1	0	0	21	5	1	0	0	2	2	32	1	0
	15-30 cm	0	2	4	3	0	4	0	0	0	1	1	1	0	0	1	0	0	1	0	1	0	0	0	0	0	
	30-45 cm	0	1	2	1	0	18	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	
	45-60 cm	0	2	7	1	1	3	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	
	60-75 cm	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	
	75-90 cm	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	90-105 cm	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	
	105-120 cm	0	3	0	0	0	0	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	120-135 cm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	
	135-150 cm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	150- 165 cm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Table 10: Finds of Room 2

Room 62	Findings Level	Closed Vessel	Plate	Goblet- Fruit Stan	Flask	Trefoil-Jug	Loom Weigh	Spindle Whorl	Idol (stone)	Axe (Stone)	Whetstone	Pin-Needle	Ring (Bronze)	Bead	Knuckle-bone
	0-15 cm	1	2	1	0	0	0	1	0	1	0	0	0	1	1
	15-30 cm	1	0	0	0	0	0	3	1	0	2	0	0	3	9
	30-45 cm	0	0	0	0	1	0	1	0	0	0	0	0	0	0
	45-60 cm	0	0	0	1	0	0	0	0	0	0	0	0	0	2
	60-75 cm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	75-90 cm	0	0	0	0	0	0	0	0	0	0	0	0	2	0
	90-105 cm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	105-120 cm	0	0	0	0	0	2	0	0	0	0	0	0	0	0
	120-135 cm	0	0	0	0	0	0	0	0	0	0	1	0	0	0
	135-150 cm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150- 165 cm	0	0	0	0	0	3	0	0	0	0	0	0	0	0

Table 11: Finds of Room 62

Room 30	Findings Level	Pithos	Open Vessel	Closed Vessel	Miniatur Vase	Bowl	Plate	Goblet- Fruit Stand	Trefoil-Jug	Loom Weight	Spindle Whorl	Pin-Needle	Knuckle-bone
	0-15 cm	1	4	1	0	1	0	2	1	14	1	1	8
	15-30 cm	0	1	0	1	2	9	12	0	0	0	0	0
	30-45 cm	0	0	0	0	0	1	2	0	0	1	1	0
	45-60 cm	0	1	1	0	1	1	2	0	0	0	0	0
	60-75 cm	0	0	1	0	0	0	0	0	0	0	0	0
	75-90 cm	0	0	0	0	0	0	0	0	0	0	0	0
	90-105 cm	0	0	0	0	0	0	0	0	0	0	0	0
	105-120 cm	0	0	0	0	0	0	0	0	0	0	0	0
	120-135 cm	0	0	0	0	0	0	0	0	1	0	0	0
	135-150 cm	0	0	0	0	0	0	0	0	0	0	0	0

Table 12: Finds of Room 30