



# NGSBA Excavation Reports

## Volume 1 (2009)

### **Salvage Excavation at Yesodot (Hirbat Umm-Kalha) – 2006 Preliminary Report**

Excavation Permit: B - 310/2006  
Excavating Archaeologist: Yehuda Govrin  
Y. G. Contract Archaeology Ltd  
Academic Sponsor: Hebrew Union College



Figure 1: Aerial photograph of the excavation area (from west), with Route 3 on the left, in the foreground the Y.G. Archaeology (Hebrew Union College) excavation area (B), and the Israeli Institute of Archaeology (Tel Aviv University) excavation area (A) in the background.

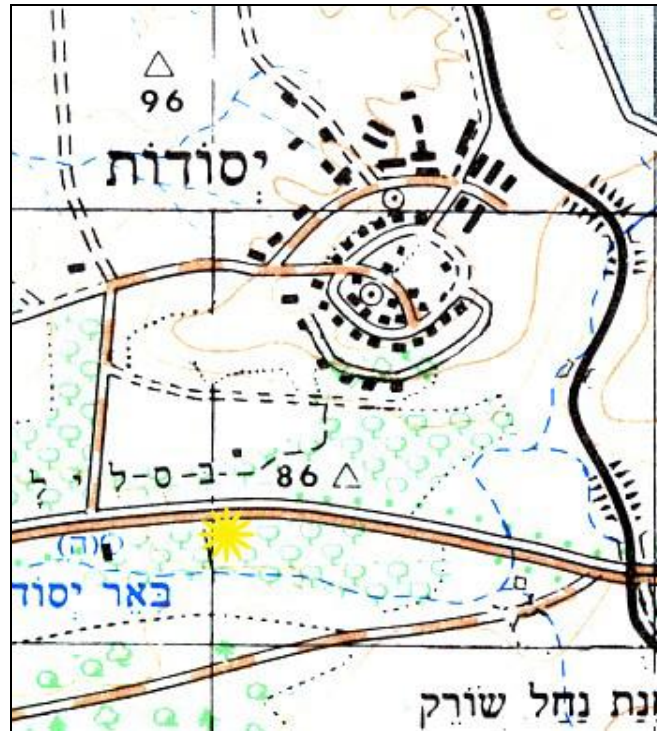


Figure 2: Location map of the Yesodot excavation site (31°48'36.02''N / 34°51'42.24''E).

## Introduction

As part of the widening of Route 3 on the west side of the Judean Hills, the Israel National Roads Company (INRC) was required by the Israel Antiquities Authority (IAA) to perform an archaeological survey and test excavations in the area of the village of Yesodot.

The IAA survey was conducted by Y. Dagan, L. Brada and S. Golan (2009). This was followed by a test excavation, initially with digging machines and later by hand under the direction of IAA archaeologist Hagit Torga.

As a result of these investigations, which indicated significant archaeological activity at this site, the INRC was required to commission a large-scale salvage excavation. The company divided the site into two sections, with separate excavation tenders for each. Y.G Archaeology won the tender for the western section, Area B (with academic sponsorship from the Hebrew Union College), and the Israeli Institute of Archaeology won the Area A tender (sponsored by Tel Aviv University).

Area B covered ca.2000m<sup>2</sup> (or eighty 5 x 5m squares). The excavation commenced in July 2006 and was completed in October, under the direction of Yehuda Govrin with area supervisors were Gili Hilel-Habasus and Amir Clonimus Cohen. Artifacts processing and analysis, and the preparation of the final report were conducted with the assistance of Dr. David Ilan, Natan Ben Ari and Conn Herriott.

## Site Description

The archaeological remains at Yesodot (Hirbat Umm-Kalha) cover a wide area along the north bank of Nahal Sorek. The current investigation site is located between this

stream and Route 3, which ran immediately north of our excavation. The site rises towards the west, meeting a meander of Nahal Sorek. Over most of the site's area grapefruit orchards had been planted and the earth was intensively worked for decades.

Artifacts recovered in the test and salvage excavations in Area A provide conclusive evidence that the site was a *tel* settlement, occupied in the Neolithic (8300-4400 BCE), the Chalcolithic (4400-3500 BCE), the Middle Bronze II (1900-1550 BCE) and the Late Bronze (1550-1200 BCE) periods. Economies were most probably based on agriculture in the fertile clayish soil of the area, and also on trade conducted along a road running parallel to Nahal Sorek, which connected the Judean Hills to the southern coastal plain (an ancient path now partly followed by Route 3). The settlement's water resources were probably wells and shallow springs close to Nahal Sorek's bank.

West of this *tel*, the excavations in Area B exposed two occupation phases, from the Middle Bronze II and Late Bronze periods. Architectural remains were found built on sterile ground at an average altitude of 81m above sea level. Remains from later periods were not found in this area, and the twenty-eight archaeologically sterile test squares dug at the west end of Area B (Area Ba) confirmed that our excavation reached the Bronze Age settlement's western limit (longitudinal coordinate: 137030).

The Area B remains constitute a settled periphery of the *tel* centered in Area A, rather than a separate settlement. This picture is supported by the fact that a coeval *tel* site, Tel Mikne, lies only 2km north. That is, the region's Bronze Age settlement pattern as currently understood did not encourage adjacent but separate population centers.

We divided Area B into two sections, Area Ba to the west and Bb to the east.

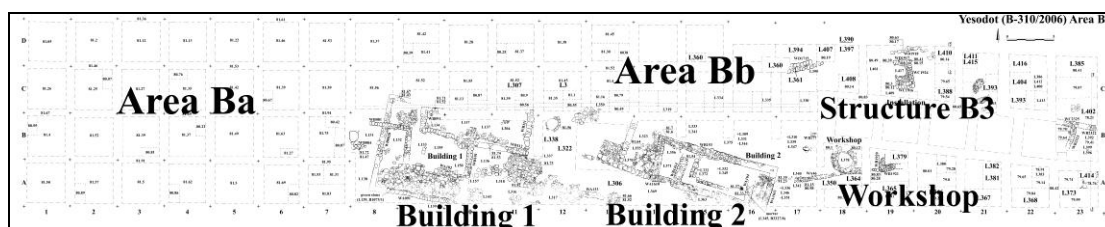


Figure 3: General site plan of Area B.

### **Area Ba (west portion of the site)**

Our investigation in this area consisted of digging twenty-eight squares: A1-7, B1-7, C1-7, and D1-7. The following are the excavation results:

1. The topsoil was a heavy, stoneless, dark brown clayish soil (grumosol). This soil was archaeologically sterile. The north row of squares (D) contained recent waste material deposits and the remains of a British Mandate road.
2. 2 x 1m test pits were manually excavated to a depth of 1m in fourteen sampled squares (see plan). In all these test pits was found a sterile clayish soil, brown in color and including well-sorted limestone chunks, which was devoid of archaeological remains.

3. In three of the test pits (squares B4, B7, C2), at the IAA's request excavation was extended to a depth of 1.5m. These deep pits were also lacking in archaeological remains.
4. A test channel was excavated by tractor along the south side of Area Ba, again at the request of the IAA. This channel measured 25m in length and was dug to a depth of 3m. The entire length of the channel was unchanging in its archaeological sterility and soil type.

It was concluded from these excavation results that Area Ba contained no archaeological remains.



Figure 4: General view of Area B (from west), with Area Ba in the foreground. This section of the site was found to be devoid of artifacts or archaeological remains. Notice the deep test channel on the south side of the area (in the right foreground).

### **Area Bb (east portion of the site)**

Fifty-eight 5 x 5m squares were excavated in this section. The following is a summary of our findings.

1. Row D (the north row, adjacent to Route 3)  
The topsoil in these eight squares (D8-16) was a dark brown, stoneless grumosol, including lime fragments, and sterile and without archaeological remains. Only recent rubbish deposits and Mandate period road vestiges were evident. Manual test pits measuring 2 x 1m and 1-1.5m deep were excavated in four sampled squares (see plan; L352-354, 360). In all these pits the same sterile soil was found, devoid of archaeological finds.

## 2. Row C (south of row D)

This row was also divided into eight squares (C8-16). The northern halves of the squares contained only sterile grumosol. However, in the southeast corners of the squares we dug deep test pits and in several cases sections of walls belonging to the northern wing of building B1 were revealed (see below). These wall sections were generally one course high and two wide, and had been cut by a previous deep test channel which ran through the southern sides of the row C squares (see plan).



Figure 5: Area Bb (from west). In the foreground is a large threshold stone from building B1. The north side of the building was destroyed (left foreground), probably by construction of the Mandate period road.



Figure 6: Building B1: the paved room in the southwest side of the building (from west).

### 3. Building B1

This building (Figs.5-8) was located at the west end of Area Bb. The structure was rectangular, measured ca.25 x 12m (300m<sup>2</sup>), and was built along an east-west axis. Mostly just the wall foundations and surface paving survived. These architectural remains were very close to the surface, at depths between 0.10 and 0.40m. At the west end of the building a large stone was found *in situ* (Fig.5). This was probably an entrance threshold. The partial plan which we built of the interior suggests rectangular rooms, some of which were paved with large lime flagstones interspersed with small stones. The stone paving survived best in the southwestern room (L139) (Fig.6), and sections were also preserved in other rooms. This paving reinforced the compact earth floor.

The structure's walls were preserved only in their bottom course. The bases of the surviving walls were made of large and medium-sized limestones. Walls could be one course wide – as in the case of WA91, an external wall – or two courses wide – as was WB82, an internal wall.

In the building area we excavated two deeper test pits (2 x 1.5 x 1.5m). These showed that the building was a single-phase structure. Under its one occupation stratum was exposed sterile soil, from which no additional archaeological finds were retrieved.

The overall impression is of a structure built of sun-dried mud bricks, set on stone foundations. However, this impression must be tempered by the fact that much of the west, north and east portions of the building did not survive and, despite being exposed to a length of 7m, the southern wall (WA91) was not fully excavated because it ran beyond the area of excavation.

The artifacts from building B1 included mostly potsherds sparsely scattered on the room floors and paved surfaces. These sherds represented storage jars, cooking pots and bowls. Most of the pottery dated to the Late Bronze Age and a small quantity to the Middle Bronze Age II.



Figure 7: Building B1 (aerial photo, north at picture bottom).

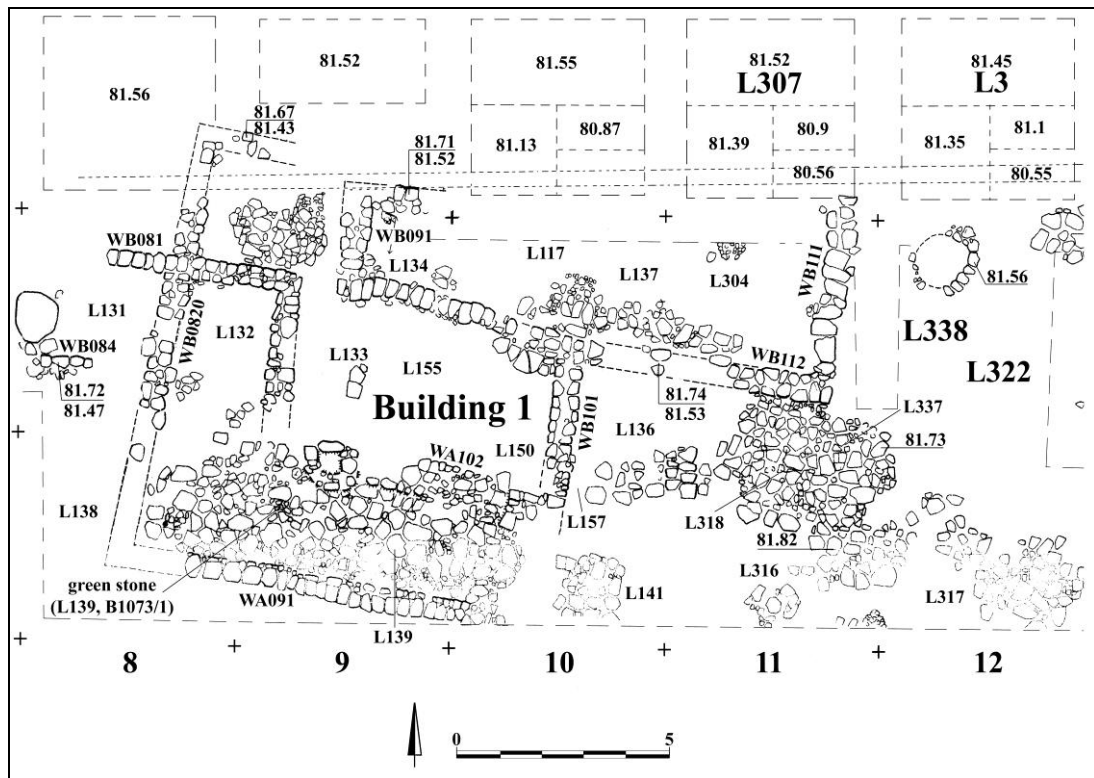


Figure 8: Plan of building B1.

#### 4. Building B2

This building (Fig.9-10) was located immediately east of building B1, and was also oriented east-west and rectangular in plan. It measured 20 x 5m (ca.100m<sup>2</sup>). The building's outline was found almost completely intact.

The main section of the building was a long rectangle in plan, measuring ca.12 x 5m, west of which were smaller rooms with relatively well-preserved paved floors. The building's walls were 0.5-0.7m wide and constructed of small and medium-sized stones. The walls survived to a height of 0.1-0.3m. The state of preservation of the south and east walls was better (they survived to about three courses high).

At the east end of the building a 3.5 x 1.5m room paved with small stones was found. At the center of the building was a long room, measuring 6.5 x 3m (L345). Close to the southeast corner of this room a stone feature was found with a fragmented stone bowl at its center. Near this bowl a number of broken potsherds were found, also *in situ*. Against the southern wall of the room a 3.5m-long stone bench was exposed. An additional (probable) bench was identified against the west wall. This latter bench was built of one large limestone – which cracked *in situ* – on the north side of which were placed a number of additional smaller limestone blocks. A small spread of building stone collapse was found between the stone benches. West of the L345 central room was another (L371), measuring ca.3 x 1.5m.



Figure 9: Building B2 (aerial photo, north at picture top).

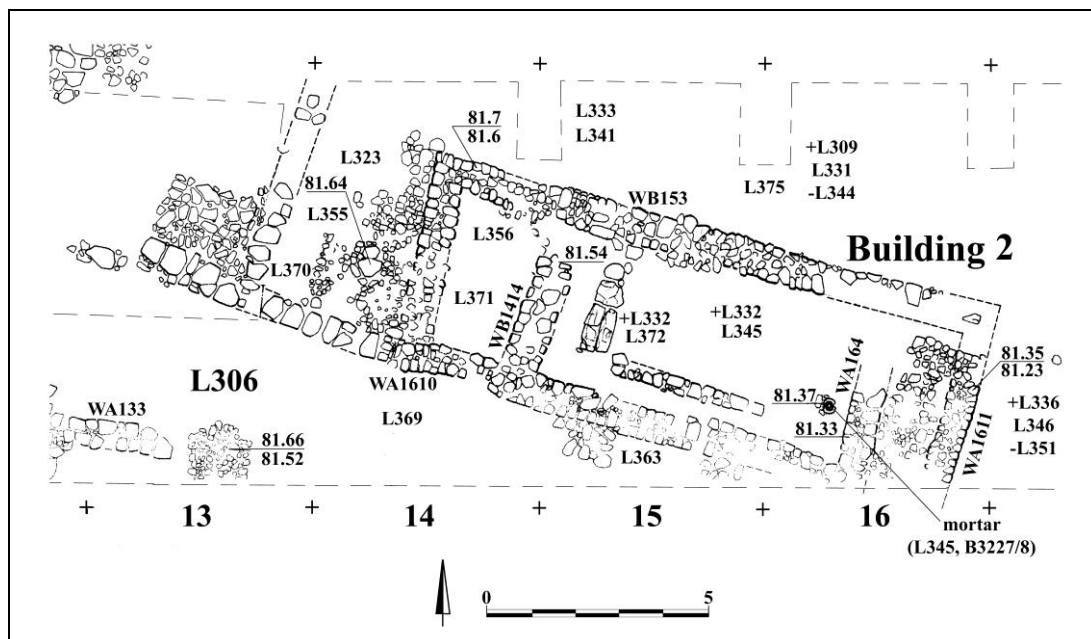


Figure 10: Plan of building B2.

These inner rooms were not paved and were probably floored by compact earth. Within the rooms were found potsherds, mostly of jars and cooking pots from the Middle Bronze Age II.

West of building B2 and along the same axis was an additional room (L370). This room measured 3.7 x 2.7m and its floor was paved with small and medium-sized stones. The south and west walls of this room were built of large limestones one course wide and high. Room L370 constituted part of a partially-paved



building complex adjacent to the west side of building B2. This complex had been partly excavated during the IAA test excavation (Hagit Torga's square E1).

A surface very rich in pottery was exposed north and west of building B2. This surface was probably the remnant of waste thrown from a nearby pottery workshop.

The impression is that, like its neighbor, building B2 was built of sun-dried mud bricks on a stone wall base. Unfortunately, damage to the building made further clarification of the architecture impossible. The wall foundations and the paving of this building were found very close to the surface and many horizontal and vertical striations on the limestone walls and paved surfaces of both buildings B1 and B2 testify to plow damage.

#### 5. Stone Wall (WA146)

This 10m-long wall was exposed east of building B2. The wall ran southwest-northeast, was 0.3m wide, survived to 1-2 courses, and was built of small limestones. The wall curved slightly south towards its east end, following the area's contours, and its east end abutted the corner of a building of which only the southwest corner survived (WB1920, 1921).

Interpreted as a boundary wall, WA146 is understood as defining the southern limit of the abovementioned pottery workshop. An additional 2m section of wall (WB177) found ca.4m north of WA146 is seen as demarcating the workshop's north limit. The walls resembled each other in their general features. The quantitative richness of the pottery (Fig.11) in the L339 area delimited by these walls, building B2 to the west and WB1920/1921 to the east certainly suggests a pottery manufacturing area. Indeed, conclusive evidence in the form of a kiln was found here. This will now be further discussed.



Figure 11: A large storage jar (L339, B3274) found *in situ* in the possible pottery workshop.

#### 6. Potters' Kiln (square B18)

As mentioned, immediately north of WA146 the remains of a probable pottery workshop were uncovered. Within this area was a pit-like feature roughly circular in plan (Figs.12-15). This was undoubtedly a potters' kiln. Its diameter was ca.2m. Outside the kiln's cut, their rims facing upward, a number of ceramic pipe

openings were visible (Figs.13-14). These pipes had diameters of ca.0.1m and were spaced 0.1-0.3m apart. Beside the north cut of the kiln was a dressed limestone block (0.5 x 0.35 x 0.1m) and two stone walls (Figs.12-14). Fragments of a badly damaged ceramic floor were found both close to the ceramic pipes' rims and also inside the kiln.

Upon excavation, the kiln was found to have been dug into the sterile soil to a depth of ca.1.2m from the surface (and 0.5m from the contemporary ceramic floor level). The fill was very different from the natural soil in both color and texture. It contained many sherds, slag, ash, and burnt clay, as well as a ceramic tuyere and lid. There were two circular apertures close to the bottom of the kiln's northwest side (Fig.15).

The vertical-facing pipes at the edge of the kiln extended down to link with the two openings near the bottom of the kiln. These pipes supplied the necessary air flow. The tuyere fed the air, and the lid may have served to cover the tops of the pipes, aided perhaps by the dressed limestone block. The two stone walls built against the kiln's northwest side gave structural support to the pipes (Figs.12-14).

It appears that the kiln's upper structure was built from a dome of sun-dried mud bricks. In the chamber surrounding the kiln were found the remains of slag, ash, burnt clay and sherds.



Figure 12: The potters' kiln (L378) (from northwest).



Figure 13: The vertical ceramic pipes at the edge of the kiln (from south).



Figure 14: Detail of the ceramic pipes (from west).



Figure 15: The ceramic pipes' lower openings, close to the bottom of the kiln.

#### 6. Squares A19-22, B19-22

These adjacent square rows were excavated east of the workshop complex. They were bordered to the north by the five test squares of the IAA (Hagit Torga's squares C30-34) and to the south by the southern excavation limit and a cypress boulevard. In these squares no architecture was found. A surface rich in potsherds and ash was exposed at a depth of ca.0.6m below ground level (L365-7). This gray-brown surface was 0.2-0.4m thick and upon full exposure was shown to lie on the sterile subsoil at an average depth of 1m below ground level. In all squares it was shown to follow the natural slope of the ground from southwest down to northeast (this slope probably indicates the former existence of a small stream to the east of the excavation area, evidenced also by the white pebbles found at the bottom and east section of square A23 (L414)). Sterile subsoil was reached in the bottom of all test sections dug in these squares.

#### 7. Wall (WD1715)

This wall was exposed very close to the surface at the centre of squares C17 and D17. Vestiges of the Mandate period road – which probably destroyed most ancient remains closer to the surface – were removed from the top of the wall. The extant length of WD1715 was ca.3m, surviving only one course high. The wall's

thickness was 0.8m and it was built of large limestones placed two wide. From test sections cut through its west and east ends it is clear that this wall had a single construction phase, set directly on a sterile, pre-occupation stratum. At the base of the wall's west end (L391) a small juglet was found *in situ* (Fig.16). It is possible that this juglet was used as a foundation offering at the time of the settlement's founding, a practice with wide currency in contemporary Levantine, Mesopotamian and eastern Mediterranean cultures. This massive wall was probably associated with a Middle Bronze Age II structure which continued north (under the present Route 3) and was severely damaged by construction of the Mandate period road.



Figure 16: Middle Bronze Age II juglet *in situ* under wall WD1715.

#### 8. Structure B3

The remains of a small rectangular structure were found in squares C19 and D19 (Fig.17), between the IAA's test squares from south and Route 3. The structure measured 2.8 x 1.8m and was built along a north-south axis. Its walls were constructed of large and medium-sized limestones placed two wide. The walls' preserved height was one course, 0.2-0.3m above the contemporary surface. As in other structures in Area Bb, the upper walls of B3 were probably constructed of sun-dried mud bricks which did not survive. The structure was accessed from the west side, where it almost no wall was constructed. The resultant wide opening measured 1.3m across, and was narrower than the structure only because of a short wall section projecting north from the structure's southwest corner.

Structure B3's interior was paved with pebbles and small limestones, a surface that mostly survived intact.

It is possible that this structure was related to the nearby pottery workshop, perhaps a sheltered location for the gradual controlled drying of ceramic vessels prior to firing.

A very badly damaged wall section (WD1918) was exposed north of and parallel to structure B3. In its construction this wall resembles the abovementioned

WA146 in squares A17-18. It is possible that this wall demarcated the northern limit of the industrial area which incorporated the pottery workshop. WD1918 most likely continued northeast under the existing road (Route 3).



Figure 17: Structure B3 (from north).

#### 9. Rubbish Pit (L415)

In two deep test sections within adjacent squares D20 and D21 a pit was found containing large quantities of potsherds, ash, burnt stones, burnt pebbles, pottery slag and non-descript burnt ceramic lumps (Fig.17). The pit's diameter was ca.4m and its depth ca.2m. The northern half of the pit was under Route 3 and therefore could not be excavated. In section the fill strata could be seen to slope down toward the center of the pit. Most of the sherds deposited in this pit were body fragments of large storage jars. In the vast majority of cases the original vessels could not be reconstructed due to a dearth of rim and base fragments. However, enough indicative sherds were recovered to date this rubbish pit to the Middle Bronze Age II.

Southwest of the rubbish pit, in a section excavated in the southeast corner of square C19, we found a layer moderately rich in sherds and ash immediately overlying subsoil (ca.2m deep). This context was thinner in the north (0.2m) than in the south (0.5), and sloped down towards the south in keeping with the natural topography of the area (an ancient stream having flowed from west to east immediately to the south, where the IAA test pits were dug). This context may have been related to the rubbish pit, and to structure B3 and the pottery production activity in the area.



Figure 18: A section of the L415 rubbish pit, showing potsherds in the fill.

#### 10. Squares C21, D21

As stated, the L415 rubbish pit was found in squares D20-21. Above this pit, just below the surface in D21 and extending south into C21 was a 0.4m-thick layer (L411) of gray soil rich in pottery and burnt ceramic fragments. In some places this L411 layer sat on top of a light-brown alluvial soil (L403) which was stratigraphically above the L415 rubbish pit.

A cluster of small and medium-sized stones (L393) was spread over part of L411. This pile of stones was investigated and was found to contain no architectural remains.

In the southeast corners of C21 and D21 deep sections were dug. In C21, at a depth of 2.2m below the surface, portions of two small walls were exposed (L403) (Fig.19). The north wall ran northeast-southwest, and was preserved to a length of ca.1.5m, 0.4m (one course) wide and a height of ca.1m. This wall was built of large and medium-sized stones and was preserved to an average height of four courses. Ca.1m south of this wall a parallel wall section was exposed. This wall was built of large stones and was preserved to a length of ca.1m and a height of ca.0.4m.

These walls were probably small dams of a sort, for collecting clayish alluvium from this slope for pottery manufacturing purposes. Between the walls were found sherds of a bowl from the Middle Bronze Age II.



Figure 19: The L403 wall sections in square C21.

### 11. Squares C22, D22

In the north portions of square D22 a deep section was excavated (L416). This 1.5m-deep section cut into a gray soil mixed with many sherds. An additional deep section (L413) was excavated in C22. This section, 2m deep, reached a light brown clayish soil devoid of any archaeological finds. Between the surface and this deep, clayish layer was a ca.1.5m-thick gray soil (L412). At the top of this layer was found a concentration of burnt material fragments mixed into the soil. However, in these squares no architectural remains were found.

### 12. Squares C23, D23

These two squares were located at the eastern end of Area B. In a deep section (L402) dug close to the southeast corner of C23 a number of large stones were found at a depth of ca.2.3m. As a result it was decided to expand this deep section. From surface to excavation base the soil (L385) in these squares was gray, friable and contained large amounts of sherds. This layer was ca.2m thick and sat on a sterile clayish soil with poorly sorted white lime fragment inclusions. This sterile layer sloped slightly down north to south.

It appears that the abovementioned cluster of large stones found on top of this sterile layer – visible on the right in Figure 18 below – had no architectural connection with walls WC2322, WC2325 and WB 2323 immediately to the south (Fig.20, 22; discussed below, with square B23 findings).



Figure 20: The cluster of large stones in the base of the C23 section (from east).

### 13. Square B23

This square was located east of the test squares dug in this area by the IAA (Fig.20). Portions of two walls were exposed here at a depth of ca.1m below the surface. The east wall (WB2322) was ca.1m long and built of small stones roughly two courses wide. The west wall section (WC2325, WB2323) included the northeast corner of a Middle Bronze Age II building (Fig.19, 21). These walls appear to have been built mostly of sun-dried bricks set on (the surviving) stone foundations. In the building, close to WB2323 was found a flat stone with a conical perforation at its centre (Fig.21). This stone was probably used as a *pota* (socket) stone for a wooden door hinge (inward-opening).



Figure 21: Area Bb (from east), with the five test squares excavated by Hagit Torga (IAA) in the center.



Figure 22: WB2323, WC2325, the foundations of a Middle Bronze Age II building's corner, with the *pota* stone in front (from west).

### 13. Square A23

This square was located near the southeastern corner of the excavation area. In a deep section dug in the northeast corner (L414) we reached a sterile soil layer at a depth of ca.1.7m below the surface. A layer of white pebbles was exposed in the eastern section of the square. Close to the southwest corner of the deep section a pit of 1m diameter was discovered, in which were a number of stones and a few potsherds.



## Summary

The buildings and features found in Area B were part of a larger Middle and Late Bronze Age settlement at Yesodot, only the western limit of which did we reach in our area. The north side was cut by Route 3 and the Mandate period road. To the east, in Area A, the site continues on the other side of the ancient stream for which we found evidence. To the south the site extended under an orchard, also beyond the limit of our excavation.

The Area B buildings are of a 'courtyard house' type common in the Middle Bronze Age II and the Late Bronze Age. The stratigraphy and artifacts did not unequivocally show which buildings and occupation surfaces belonged to which phase of the ancient settlement. But the general impression is that most archaeological contexts should be assigned to the Middle Bronze Age II.

Within Area Bb there seems to have been something of an 'industrial area' for pottery manufacturing. Here a pottery workshop (L379) and kiln (L378) were unearthed, as well as associated features such as buildings (structure B3), rubbish pits (L415), and dams for collecting clayish alluvium (L403). However, the five IAA test squares (C30-34) running through the center of this 'industrial area' severely damaged the area's stratigraphy, as well as several structures and features.

It appears that the ancient stream adjacent to the eastern end of Area B was useful for this local industry. Near the banks of the stream much pottery manufacturing waste was deposited (L415). The pottery workshop was built in this area in order to easily collect alluvial clay. This location was also on the periphery of the settlement, sparing from kiln smoke and other waste the town center and main residential area to the east (Area A, excavated and to be published by the Israeli Institute of Archaeology, in conjunction with Tel Aviv University).

## Bibliography

Dagan, Y., L. Brada and S. Golan 2009. 'Hirbat Umm Kalha: Survey of No 3 Road'. *Hadashot Arkheologyot* 121. (Preliminary report: [http://www.hadashot-esi.org.il/report\\_detail\\_eng.asp?id=1221&mag\\_id=115](http://www.hadashot-esi.org.il/report_detail_eng.asp?id=1221&mag_id=115))