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Chapter 1

Introduction

Amir Golani

The site of Ashqelon Barne'a is part of a much larger Early Bronze Age I site that extends from the tell in the south, includes the marina and the Afridar neighborhood of the modern city of Ashqelon, and now reaches the northern neighborhood known as Barne'a B–C (Fig. 1.1; see p. 6). The EB I site of Ashqelon is located on the southern coastal plain, which reaches c. 20 km wide in this region and is bordered on the east by the Judean Shephelah. Originally, this part of the coastal plain was characterized by two sandstone (*kurkar*) ridges extending northeast–southwest, parallel to the modern coastline, with a broad, shallow trough between them (see Chapter 2). These *kurkar* ridges are the remains of fossilized sand dunes of the Pleistocene era and represent higher ancient sea levels. The site was located on the moderate, southeastern slope of the westernmost ridge and partially within the western side of the trough, thus providing some measure of protection from the westerly winds.

The system of southern coastal troughs was characterized by permanent agricultural settlements that exploited this ecological niche. The fertile red *ḥamra* and alluvial soils, high water table and varied flora and fauna provided a self-contained ecosystem conducive to permanent subsistence agriculture during EB I (Gophna 1997), as well as in earlier periods (Noy 1977; Liphschitz and Biger 1990). This was in contrast to contemporaneous settlements in the troughs of the Sharon coastal plain, which appear to have been more transient in nature, with a meager subsistence economy (Gophna 1974, 1977, 1997:159; Gophna and Portugali 1988). In recent millennia, these coastal troughs in the southern coastal plain were largely covered by sand dunes that deeply buried many protohistoric sites. Accelerated modern development in recent times has often led to the removal of this sand cover and the subsequent exposure of these ancient settlements.

The Local Paleoenvironment and Subsistence Strategies of the EB I Site at Ashqelon

The excavations at Ashqelon Barne'a yielded one of the largest assemblages of archaeobotanical, faunal, fish and malacological finds recovered from an EB I site in the southern Levant. Together with the geomorphological study (Chapter 2), these enable a better understanding of the potential resources and the subsistence pattern of the ancient settlement. The following discussion presents a brief overview of the paleoenvironment of the ancient settlement.

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Fig. 1.1. Excavated EB I sites in the vicinity of Ashqelon.

Climate

The climate of this region today is typically Mediterranean with mild rainy winters and dry summers; the mean annual rainfall of 350 mm is concentrated between the months of November and February, while the mean annual temperature ranges between 19º and 21º C with extremes of 26º to 28º C in the summer and 12º to 24º in the winter (Kadmon 1956: Maps 1/IV, 2/IV; Koucky 2008). However, paleoclimatic research of the southern Levant shows that a moister climate prevailed during the Early Bronze Age (Rosen 1989). Recent research has pinpointed EB II–III as a period in which the southern Levant received a substantially greater amount of precipitation than today, creating marshlands on

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the coastal plain that may have led to its abandonment at this time (see Chapter 2; Faust and Ashkenazy 2007). Only toward the end of that period did the more arid, present-day climatic conditions become prevalent (Goldberg and Bar Yosef 1982:404).

Hydrology

In the Ashqelon region, a high water table enabled easy access to fresh water that could have been obtained by digging wells (Gophna and Liphschitz 1996:145; Nir 2008), a technology known in the southern Levant since the Neolithic period (Galili 1993; Garfinkel 2006). Several wells are known in the vicinity, such as the Byzantine well in Area D of the present excavation (see Chapter 3: Plan 3.18: Section 8–8)[1] and Bir Shuqeir, of unclear date, located 600 m north of the site (Berman and Barda 2005:21*, Site 1).

The high water table in the ancient coastal troughs, which also produced seasonal ponds and wetlands (Gophna 1997:155),[2] is partly due to the presence of an ancient underground river that flowed into a large salt lake 15 million years ago. Sand from the Nile River effectively buried this prehistoric river channel, located approximately 20 m below the modern surface, which still carries freshwater from the eastern Judean Shephelah to the Ashqelon region (Stager 1993:103; Stager and Schloen 2008:3).

Phyto-Geography

Ashqelon is situated at the southern extremity of the Mediterranean phyto-geographic zone, near the border with the Irano-Turanian and the Saharo-Arabian phyto-geographic zones (Kadmon 1956: Map 1/VI; Orni and Efrat 1976:164–177). Today's vegetation is primarily Saharo-Arabian, and includes marram grass (*Ammophila littoralis*), white broom (*Retama raetam)* and carob (*Ceratonia siliqua L.)*. The massive formation of sand dunes that covered the troughs beginning sometime in the Roman–Byzantine period (see Chapter 2), severely altered the natural vegetative cover; thus, our knowledge of the native climax vegetation in the Early Bronze Age is only partial. Excavations at EB I sites throughout the Ashqelon littoral have uncovered remains of lentisk (*Pistacia lentiscus*), terebinth (*Pistacia palaestina*), tamarisk (*Tamarix aphylla*), shrubby salt bush (*Atriplex halimus*) and acacia (*Acacia raddiana*; see Liphschitz 2004; Weiss and Mahler-Slasky, forthcoming).

Potential Subsistence Strategies at EB I Ashqelon

Archaeobotanical remains of cultivated species from the EB I site of Ashqelon include cereals and legumes such as emmer wheat, barley and lentils, as well as fruits such as grapes and figs (Weiss and Mahler-Slasky, forthcoming), indicating that local agriculture within the troughs was providing the inhabitants with a subsistence economy, perhaps

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[1] This may be the well that appears on the British Mandate map of Ascalon North, see British Mandate map, Sheet 10/12, 1: 20,000 series first printed in 1931.

[2] A historical source from the first century CE mentions a large, deep, freshwater pond near Ashqelon (Diodorus Siculus 2:4[II]). Guérin also mentions a large, deep pool south of Ashqelon (Weiss and Kislev 2004:10–11), although the exact location of both of these ponds (possibly the same one?) is unknown.

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even surpluses. This is indirectly attested throughout the EB I site of Ashqelon, as well as at other sites of this period throughout the southern Levant, by the numerous storage installations that were apparently intended for public as well as private household storage (Golani and Yannai 2016). The discovery of emmer wheat spikelet forks indicating hulling in specific places at the site (Weiss and Mahler-Slasky, forthcoming), reveals that cereal crops were locally grown and brought into the settlement for processing and redistribution. The processing of these crops is further indicated by the large number of flint sickle blades exhibiting sheen (Goder-Goldberger, forthcoming) and the stone grinding and pounding tools recovered in the excavations (Rosenberg, forthcoming). Furthermore, the presence of numerous olive pits and charred olive wood (*Olea europaea*), common finds in both the Ashqelon Afridar and Ashqelon Barneʻa excavations (Liphschitz 2004; Weiss and Mahler-Slasky, forthcoming), alludes to the intensive cultivation of olive trees in the immediate vicinity, probably for the production of olive oil. In fact, olive wood accounts for over 90% of all the wood remains examined from EB I sites in the Ashqelon region (Gophna and Liphschitz 1996:146; Liphschitz 2004; Weiss and Mahler-Slasky, forthcoming). The discovery of grape pips (*Vitis vinifera*) in the present excavations (see Weiss and Mahler-Slasky, forthcoming), as well as at several other EB I sites in neighboring regions, such as Niẓẓanim and Taur Ikhbeineh (Gophna 1997:160), may attest to the cultivation of grapes for wine. Wine as well as olive oil and other foodstuffs produced at Ashqelon were possibly destined for export to Egypt by overland or maritime trade (Gophna and Liphschitz 1996; Gophna 2002b; Liphschitz 2004).

Alongside horticulture, animal husbandry played an important role in the subsistence economy of the local inhabitants of EB I Ashqelon and indicates the establishment of a self-sustaining, yet market-oriented production economy. The faunal assemblage is one of the largest investigated to date (Zidane and Bar-Oz, forthcoming) and joins a growing number of archaeozoological studies carried out on finds from other excavations at the EB I site (Whitcher 1999; Whitcher-Kansa 2004; Sade 2008; Pines, forthcoming; Turgeman-Yaffe, forthcoming). The fauna is dominated by sheep and goat that were slaughtered at maturity, demonstrating exploitation of livestock for their secondary products such as milk and wool (Zidane and Bar-Oz, forthcoming). Sheep were generally found to outnumber goats, probably reflecting environmental constraints. The assemblages also included cattle and pig, the former reflecting a growing dependence on draft power, the latter increasing meat yields for local consumption, both requiring a nearby water source. Furthermore, a significant representation of domestic donkey, which served for traction as well as for transport, reflects the growing importance of trade, one of the main characteristics of late EB I. Game animals provided a minor supplement to the economy and are present in low frequencies.

The site's location near the seashore offered the potential for exploitation of maritime resources. The excavations have produced the largest assemblages of fish bones and mollusks yet studied from stratified deposits of EB I (Lernau, forthcoming; Ktalav, forthcoming), both of which provided supplementary dietary nutrition.

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The Coastal Location of Ashqelon—An Entrepot for Maritime and Overland Trade

Ashqelon is located on ancient and historical trade routes that probably existed as early as EB I (Gophna 2002b); for example, it lay along the southern portion of the western branch of the Via Maris,[3] a major international north–south route that led from Damascus in the north and continued south along the coast to Egypt. During the Egyptian New Kingdom, Ashqelon served as a way station on this southern portion of the overland caravan route between Canaan and Egypt, known then as the 'Way of Horus' (Aharoni 1967:41–45).

While today the Ashqelon coastline is covered with sand dunes that hinder direct access to the seashore, in the past, a wide opening in the dunes at Ashqelon facilitated passage from inland regions to the coast (Aharoni 1967:44), thus making it a convenient location for a maritime anchorage and an entrepot for overland trade. Nilotic shells found within a typical EB I juglet off the coast of 'Atlit have provided evidence for maritime trade with Egypt along the Mediterranean coast in this period (Sharvit et al. 2002) and such shells have been found in the present excavation as well (Ktalav, forthcoming). The discovery of Lebanon cedar and Turkish oak from the northern Levant at other sites in Ashqelon (Liphschitz 2004), as well as Egyptian ceramics and flint tools in the present excavation (Golani and Talis, forthcoming; Goder-Goldberger, forthcoming), suggest the existence of both maritime and overland trade. The latter is also expressed by the high frequency of domesticated donkey remains in the faunal assemblages of both Barne'a and Afridar (Zidane and Bar-Oz, forthcoming; see also Milevsky and Horwitz 2019). Donkeys were most likely exploited as transport animals in the thriving trade network that was a major component in Ashqelon's economy, and their increased role in EB I in relation to the previous Chalcolithic period can be regarded as a defining characteristic of EB I. Other items among the finds that probably arrived by overland trade include semi-processed copper, which apparently originated in Feinan, Jordan (Segal, Halicz and Kamenski 2004; Golani 2014b), and numerous groundstone vessels of non-indigenous basalt (Rosenberg and Golani 2012; Rosenberg, forthcoming). The seeming prosperity of the Ashqelon inhabitants was probably a result of its role as a trade nexus for the processing of copper into tools (see Chapter 4; Golani 2014b).

In summary, the physical environment along the Ashqelon littoral enabled the inhabitants of the EB I settlement to develop a complex and broad-based subsistence strategy. Some of the inhabitants specialized in local agricultural activities, some specialized in sheep and goat pastoralism, some were fishermen, while others were involved in metallurgy and trade. The ensuing wealth from the metallurgical industry and surplus production of food crops apparently attracted a large volume of prestige products to the EB I community at Ashqelon.

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[3] For a different location of the Via Maris, see Rainey 1981:146–148.

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The Archaeological Remains in the Ashqelon Region and Their Exposure

Research on the Early Bronze Age Settlement at Ashqelon

Ashqelon is one of the largest and most extensively excavated EB I occupation sites in the southern Levant. Since 1990, intensified development of the modern city has become the impetus for rescue excavations and extensive mechanical test trenching, the majority carried out by the Israel Antiquities Authority (IAA). These have revealed a large and sporadic settlement spread out from Tel Ashqelon in the south to the Barne'a neighborhood in the north, and from the seashore to approximately 1 km inland (see Fig. 1.1). The EB I occupation is composed of numerous non-nucleated patches separated by large open areas where no archaeological remains were found[4] and may be seen as comprising a single settlement of long duration, wherein the *foci* of settlement shifted over time. Among the various excavation areas, some revealed remains of one occupational stratum, while others revealed up to six, all of which are associated by their material culture to EB I (Table 1.1).

The site was first probed in 1968, when Ram Gophna exposed massive mudbrick building remains of the late EB I (EB IB) in the Afridar neighborhood (Gophna 2002a; later designated as Area A). Since then, numerous rescue projects (see Table 1.1; Fig. 1.2) have demonstrated a continuous settlement that existed throughout the entirety of EB I, from the beginning of EB IA to the very end of EB IB. Although all the excavations at Afridar are apparently to be regarded as relating to one site, each was treated as a separate excavation area that was processed, analyzed and published individually;[5] in the meantime, several syntheses have been produced (e.g., Golani and Segal 2002; Golani and Nagar 2011; Rosenberg and Golani 2012; Golani 2013, 2014b, forthcoming a).

During the 1980s, excavations at Tel Ashqelon, located on the coast southwest of Afridar, unearthed ceramic evidence for occupation as early as EB IA (Stager 1993:105–106). Further excavations in 2015 in the central portion of the tell revealed pits full of EB IA ceramics (Daniel Master and Joshua Walton, pers. comm. 2015). Sherds of the Chalcolithic and/or EB I were also reported in a small trench dug with mechanical equipment south of the tell (Rosen 2008:103).

In 2018, a large, multi-layered occupation site dating to the Late Chalcolithic (Ghassulian) period was revealed in excavations in the newly developing Agammim neighborhood, c. 3 km southeast of the tell (Abadi-Reiss and Varga 2019).

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[4] However, it should be noted that the 'open spaces' are essentially where mechanical trenching was not able to discern any ancient occupational remains. As these were often covered by a very thick overburden of sand dunes (see Chapter 2), and the maximum depth to which the mechanical backhoe could reach from the modern ground surface is c. 4 m, any remains below this depth would not be exposed.

[5] Previous excavations in the immediate region of the marina were often termed 'Ashqelon Marina', while those slightly farther to the east were termed 'Ashqelon Afridar'. As these excavations are all part of the same site, the general designation of Ashqelon Afridar is now preferred.

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Fig. 1.2. The excavation areas at the EB I site of Ashqelon Afridar.

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Prior to the present excavations at Ashqelon Barneʿa B–C, the existence of an Early Bronze Age occupation here was unknown. During the 1960s, roadwork in this vicinity involved large-scale earth-moving activities,[6] yet no Early Bronze Age remains were noted, probably because the road system was installed directly upon the overlying sands. Archaeological surveys of the Barneʿa site prior to 2003, undertaken by the IAA (Berman and Barda 2005) and the Leon Levy Expedition to Ashkelon (Allen 2008), revealed primarily Byzantine remains. Excavations conducted by Yoram Haimi and Ilan Peretz of the IAA between 2002 and 2015 within the Ashqelon Barneʿa neighborhood, less than 1 km to the south of the present excavations, revealed remarkably preserved remains of the Hellenistic and Persian periods (Haimi 2008; Peretz 2017). With the resumption of development at Barneʿa B–C in 2003, the old road infrastructure was dismantled and much of the sand dunes were removed. Rescue excavations on the *kurkar* ridge in the area immediately to the southwest of the present excavation site (Fig. 1.3; Milevski et al. 2018) revealed remains of a Byzantine occupation.

Following the present excavations in the Barneʿa neighborhood, it is now evident that the EB IA non-nucleated settlement revealed at Afridar extended from Barneʿa in the north all the way to Tel Ashqelon in the south; in EB IB, the settlement expanded in size at Barneʿa but decreased at Afridar (see Fig. 1.1).

Within a 10 km radius from the site of Barneʿa, archaeological surveys have revealed scatters of EB I potsherds and flints in the sand, perhaps indicating other small settlements during this period (Berman, Stark and Barda 2004:30* [Site 136], 33* [Site 51], 46*, 53*, 60* [Sites 121, 159, 198]; Berman and Barda 2005:60*, 62*–64* [Sites 118, 132, 137]); 6 km to the northeast is the well-known EB IA site near Niẓẓanim (Yekutieli and Gophna 1994).

Modern Development of the Ashqelon Barneʿa Site and Formulation of Excavation Strategy

As noted above, mechanical removal of the sand dunes was carried out during municipal development in 2003, which cleared away large portions of the Byzantine occupation and exposed a compact, dark brown-gray layer containing architectural remains and EB I ceramics. The earth-moving operations obliterated large portions of the southern part of the Early Bronze Age site, and some at the northern end (Fig. 1.3). At the same time, large quantities of sand were dumped to the east of the *kurkar* ridge and on its southeastern slope, thus effectively filling in the remainder of the trough and leveling the area.

With the discovery of the Early Bronze Age site by IAA inspectors, the pace of development was restricted, yet continued under archaeological supervision. As construction at the site could not be completely halted, it was decided that a major archaeological project would be undertaken to rescue data from a large part of the area destined for destruction. Protracted negotiations with the Ashkelon Economic Company Ltd., along with budgetary and legal restraints, precluded formulation of a comprehensive excavation strategy; instead,

[6] These roads appear on the 1:50,000 scale topographical maps of this region just to the north of modern Ashqelon.

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Table 1.2. Summary of Excavations at the Early Bronze Age Site of Ashqelon

Excavation	*Main Features*	*Early EB I (EB IA)*	*Late EB I (EB IB)*	*References*
Afridar Area A*	Architectural remains		EB IB	Gophna 2002a, 2004
Afridar Area B*	Mechanical test probes		EB IB	Gophna 2002a, 2004
Afridar Area C*	Remains of large, massive mudbrick structure		EB IB	Brandl and Gophna 1994; Gophna 2002a
Afridar Area D (E-4)	Pits	EB IA		Gophna 2002a, 2004; Wallach 2003
Afridar Area E	Area E-1—pits Area E-2—pits, architectural remains, metallurgical activity, burials Area E-3—pits	EB IA		E-1: Golani 2004, 2018 E-2: Golani 2004, Golani and Paran 2014; Golani and Paran, forthcoming E-3: Golani 2004
Afridar Area F	Stratum II—pits Stratum I—architectural remains	Stratum II: early EB IA Stratum I: late EB IA		Khalaily 2004
Afridar Area G	Stratum II—architectural remains, burials Stratum I—architectural remains	Strata II–I: early EB IA		Braun and Gophna 2004
Afridar Area H	No finds			Braun and Gophna 2004
Afridar Area I	Designation not used			
Afridar Area J	Stratum VI—pits, architectural remains, metallurgical activity, pottery kiln Stratum V—pits, architectural remains, metallurgical activity, hearths Stratum IV—pits, hearths, architectural remains Stratum III—pits, metallurgical activity Stratum II—architectural remains Stratum I—architectural remains	Strata VI–IV: EB IA	Strata III–I: EB IB	Baumgarten 2004
Afridar Area K	Architectural remains	EB I	EB I	Baumgarten 2006; Haimi 2009
Afridar Area L	Pits (identified by excavators as ‘Late Chalcolithic’)	EB IA		Garfinkel 1999, 2008
Afridar Area M	Stratum II—architectural remains, metallurgical activity Stratum I—architectural remains, metallurgical activity, burial	EB IA		Golani 2008b
Afridar Area N	Stratum II—architectural remains Stratum I—architectural remains	EB IA		Golani 2014a; forthcoming b
Afridar Area O	Area O-1, Stratum III—habitational debris Area O-1, Stratum II—architectural remains Area O-2—pits, architectural remains	EB IA		Paran 2014; Golani and Pasternak, forthcoming
Afridar Area P	Pits	EB IA		Golani 2017
Afridar Area 10	Pits, architectural remains, metallurgical activity	EB IA		Unpublished: Yuval Yekutieli and Nir-Shimshon Paran, Ben-Gurion University
Barneʿa	Stratum IV—pits, architectural remains, metallurgical activity, burials Stratum III—pits, architectural remains, metallurgical activity, burials Stratum II—pits, architectural remains, metallurgical activity, burials	Stratum IV: late EB IA/EB IA–B transition	Stratum III: early EB IB; Stratum II: late EB IB	Golani 2005, 2007, 2008a
Delilah Beach*	Pits, metallurgical activity	EB I	EB I	Toueg 2010
Tel Ashqelon	Pits (central portion of tell)	EB IA		Daniel Master and Joshua Walton, pers. comm. 2015

* The locations of the excavations in Afridar Areas A, B and C, and the excavations at Delilah Beach, were not recorded in sufficient detail and are therefore approximate in Fig. 1.2.

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the project was designed according to the developer's immediate needs and financial capabilities. The rescue excavations were thus conducted in three stages that took place over three seasons.

In the first stage, a survey defined the area of the Early Bronze Age site as encompassing approximately 54 dunams, then a trial excavation was conducted during June–July 2004 within the area of the site along the path of the projected roads of the future neighborhood (Golani 2005: Fig. 1). This excavation probed the nature and depth of the finds to aid in developing a future excavation strategy. Six separate areas (A–F) were opened where ancient remains were visible on the surface. Three main EB I occupation strata (IV–II) were identified in most of the excavated areas.

In the second stage, during February–May 2005, excavation concentrated on exposure of the remains in the southern third of the site (Golani 2007). Areas D and E were greatly expanded, and Area G was opened. In addition, mechanical trenching was carried out in the northern two-thirds of the site to determine the northern, eastern and western boundaries of the ancient settlement and the depth of the occupation buildup (Golani 2007: Fig. 1).

The strategy for the third stage of excavations, carried out during August–December 2005, was based on the results of the first two seasons (Golani 2008a). As it was not possible to fully expose the northern two-thirds of the site (nearly 40 dunams), a viable strategy was conceived, composed of four principal elements (Fig. 1.3):

1. A north–south section, 15 m wide, through the central portion of the site (Areas H, M), which would connect Areas A and B;
2. An east–west section (Area L) connecting to the eastern side of the north–south section;
3. Expansion of either section upon exposure of any significant architectural remains (Areas I, K);
4. Limited excavation on the periphery of the EB I site (Area J) and beyond (Area C).

Excavation Methodology

Prior to excavation, a grid was set up on a southwest–northeast axis. For Areas A, B, H, K and M, the excavation grid shared letter/number designations as all these areas were physically linked within the context of the north–south and east–west sections excavated through the site. As Areas C, D, E, F, G, I, J and L were not physically connected to any other excavation area, each was assigned its own grid numbering (Fig. 1.3).[7]

After mechanical equipment removed the remainder of the upper sand layers that had already been disturbed, excavation then proceeded manually. Debris originating from habitation surfaces and surface make-ups was sifted through a 1 × 1 cm wire mesh. All the ceramics, flints, bones, metal fragments, shells and botanical samples were collected and later sorted. Locus numbers comprise three, or more often four digits, and basket numbers five digits. The first digit of the locus and basket usually indicates the area; e.g., all the

[7] Although Area I was physically linked to Area H, it was assigned a different grid as it was opened toward the end of the excavation.

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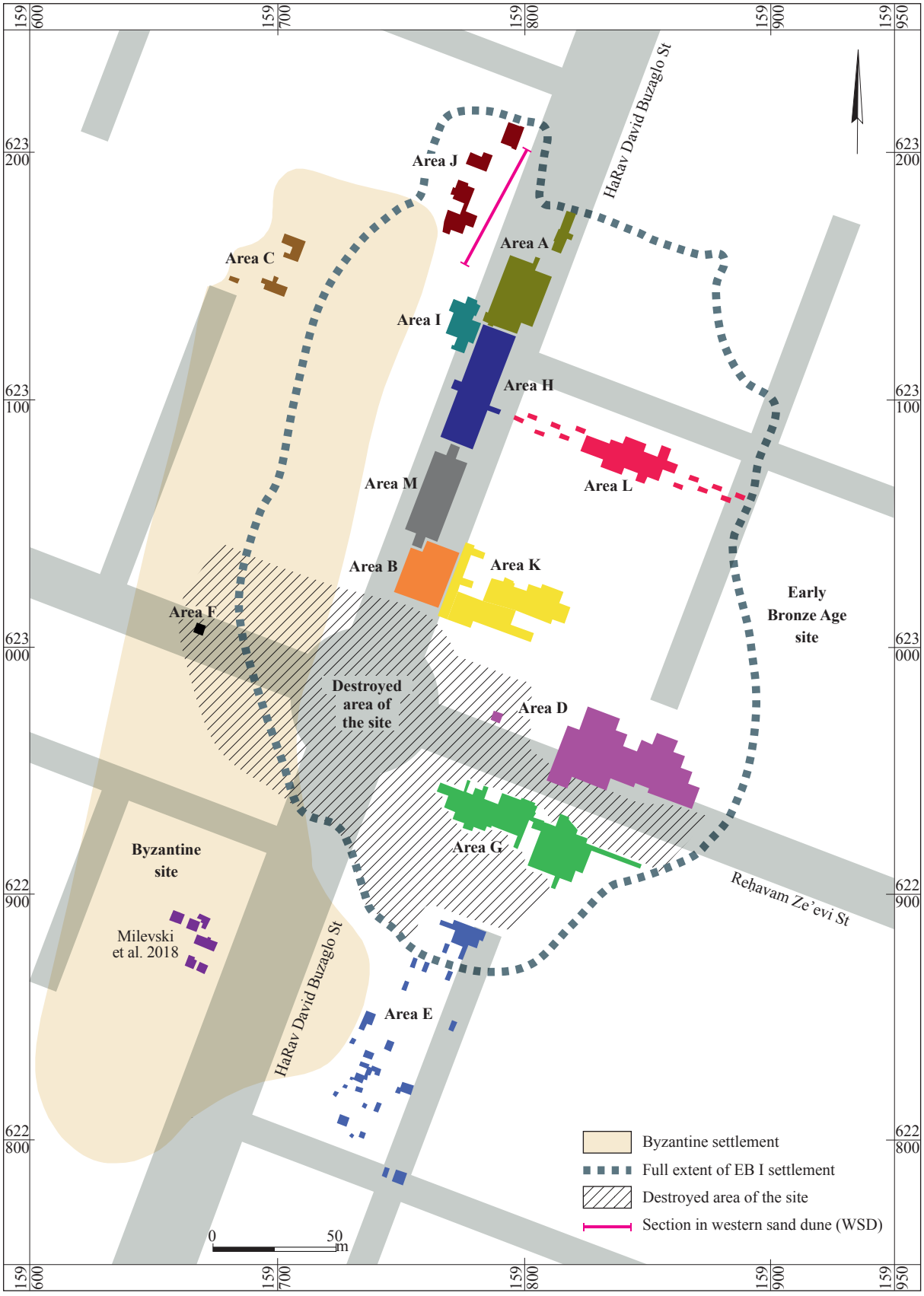

Fig. 1.3. The excavation areas at Ashqelon Barne'a.

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loci and baskets of Area G begin with the number '8'. Each basket was treated as a three-dimensional 'mini-locus', and as such, the same basket number was assigned to the pottery, flints, bones, shells and other finds.

In the stratigraphic description (Chapter 3), a distinction is made between a 'building' and a 'structure'. A building is defined as an enclosed space with a clear plan, or one that can be reasonably reconstructed as such, while a structure is defined as a group of architectural elements of unclear plan whose reconstruction is not possible or highly conjectural.

A distinction is also made between 'floors' and 'surfaces'. A floor is defined as the accumulation directly upon a habitation level within a clearly defined and roofed area such as a room, or within an area that may be reconstructed as such. On the other hand, a surface is defined as an accumulation in an open area, or a living level associated with a wall or walls that do not form a reasonably clear plan.

When the debris directly upon a floor or surface could be distinguished from the composition of the floor/surface itself (the make-up), the two locus numbers are presented together with the higher element first; for example: L128/L3016 represents Floor Accumulation 128 over Floor Make-up 3016.

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