8 BYZANTINE POPULATION, LAND USE, AND THE CONNECTION BETWEEN SETTLEMENTS IN THE NORTHERN NEGEV

8.1 Introduction

Roman-Byzantine Palestine was basically an agrarian economy, with rural settlements spread throughout the region (Hirschfeld, 1997: 33). Within the study area, the large majority of sites from the Byzantine period include villages, hamlets, farmhouses, and agricultural installations. However, a percentage of the population of the northern Negev lived in cities and towns, including the large city of Be'er Sheva. An urban center such as Byzantine Be'er Sheva, with its extensive political and economic facilities (churches, monasteries, public buildings, bathhouses, marketplace, and military camp), impacted land-use strategies and settlement density as well as the settlement types in the hinterland. Settlement density and settlement types varied according to their distance from the urban center. During the Classical period, the city was a place in which the public authority (i.e., a city council, the provincial governor, a military commander, or a bishop) resided (Zanini, 2003: 209). Be'er Sheva was an urban and military center located at the crossroads of two important roads connecting the north and south and the Mediterranean coast with the Dead Sea. To understand the implications of urban centers for the surrounding hinterland, it is important to establish the approximate population size.

Several methods exist for calculating the population of an urban settlement, and some of these can be applied to the northern Negev. More specifically, re-

searchers have suggested the following proxies for population size: site size (Frankfort and Delougaz, 1950; Adams, 1965; Byatt, 1973; Wilkinson, 1974; Broshi, 1980, 1993; Shiloh, 1980; Hassan, 1981; Bairoch, 1988), number of households (Kuckelman, 2000), average floor area of a dwelling (Naroll, 1962; Brown, 1987), average number of people per dwelling (Alston, 2002), and average number of rooms per dwelling (Hill, 1970; Adler, 1990). Two methods were used in the present study: the population was calculated based on (1) the size of the site for urban settlements and (2) the average number of people per dwelling for the villages, as determined based on ethnographic analogies.

It must be acknowledged that the exact size or number of dwellings was not known in all cases, as most site data are based on surveys. However, where additional excavation data were available, the respective number of dwellings was calculated based on assumptions regarding possible site size. In cases where no data were available, the average number of dwellings within the three study areas was used. As this study sought to analyze settlement size, hierarchy, land use, settlement patterns, and the connection between the settlements, rather than calculate the total population of northern Negev, these assumptions were considered appropriate for the calculations. The population number was calculated solely to establish the relationship between the spatial size of the archaeological cities, towns, and villages and their minimum populations during the Byzantine period.

8.2 Urban population

Prior urban population density estimates vary widely, ranging from 100 to over 1,000 people per hectare (see Table 8.1). The majority of these estimates are based on ethnographic studies such as modern data collected during the first half of the twentieth century from cities such as Jerusalem, Aleppo, Tripoli, Damascus, and Baghdad (Adams, 1965; Broshi, 1980; Shiloh, 1980), while others are based on archaeological and historical considerations, or a mix of all these considerations. Of course, establishing the population of sites in antiquity is not an exact science and depends on the methods, theories, and parameters available. As the population number is only calculated to establish the relationship between the spatial size of a city, town, and village and their suggested population, these population estimates are considered sufficient.

The formula to estimate the population of a given settlement is fairly simple. First, the spatial area of the city or town must be established, and then its total population can be calculated as follows: site area × density coefficient = city pop-

Table 8.1 Urban population density estimates.

Estimates based on different studies (ranging from 100 to over 1,000 people per ha).

Author	People/ha	Remarks	Methodology
Adams (1965)	200	Population of ancient Mesopotamian cities	Ethnographic study based on modern cities such as Baghdad as well as towns and villages
Bairoch (1988)	150	Cities of antiquity; margin of error: 20–25%	Study based on preindustrial societies
Broshi (1980)	400* (300)	Population of Palestine in Rom.-Byz. period (deducting 25% for public and open spaces)	Archaeological considerations and ethnoarchaeological parallels
Byatt (1973)	1,000	Roman Jerusalem	Historical (Josephus Flavius) and ethnographic studies
Frankfort and Delougaz (1950)	197–494	Near East	Ethnographic study based on size of houses in the Near East
Peterson (2005)	100	Towns in Palestine during the Byzantine to early Ottoman periods	Historical and ethnographic study on medieval and Ottoman sites
Shiloh (1980)	400–500	Urban population of Iron Age Palestine	Ethnographic study based on density of contemporary settlement in various "old cities" (Damascus, Aleppo, Tripoli, Jerusalem)
Wilkinson (1974)	1,080	Jerusalem second cent. CE	Archaeological considerations based on water usage in Jerusalem

ulation, with the density coefficient based on the data in Table 1 (Shiloh, 1980: 25; Chase-Dunn et al., 2005: 97). As previous estimates vary significantly, this study followed the urban population density estimates of Bairoch (1988), as they are among the lowest. The population estimate given by Bairoch is 150 people per ha, with a margin of error of 20–25%, meaning the minimum population estimate is 112.5 people/ha the maximum is 187.5. These numbers were used to establish the population numbers of the city and towns in the northern Negev.

The population of a given village was calculated based on the average number of people per dwelling. This average number varies between six and more than 10.

In an ethnoarchaeological study conducted in Iraq, Kramer (1982: 179) calculates the average number of people per dwelling to be between 6.8 and 11.3. Similarly, Alston (2002: 70), who bases his average number of people per dwelling on research concerning Roman-Byzantine Egypt, finds the average number of occupants per dwelling to be between 7.61 and 7.78. In the present study, we used the estimated average Alston (2002) suggests. Although these numbers were calculated for an urban population, and while the large farmhouses found in the northern Negev likely housed more people per dwelling, there were also many smaller farms and structures that probably had fewer people living in them. To simplify our calculations, the figure of 7.5 people per house was used. However, this calculation was only possible for those settlements for which the number of dwellings has previously been established through surveys, such as Nahal Noqedim (Baumgraten, 2014: site 40) or Horvat So'a (Govrin, 1991: 97–9), and those that have been (partly) excavated, such as Tel Sheva and Khirbat Amra (Tahal, 1996; 2000). For around 60% of the villages, the approximate number of dwellings could be established based on survey or excavation data. In cases in which this was not possible, the average number of dwellings (n = 7) for villages was used instead. This calculation was only important in terms of elucidating the relationship between Byzantine Be'er Sheva, the largest city in the northern Negev, and the villages and farms surrounding it.

8.3 Population size of Be'er Sheva

The area of the Byzantine city of Be'er Sheva was determined using the KDE method (see Chapters 4.6 and 6.6.1). With regard to the KDE method, the minimum (40 ha), medium (90 ha), and maximum (140 ha) extents of the ancient city were calculated. These different site sizes were then used to estimate the population. As previously discussed, the urban population density per hectare was estimated using previous research, particularly the population density estimation by Bairoch (1988) of 150 people per hectare, with a margin of error of 20–25%. Based on this population estimate, the ancient city of Be'er Sheva had a population of approximately 4,500 to 26,250 people.

However, the minimum size of 40 ha included only the center of the city, and, as there are several churches and public buildings located outside this 40-ha parameter, the minimum calculation is hypothetical and, according to archaeological findings, unlikely. The real size of the city was likely around 90 ha or more; therefore, we can consider the population to be between 10,125 and 26,250 people. This means that the minimum population of Byzantine Be'er Sheva was between

10,000 and 15,000, and the maximum numbers would fall between 16,000 and 26,000. The city of Be'er Sheva most likely saw its largest extent as well as a peak in population during the sixth–seventh century CE, based on findings, as well as the dating of churches built in Be'er Sheva (Figure 8.1).

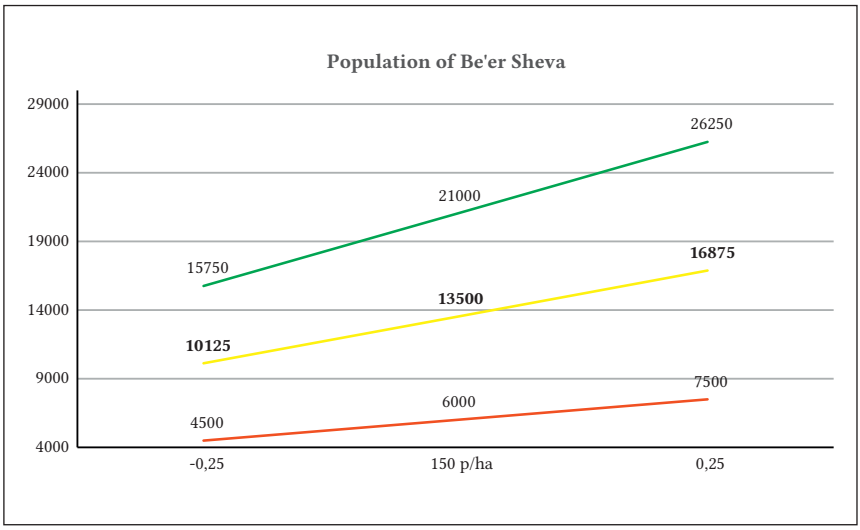

Figure 8.1 Minimum and maximum population of Be'er Sheva.
Population numbers of the Byzantine city of Be'er Sheva based on the population estimate of Bairoch (1988: 22–23) for a city size of 40 ha (red), 90 ha (yellow), and 140 ha (green).

If calculating the population according to Broshi, who has researched and calculated the Byzantine population of the Negev and suggests a population density of 400 persons/ha minus 25% for public spaces (= 300), the total population of Byzantine Be'er Sheva would be between 27,000 and 42,000 persons. However, these numbers seem too high.

In order to establish a site hierarchy of the northern Negev towns and large villages the respective population sizes of these settlements were also calculated. For calculation the population estimates by Bairoch (1988: 22–23) regarding cities in antiquity were used. Based on similar calculations to those for the city of Be'er Sheva, the other larger towns and villages located within the study area—Ma'on, Khirbat Irq, Khirbat Jemmeh, Tel Malhata/Moleatha, Tel Sheva, Khirbat Amra, Khirbat Qasif, Horvat Hur, and Be'er Shema—likely had respective populations of less than 5,000 inhabitants.

Table 8.2 Minimum and maximum population of Byzantine towns and villages.

Towns and large villages within the study area, based on the population estimates by Bairoch (1988: 22–23) regarding cities in antiquity.

Site	–25%	150 p/ha	+25%
Ma'on	3,937	5,250	6,562
Khirbat Jemmeh	3,375	4,500	5,625
Khirbat Irq	2,250	3,000	3,750
Tel Malhata/Moleatha	2,700	3,600	4,500
Khirbat Qasif	2,250	3,000	3,750
Tel Sheva	900	1050	1500
Khirbat Amra	787	1200	1312
Horvat Hur	450	600	750
Be'er Shema	337	450	562

Analyzing the urban population of the cities and towns of the northern Negev as well as the southern coastline (Gaza and Ashkelon), according to settlement area, provides the following picture. The city of Gaza,[30] an important port city in the area, was by far the largest in the region, followed by Ashkelon, which seems to have had a size similar to Be'er Sheva, even without including the outskirts of the city (e.g., Ashkelon Barnea). In addition to Be'er Sheva with its estimated population between 10,125 and 26,250 (see above), the population of Elusa, an important city in the Negev and a bishop's See, was estimated at about 5,000 people (Schöne et al., 2019: 142). The population density estimates by Bairoch (1988), as shown in Table 8.1, confirm this number, with a population range of 5,062 to 8,400. A similar size has also been calculated for Eleutheropolis (Beit Guvrin), with a population of 4,500 to 7,000 people. The towns and large villages of the northern Negev that are located within the study area provide a population range spanning from some 450 in Be'er Shema to some 5,000 in Ma'on (Figure 8.2). All cities and

30 The calculated size of the city of Gaza includes Anthedon, Maiumas-Gaza, and Gaza. According to Broshi (1980: 4), Anthedon and Gaza each had a spatial size of 90–120 hectares and Maiumas-Gaza was 40–60 hectares.

Figure 8.2 northern Negev with main cities and towns according to population size. Population size was calculated according to the population density estimation used by Bairoch (1988: 23) for cities of antiquity. The spatial size of settlements outside the study areas (Gaza, Ashkelon, *Eleutheropolis* [Beit Guvrin], and Mamshit) were taken from Broshi (1980) and, in the case of Elusa, from Schöne et al., (2019). The suggested roads were taken from McCormick et al., (2013). Background: Hillshade from 12.5 m-resolution ALOS-PALSAR DEM.

towns are located along one of the major ancient roads, except for Khirbat Irq and Khirbat Jemmeh. Many were located at crossroads, including Be'er Sheva, Tel Malhata/Moleatha, Elusa, Mashit, and Gaza.

8.4 The hinterland of Be'er Sheva

In his book *Isolated State* (1966 [1826]), the German agronomist Von Thünen proposed a land use model with a central market located in the middle of a flat isotropic landscape, and its hinterland organized in concentric land-use bands. His model is based on the assumption that what farmers produce varies by distance

from the town and maintains that the cost of transportation governs the use of land. Von Thünen's system of land use from the urban center outwards is comprised as follows:

1) Horticulture and dairy farming. This occurs in the ring closest to the city as vegetables, fruits, milk, and other dairy products must get quickly to the market.
2) Silviculture, timber, and firewood would be produced for fuel and building materials.
3) Extensive field crops.
4) Livestock ranges (Chisholm, 1968: 20–32; Hagget et al., 1977: 205–7; Goodchild, 2007: 31–35).

Of course, this is an idealized model, and landscape morphology, secondary marketplaces, and roads influence this model in the real world. The hinterland of Byzantine Be'er Sheva is also organized in land-use bands. Three are discernible based on the findings of surveys and excavations:

Land-use belt 1: A large number of tombs can be found in the area immediately surrounding Byzantine Be'er Sheva. This high number of burials formed the necropolis of Late Roman to Early Islamic Be'er Sheva.

Land-use belt 2: An area of ca. 3,000 ha, which contains almost no archaeological sites except for a few installations, tombs, and cisterns. The main part of this area is covered today by the modern city of Be'er Sheva. This part of the city has been built from the 1950s onwards, but most of the area encompasses newer neighborhoods. As a result, archaeological remains would have been discovered during the construction of these areas. In other parts of the city developed during the same period, including the area of the university and the northern train station, a large number of archaeological sites have been discovered. Therefore, this area can be considered "empty" of archaeological sites dating to the Byzantine period.

Most likely, this area would not have been used for grain production,[31] because it would probably only have produced enough for 1,500 to 3,000 people—

31 According to Broshi (1983: 422), the minimum amount of land needed in Roman-Byzantine Palestine to feed one person in terms of grain production was one hectare. Other studies suggest that, in dry farming areas, 1.5 ha were required (Chisholm, 1968; Zaccagnini, 1975). Notably, production varies widely between "good" and "bad" years; based on a study conducted in modern Jordan, "production in a good year may be seven times that of a bad one" (Antoun, 1972: 8).

a fraction of the city's population. Furthermore, the remains of farmhouses and agricultural installations would have been found during surveys and excavations if they had existed. The archaeological findings in the outskirts of the city point to a different usage of the area surrounding Be'er Sheva. To the west of Byzantine Be'er Sheva, a large winepress was excavated (Sonntag, 2001: 115*–116). To the south of the city, a large complex was excavated, including buildings, dovecote towers (Michael and Tepper, 2021), and a winepress (Haimi, 2008). The winepresses were built in close proximity to the city.

Other dovecotes have been found surrounding the city of Be'er Sheva, in Nahal Beqa (Eisenberg-Degen, 2017), and to the west of the city (Korbrin and Tepper, 2017). The pigeon fertilizer of the dovecotes was most likely used for orchards rather than for grain, especially as the amount of fertilizer available was much too small to satisfy the needs of dry farming. As the winepresses were located close to the city, we can assume that the grapevines were probably located close to the city as well. That is, the "empty" area around Be'er Sheva was probably used by the city's inhabitants for orchards and vegetable gardens. This argument is supported by the winepresses and dovecote towers. A more distant area, where the villages and farmhouses are found, was used for grain production. Most of the city's population likely worked in the surrounding fields. This proposal is also supported by Scheidel (2007b: 79–80), who claims that most (more than 80%) of the urban population would have farmed land in the surrounding areas.[32]

Land-use belt 3: The area of orchards and vegetable gardens was followed by an area of villages, farmhouses, and field towers. This area is located between three and six km from the city of Be'er Sheva. Villages surrounding Be'er Sheva were engaged mainly in agriculture, as many installations and farming terraces (especially in the northern Goral hills) have been found. It seems that animal husbandry played a marginal role (cf. Figueras, 1980: 152; Ilan, 1980: 29; Ustinova and Nahdhoni, 1994: 170). In the study area, only a handful of animal pens have been recorded during surveys and excavations. The larger villages are all relatively close to the city. This allows the population of the villages and farms access to the marketplace in Be'er Sheva.

Three types of farmhouses can be found surrounding the city of Be'er Sheva: (1) simple farmhouses (50–100 square m); (2) large complex farmhouses (150–500 square m); and (3) small square farmhouses and field towers (9–25 square m). The

32 "There is no good reason to believe that more than one person in eight would have been permanently or predominantly engaged in non-agrarian labor" (Scheidel, 2007: 80).

large and more complex farmhouses are comprised of several rooms and served most likely as a residence in the peripheral area (Haiman and Fabian, 2009: 45). Simple farmhouses included two to three rooms and probably also served as a residence. Haiman and Fabian (2009: 45) argue that the small square field towers served as watchtowers over agricultural fields belonging to residents of the town. However, it seems that most field towers are located in the north of Be'er Sheva, close to villages. It is therefore possible that most of the field towers belonged to villages and large farming estates rather than to the population of the city (Figure 8.3).

We can conclude, therefore, that the city or Be'er Sheva was not supported exclusively by its agricultural hinterland but also needed a village hinterland to support its population. A distance analysis, based on the location of the archae-

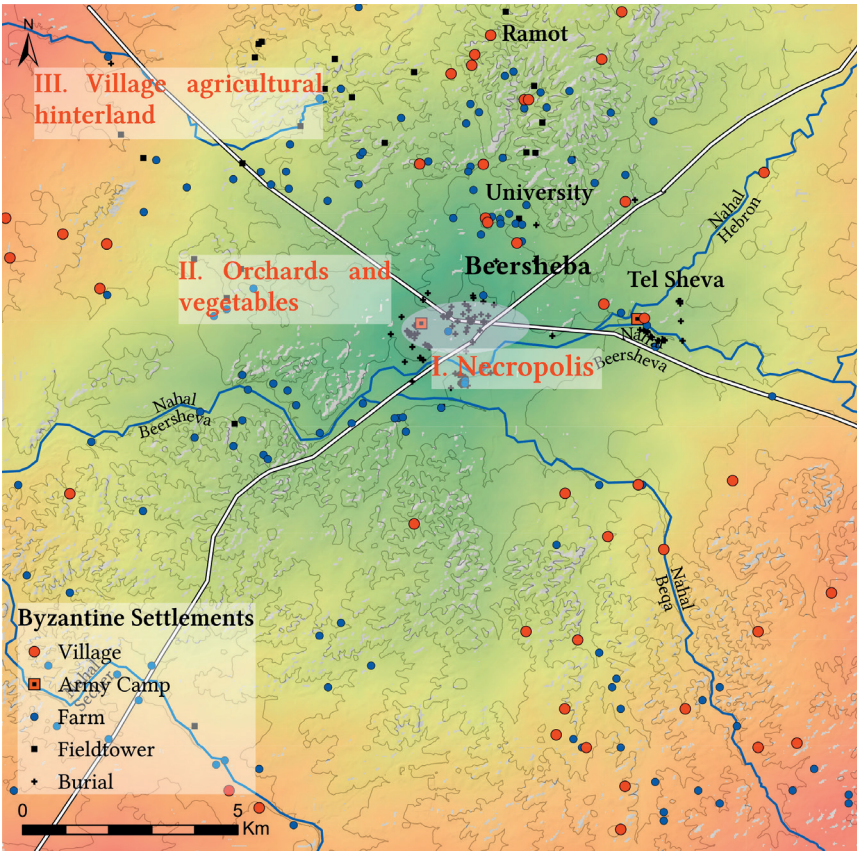

Figure 8.3 Distance analysis of the Byzantine city of Be'er Sheva.
A distance analysis (ESRI—ArcGIS pro, Distance analysis toolset) of the city of Be'er Sheva and its hinterland, as well as the land-use belts according to above descriptions.

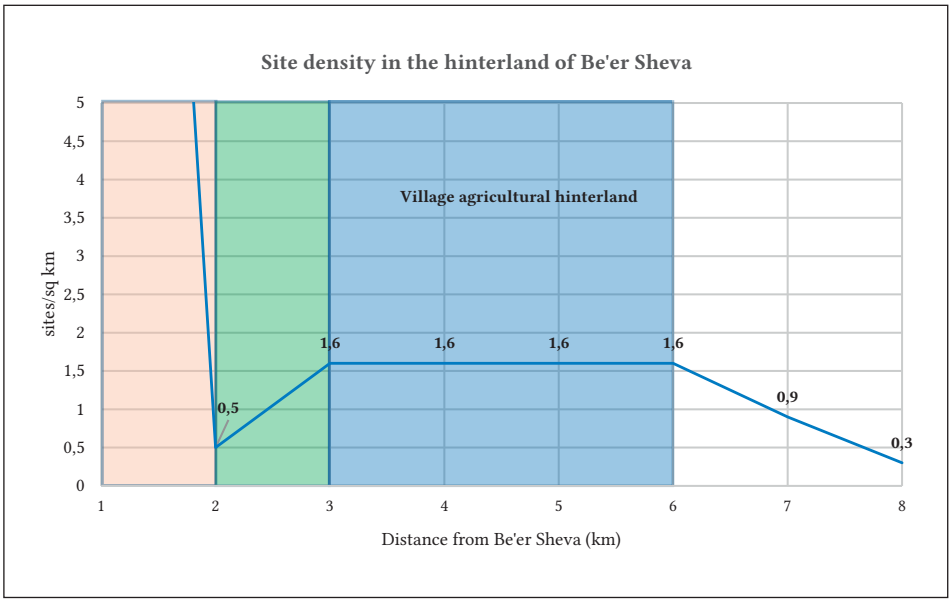

Figure 8.4 Site density in the hinterland of Be'er Sheva.
Analysis of the land-use belts according to site density of the area.

ological remains, shows that there are at least three land-use bands discernable: (1) necropolis, (2) orchards and vegetable gardens, and (3) village agricultural hinterland. These land-use belts are also visible by analyzing site density (villages, farms, structures, field towers) surrounding Be'er Sheva. Less than one kilometer from the city of Be'er Sheva, site concentration is very high—between two to three square km. The number drops significantly (from almost 24 sites per sq km to 0.5). Between three and six kilometers from the city, the concentration of sites per sq km is constant at 1.6, because this is the village agricultural hinterland. Further than six kilometers from the city of Be'er Sheva, the number drops to 0.9 and, by seven kilometers, to 0.3 (Figure 8.3). The density of 1.6 sites per square kilometer is quite high, meaning 1.6 buildings per sq km, which includes single buildings of villages, farmhouses, structures, and field towers. However, because every farmhouse, or small village has additional buildings such as watchtowers, this explains the high number. An area of three to six km surrounding Be'er Sheva was almost completely used for agriculture. If only the settlements to the north of the city are analyzed, then the settlement density is even higher.

Be'er Sheva, as a large urban center with extensive political and economic facilities, impacts the land-use strategies of the settlements surrounding it. This fact

is also visible in the site density numbers of the surrounding hinterland. In the central study area, Be'er Sheva is the sole urban center, and no other town is located within ca 20 km.

8.5 Settlement distribution in the northern Negev

By analyzing the distribution of cities and towns, villages, farmhouses, and field towers, the following are visible: in total, there are in the three study areas one city, six towns, and a few very large villages (Be'er Shema, Horvat Hur, Tel Sheva). In the western study area, the number of sites surrounding a large settlement is the lowest, followed by the eastern study area. In the central study area, Be'er Sheva is the only large urban center. The highest concentration of villages and farmhouses surround Be'er Sheva. In general, all large settlements are located along the major roads, with only two exceptions in the western study area.

By analyzing the villages, one can see that the highest concentration is located in the central study area, mainly surrounding the city of Be'er Sheva. Interestingly, the majority of villages are located on the northeast and southeast side

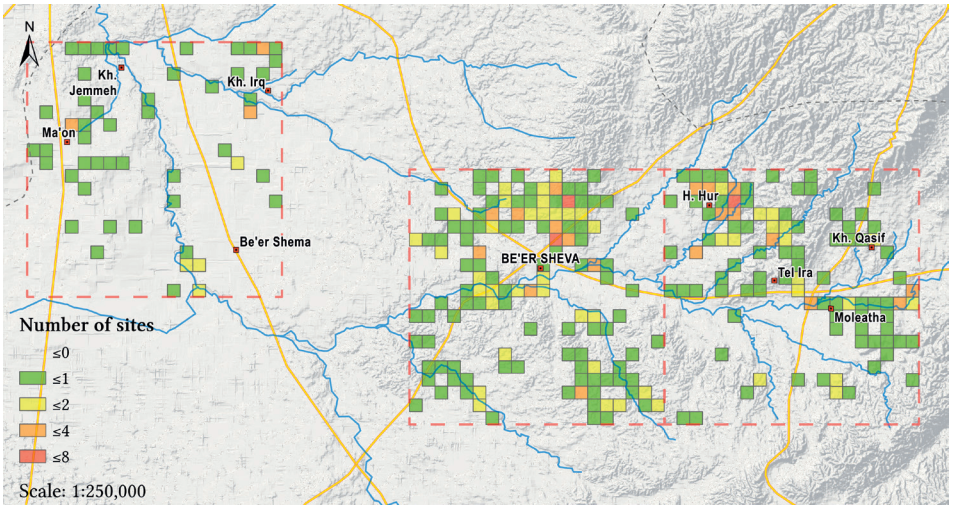

Figure 8.5 Settlement patterns of the northern Negev.
Study area overlaid with FISHNET module in ArcGIS Pro: each square represents an area of 1,000 × 1,000 meters. The number of settlements has been counted for each square according to settlement type (0 = no square). The size of settlements was not taken into consideration—settlements considered: villages, farmhouses, and field towers.

of Be'er Sheva, with a high concentration near the two main roads that connect the north to the south. The towns in the other study areas have at least one village within a radius of four kilometers, and many have two to three. In the eastern study area, the three towns of Tel Ira, Khirbat Qasif, and Moleatha are located close together, therefore, the concentration there is slightly higher.

By analyzing the settlement patterns, one can see that there is a concentration of farmhouses and villages around Be'er Sheva. Farmhouses surround the city, and the density lessens the further away they are located from the urban center. In contrast to the villages, the concentration of farmhouses is higher to the north, west, and south of the city of Be'er Sheva. The farms located in the southwestern corner belonged most likely to the hinterland of Elusa, as they are located closer to Elusa than Be'er Sheva. A comparison of Be'er Sheva to other towns in the study areas shows that the settlement hierarchy was different from the smaller towns. Similar to Be'er Sheva, they have an "empty area" surrounding the city, although it is much smaller (a maximum of 1.2 km from the town), followed by an area of farmhouses and installations. The villages are further away from the towns and were probably not part of a village hinterland (Figure 8.6). The farmhouses are grouped in a ring around the towns and are most likely part of the agricultural hinterland (Figure 8.7).

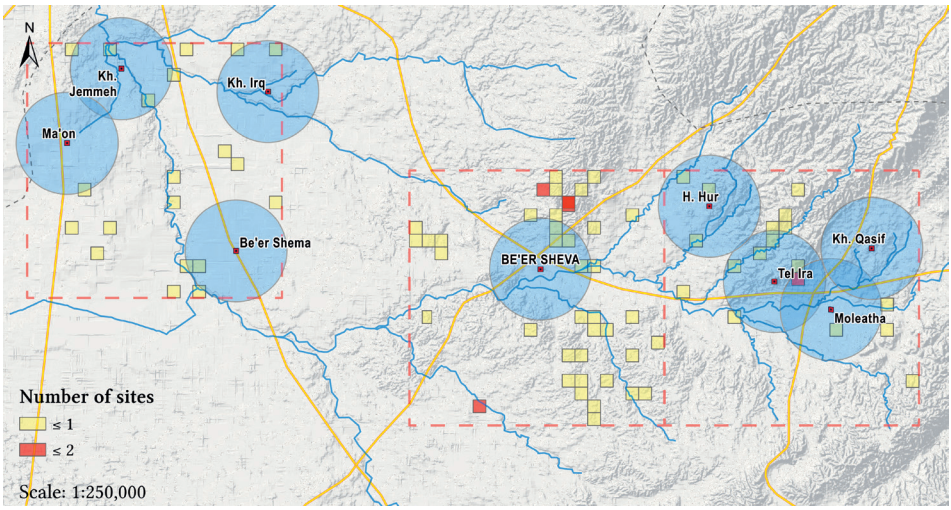

Figure 8.6 Raster analysis of villages surrounding cities and towns.
In the study areas, 83 villages in total were found during surveys and excavations. Most villages are located in the central study area. A 4 km buffer (blue) surrounds each larger settlement.

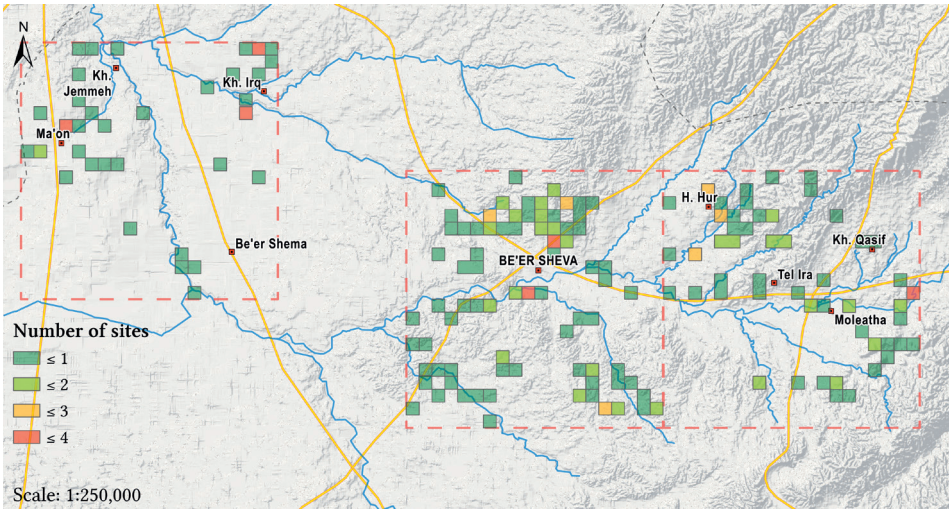

Figure 8.7 Raster analysis of farmhouses surrounding cities and towns.

The small square field towers, which did not serve as family residential buildings but as watchtowers, belonged to residents of the village and possibly also towns, and can almost exclusively be found to the north and to the northwest of Be'er Sheva (with a few exceptions to the south of the city). Most field towers were found in the eastern study area, especially surrounding the settlement of Horvat Hur. It seems they are mainly located in higher elevated areas. According to Haiman and Fabian, these field towers served as seasonal farmhouses for the population of the urban centers, and they went out of use in the sixth century CE (2009: 45). However, Magness has re-dated pottery from seven field towers found in the northeastern study area, and one dates between the Byzantine and Early Islamic periods (eighth to ninth centuries CE). The others date between the fifth, sixth, and seventh centuries CE (Magness, 2003: 12–63). Similarly, field towers have been discovered during excavations, including the field tower excavated south of Be'er Sheva (Rasiuk and Shmueli, 2017). Almost no field towers have been found in the western study area, which might be because this kind of structure was not necessary there as most of the area is flat, and the settlements could easily oversee their fields.

Based on this analysis of the population, settlement size, and land-use, it is clear that urban centers like Be'er Sheva adopted specific land-use strategies that, in turn, impacted settlement density and settlement types in its hinterland. Smaller towns, for example, Ma'on or Moleatha, also influenced their hinterlands, and villages and farmhouses are hierarchically grouped around urban centers.

An exception is Be'er Shema: based on its size and population of 300 to 500 persons, the settlement could be considered a large village rather than a town. However, because of its importance as a settlement along the road from Elusa to Gaza and also in historical sources, the settlement has been described as a town. In the *Descripto Orbis Romani,* Be'er Shema is mentioned as a regional administrative center for the territory of Gerar (Gelzer, 1890: 52 cited in Dolinka, 2007: 112).

By analyzing settlement distribution in the Byzantine period, the map is quite empty surrounding the settlement, in contrast to all the other local centers. No farmhouses surround the settlement, instead, many encampment sites and findspots appear in close vicinity to Be'er Shema (see Chapter 5—Western study area: Nahal Besor). Similar to the other towns, at least two villages are in a four-kilometer vicinity of the settlement (see above). Therefore, it is possible that some of these "campsites" and "findspots" actually used to be farmhouses or other agricultural structures and installations, and their remains have been dispersed over a wide area due to modern agriculture. Furthermore, there are several burial sites in the 4-kilometer radius around Be'er Shema (mainly cist tombs). Built tombs are an indication of residential structures rather than non-permanent settlements, such as campsites or findspots (Figure 8.8).

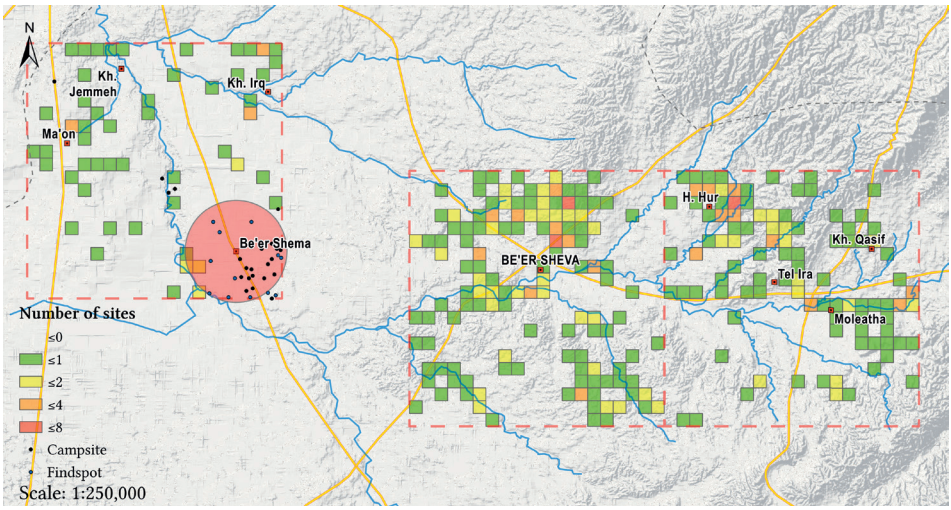

Figure 8.8 Settlement distribution surrounding Be'er Shema.
The red circle surrounds Be'er Shema. Points represent encampment and findspots sites according to Gazit (1996).

8.6 Discussion

During the Byzantine period, farmhouses and villages surrounded Be'er Sheva, forming a village hinterland that was vital for the city. A large proportion of the city's inhabitants likely worked in the surrounding fields. The status, size, and influence of Be'er Sheva is also visible as it is the only major urban center in the central study area, whereas in the western and eastern study areas, there are at least three towns. Based on size and population, Be'er Sheva was the largest settlement in the northern Negev, and after the Arab conquest, a change in settlement patterns is visible. While it is difficult to understand how Be'er Sheva developed in the Early Islamic period because modern development has destroyed many of the remains, there are indications that, at least during the beginning of the Early Islamic period, Be'er Sheva had a similar size and population. There is also evidence of churches in use in the Early Islamic period (see Chapter 6.7.1—Be'er Sheva in the Early Islamic period). Survey and excavation data suggest three trends:

1) A phase of ruralization and urban decline in the seventh century CE;
2) Large farmhouse estates are built outside the city;
3) Settlement density declined at the end of the Byzantine period or during the Early Islamic period, though it is unknown whether this occurred in the seventh century or later.

This phase of ruralization and urban decline is also visible in Elusa (Schöne et al., 2019: 142). An indication that a phase of ruralization also took place in Be'er Sheva is visible with the establishment of large farmhouse estates outside the city. It is interesting that several of these large farming estates were built close to the city, much closer than the village hinterland in the Byzantine period: Be'er Sheva (Gilead et al. 1993: 97–99; Eisenberg-Degen and Kobrin, 2016), Nahal Be'er Sheva (Eisenberg-Degen, 2017; Aladjem (unpublished), A-5416/2008), Nahal Anim (Fraiberg, 2017), Hura (Peretz, 2012), Nahal Gerar (Peretz, 2015), Lehavim (Kobrin, 2016), and at Khirbat Amra (Tahal, 1996; 2000). As the winepresses went out of use toward the end of the Byzantine period, it is possible that the land surrounding the city was used for grain or other agriculture.

For many excavated farmhouses and villages in the hinterland, the archaeological record shows no discernable changes during the Umayyad period in the seventh and early eighth centuries due to the phase of ruralization that occurred simultaneously with the Islamic immigration to the surrounding area. Many of the farms continued to exist during the Early Islamic period, and new, large farmhouses were built. The urban population moved to the surrounding land, and,

therefore, the small farmhouses that served as watchtowers went out of use, as there was no need for them after the ruralization of the area. If it were possible to excavate larger parts of Be'er Sheva, we might see a pattern similar to that of Elusa, where a phase of ruralization and urban decline followed the Arab conquest (Schöne et al., 2019: 142).

During the Byzantine period, the farmhouses and villages were vital for the city of Be'er Sheva; however, urban decline had no influence on the farmhouses and villages, with new farms built instead. That is, while the villages and farms could continue without Be'er Sheva, these villages and farms were vital to the city and its population. Many of the farmhouses show a change in the mid-eighth century, at the beginning of the Abbasid period (see Chapter 6.6—Byzantine period), when dressed building stones and architectural remains were put to secondary use from collapsed Byzantine buildings such as churches. This might serve as an indication that a part of the population left the area, and churches and other public buildings were no longer rebuilt. The coin finds show a similar picture, with a gradual decline from the seventh century CE onwards.