

Lachish V: Regional and Site-Level Implications Revealed through the Past Decade of Research

Submitted by

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Anthropology

To

The Honors College

Oakland University

In partial fulfillment of the
requirement to graduate from

The Honors College

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Department of Sociology, Anthropology, Social Work and Criminal Justice

Oakland University

April 5, 2024

Abstract

The last decade of research has seen a dramatic increase in the archaeological knowledge surrounding Lachish Level V. Many of the publications have been especially focused on Lachish V's city wall; meanwhile, other aspects of the city, speaking both regionally and at the site-level, have fallen to the wayside. After a summary of the recent discourse surrounding the city wall, the site-level implications of these other aspects are explored. Results of this discussion show that Lachish V is larger than previously thought and further support both the suggestion that the city was not violently destroyed and that Podium and Palace A may have been part of the Level V city. Afterwards, a preliminary least cost path analysis between Lachish and two other cities was carried out to explore Lachish V in its regional setting. Results show that the city's importance can not be understood based on its geographic location, but propose a separate possibility in which Lachish V's importance can be understood as a result of it simply having been formed earlier than its main competitor in the analysis: Beth Shemesh.

A Brief History of Archaeological Research at Lachish

Tel Lachish, located in the Shephelah region of modern-day Israel (see Figure 1), has been a very important site in the archaeological investigation of the Levant for nearly a century. When Sir Austen Henry Layard uncovered the palace of Sennacherib in the ancient Assyrian city of Nineveh in 1847, he discovered a room decorated with wall reliefs depicting the siege of a city, later identified as Lachish thanks to the translation of an accompanying inscription (Layard 1849; Ussishkin 1982 as cited in Garfinkel et al. 2021:420). After Layard's discovery, the site of Tel el-Hesi was misidentified as Lachish by Sir William Flinders Petrie in 1890 based on the recommendations of C. R. Conder and H. H. Kitchener (Petrie 1891). The true location of the city remained unknown for almost another forty years until William F. Albright correctly identified the site of Tell ed-Duweir (the Arabic name for Tel Lachish) as ancient Lachish in 1929 (Garfinkel et al. 2021:420).

Seven archaeological expeditions have been carried out at Tel Lachish, the first beginning in 1932 under the supervision of James L. Starkey and the most recent, which is still underway, beginning in 2022 under the supervision of Dr. Yosef Garfinkel. The site consists of nine levels (Level IX: Middle Bronze IIB-Level I: Persian/Early Hellenistic Periods) and a few earlier unnumbered phases: Neolithic, Early Bronze I, and Early Bronze III (Garfinkel et al. 2021:Table 1). Of the aforementioned expeditions, four of them were/are of a rather large scale: the Wellcome-Marston Expedition, usually referred to as the First Expedition, David Ussishkin's, usually called the Third Expedition, and Yosef Garfinkel's, the Fourth and Seventh Expeditions (the latter is essentially a continuation of the former).

The First and Third Expeditions undoubtedly had many reasons for choosing to excavate at Lachish, but as Ussishkin (2004:1:3) recounts, the importance of the Lachish reliefs from Nineveh were at the forefront of the list. The First Expedition lasted from 1932-1938 until Starkey's murder, while the third lasted over twenty years (1973-1994), including an impressive fifteen excavation seasons which concluded after 1987 (Garfinkel et al. 2021; Ussishkin 2004:1:12). After these many seasons of excavation, one may think Lachish would not have had much left to reveal, but in reality it was quite the contrary.

Unlike the two previous major expeditions, the Fourth Expedition was not fueled by the importance of the Lachish reliefs, but rather by the question: where would a city (Lachish V) smaller than its successors be located? Taking into account the landscape in Lachish's immediate vicinity, they settled on the northeastern corner of the site, which had been mostly overlooked by its previous excavators (Garfinkel et al. 2021). Over the span of five seasons (2013-2017) the Fourth Expedition focused their excavations in that northeastern corner, looking especially for remains of the Level V city; in 2016, this decision proved to be fruitful, as they uncovered the remains of a 3-3.5 m wide stone wall belonging to the smaller city, which until that moment was not believed to have had any sort of fortifications (Garfinkel et al. 2019:697, Figure 3).

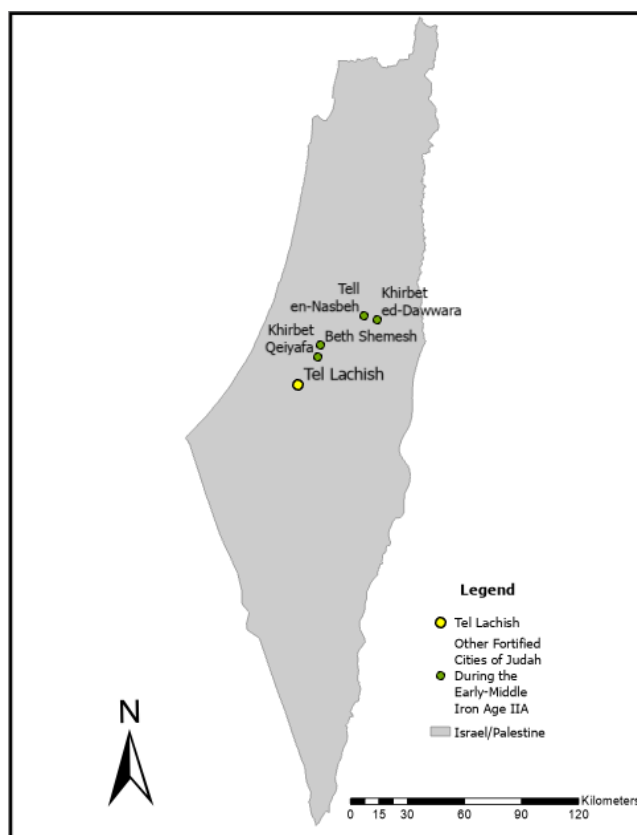


Figure 1. The location of Tel Lachish compared to other Iron Age IIA cities.

The Controversial Level V City Wall

Before the Fourth Expedition arrived at the site and made its revolutionary discovery of the Level V city wall, each of the first three expeditions had encountered Lachish V in one form or another. Olga Tuffnell—a member of the First Expedition responsible for publishing much of its data after Starkey’s death—assigned Palace A and the storerooms to Level V based upon its stratigraphic location above the remains of Level VI, although she did note that “the contents of the filling have not yet been sufficiently explored,” so they were “provisionally attributed to Level V” (Tuffnell 1953:53 as cited in Kang 2016:284). In the smaller Second Expedition, headed by Yohanan Aharoni (1975), Level V remains were supposedly found in the form of an Israelite

sanctuary and its associated vessels as well as a couple of high places. During the fifteen seasons of excavation that were part of the Third Expedition, Ussishkin excavated in seven separate areas: Area S: The Trench; Area GW: The Outer City-Gate; Area GE: The Inner City-Gate; Area R: The Main City Wall-Outer Revetment Wall Connection; Area Pal.: The Judean Palace-Fort; Area P: An extension of Area Pal.; and Area D: An extension of Area P (Ussishkin 2004:1:XV-XVI, 32, Figure 2.10, 140, 282).

Remains of the Level V city wall were not uncovered in any of these expeditions which led to the belief that the city was devoid of any sort of fortifications. This is of course somewhat understandable as most capable researchers would arrive at similar, if not identical conclusions when no sign of a city wall for any given strata/level is discovered over the course of nearly twenty-five years of excavation (the total sum of Starkey's, Aharoni's, and Ussishkin's excavations). When each of these expeditions were scrutinized closely; however, Garfinkel and the rest of the Fourth Expedition were able to come to that realization that the northeast corner of the site was in need of excavation. This rendered definitive statements such as "many small houses were then built, all over the site, but no defense wall along the edge of the mound protected the city," inappropriate due to the insufficient amount of data on Lachish V which caused it to be "poorly known" (Ussishkin 1979:27; Kang 2016:284).

After its initial discovery in 2016, the 3-3.5 m wide wall was uncovered for a length of 35 m in Area CC through the remainder of the Fourth Expedition and a "continued segment of the city wall," was found in Area BC as well (Garfinkel et al. 2019:699; Garfinkel et al. 2021:443-444; see Figure 3). It was located above the remains of Level VI—the last Canaanite city at Lachish—and below the 6 m wide mudbrick city wall of Levels IV-III (Garfinkel et al. 2019:Figure 3; Garfinkel et al. 2021:444, Figure 21). Its stratigraphy resulted in it being

attributed to Level V which is of course a well-informed hypothesis, but not conclusive because stratigraphy, as wonderful as it is, is at risk of interruption due to various site-formation processes. More conclusive evidence came in the form of seven samples—four olive pits and one cereal seed from Locus CC308 and two olive pits from Locus BB626—sent to Oxford University as part of a larger radiometric dating project along with 60 more samples from Lachish, Khirbet Qeiyafa, and Khirbet al-Ra'i (Garfinkel et al. 2019). The results showed that one sample, OxA-34889, was older than the rest by 200 some years, most likely intrusive from one of the earlier levels, but the four remaining samples from CC308, which were used to date the stone wall, range from within the tenth century BCE through the second half of the ninth century BCE in the 1σ (68.2%) range and the last quarter century of the eleventh century BCE through the last years of the ninth century BCE in the 2σ (95.4%) range (Garfinkel et al. 2019:697, 701, Table 4). Most of the samples in the dating project, including all of the samples from Lachish, were then subjected to Bayesian analysis, the results of which propose that Lachish Level V likely began sometime in the tenth century BCE according to the 1σ range and within the late tenth century BCE according to the 2σ range (Garfinkel et al. 2019:708, Figure 7, Table 5).

The results of the project do not seem to be very important at first glance, as radiometric dates on their own, without any sort of further context tend not to be very helpful for anything other than providing a range of years. The additional context in this case, as it is in many others, is provided by Lachish's pottery assemblage. The pottery types found in Level V contexts from each of the first four expeditions include multiple kinds of bowls, juglets, a cooking pot, jugs, lamps, chalices, kraters, and baking trays (Kang 2016; Kang et al. 2023). Many of these, especially the bowls and kraters, feature surface treatments typical of the Iron Age IIA (ca. 1000-800 BCE¹; see Table 1 for dates of the periods relevant to understanding Lachish V): red

slip and/or hand burnishing (Kang et al. 2023). Kang (2016) compared these with the pottery assemblages at other nearby sites, the major one being Khirbet Qeiyafa, which was settled during the Early Iron Age IIA (ca. 1000-930 BCE; see Table 1; Garfinkel 2023:100). He then established that the assemblage from Lachish V was slightly later than Khirbet Qeiyafa's because of the much higher percentage of pottery sporting irregular hand burnishing from the former (Kang 2016:290). According to the pottery then, Level V can be dated to somewhere in the second half of the tenth century BCE, which corresponds with the dates proposed by the radiometric testing, meaning the stone city wall was accurately identified as belonging to the Level V city. This also matches the biblical tradition which holds that King Rehoboam fortified cities throughout the Kingdom of Judah, including Lachish, in the last quarter of the tenth century BCE (2 Chr. 11:5-12; Kang et al. 2023).

Period	Dates
Late Bronze Age	1550 - 1150 BCE
Iron Age II	
Iron IIA	
Early	1000 - 930 BCE
Middle	930 - 860 BCE
Late	860 - 800 BCE
Iron IIB	800 - 701 BCE
Iron IIC	701 - 586 BCE

Table 1. Periods Important to Understanding Lachish V in its Temporal Context

In spite of the evidence supporting it, David Ussishkin and Israel Finkelstein have recently come out and challenged the identification of the wall as a part of Level V (Kang et al. 2023). Ussishkin argues that the 3-3.5 m wide stone wall—wall W200—is “a revetment of the later Level IV-III city wall,” rather than the city wall of Level V (Ussishkin 2019 as cited in Kang et al. 2023:8). Finkelstein agrees with Ussishkin's objections in addition to opposing the

connection between the wall and the multiple pillared buildings that abut the wall in Area BC (Kang et al. 2023). Regarding wall W200, both Ussishkin and Finkelstein overlook four important points:

- 1) A Level V floor running directly up to W200 in Area CC lacks any sort of foundation trench between the floor and the wall which would be there if W200 were truly a revetment for the Level IV-III city wall (Kang et al. 2023:8).
- 2) A drain in the section of W200 in Area CC would have been located meters below the living floors of Levels IV-III; this is not consistent with other drains from those levels which were only located a few centimeters below the floors (Kang et al. 2023:8).

Additionally, the Level IV-III drains exited the city at the same height of the city wall they belonged to, and this is clearly not the case with the drain in W200 (Ussishkin 2004:2:535-597 as cited in Kang et al. 2023:8).
- 3) The pillared buildings, identified as houses, that abut W200 in Area BC, share the same stratigraphy as the wall meaning they are indeed associated with the wall (Kang et al. 2023:8).
- 4) If W200 were a revetment of the Level IV-III city wall, then that would mean the Level IV-III cities would have had three lines of parallel fortifications between the 6 m wide mudbrick wall, wall W200, and the massive stone structure, also called a 'revetment' found in the 1930s at Lachish's mid-slope (Kang et al. 2023:8). No cities in the southern Levant have ever been known to have three lines of defense and based on the other available evidence surrounding W200, Lachish does not appear to be any different (Kang et al. 2023:8).

Despite these objections; however, the evidence clearly points to wall W200 belonging to Level V, a revelation which has completely changed the understanding of Lachish's first Iron Age city.

The Level V City: Beyond the Wall

Lachish V And the Relevant Expeditions

As mentioned above, remains of the Level V city were uncovered by each of the first four expeditions. Additionally, the first and second seasons of excavation in the Seventh Expedition also saw the discovery of Level V remains including more of the city wall. Despite the vast importance of the city wall for the understanding of the tenth century BCE city, the other Level V remains, recorded in publications corresponding to each of the relevant expeditions, are beginning to play a more important role in the city's understanding as well. In order to understand this, more in-depth descriptions of the Level V remains reportedly uncovered during each relevant expedition are necessary and are presented chronologically.

The First Expedition. A trial cut along the south wall of Palace/Podium B (Area Pal.; see Figure 3) saw the initial discovery of Level V remains. An 80 m long wall running southeast from Grid Squares G.14-L.15, mostly covered by Palace B's southern wall, hosts a building on its eastern end referred to as the "government storehouse" (Tufnell 1953:80; Ussishkin 2004:2:802, Figure 14.38). This building consisted of four thinner brick walls running south at a right angle off of this main wall; each of these walls' foundations were at varying heights due to

the site's natural slope and the living level of the building was estimated to be at 266.5 m above sea level since most of the potsherds were discovered around that height (Tufnell 1953).

Unlike this expedition's work on the west side of the tel, wares decorated in red slip and hand burnish were "recovered in some quantity from the trial cut at the southeast corner of the citadel (Grid Squares K.15/16)" (Tufnell 1953:80). This includes bowl classes B1 and B2, both of which were well represented in these areas and belong to Level V (Tufnell 1953; Kang 2016).

Six rooms attributed to Level V were discovered underneath the Residency as well. Each of these rooms served as casemate foundations for Palace A—the earliest part of the Iron Age palace built at Lachish (Tufnell 1953:79, 116-117). Some of these rooms contained debris from the Late Bronze Age (ca. 1550-1150 BCE; see Table 1) as well, due to the fact that Palace A was built directly atop the ruins of the Late Bronze Age Ramesside building (Tufnell 1953:77, 79, 116-117). For instance, room K.11/12:1053² contained a few burnished sherds from the Iron Age and remains of iron armor, but also bronze armor and a scarab dating to the Bronze Age (Tufnell 1953). Similarly, room L.12:1057, though a part of the same casemate foundations as the rest of these rooms, contained an inscribed fragment of a bowl from the Late Bronze Age (Tufnell 1953). Some of these rooms contained items which were more difficult to assign dates to, such as stone chippings from construction debris in K.12:1055 or a mix of iron and bronze artifacts and a bowl, which was likely from Level II or later, all discovered out of context in a pit in K.11/L.12:1058 (Tufnell 1953).

The Second Expedition. The Israelite Sanctuary, mainly referred to as Cult Room 49 by Aharoni (1975:26) was "partly covered by the large terrace wall of Stratum [Level] IV." Cult Room 49 is a 2.3 x 3.3 m rectangular broadroom, with a foundation of stone and a "brick superstructure" (Aharoni 1975:26). Its rear wall—the southernmost wall—was built with one

row of larger stones, as it acted as a terrace wall supporting the higher terrain to the room's southwest (Aharoni 1975). Inside the sanctuary were benches roughly 50 cm wide, consisting of stone and plaster, which ran along the walls (Aharoni 1975). The presence of a "well-dressed basalt slab," possibly a small *massebah*, in what was likely the sanctuary's entryway and the fact that the bench in the western corner was about 40 cm tall, acting as a *bamah* or raised platform, while the rest of the bench was only "slightly above floor level," serve as evidence of this room's cultic function (Aharoni 1975:26). Further evidence comes in the form of a 45 cm tall altar—with one preserved horn of what was once likely four horns—and a collection of cult vessels that are "more or less complete," including five jugs, seven chalices, three lamps, two juglets, a small cooking pot, roughly seven bowls, and four clay incense burners, two of which had fenestrated stands (Aharoni 1975:26).

The terrace wall of Cult Room 49 extends about 10 m to the southeast as a regular brick wall, 60-70 cm wide; two stone terrace walls branch off of the brick wall and run parallel to the sanctuary (Aharoni 1975). The eastern terrace wall is raised higher than the western, which is "contrary to the natural slope of the two terraces," meaning the area east of the eastern wall (Locus 111) was artificially raised and, given its close proximity to the sanctuary, may have been an open *bamah*, perhaps meant for use by the public (Aharoni 1975:28). In a line that continues relatively straight to the southeast, more cultic objects/places associated with this *bamah* were found: three *favissae* and another *massebah* (Aharoni 1975:28; Pl. 60). The *massebah* measures 1.2 m tall, 95 cm wide, and 60 cm thick; it was set 20 cm below the Level V floor and was supported by three smaller stones (Aharoni 1975). In front of the *massebah* was a pile of ashes 50 cm in diameter, which Aharoni (1975:29-30) suggests was likely once a tree trunk that served as an *asherah*. The *favissae*; however, belonged to the later Levels IV and III; each had cultic

objects inside, which in addition to Aharoni's (1975:30-31) claim that the *massebah* was in use from Levels V-III, point to the possibility that the Level V sanctuary stood beside an open high place that remained in use after the former fell out of use at the end of Lachish V.

It is important to note here based on "analysis of the stratigraphic data and the pottery," that the stone altar and cultic vessels mentioned above, appear to have been dumped there in a pit that was probably dug in Level IV, meaning no sanctuary and high place actually existed at all (Ussishkin 2003 as cited in Ussishkin 2004:1:77). The identification of Aharoni's 'cult room' and 'high place' as belonging to Lachish V; therefore, does not hold up well.

The Third Expedition. The remains of Level V in Area S were well-defined stratigraphically, atop the collapsed walls of the Level VI Pillared Building and below the stone foundations of the Main City Wall (Levels IV-III) and the Level IV Enclosure Wall (Barkay and Ussishkin 2004:411). The walls of the Level V buildings were noted to have been used in the stone foundations of Tower W 23 in the Main City Wall (Barkay and Ussishkin 2004:411). No Level V remains other than these were found in Area S and only one "clearly identifiable structure," in Squares B-D/9-11, could be highlighted, revealing the "remains of three elongated, rectangular rooms...each with several small walls creating secondary divisions" (Barkay and Ussishkin 2004:413).

On the Level V floors were thin layers of soot/ash and several complete vessels; Gabriel Barkay argues that this, in addition to the ash in Aharoni's 'cult room' is evidence for a violent destruction of Level V, a claim supported by the presence of an armor scale and two slingstones in Locus 3665³ of the structure (Barkay and Ussishkin 2004:412). Ussishkin on the other hand, does not see the presence of the ash as a result of destruction, but rather the result of domestic activities (Barkay and Ussishkin 2004). Additionally, some of the Level V floors sporting ash

were discovered to have earlier floors underneath them, which according to Barkay is indicative of two Phases in Level V, and was a probability first raised by Olga Tufnell (Barkay and Ussishkin 2004:412).

In Area GE, two portions of lime-plastered floor from Lachish V were found in Loci 4159 and 4101, almost immediately beneath the foundations of the northern central chamber and adjacent to the eastern exterior wall of the Levels IV-III inner gatehouse, respectively (Ussishkin 2004:2:631). The floors consisted of limestone and pebbles, and numerous red-burnished sherds of Levels V-IV were found on the plastered floor in Locus 4159 (Ussishkin 2004:2:631, 682).

Lastly, in Area Pal., multiple pits from Lachish V were uncovered underneath the Northern Annexed Building and four walls representing two Level V huts (Walls 259 and 260 and Walls 227 and 230) were found under Podium A (Ussishkin 2004:2:774-776). Lachish V remains from the other areas were really limited to Levels V-IV sherds, often found in constructional fills.

The Fourth Expedition. Four areas were excavated over the course of the Fourth Expedition: Area AA, Area BB, Area CC, and Area BC (see Figure 3), each containing some Level V remains (Garfinkel et al. 2021).

The remains of Level V in Area AA were found in its eastern half; there appeared to be an open area with two *tabuns*, or cooking installations, and a stone paved surface (Garfinkel et al. 2021). Aside from pottery, many preserved olive pits and a few special finds were also among the remains including a small piece of ivory with a pomegranate carved on the tip, a small game piece, a fragment of alabaster, and a coral object (Garfinkel et al. 2021).

The Level V remains in Area BB came from underneath a stone building dated to Level IV; located on the site's eastern edge, the remains consisted of a "paved open area," with a

“typical,” accumulation of thin layers of ash, potsherds, and animal bones, suggesting that this may have been part of a gate piazza during the time of the Level V city (Garfinkel et al. 2021:21).

Area CC began as a trench on the northern side of the tel and provided the “clearest stratigraphic sequence of fortifications from Levels I to VI” (Garfinkel et al. 2021:442). It was in this area that the first 35 m of the 3-3.5 m wide stone wall—the section with the drain—was discovered above Level VI and underneath the city wall of Levels IV-III (Garfinkel et al. 2021).

Lastly, Area BC saw the discovery of more of the wall as well as one complete pillared building and the remains of three others that abutted the wall from within the city (Garfinkel et al. 2021:Figure 22). These buildings were later covered by the 6 m wide mudbrick wall of Levels IV-III (Garfinkel et al. 2021). It should be noted here that no destruction layer was found in this area, “suggesting that Level V went out of use when the new urban plan of Level IV was introduced” (Garfinkel et al. 2021:444). The fact that none of the city wall had been found in any areas in the southern and western parts of the tel “implies that the city of Level V was small and occupied only part of the site, probably 3–4 ha” (Garfinkel et al. 2021:444).

The Seventh Expedition. As mentioned earlier, the Seventh Expedition is, for all intents and purposes, a continuation of the Fourth Expedition, which began in the summer of 2022 with renewed excavations in Area BC.

During the first season, six 5x5 m squares/excavation units⁴ were opened just west of the pillared buildings and the segment of the Level V city wall in Area BC. The units were located atop the mudbrick city wall of Levels IV-III and were excavated until the destruction layer of Level VI. Level V was encountered mainly in the form of the stone foundations of around five more buildings, three of which were very similar in plan to the pillared buildings uncovered by

the Fourth Expedition (see Garfinkel et al. 2021:Figure 22 for an illustration of the pillared buildings). The stratigraphy in this area is comparable to that of the trench in Area CC (see Garfinkel et al. 2019:Figure 3), as the buildings being located directly beneath the mudbrick wall shows that the Level V city wall should be further north of the Levels IV-III wall here as well. It should be mentioned that the Level V city wall in front of these newly discovered buildings may not have been preserved well, if at all, because immediately north of the excavation units, the slope has been extremely eroded. Whether or not it is still there, is a question that will be answered in subsequent excavation seasons.

Interestingly, inside the walls of each of these buildings was ‘rock fall’ or medium to large stones which appeared arbitrarily strewn throughout the structures (see Figure 2). Most of these stones were removed as the excavation continued because they were ‘floating’ and as a result, were out of context. The current interpretation surrounding the ‘rock fall’ is that the stone foundations of each of these buildings were intentionally toppled by the builders of the Level IV city so the stones could serve a new purpose as the foundation for the Levels IV-III mudbrick city wall. This compliments a view of Barkay’s in which he believes the absence of more Level V remains in Area S is due to the builders of Level IV clearing them away before they built the “City Wall and the Enclosure Wall,” and laid “the constructional fills which abutted Podium B” (Barkay and Ussishkin 2004:412). In viewing both of these interpretations, it is apparent that there is a pattern emerging in which it appears that the builders of Level IV interacted with the Level V city and its structures in different ways depending on what suited their needs better. No evidence for a Level V destruction layer was found during this season either.

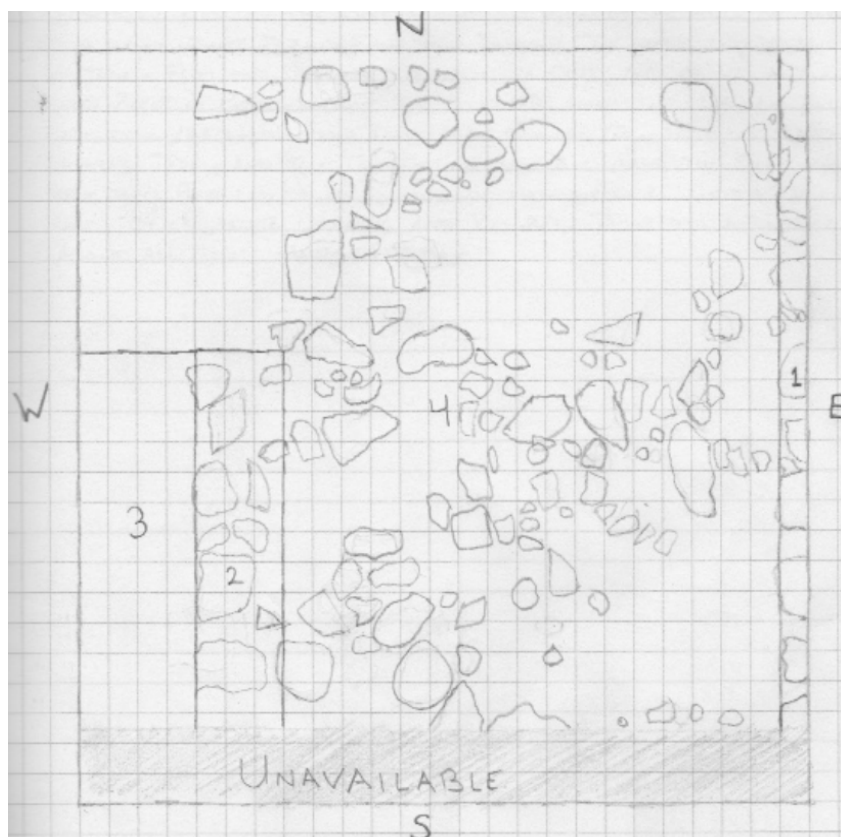


Figure 2. Plan-view drawing of excavation unit ND6 depicting the ‘rock fall’ in Section 4 (Locus BC458).

More of the Level V wall was found toward the south of the site in Area EE (see Figure 3) during the summer 2023 season (Hoo-Goo Kang, personal communication 2023). No domestic buildings abutting the wall have yet been found and further excavation in that area is needed for their discovery (Hoo-Goo Kang, personal communication 2023). A Level V domestic structure was also found in Area DD (see Figure 3), consisting of two parallel walls and a stone installation (Hoo-Goo Kang, personal communication 2023).

Lachish V: Site-Level Implications

Mapping Lachish V. The map below (Figure 3) visualizes Tel Lachish, as it stands today, at a scale of 1:2,150 and all of the Level V remains which are large enough to be seen at this scale. This map was created using a compilation of aerial and satellite imagery shared with me

by Hoo-Goo Kang (personal communication 2023), and from Environmental Systems Research Institute (ESRI), along with a collection of measurements described in Ussishkin's (2004) Volume II and a few georeferenced illustrations of both the entire site (Garfinkel et al. 2021:Figure 19) and of certain Level V features (Ussishkin 2004:2:Figure 12.12).

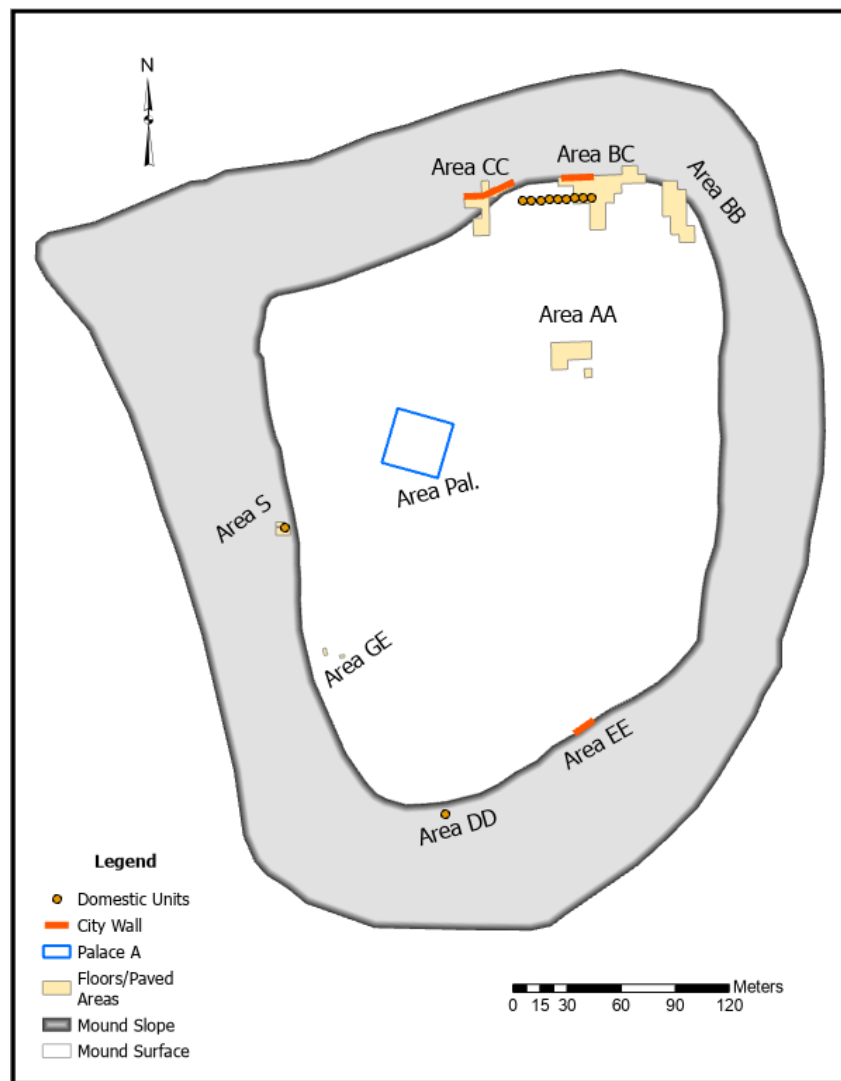


Figure 3. A map depicting the uncovered remains of Lachish V.

The Size of Lachish V. The most obvious implication in regard to Lachish V deals with the city's size. The discovery of more of the Level V stone city wall to the south in Area EE renders the city's estimated size of 3-4 ha (see Garfinkel et al. 2021:Figure 19 for an outline of

the estimated size) null and void. While it is still probable that the fortified city did not necessarily extend over the entire surface of the mound, it is now clear that the fortifications of Lachish V surrounded, at the very least, the entire eastern half of the mound. Looking at the Fourth Expedition's size estimate (Garfinkel et al. 2021:Figure 19); however, the city extends far into the western half of the tel as well, making it likely that the city covered 4 ha at a minimum and possibly much more than that. One thing is certain though, which is that the remaining portions of the Lachish V city wall must be traced as far to the west as possible in order for a more definitive approximation of the city's size to be put forth.

A Lack of Destruction. The second and last major site implication for Lachish V is that it does not appear that the city was destroyed violently, but rather the transition into the Level IV city was [reasonably] peaceful. The fact that Level V remains were devoid of any sort of destruction layer in Area BC (Garfinkel et al. 2021:444) is the first piece of evidence in support of this argument. The thin accumulations of ash and debris in Area BB (Garfinkel et al. 2021:442) and on the floors in Areas S (Barkay and Ussishkin 2004:412) are typical of open areas and domestic activity, respectively. These accumulations are not indicative of a destruction layer and consequently do not support Barkay's assertions that Lachish V suffered a violent destruction (Barkay and Ussishkin 2004:412), especially when accounting for the uncertainty of Aharoni's 'cult room' having belonged to Level V at all (for this same reason the cult room is not depicted in Figure 3). Further evidence for the quiet transition between Lachish V and IV can be seen in the pottery typologies of both levels; "hardly any changes occurred between the pottery of Level V and that of Level IV, suggesting that little time elapsed between the two settlement phases" (Ussishkin 2004:1:78). The builders of Level IV building on top of some Level V remains and clearing away others in Area S, and possibly in Area AA (Ussishkin

2004:2:412-413; Garfinkel et al. 2021:442), also points to a quick transition between the two settlement levels as there was no time for Lachish V to develop thick accumulations of dirt and debris as is so common during occupation gaps in the Near East.

Palace A. One last thing to briefly discuss is the inclusion of Palace A in Figure 3. Most of the site's excavators have proposed that Podium A and Palace A (the first of three Iron Age podia-palace phases labeled sequentially from A-C) were built as part of the Level V city (Tufnell 1953; Aharoni 1975; Garfinkel et al. 2021); however, not everyone agrees. Ussishkin (2004:2:770-774) believes Podium A was built at the same time as Podium B by the builders of Lachish IV meaning Podia A, B, and C only supported two Palaces: B and C. The decision to include Palace A in the map above (Figure 3) was made, not only to keep in continuity with the Fourth Expedition's reconstruction of Lachish V (Garfinkel et al. 2021:Figure 19), but also because of the new information pertaining to the city itself. At the time Ussishkin published his multi-volume collection detailing the Third Expedition's excavations, there was no evidence to indicate that Lachish V had any sort of fortifications, hence the reason it was classified as an unwalled settlement. This belief, as valid as it was then, would have undoubtedly influenced his interpretations of the data pertaining to Podium A, gathered from the excavations in Area Pal. Truly, in an unwalled settlement the construction of a large public building such as Palace A would have made little sense, but in the last ten years, the discovery of multiple portions of Lachish V's solid wall by the Fourth and Seventh Expeditions have proved the city was anything but unwalled. With every season of excavation between 2013-2017 (the Fourth Expedition) and 2022-2023 (the Seventh Expedition [thus far]), information on Lachish V has increased. Not only has the city been proven to have been fortified, but it has also been shown that it was larger than originally thought and the solid construction of the city wall could be indicative of

Lachish's importance in Judah as early as the Level V city (this idea is discussed in more detail below). Significantly different from how it was interpreted during the Third Expedition, this emerging image of Lachish V as well-sized, fortified, and important certainly means that Palace A would have fit suitably into the plan of such a city.

Lachish V in Middle Iron Age IIA Judah

An Introduction to the Region

The last decade of research at Tel Lachish has not only further contributed to the understanding of Lachish V at the site-level, but it has had implications for the city at a regional scale as well. Dr. Yosef Garfinkel (2023) has recently put out a paper examining the processes of urbanization during the early days of the Kingdom of Judah. In this paper he discusses the kingdom's earliest fortified cities which included Lachish V, Khirbet Qeiyafa, Beth Shemesh 4, Khirbet ed-Dawwara, and Tell en-Naşbeh. Regionally speaking Lachish, Khirbet Qeiyafa, and Beth Shemesh are located within the Shephelah while Khirbet ed-Dawwara and Tell en-Naşbeh are further north in the hill country (Garfinkel 2023:87-88). The data from these sites and their relevant strata suggest that Judah's expansion in the hill country began as early as the tenth century BCE and within two generations had extended down into the northern part of the Shephelah as well (Garfinkel 2023:88).

Lachish V dates to the Middle Iron IIA (ca. 930-860 BCE; see Table 1), while the other four cities are from slightly earlier, during the Early Iron IIA (ca. 1000-930 BCE; see Table 1; Garfinkel 2023:89-97, 100). These other four cities were all built according to a plan, first recognized by Shiloh, that was characteristic of early Iron Age cities (Garfinkel 2023:100). This

plan included a peripheral belt consisting of three parts: a casemate city wall, domestic units/houses abutting the casemate wall, and a street (Garfinkel 2023:87, 100). Lachish V also included a plan in which houses abutted the city wall, but the city wall here was solid rather than of a casemate construction (Garfinkel et al. 2021:22-23). According to Garfinkel (2023:102) the solid city wall at Lachish V is indicative of the city's "importance as a regional center as early as the second half of the tenth century BCE."

Why was Lachish Special?

This claim sparked the question as to why Lachish specifically had taken on such a regional importance as opposed to any of these other cities. This section sought to answer this question through a preliminary least cost path analysis between Tel Lachish and the other fortified cities that would have been contemporary with its Level V city. Before this analysis could begin; however, it had to be determined which of the cities above, if any, existed at the same time as Lachish V. Of the other four cities discussed by Garfinkel (2023), two of them were not contemporary with Lachish V: Khirbet Qeiyafa and Khirbet ed-Dawwara. Radiometric results of samples from Khirbet Qeiyafa indicate that it was a short-lived city which only existed during the Early Iron IIA until its abrupt destruction before Lachish V's establishment in the Middle Iron IIA (Garfinkel 2023:100, Table 3; Garfinkel 2011:24). Khirbet ed-Dawwara was also a short-lived site with shallow accumulations, similar to those at Khirbet Qeiyafa, suggesting the site fell out of use before the Middle Iron IIA and consequently before the start of Lachish V (Garfinkel 2023:97, Table 3).

Cities at Tell en-Naṣbeh and Beth Shemesh on the other hand, can be considered contemporary with Lachish V based on the information currently available and were included in the analysis. The dating of Tell en-Naṣbeh is currently only based on relative dating techniques.

These include consideration of the site's stratigraphy and the recognized plan with the peripheral belt, mentioned above, in the earlier of the two Iron Age cities at the site (Garfinkel 2023:96).

This earlier Iron Age city, with the casemate wall and other aspects of the peripheral belt, was in use through the entirety of the Iron IIA (Garfinkel 2023:Table 3) until the late ninth century BCE, during which a new fortification system “consisting of a massive offset-inset city wall dubbed the *Great Wall*, ” was built, this time around an even larger area, marking the beginning of the second Iron Age city at the site near the start of the Iron IIB (see Table 1; McClellan 1984, Herzog 1997, Zorn 1997, Katz 1998, and Finkelstein 2012 as cited in Garfinkel 2023:96, Table 3). At Beth Shemesh, the city contemporary with Lachish V was not the one Garfinkel (2023:93-95, 100, Table 3) discusses in most detail, Beth Shemesh 4, but rather the subsequent city of Beth Shemesh 3 which was also established during the Middle Iron IIA. Beth Shemesh 3 included many impressive features characteristic of state formation such as large public buildings, an underground rock-cut water reservoir, a storehouse, a massive grain silo, and a commercial area (Bunimovitz and Lederman 2009:127-136; 2016 as cited in Garfinkel 2023:95). This city was dated from 950-750 BCE by Bunimovitz and Lederman, but the start date in the middle of the tenth century BCE has been criticized for being based on only two sherds from a construction fill and “should probably be pushed back” (Finkelstein 2002:121-122 as cited in Garfinkel 2023:95).

Least Cost Path Analysis

Overview. Having established these facts, the least cost path analysis could then be conducted in ArcGIS Pro 3.1, a software package put out by ESRI. Again, the least cost path analysis was conducted as an attempt to figure out why Lachish became an important city as early as the second half of the tenth century BCE by beginning to model the movement of people

through the regional landscape, while considering the energy required to do so. The analysis was based on only one criterion—slope, or the topography of the landscape/terrain—and attempted to follow the experimental framework of De Silva and Pizziolo (2001). Their framework was also limited to just slope and attempts to account for round-trip movement when calculating a least cost path because when “dealing with settlements, inhabited by a community, we must presume that some return trips will have to take place” (De Silva and Pizziolo 2001:280). Slope was treated as anisotropic friction and their work was carried out in the GIS software Idrisi for Windows (De Silva and Pizziolo 2001:280). Their basic steps were as follows:

1. build up a Friction Surface, in other words, an image which expresses the maximum friction exerted by each portion of landscape,
2. build up a Friction Direction Surface which is a layer that expresses in which direction the movement is subject to maximum friction,
3. formulate an algorithm to describe how friction changes in relation to the direction of movement,
4. define a set of one or more sites, for instance prehistoric settlements, from which to calculate the cost surface [De Silva and Pizziolo 2001:280]

Only Steps 1 and 4 were able to be completed. Problems arose when it came to displaying the distance accumulation rasters (produced by the Distance Accumulation tool) when the Friction Direction Surface raster, built during Step 2, was included. As such, this Friction Direction Surface and the algorithm in Step 3 were unable to be included and the generated least cost paths are only based on the Friction Surface from Step 1 and the defined set of sites from Step 4.

Whether these problems are a result of bugs in the ArcGIS Pro software, differences between ArcGIS Pro and Idrisi for Windows, or simply user error remains to be seen.

Friction Surface. To build the Friction Surface the construction of a few preceding rasters was required. First a Digital Elevation Model (DEM) of the landscape was needed. This was accomplished by downloading nine 30 m resolution tiles from NASA Shuttle Radar Topography Mission (SRTM) Global 1 Arc Second V003, found on the administration's Earthdata website. These tiles were then input into ArcGIS Pro, stitched together, and projected into WGS 1984 UTM Zone 36N, the projected coordinate system all subsequent analysis was done in. The DEM was then input into the Slope tool resulting in a new raster depicting the slope of the landscape in percent rise. This slope raster was then input into the Raster Calculator tool to apply the following mathematical function: $1/2 [1+(3.168 * \text{the slope as percentage}) + 1 + (1.2 * \text{the slope as percentage})]$. This function acts as a friction factor for a round trip in a raster grid (De Silva and Pizziolo 2001:281), finally resulting in the Friction Surface raster below (Figure 4).

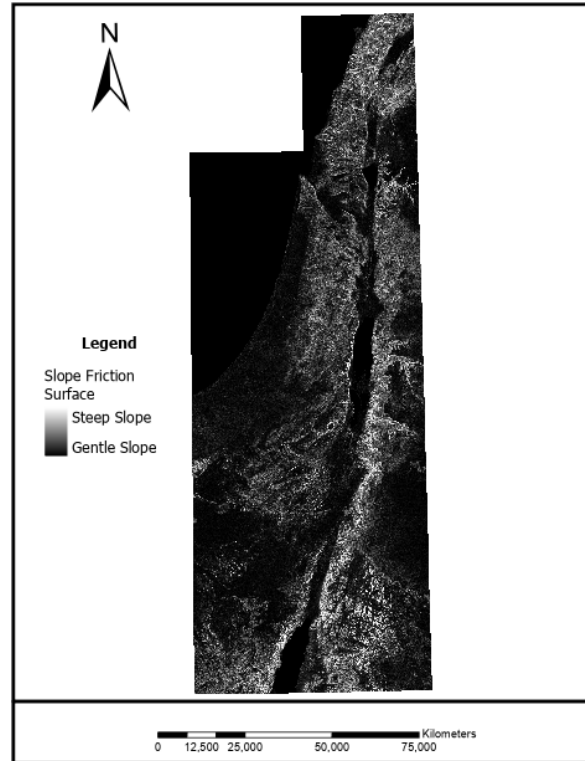


Figure 4. Modified Slope Friction grid based on De Silva and Pizziolo's (2001) Round Trip Function.

Defining the Sites. The defined sites are clearly Lachish, Beth Shemesh, and Tell en-Naşbeh. They were added into ArcGIS Pro using Excel spreadsheets containing their geographic coordinates and then extracted and projected into WGS 1984 UTM Zone 36N.

Generating the Least Cost Paths. Without being able to incorporate Steps 2 and 3 of De Silva and Pizziolo (2001), the last thing to do was generate the least cost paths. This was accomplished in two parts. First, the locations of Tel Lachish, Beth Shemesh, and Tell en-Naşbeh were added into the Distance Accumulation tool along with the DEM and the Slope Friction raster to produce a distance accumulation raster and a back direction raster for each city. See the examples of these rasters for Lachish (Figures 5-6) immediately below.

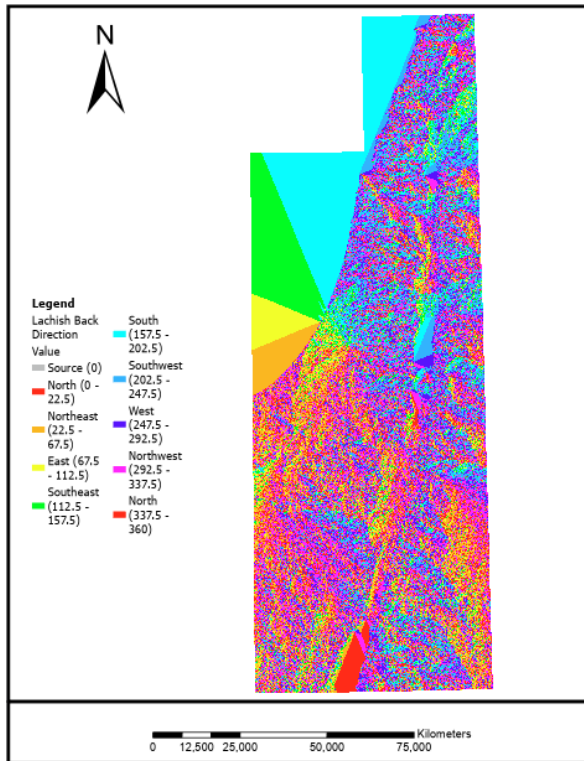


Figure 5. Back direction raster for Lachish.

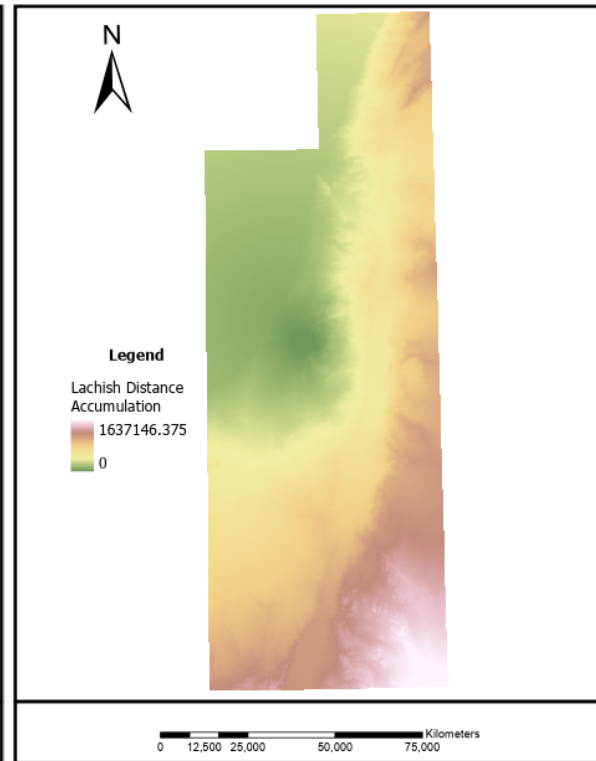


Figure 6. Distance accumulation raster for Lachish.

Once all of these distance accumulation and back direction rasters were created, they were inserted into the Optimal Path as Line tool along with the city the path would originate from. Two paths were drawn from Tell en-Naşbeh and Beth Shemesh to Lachish and a third was drawn from Tell en-Naşbeh to Beth Shemesh, essentially ‘connecting’ all three of the contemporary cities.

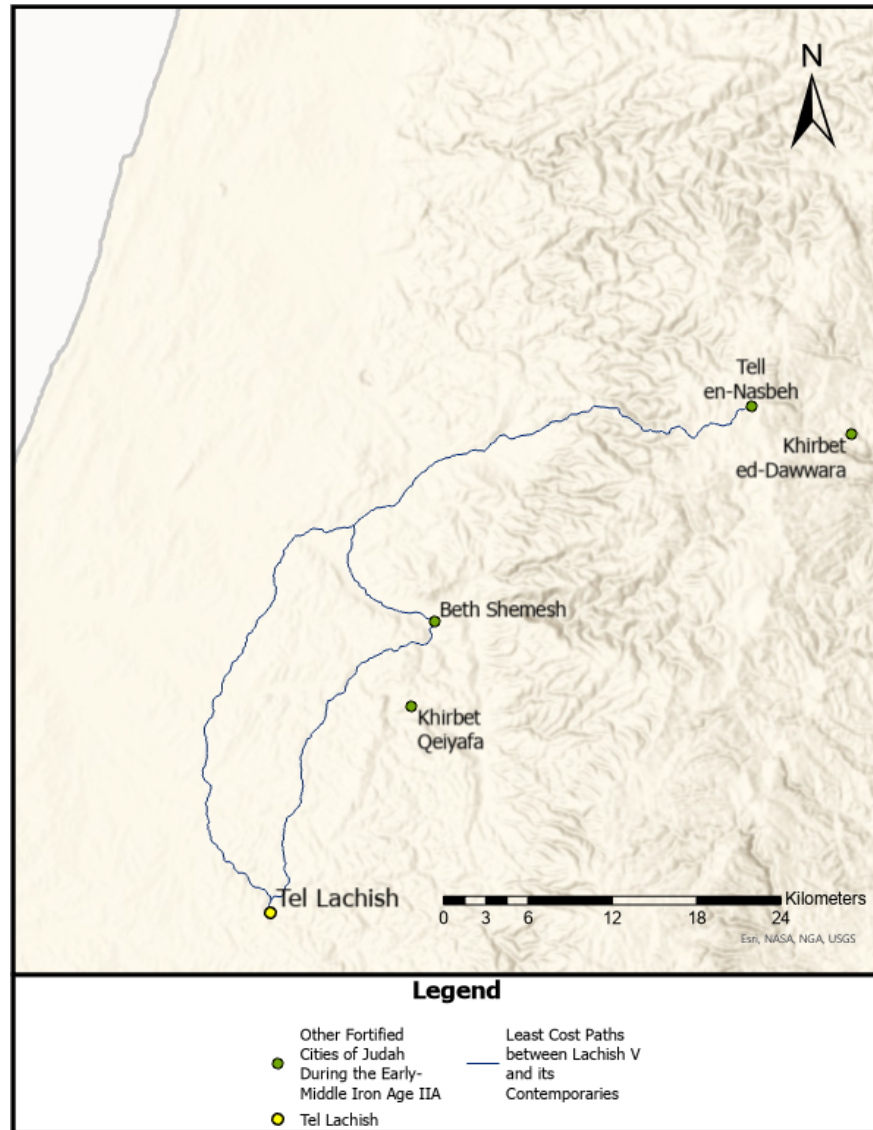


Figure 7. Least cost paths between Lachish V, Beth Shemesh 3, and Tell en-Nasbeh.

Results. As can be seen above (Figure 7), the path generated from Beth Shemesh to Lachish is much more direct than the path from Tell en-Nasbeh to Lachish, which bypasses much of the rolling topography of the hill country and the Shephelah, instead opting to go further west for the much flatter terrain. The last path, connecting Tell en-Nasbeh to Beth Shemesh, follows the path from the former to Lachish for about half of its total length, at which point it breaks off to follow a flat tract of land through a wide valley that leads straight to Beth Shemesh.

Least Cost Path	Cost	Path Length (meters)
Tell en-Naşbeh to Lachish	372,459.5625	74,876.86195
Beth Shemesh to Lachish	151,031.265625	30,114.330081
Tell en-Naşbeh to Beth Shemesh	276,173.0625	47,726.030028

Table 2. Least Cost Path Total Costs and Lengths.

Clearly the path from Tell en-Naşbeh to Lachish has the highest associated round trip cost of the group (see Table 2). This round trip would cost roughly 1.35x more than it would for a round trip between Tell en-Naşbeh and Beth Shemesh. On the other hand, the path from Beth Shemesh to Lachish and back would be the cheapest, costing only 151,031.27 units. Based on these results, it would seem Lachish V was not the fortified city located in the most optimal position during the Middle Iron IIA. As such, Lachish V's importance as a regional center so early can not be explained based upon a least cost path analysis, at least not on one that only accounts for slope. The results of this analysis actually show that Beth Shemesh 3 would have been located in the most optimal position cost-wise, as it splits the difference in cost between the cities rather well; simply looking at the map (Figure 7), one can also see that Beth Shemesh is located roughly between Lachish and Tell en-Naşbeh.

Lachish V's importance in the Middle Iron IIA despite Beth Shemesh 3's better positioning in regard to slope can possibly be understood based on the fact that Lachish V was probably built first. Recall Lachish V's attribution to the late tenth century BCE based on the pottery analysis (Kang 2016) and the results of the Bayesian analysis for the 2σ range of radiometric dates from the larger dating project (Garfinkel et al. 2019). Coupled with the fact that Bunimovitz and Lederman's proposed start of 950 BCE for Beth Shemesh 3 should likely be pushed back to a later date, this suggests that Lachish V would have then been established before

Beth Shemesh 3. In such a case, Lachish V would have at one point been the only fortified city in the Shephelah and could have developed its mantle of regional importance before Beth Shemesh 3 had even been constructed. When examining Judah's expansion south into the Beersheba Valley less than a century later—in the mid-ninth century BCE—the simultaneous enlargement of Lachish, into the centrally located and administrative Level IVb city (Garfinkel et al. 2019:708, 710, Table 5), could have been due, in part, to the previous importance of the Level V city. This is just conjecture at this point; however, and absolute dating, such as radiometric dating of multiple samples from Beth Shemesh 3, must be carried out in order to test such a hypothesis.

Shortcomings and Suggested Improvements. Keeping in mind that this least cost path analysis was only preliminary in nature there are a few shortcomings which need to be addressed. The first of these shortcomings is quite simply the use of just one criterion. Any literature pertaining to least cost path analyses will acknowledge the fact that any number of given factors could have affected and influenced how people moved through their landscapes in the past (De Silva and Pizziolo 2001:279). These factors can range from anisotropic and isotropic factors within the landscape itself (e.g. slope, waterways, vegetation cover, etc.) to cultural factors which may have been just as, if not more, influential to human movement. According to Howey (2007:1831) “the importance of incorporating multiple criteria in cost surface models has been acknowledged but many only incorporate slope (or another topographically derived variable) into the calculation of cost distance.” As with the many other cost surface models Howey mentions, this analysis also only incorporates slope and does not account for other factors that would have most definitely influenced the movement of Judahite citizens in the Middle Iron IIA. Consequently, the least cost paths visualized in Figure 7 are more

than probably not the most accurate reflections of any roads that may have connected Lachish V, Beth Shemesh 3 and Tell en-Naşbeh. In this preliminary stage this is acceptable, but any further inquiry into modeling least cost paths between these cities must account for more factors than just slope, such as cultural factors in the shape of the Middle Iron IIA borders of the Kingdom of Judah and its neighboring polity Philistia.

The other major shortcoming of this least cost path analysis stems from the original DEM that all of the subsequent rasters were produced from. This DEM was, again, made from SRTM Global Arc 1 tiles which include agricultural fields and the paved and flattened roads in Israel and the Palestinian Territories today. Unsurprisingly, the three least cost paths either followed these modern roads, ran parallel to them, or ran through large tracts of agricultural land for the vast majority of their lengths. Unfortunately, the landscape of Judah some 3000 years ago would not have been the same as it is today. In order to get paths that may better reflect the reality of human movement in Middle Iron IIA Judah, a different DEM could potentially be built using historical topographic maps. The archives of the Palestine Exploration Fund may be a good place to start searching. Any existing maps made during surveys that began around the mid-nineteenth century CE in the archives of the Palestine Exploration Fund, or other similar organizations, though still separated from Lachish V by multiple millenia, could hypothetically minimize the impact of the modern features of the landscape, built within the last 200 years or so, resulting in a new DEM that is at least slightly more accurate in representing the terrain and topography of Iron Age Judah.

Conclusion

The investigations into the site-level and regional aspects above were carried out to further contribute to the discussion on Lachish V. By focusing on not only the city wall, but also on the other Level V remains that have been revealed by the First, Second [?], Third, Fourth, and Seventh Expeditions, the evidence seemingly implies three major points: Lachish V was likely even bigger than the initial estimated 3-4 ha, the city was not destroyed violently before the establishment of Lachish IV, and Palace A would not have been out of place in the Level V city. The regional least cost path analysis that sought to understand Lachish's importance in Judah as early as the Level V city demonstrates that factors unrelated to the area's terrain are responsible for this importance. It is possible that Lachish V simply happened to be the only fortified city in the Shephelah for a short while, during which time it began to develop the prominent regional role that the later Levels IV and III cities shouldered until the latter's destruction in 701 BCE at the hands of Sennacherib's Assyrian armies. As the Seventh Expedition continues its work, the understanding of Lachish V will surely increase and the story of this long elusive city will continue to become clearer.

Acknowledgments. Special thanks to Drs. Mike Pytlik and Jon Carroll for their support and guidance as I conducted this research throughout the past year. From bibliographic suggestions, to helping me shift focus a few times as unforeseen complications arose, to letting me rattle off my ideas, I truly would not have been able to complete this research without their help. I would also like to express my sincerest gratitude to Dr. Yosef Garfinkel and his team from the Hebrew University of Jerusalem for their continued partnership with Drs. Pytlik and Carroll and Oakland

University, allowing students such as myself the opportunity to participate in an archaeological field school outside of the United States; my own experiences excavating at Tel Lachish in 2022 served as a solid base on which to begin this research. Lastly, I extend my thanks to Dr. Hoo-Goo Kang of Seoul Jangsin University for providing me with updates from the excavations in 2023 which played a crucial role in identifying the new site-level implications about Lachish V discussed above.

Notes

1. The 800 BCE date is used here to indicate the end of the Iron IIA to keep in accordance with the period's subdivisions laid out in Garfinkel (2023).
2. These rooms are labeled, from left to right, by their Grid Square References and their room/area numbers.
3. For a full breakdown of loci relating to Level V see Barkay and Ussishkin (2004:413-416).
4. Some units did not measure 5x5 m exactly, as a cliff face to the south cut a couple of the units off by a maximum of roughly 0.5 m.

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Figure Captions

Figure 1. The location of Tel Lachish compared to other Iron Age IIA cities.

Figure 2. Plan-view drawing of excavation unit ND6 depicting the ‘rock fall’ in Area 4 (Locus BC458).

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