

PART I:
INTRODUCTION
AND
STRATIGRAPHY

INTRODUCTION

Joe Uziel, Tehillah Lieberman and Avi Solomon

OVERVIEW AND SYNOPSIS

Some 170 years have passed since the Swiss doctor Titus Tobler published the first scientific mention of a stone arch built over a large, plastered pool (Fig. 1.1) west of the Temple Mount in Jerusalem (Fig. 1.2). Tobler noted that the arch supported the path leading from the market to the Chain Gate, one of the passages to the Temple Mount. Several years later, scholars began referring to it as *Wilson's Arch*, after Charles Wilson, who had been credited with the first scientific documentation of the arch (for further discussion, see Chapter 2). Early exploration of the arch focused on when it had been built, as it became clear that this arch was the last link in the chain of arches that supported the path leading to one of the main entrances to the holy compound of the Temple Mount/Ḥaram aš-Šarīf, which for centuries had served as the religious center of the city. The series of arches, which came to be known as the “Great Causeway,” extends 85 m to the west of the Temple Mount, intersecting with the Eastern Cardo (Weksler-Bdolah 2017).

Wilson's Arch is built of 23 courses of stone, with its (internal) pinnacle reaching a height of 735.20 m asl. The arch is 14.8 m wide, with an opening of roughly 12.9 m between its pier and the Western Wall (which supports the arch on the east).

With little archaeological data to determine its date of construction, Wilson's Arch has been one of the most debated monuments in Jerusalem's landscape. Despite its importance for reconstructing the history of Jerusalem and particularly for understanding the entrances onto the Temple Mount, large-scale excavations beneath the arch did not begin until 2015, when a salvage excavation was initiated by the Israel Antiquities Authority.¹ The excavation began with the construction of a support system that enabled the area beneath the arch to continue serving as a synagogue, which was established there after the Six Day War.

In 2018, the excavation was halted due to the need to strengthen the supports for the synagogue. But when this goal was achieved the excavations ceased and the focus shifted to the analysis and publication of the finds already revealed.

Unlike academically sponsored excavations, which begin with specific research aims, salvage excavations are generally a shot in the dark. Their main objective is to excavate, document, study and publish finds in the excavation area. These are then handed over for development, which creates an objective situation in which finds are exposed because of their physical location and not because of their relative importance to a given scholar. Although the excavations beneath Wilson's Arch were defined as a salvage excavation, there was a clear research question related to the work: the date of the construction of Wilson's Arch. Therefore, the project could be defined as a salvage excavation, with the aim of analyzing all strata and finds, but with a particular research question regarding the dating of the arch. This dictated the methodology of the project, which integrated

¹ License Numbers 7514, 7633, 7900 and 8205. The excavation was funded by the Western Wall Heritage Foundation.

standard excavation methodology with scientific analysis. Of particular importance was an attempt at absolute dating of the entire stratigraphic sequence. Johanna Regev and Elisabetta Boaretto of the Weizmann Institute of Science conducted microarchaeological analysis and radiocarbon dating throughout the project, as part of the broader dating project conducted throughout Jerusalem's ancient core.² This was crucial for dating the various features unearthed, including the pier of Wilson's Arch, the project's primary goal.

Almost two years after the culmination of the salvation excavation, full-scale excavations were renewed under the direction of Barak Monnickendam-Givon and Tehillah Lieberman.

WARREN'S RESEARCH OF WILSON'S ARCH

The Great Causeway and Wilson's Arch as entrances to the Temple Mount have been the subject of research for over 170 years. Tobler was the first to take note of the arch scientifically (Tobler 1853: 206). He was followed by James T. Barclay (1858: 583), who termed the large pool that was then located beneath the arch the "Makhkame Pool." Following their visits, Wilson surveyed the water systems in Jerusalem. Wilson documented the arch and the pool, terming it "Al-Buraq." He noted that the pool extended south of the arch and was roofed by a series of arches built later, south of Wilson's Arch (Wilson 1865; Bahat 2013: 38).



Figure 1.1: View of Wilson's Arch, looking north (photo: S. Halevi).

² The Israel Science Foundation funded the project. The grant (#1873/17) was awarded to E. Boaretto, Y. Gadot, D. Ben-Ami and J. Uziel. J. Regev served as the project's principal investigator and conducted most of the fieldwork related to the project as a whole and at Wilson's Arch in particular.

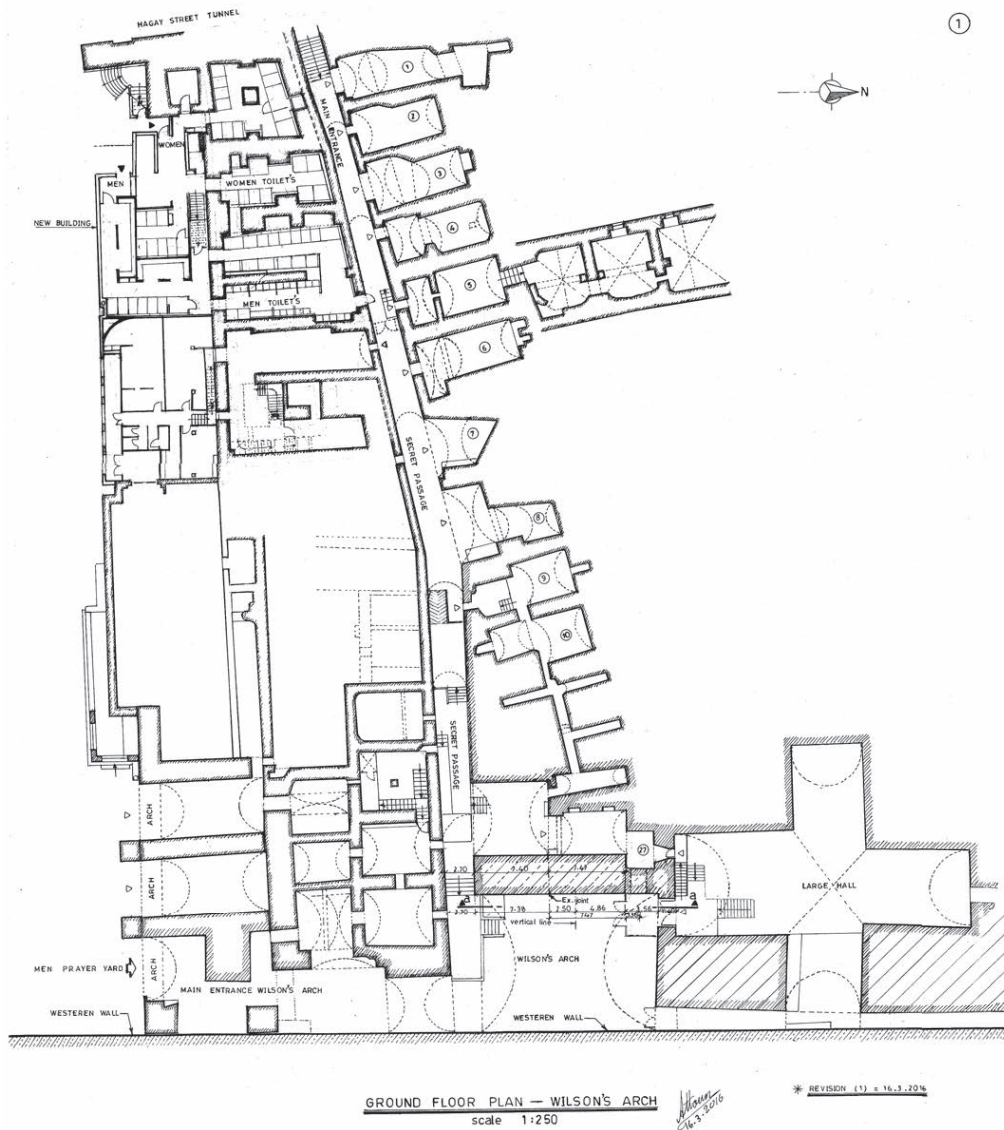


Figure 1.2: Plan of the Great Causeway and Wilson's Arch, west of the Temple Mount (plan by A. Abu-Morad).

In 1867, Charles Warren was sent by the Palestine Exploration Fund to explore and excavate in Palestine and Jerusalem in particular. His work in Jerusalem took place in areas surrounding the Temple Mount, as excavation of the Mount itself was forbidden by the Ottoman authorities. He excavated two shafts underneath the arch. The first shaft was positioned alongside the Western Wall. He described the discoveries as follows:

The bottom of this pool is 3.5 feet below the springing of the arch and is composed to a depth of 3 feet 6 inches of very hard concrete, formed of stones about 3 inches cube, set in dark cement. Below this we found black soil, and at 24 feet came in contact with a mass of masonry, apparently the voussoirs and drafted stones of a fallen arch and wall....

[T]he stones passed through appeared to be similar to those in the Sanctuary wall, and the mass of them together is about 8 feet deep. Continuing down, 44 feet below the springing of arch we came on water.... [T]he water had disappeared from the bottom of the shaft and we were able to get down 7 feet lower, when we came on water again and soft rock at 51 feet 9 inches below the springing of the arch. The bottom course of the Sanctuary wall is here let into the rock, and we sunk down 2 feet 10 inches until we could see it resting upon the hard mezzeh, which seems generally to have 3 or 4 feet of soft rock overlying it....The whole of the sanctuary wall exposed in this excavation is evidently *in situ*. There are twenty-one courses of drafted stones averaging 3 feet 8 inches to 4 feet in height... The courses are similar to, but in a much better state of preservation than, the courses at the Wailing Place; the wall, when first built, appears to have been exposed to view from the very bottom and it is probably one of the oldest portions of the Sanctuary now existing, and may have formed part of the original enclosure wall of the temple, in accordance with Jewish tradition (Warren 1876: 77–79).

As described, Warren observed several layers in the eastern shaft: the upper pool of Al-Buraq, black soil below it and a heap of collapsed masonry that he believed had fallen from the Western Wall and the arch. He discovered the base of the Western Wall built directly upon bedrock and proposed that the 21 courses of margin-drafted stones of the Western Wall had originally been overt. He also excavated an additional “gallery” to the south. Although little is known of these features due to their limited exposure, they led from the first shaft to remains of a building and pavement (Warren 1876: Pl. 34).

Another shaft was excavated on the pier on the western side of the arch through the hard concrete of the pool as exposed in the opposite shaft:

Down to 25 feet below the springing of the arch the pier was found to be built of large, squared stones (not drafted) similar to those above the drafted stones at the Wailing Place; below this, to a depth of 19 feet 3 inches, the pier is built of large rough boulders resting on the rock, which is here 44 feet 3 inches below the springing of the arch. There are seven courses of the squared stones, averaging 3 feet 2 inches to 4 feet 2 inches in height, and in the three lowest courses a recess is cut (somewhat similar to those at Robinson’s arch), the lintel over it being 4 feet 2 inches high... Apparently, it had once been used as a gateway or chamber, as there are grooves cut into the stone for a metal gate. This recess we found very convenient, as in front of it we had come across a similar mass of fallen stones to what we had encountered on the opposite side...; the debris of these fallen stones terminates near the bottom of this recess, 4 feet below where the rough stones of the pier commenced, and somewhat above the level on the other side; this is a significant fact; it points to this having been the level of the surface when this pier was built, and therefore to the pier and the original arch having been constructed long after the erection of the Sanctuary wall. The rock from which the pier springs was found to be 10 feet above the point where we had struck it alongside the Sanctuary wall, and to shelve down to east (Warren 1876: 79–80).

The shaft excavated on the west exposed the pier of Wilson’s Arch. The meeting point between its seven squared courses and the roughly dressed courses below signifies the level of activity when the arch was constructed. Warren exposed a small chamber integrated into the pier, through which he drove a hole to ascertain its thickness and nature and to continue his explorations westward. Below the level of the chamber, fallen stones were observed that were similar to those exposed on the opposite side. The stone pier was found to be built upon bedrock on a significantly higher level than the base of the Western Wall.

Although the results of the current excavations have shown that some of Warren's interpretations were incorrect, his work continues to be useful and provides relevant data on the topography of the bedrock, which dictated much of Jerusalem's urban development. In addition, as the current excavations did not reach bedrock, Warren's documentation of the pier of Wilson's Arch remains the only representation of the lowest courses of the pier.³

RENEWED INTEREST IN WILSON'S ARCH

Following Warren's work, interest in the arch was abandoned for almost a century, until William F. Stinespring (1966, 1967) returned to the arch in 1965 and 1966, taking the first modern photographs of it. After the Six Day War, work within the compound of the Western Wall Tunnels was renewed under the direction of the Israel Ministry of Religion. As part of this work, the arch was cleared to 728 m asl—seven meters below the pinnacle of the arch. This work was overseen by Meir Ben-Dov, who suggested that Wilson's Arch was an interchange that allowed entrance to the Temple Mount in the late Second Temple period, much like Robinson's Arch to its south (Ben-Dov 1982, 1983). Several small excavations were conducted in the 1990s above Wilson's Arch, west of the Chain Gate (Abu Raya 1992; Gershuny 1992; Kogan-Zehavi 1995). These excavations exposed two phases of a stone-paved street and the crown of the extrados of the arch. The dating provided for the first phase of the paved street, and as a result, based on ceramic and numismatic evidence, Wilson's Arch, was dated to the 1st century CE.

Almost 140 years after Warren's excavations, Dan Bahat conducted a small excavation south of Wilson's Arch as part of his research and excavations in the Western Wall Tunnels. The excavation exposed two subsequent floors of the large pool mentioned above, as well as domestic structures to its south (Bahat and Solomon 2006; Bahat 2007, 2013). The southern face of the arch's pier was exposed by Onn (Onn, Weksler-Bdolah and Bar-Nathan 2011; Onn and Weksler-Bdolah 2016). The various excavations led to a series of articles regarding the debate about the function and construction date of Wilson's Arch. Three possible dates were suggested for the construction of the arch: the Early Roman period, the Late Roman period and the Umayyad period.

THE EARLY ROMAN PERIOD

Wilson (1865) believed the arch was an integral part of the construction of the Temple Mount complex and particularly the Western Wall. He therefore attributed it to the Early Roman period. Stinespring (1966) adopted this opinion, noting the similarity between the stones of the arch and the Temple Mount walls. Ben-Dov (1982, 1983) suggested that Wilson's Arch was built like Robinson's Arch (although recent reconstructions of Robinson's Arch suggest that it served as a bridge; see Mazar 2020; Moscovich 2022), supporting a causeway that rose above the main street that ran along the western foot of the Temple Mount, providing access from the street to the Temple. Following Ben-Dov, Onn and Weksler-Bdolah (Onn and Weksler-Bdolah 2010; Weksler-Bdolah 2015) pointed out the similarities between the two arches, as well as the excavations above Wilson's Arch that revealed a monumental pavement, beneath which a coin dating to the days of Pontius Pilate was unearthed (Szanton *et al.* 2019). In their opinion, Wilson's Arch was constructed as part of the expansion of the Temple Mount in the Early Roman period.

³ The renewed excavations by Monnickendam-Givon and Lieberman exposed the courses of the Western Wall down to bedrock in the northern part of the excavation (see Chapter 4).

THE LATE ROMAN PERIOD

As a result of Warren's discovery of collapsed stones in his excavations beneath the arch, he and Conder suggested that the arch had two phases: the early phase which dated to the Late Roman period and which collapsed, and the later phase which was rebuilt in the 5th–6th centuries CE (Warren and Conder 1884: 196–209). Amos Kloner (2006) agreed with the idea of two phases but adjusted the dating of the first stage to the Second Temple period and the second stage—as seen today—to the Late Roman period. According to Kloner, the first stage of the arch was destroyed in the events leading to the destruction of the city in 70 CE, but it was rebuilt—as part of the Great Causeway—in the Late Roman period. Kloner claimed that the arch cuts the Western Wall, with the stones of the latter adapted to fit the arch to repair the bridge leading from west to east, as part of the Roman construction of the *decumanus maximus* of Aelia Capitolina that led to the Temple of Jupiter on the Temple Mount. Avi Solomon (2011) accepted the assumption that the Western Wall was cut during the construction of the arch.

THE EARLY ISLAMIC PERIOD

Bahat (2013) adapted the two-stage theory, suggesting that the second stage be dated to the Early Islamic period. Kloner claimed that the bridge to the Temple was destroyed during the Great Revolt but was restored over half a millennium later to renew the water supply to the Temple Mount from Solomon's Pools. His suggestion was based on the results of Robert W. Hamilton's 1932 excavations, which supported an Early Islamic date for the construction of the Great Causeway. The arch supported the entrance to the Temple Mount following the construction of the mosques, around which an important Islamic center was established after years of abandonment (Bahat 2013: 79–90, 390).

THE CURRENT EXCAVATIONS: AIMS, METHODS AND ACHIEVEMENTS

The excavation beneath Wilson's Arch aimed to provide a complete stratigraphic sequence of activity, which would contribute to our understanding of Jerusalem as a whole and the area west of the Temple Mount (including its outer enclosure, i.e., the Western Wall) in particular. Importance was placed on resolving the debate regarding the dating of the arch.

The active prayer area beneath Wilson's Arch (Fig. 1.3) inhibited our ability to excavate the area from the surface. To allow for continued use of the prayer area during the excavation, eight columns were drilled into bedrock to support the synagogue floor. Although the columns damaged the archaeological layers below, this damage was not seen as a major issue (see further discussion in Chapter 20). A solution was required to excavate beneath the newly supported floor. The upper two meters of the area were excavated horizontally. A well-documented section exposed by Onn enabled us to define the sequence of layers. New sections were created every three meters, and these were documented and studied to determine whether the sequence of layers had changed. The upper two meters had been disturbed by modern building activities, leaving only small segments appropriate for archaeological examination. Work was conducted slowly when such areas were defined, separating between defined layers as much as possible. The layers were sampled for microarchaeological and radiocarbon analysis to maximize the archaeological data that could be obtained.

Following the excavation of the upper two meters, the area was divided into six “squares,” each measuring 6.5×6 m (see further discussion in Chapter 3). Throughout the excavation, samples were taken for wet and dry sifting, as well as flotation. Upon the discovery of the remains of a theater-like structure, all earth was taken for wet sieving.⁴

⁴ The wet sieving was conducted in the Emek Tzurim National Park.



Figure 1.3: View of the prayer area beneath Wilson's Arch, looking north (photo: S. Halevi).

Although remains had been uncovered dating from the Late Hasmonean period through the Ottoman period, the primary achievements of the excavation focused on the Early and Late Roman periods. This solved the debate regarding the construction of the arch; the arch had two clear phases—both in the Early Roman period. Additional remains dating to this period contributed to the study of Jerusalem in the late Second Temple period, and particularly the 1st century CE, when the city grew exponentially, and major building projects were undertaken. These included the expansion of the Temple Mount, the construction of a network of bridges, roads and sewers beneath them, and aqueducts and other elaborate buildings throughout the city.

Following the destruction of the city in 70 CE, the character of Jerusalem changed. The finds, including pottery, faunal remains, botanical remains, numismatics, glass, metal, etc., contributed to the study of the material culture of Aelia Capitolina, which began as a legionary camp before being transformed into a civilian settlement and declared a Roman colony in 130 CE. The discovery of the small theater-like structure built beneath the arch in the early 2nd century CE—the first building of its kind in Jerusalem which illuminates the stages of development of Aelia Capitolina and the civic center of the colony—is of particular importance.