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Studying the Significance of the Uninterrupted Occupation in the Archaeological Site of Pella in Jordan as a Sustainable Built Heritage

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Abstract:

The Archaeological site of Pella in Jordan represents a continuous uninterrupted microcosm of settlements since the Natufian Period. The sequence of settlements embodies the heritage's ability to self-sustain over many years, holding substantial power and value historically and geographically. Pella has become underdeveloped and vulnerable due to the lack of understanding of what the site has to offer. This paper highlights Pella's unique heritage from how its name was derived, its geographic setting, historic interrelated characteristics of various periods, as well as the values, attributes, and opportunities it presents as a sustainable built heritage. This will strengthen the outstanding universal value OUV of the site that might lead it to get it inscribed as a World Heritage Site as well as promote and enhance the national and international advocacy for its preservation.

Keywords: Pella, significance, uninterrupted occupation, sustainable built heritage.

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1. Introduction

The Archaeological site of Pella is a large site rich in an architectural and artistic ensemble of remains representing a microcosm of settlements since 6000 B.C.E. that have molded human history in Jordan since the commencement of civilization. Located in a country with a rich and complex history, Jordan has a large variety and diverse range of cultural heritage. Due to its geographical location, it became a crossroads between powerful civilizations and religions (figure 01). All of which left behind an overabundance of inimitable tangible and intangible heritage (World Bank Group, 2020).

Pella is an example of a built heritage that was able to sustain itself for many eras. As such, its rich historic stratigraphy and continuous human occupation have witnessed archaeology and relics of different artistic and architectural periods from the Neolithic period, the Chalcolithic period, the Bronze Age, the Iron Age, the Hellenistic Age, the Roman period, the Byzantine period, and lastly, the Islamic period (Smith, 1968; 1981; Churcher, 2008). Unfortunately, the overwhelming number of cultural heritage sites in the country has prioritized some over others, leaving most to be underdeveloped and unable to become sustainable environments due to a lack of resources in conserving them, one of which being Pella (World Bank Group, 2020).

As Pella's environment has been subject to constant change and development at rapid rates to this day, new threats, natural and anthropogenic, are created that impact Pella's site. The constant change affects the site's values and attributes, where tangible and intangible resources are slowly fading due to the lack of understanding and knowledge about the site, hence, the site is unable to sustain itself. Consequently, conservation is necessary to elongate the site's life by safeguarding and preserving these resources (Teutonico & Matero, 2001).

Due to complexities surrounding the heritage as well as its pertinence to be listed under the UNESCO World Heritage List, developing a conservation and management plan based on a value approach, will systematically recognize the values, attributes, and cultural significance that have been ascribed by stakeholders of a heritage to its context and society (UNESCO, et al., 2013). Through understanding the values and significance of cultural heritage, a formal and structured planning process of the value-based approach can be structured into four main phases; identification and description, assessment of significance, conditions and management, response through decision making, and lastly, implementation, monitoring and reviewing (Sullivan, 1997; Demas, 2000). As

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such, by following the value-based approach to conservation for managing and directing change, the first step would be "Identification and Description" of the current knowledge about the site and what needs to be understood about Pella (Sullivan, 1997). Accordingly, with continuous practice and implementation of new tools and processes in conservation and management, gaps between heritage and sustainability are slowly decreasing as cultural heritage sites become more inclusive in sustainable approaches in conservation and management.

This paper explores the rare significance of Pella as a sequence of uninterrupted occupation to understand the values and attributes, as well as the knowledge it can offer. This will aid in demonstrating the current condition of the site, as well as all challenges it faces, as an initial step in a value-based approach for its conservation and management towards achieving a sustainable built heritage over the long run.

2. Problem Statement

Due to the large number of cultural heritage properties in Jordan, it is difficult to maintain, manage and monitor all of them effectively. Thus, some are prioritized over others. Even though Jordan has its own archaeological database, the Archaeological Site of Pella remains underdeveloped, and in need of more attention. There is a lack of literature, awareness and understanding of Pella's significance and reason behind the need to properly conserve and manage it which ultimately leads to poor conservation and to the site's current vulnerable state. Exploring, understanding, and sharing the knowledge, values, and attributes of the site, would enable a base tangent to better comprehend the values and attributes of the site.

Therefore, this research will be answering the following questions:

1. What is the significance of the Archaeological site of Pella?
2. How is the site considered a sustainable built heritage?
3. What are the opportunities that the site can provide?

3. Research Methodology

This research will be based on both primary and secondary data collection. Primary data collection through personal observation and assessment of the site. The secondary data collection through documented books, journals, academic articles, governmental resources, and publications. In addition, a literature review that demonstrates consecutive facts related to the site Pella, how it represents a

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sustainable built heritage, its values and attributes, challenges facing it, its status, along with opportunities it presents, all of which fall into the initial step of a value-based approach to conservation and management.

4. Significance of Pella's Geographical Setting

Pella or the modern village of Tabaqat Fahl is located in the eastern foothills of the Jordan Valley at the southern end of an extended plateau, with a north-south orientation line parallel to the valley floor (figure 02). The site is 27 kilometers south of the Sea of Galilee, also known as Lake Tibreas and 5 kilometers from the Jordan River (Walmsley, 2007). The main archaeological features of the site are 30 meters high and approximately 10 hectares wide, where visible monuments are situated on two 100-foot mounds of debris; the main one being Tabaqat Fahl and the second one is a natural hill called Tell el-Husn. The site's topography is mostly situated on a flat basin surrounded by mountains and agricultural terrains, making it hot in the summers and mild temperature in the winters (Smith, 1968; Bourke, 2013; Walmsley, 2007). The site offers an unmatched range and amalgamation of archaeological monuments that date back to the prehistoric era (figure 03). It can be noted that Pella's location is one of the main reasons for such a range in archaeology that influenced the scientific and archaeological investigations and excavations since the 1950's. Due to its geographic location, Pella acts as a vital cultural and economic link between different crossroads. Such as; north-eastwards routes that lead to Irbid (Arbela), Dara'a (Edrei) and Busra (Bostra). West routes that link to the Mediterranean Sea and to Marj ibn Amir (Esdraelon Valley). Lastly, south-eastwards routes that lead to Amman and Jerash (Philadelphia and Gerasa) (Walmsley, 2007; Ababneh, 2018).

Pella provided shelter, food, and several facilities to travelers at different times over its rich and long history, thus acting as a 'gateway community.' Its unique location allowed an advantageous power due to the broad view along the valley and a wide-ranging vision along the north-south routes, routes towards the Mediterranean, south from Tell el-Husn, as well as east routes from Pella all of which were easily dominated. Thus, Pella has a strategic dominance to its neighboring places and locations (Walmsley, 2007). Pella's location is important during historical dynastic aggravations that were characterized in several power shifts when Emperor Maurice Tiberius was overthrown by Phocas (602 C.E.) and later deposed by Heraclius of North Africa (608–10 C.E.). Further, the geographical location of Pella offers several environmental advantages, by having constant underground water and springs which allowed for continuous rural activities and

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non-stop supply of water for agricultural lands towards the west and north of the site where different crops were grown over the year (Ibid).

5. Pella: The Name Origin and Discovery

Various ancient sites have been referred to as Pella, including a settlement in north Syria that was later renamed to 'Apameia.' Inherently, it is indefinite as to how the name 'Pella' in Transjordan originated or who founded the Greek name (Smith, 1981; Cohen, 2006). The site has been referred to by different names and languages throughout its history:

a. **Ancient Semitic:** Based on ancient Semitic texts, the pre-Hellenistic Pella that predated the arrival of the Macedonians, was referred to as 'Pahil' or 'Pihil' (Cohen, 2006). Based on 4,000 years old historical Egyptian Excretion Texts, that were found on Pharos temple walls, was the name of the city under the old Semitic name of 'Pihilum' (Smith, 1981).

b. **Hellenistic:** The name 'Philium' was then Hellenized to 'Pella' in honor of the birthplace of Alexander the Great in Macedonia. Though the origin of the name is not confirmed, based on Cohen (2006) studies, he has concluded that the name could have been derived from its ancient Semitic name as well as due to similar characteristics of richness in hot springs that are seen in both Macedonia and Transjordan sites (Dion and Pella respectively). According to Greek manuscripts based on Stephanos or Stephan of Byzantium, the name Pella was also known as Berenike in Greek; 'Πέλλα', which indicates that both Pella and Dion (archaeological site at Mount Olympus in Greece) were founded by the Macedonian king (from the ancient kingdom in Greek antiquity). The Greek name was used under the Ptolemaic rule which was later reverted to Pella under the Seleucid rule. However, after the Roman General Pompey captured the city, it was later referred to as 'Philippeia' and came to be known as one of the ten cities of the Decapolis (Smith, 1968; Cohen, 2006).

c. **Arabic:** With the Islamic conquests in the region, the name was then

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converted to 'Fahl' or 'Fihl' (Churcher, 2008). This later influenced the settlement of a village of approximately 300 people in the 19th century, known as 'Tabaqat Fahl' on the site. The reference of its ancient name is noted, especially after the decline of Greek and Byzantine culture, where the adaptation of ancient Semitic names with 'h' resurfaces in the Arabic name for Pella as the equivalent of 'Pihilum' (Smith, 1968; 1981).

The location of Pella or Tabaqat Fahl was lost for centuries to the world until its re-discovery in 1818, by two English travelers Charles Irby and James Mangles. Even though their identification failed to mention a particular ancient site, the initial observation was of a village on top of a mound surrounded by a beautiful landscape, hence, were the first to record the ruins. There has been a suggestion about Pella in 1842 by the German geographer Heinrich Kiepert in an illustrative map of the site (figure 04). That is until 1852, when Edward Robinson and Eli Smith visited the site, and the ruins of Fahl were identified as ancient Pella by Robinson (Churcher, 2008; Bourke, 2013). As such, Pella became a focus of scholarly attention that welcomed a series of different visits by Western intellectuals. Scholars include the French geographer Victor Guerin in 1875 and later, Selah Merrill in 1876 who noted recent excavated tombs that date back to the Byzantine period and traces of the ancient road that links Pella to Jerash, which was confirmed in later studies. In 1887, the German scholar Gottlieb Schumacher, carried out extensive surveys and published his book 'Pella'; which illustrates sketches, plans, antiquities, topography, and history of the site. Further visits commenced in the early 20th century by Foxwell Albright in 1927, and John Richmond in 1933 and Nelson Glueck in 1940; all of which surveyed the site and extracted new knowledge without undertaking excavations (Churcher, 2008).

It is in 1958 when archaeological investigations commenced by the American Schools of Oriental Research (ASOR), and further assisted by the Department of Antiquities (DoA) in Jordan, from 1963 to 1964, who salvaged remains of 11 tombs that date back to the Late Bronze and Early Iron Age. As such, this later expedited the process of beginning the first 1967 season of full excavation of the site by Robert Smith, for the College of Wooster in Ohio (Bourke, 2013). Where Smith focused on excavating Byzantine ruins and documenting climatological information and precisely mapping the site. Due to the 1967 Arab-Israeli war, further excavation campaigns were stopped and results from the first season excavations and background information on the site were published in 1973 as 'Pella of the Decapolis' by Robert Smith. That is until 1978 where the campaign

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started again under the lead of Smith and Co-directors Basil Hennessey and Anthony McNicoll of the University of Sydney in Australia in collaboration with the Jordan DoA (Khalil, 1984). Despite having to deal with different calendars, having the two international teams work together was successful for the Pella project as each team worked on different seasons but used the same equipment, method of documenting and techniques. As such, the joint expedition was summarized into four volumes, two were published by the College of Wooster and two by the University of Sydney (Bourke, 2013; Khalil, 1984).

Moreover, the joint project continues. The Wooster team's work in the field concluded in 1985 but is constant in desk research, whereas the Australian team has excavated the site annually, resulting in a total of 19 seasons of excavations; with the exception of years 1990 and 1991 due to the Gulf War (Churcher, 2008).

6. Historical and Archaeological Significance

According to findings and excavations on site, Pella has been occupied since the Neolithic times. However, there are no concise sources that confirm precisely the first settlements on the site before that time. The site is rich in wide-ranging preserved remains from the Bronze and Iron Ages and there have also been references of Pella which were strongly associated during the Hellenistic and Roman Periods, as a region of great political and cultural power being a part of the Decapolis. Pella later flourished during the Byzantine and early Islamic period. Though it can be noted that there was no major Byzantine modification of Roman temples, highlighting that each period constituted of its own monuments (with little reuse of previous elements) and that no pagan temples were converted into churches. Thus, maintaining a high level of authenticity to its history. Later during the Islamic period, archeological remains were of great importance as they can trace a reliable historical chronology, especially after the destruction caused by the 749 C.E. earthquakes. The site was later inhabited by a large village that built a mosque, an administrative compound and later sugar mills, where agriculture flourished (Khalil, 1984; Walmsley, 1997; 2007).

a. The Natufian Period

The term 'Natufian' is used to portray how inhabitants in the Jordan Valley from over 12 thousand years ago lived and went by their everyday norms and culture. This period represents the first settled life and an important shift in mankind's cultural progression in life; from that of a nomadic dweller, which is usually referred to as a hunter or gatherer, to an urban dweller in a village

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(Churcher, 2008). Remains of a cluster of circular houses that were once a part of an ancient village were found, making it one of the oldest villages in Jordan. Early settlements usually depended on hunting for sustenance, however the inhabitants shifted into agriculture and relied heavily on wild grains from the landscape and terrains around them. Evidence of the lifestyle shift in human society is confirmed via investigations and excavations on site and can be noted that they all took place before domestication (of wild animals), metal casting and the invention of pottery (Churcher, 2008).

b. The Neolithic Period

The first settlement occupation on the main mound in Pella was during the Neolithic period, also known as the New Stone Age. This period began approximately 10 thousand years ago and lasted 4 thousand years in Pella (Churcher, 2008). Based on the Sydney University excavations, dwellings found dated back to 6000 B.C.E. (figure 05). They have also confirmed that Pella flourished as an agrarian community during this time due to the lack of imported goods, and the presence of domesticated animals for food and for carrying loads, as well as a variety of harvested plants. This was advantageously achieved by the rich natural resources that their environment provided from fertile land to steady springs and an altitude for cool breeze. Around 7000 B.C.E, the Neolithic community experienced a major innovation through the invention of pottery which positively affected their daily lives (Bourke, 2013).

c. Chalcolithic

According to Bourke (2013), The Chalcolithic period is subdivided into two phases. The first is the Early Chalcolithic period (4700 B.C.E.), where the Pella settlement slowly grew larger and more specialized in their harvesting. There has been an increase in the number of animals which indicates the possible use of wool and dairy production, as well as a wider range of plants. Excavations confirm that the village had a centralized organization where inhabitants began processing olive oil and storing grains in bins (Churcher, 2008; Bourke, 2013). An economic shift slowly started to take place with the occasional introductions to imported goods such as shell, ivory, ceramic and stone. These became important elements in the later Chalcolithic period (4200 B.C.E.), as they represented a modest development in social differentiation in the community. This is seen through the use of imported materials in tableware, personal adornments, and in rare types of food (Bourke, 2013). It is during the late Chalcolithic period (4000 B.C.E.), also known as the Copper or Stone Age, when the Pella settlement began

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melting and molding copper. It is also during this time when large, 20x20 meter structures were built to store grain (figure 06), indicating that there was an excess in sustenance (Churcher, 2008; Bourke, 2013).

d. The Bronze Age

At the end of the Chalcolithic period, there seems to be a short break in occupation at Pella. It is assumed that earthquake activity and tremors affected the environment for a short time and caused a shortage of water, thus affecting the settlement (Bourke, 2013). That is until 3000 B.C.E., where excavations show new innovations that were introduced with the mixture of copper and tin to create bronze. Thus, the Bronze Age began and widespread in the Middle East that lasted for 2 thousand years as a period of innovation, urbanism and richness. An important characteristic of the Bronze Age was its impact in developing the city of Pella (Churcher, 2008). During the Early Bronze Age (EBA) (3000 B.C.E), Pella developed from a village into a larger power-centralized settlement. Its rapid development of social organization and urbanism are indicated by a city wall made of mud-brick and stone that surrounded the main mound as a defense mechanism (currently one meter in height remains) (Churcher, 2008).

During the Middle Bronze Age (MBA) (1900 B.C.E), traces show stronger structures of 7 meters in height today, along with a tomb that had several objects from personal tokens such as earrings and bracelets to alabaster vessels and pottery (Churcher, 2008). Pella continued to flourish into the Late Bronze Age (LBA) (1500 B.C.E.) where structures of houses from large stones show remains of plastered floors and walls. A tomb believed to be for King Mut-ba'lu, the king of Pella, who has been mentioned int the Amarna Letters, also dates back to the LBA. The Amarna Letters are cuneiform texts that are adorned onto clay tablets (dating back to 1380-1370 B.C.E.) and were among the ruins of Akhenaten's capital of Amarna in Egypt (Churcher, 2008).

Moreover, one of the most significant findings was the excavation of the six-phased Bronze and Iron Age temple. It is the largest Canaanite temple in Jordan that was dedicated to the chief Canaanite god of creation, El (figure 07) (Churcher, 2008). The large stone fortress consists of early MBA (2000-1800 B.C.E.) mudbrick temples that were preserved within the stone temple foundations (Phases 1 and 2). It also consists of different phases built on top of one another. The first, a Syrian anten-temple (Phase 3), and the second, a Fortress Temple or 'Migdol' (Phase 4). The temple was later modified in the early LBA (1500 B.C.E.) where the internal box was subdivided for dedicated Holy of Holies spaces (Phase 4).

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Unfortunately, the structure survived for over a hundred years and an earthquake hit and destroyed the northern side. Extensive remodeling later occurred with a large Egyptianizing influence on the structure (Phase 5). Lastly, it is during the Iron Age (950 B.C.E) where a major rebuilding of the temple took place (Bourke, 2013).

e. The Iron Age

Iron was already used during the Late Bronze Age in the Middle East but with time its availability increased rapidly in the Iron Age (1100 B.C.E.) and became cheap enough to be used for several metal innovations such as agricultural tools. The Iron Age goes through definite peaks and troughs. During the Early Iron Age, there were several upheavals and commotions throughout the Mediterranean, such as the collapse of both the Mycenaean civilization of Greece and the Hittite Empire. Egypt was also under attack from sea-borne warriors looking for new lands and Israelite tribes arrived at west of Jordan. Thus, Pella did not escape movements happening around it nor the dislocation, poverty or reduced occupation of the period (Churcher, 2008). However, according to excavations, the locals were able to remain loyal to the Canaanite god, El, through their cult stands that are decorated with motifs, where offerings and incense were given to the gods. Excavations uncovered areas of administrative and religious buildings, as well as a temple complex of workshops containing over 20 rooms that were used to store food, liquids, as well as cloth weaving; which was the main trade object of the time. All of which indicates that Pella was a thriving community towards the Middle Iron Age. However, during the Late Iron Age, a recession or an almost close to complete abandonment happened due to the Neo-Babylonian aggression in the region (Churcher, 2008; Bourke, 1997).

f. The Hellenistic Age

The arrival of Alexander the Great to Pella had a strong Greek influence on it, both culturally and socially. This is especially noted in the site's name which was Hellenized to Pella; in honor of the birthplace of Alexander the Great and a close association to its ancient name 'Pihilium.' The Hellenistic period (3rd to 1st century B.C.E.) was re-established as an urban center under a Seleucid monarch, Antiochus III's conquest. Pella fell under the reign of Ptolemaic rule after the death of Alexander the Great in 323 B.C.E., and later under the Seleucids in 198 B.C.E. (Smith, 1981; Churcher, 2008). During the 2nd and early 1st century B.C.E., Pella flourished in trade and expanded in population until the region was invaded and Pella was captured by Alexander Jannaeus (Hasmonean ruler of Palestine) in 83-

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82 B.C.E. It is noted by Josephus, a Jewish historian, that Jannaeus destroyed Pella because its inhabitants refused to adapt to the customs of the Jews (Smith, 1981; Churcher, 2008). Artefacts that characterized the Hellenistic period include lamps from Athens, coins (which bore dates from the second half of the 2nd century B.C.E.), glass, along with a considerable amount of domestic architecture and imported goods from Greek islands (Smith, 1981). After the destruction of Pella, the city recovered and flourished in trade during the Hellenistic period, due to its geographical location and its crossroad of major trade routes. This was indicated through stone forts that were built as watch towers to protect the thriving city (Churcher, 2008).

g. The Roman Period

The Roman General Pompey conquered Pella in 63 B.C.E. and with a heavy Hellenistic and Roman cultural influence, Pella thrived in prosperity and peace as it became a city under the 'Pax Romana' (Roman peace) and a part of the ten cities of the Decapolis (Smith, 1968; Churcher, 2008). A major event to occur during the Roman period was the flight of Christians from Jerusalem to Pella in seek of refuge to avoid the Roman siege who were advancing into Jerusalem to suppress the Jewish Revolt in 66-70 C.E. Since then, Pella had a flourishing (first) Christian community, and is believed that the Christian apologist, Aristo (2nd century C.E.) came from Pella (Smith, 1968). The Christians later returned to the destroyed city of Jerusalem in 130 C.E. and continued their religious teachings. Coin minting remains (figure 08) illuminate evidence of the prosperity of Roman Pella through illustrations of buildings in the valley, colonnaded temples and streets. Other excavations include tombs dating back to the Roman period that included lamps, pottery, and glass flasks (Churcher, 2008). Pella in the Late Roman and Early Byzantine period was relatively vague; however, several milestones on the Roman road (162 C.E.) between Pella and another Decapolis city Gerasa (Jerash) were found. Other Late Roman and Early Byzantine period structures were destroyed by Late Byzantine and Umayyad period construction (Smith, 1981).

h. The Byzantine Period

After making Christianity the State Religion in 330 C.E., the Roman Emperor Constantine shifted the Roman Capital to the city of Byzantium, later named Constantinople, which founded the Byzantine Empire. Pella continued its role as part of the Decapolis administrative centers and its importance as a city encouraged a building boom as early as 451 C.E. (Smith, 1981; Churcher, 2008). Pella reached its greatest size and prosperity during the Byzantine period when

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the city was engulfed in monasteries, residential structures and public buildings which all crowded the slopes and main mound, as well as a large number of presses for wine production were found. Pella was very much a Christian city with its own bishop who participated in the Council of Ephesus in 449 C.E. and the Council of Chalcedon in 451 C.E. During this time, the city was inscribed with crosses, Christian epitaphs and symbols; above tomb doors and inside tombs. Old Transjordan religions maintained a powerful hold on inhabitants of the city, as a result, Christianity practiced at Pella was integrated with non-Christian ideas and practices in the Byzantine times (Smith, 1968; 1981). Major remains of the Byzantine period are the three Basilicas that were constructed in the city, the first (and largest) at the beginning of the spring (figure 09), the second on the east side of the city and the third, in the village of Tabaqat Fahl (Churcher, 2008). Other Byzantine remains include the Odeum theatre, close to the central basilica, that is about 62 meters below sea level, making it the lowest Odeum in the world (Milhim and AlHassan, 2010). Nevertheless, this prosperity came to an end in the 7th century by a Persian invasion, and later by Muslim troops who gained control over the region and Pella included (Smith, 1968).

i. The Islamic Period

The Byzantine Empire was slowly weakening before the Muslim armies marched northward out of Arabia. In 635 C.E. the Muslims defeated the Byzantine forces at Pella in the Battle of Fihl, hence Pella was called 'Fahl'. In fact, ancient resources note that the Pella inhabitants surrendered, and no blood was shed. This victory was the center point of spiritual and economic change in the city. Following the conquest, specifically during the Umayyad period (661-750 C.E.), new cultural factors were initiated, such as the construction of sprawl mound houses (typically of 2 storey) with reused building materials and broken columns, and stables for animals, where some also resided in the same houses as the people, and camel caravans began (Smith, 1981). However, by establishing Islam as the dominant religion in the region, the Muslims no longer had control over the major trade routes, thus prosperity in trade declined, which consequently affected the material culture of Pella's inhabitants. Under Muslim rule, Christians were put under strict restraints through conditions of head-tax and land-tax in return for guaranteed peace towards the people as well as their properties (Churcher, 2008). Due to the continual economic decline and religious changes to Islam, many Byzantine churches slowly deteriorated over time. By the 8th century, two of the churches housed animal stables and eventually stopped being used for religious purposes. The last church was left for the small Christian community that remained (Smith,

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1981; Churcher, 2008). An earthquake in 747 C.E. caused major destruction and collapse of almost all buildings in Pella. As such, what remained of inhabitants moved to the north of the main mound and some to neighboring villages (Smith, 1981).

Pella or Fahl experienced an accelerated pace of social and economic reconstruction under the Ayyubid and Mamluk periods, which helped recover some of its former status and significance. Excavated architectural features of this period include a mosque in the center of the main mounds (figure 10), a cemetery at the eastern end of the mound, a domestic area and a sample of material culture; some that include glazed and unglazed potteries of different uses (Walmsley, 1997). During the Ottoman period (16th century), a village named Fahl al-Tahtâ (Lower Fahl) was referred to in the Ottoman 'daftars' by inhabitants located directly below Pella on the Jordan Valley floor. This indicates that while Pella was located on the mound it was referred to as Tabaqat Fahl (Upper Fahl). During this time, there were nine family acting heads all who worked in agriculture (Ababneh, 2018). Occupation in Pella or Tabaqat Fahl continued until the Jordanian government encouraged inhabitants to leave in the 1950's, for archaeological investigations and excavations to commence (Smith, 1981).

7. Pella as a Sustainable Built Heritage

Built environments are an amalgamation of complex processes of settlements that rise and fall continuously in the same environment over a long period. This complex history connected through its tangible and intangible remains from each period is a representation of the character, values, identity, traditions, social and economic image of those who once occupied the area and are further reflected in the local community today (Peuramaki-Brown, 2013). Pella, like many other cultural heritage sites have survived to this day along with its weathered state of interconnected characteristics. To sustain such heritage and what it has to offer from values and attributes, and ensure they are carried forward into the present and future, they must be identified and understood through contemplative conservation and management. Only then can it be comprehended how its significance is vulnerable to various external and internal factors that impact its longevity (Matero, 2001). Thus, to become a sustainable built environment, priorities towards holistic approaches need to be adopted for a balanced relationship between conservation and management, along with its natural, social, cultural, economic, and community factors on local and global levels (Grierson, 2009). As such, the process of sustainability is integrated in all stages of a management

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plan. Therefore, alongside the four main phases of a value-based approach to conservation management plan; identification and description, assessment of significance, conditions and management, response through decision making, and lastly, implementation, monitoring and reviewing, the following two are additional guiding frameworks that help accomplish a sustainable built heritage. The first framework is a multidisciplinary approach through five key factors that have been developed to achieve a sustainable built heritage in a holistic and constructive way (Batchelor, 2001). First and foremost, to document and create an inventory of all tangible and intangible, historical and physical elements. This step is considered the base of any sustainable regime for built heritage. It is necessary to comprehend what attributes to study to manage and sustain efficiently into the future. Insight on past practices and reasoning behind remains illustrate impacts on the landscape and heritage itself. Second, is assessing the current condition of the site through analyzing its significance from a cultural, social, and economic perspective. Third, is researching towards conservation and management strategies. Fourth, developing a consensus and understanding between different stakeholders. Lastly, continuous monitoring and review through the entire process to ensure nothing was left out or is compromising the process along with studying possibilities of other approaches (Batchelor, 2001). Setting reasonable and manageable aims that incorporate both short and long-term models are crucial to ensure goals in sustainability that are met and measured. Here, the notion of a sustainable built heritage starts to become a thought process rather than a methodology that can be achieved on various scales (Ibid).

The second guiding framework, the Recommendation on the Historic Urban Landscape (HUL) acts as an additional tool to management plans to help integrate conservation practices and processes in a sustainable manner for the built environment whilst addressing the values and attributes of the heritage. The toolkit implements an integrated value-based landscape approach through four tools which are knowledge and planning, community engagement, regulatory systems, and financial tools. This will guarantee preserving existing resources, efficient planning and management of these resources and their urban identity, as well as a conservation strategy to achieve a balance between urban growth and quality of life on a sustainable basis. Various cases have implemented the HUL approach into their practice to help understand their heritage. The tools help provide sufficient knowledge and guidance through managing change and decision making. Thus, establishing a sustainable framework that can be adapted to a complex and evolving heritage (UNESCO, 2016).

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Consequently, by adopting a sustainable approach whether it be the five key factors previously mentioned, or the HUL toolkit, either as an additional guiding framework alongside the value-based approach conservation and management plans, this will allow for a comprehensive understanding of Pella holistically. Thus, guaranteeing Pella as a sustainable built heritage over both the short and long run.

8. Summary of the Values and Attributes

Pella's multi-layered geographical and historical rich context as well as its ensemble of archaeological diversity of settlements in a natural landscape can be categorized into multiple focal elements which best describe the site as a whole. To begin, Pella is a microcosm of diverse cultural historical development attributed through its human occupation as well as its architecture and monuments. Its location and natural resources played a huge role through its trade routes and natural sustenance as reasons behind settlements in this specific area. Pella is also strongly associated to several historical events and people, which solidifies its significance in history (Ababneh, 2018). As such, Pella holds several values that need conserving. Of which include a scientific and cultural value through its archaeological investigations and excavations unearthing its chronological historical evolution. It also encompasses great economic value due to its location and center point of cross trade-routes, as well as a potential aspect of tourist attraction. As it is one of the oldest sites in Jordan, it holds immense social value especially for the Muslims of the region as it has retained its name from an Islamic Battle. Lastly, Pella also holds an aesthetic value in its cultural site and natural landscape that shows how it has been formed over many years and its relation to its surrounding environment (Ibid).

9. Challenges Facing Pella

The 10-hectare site faces several challenges on multiple levels. Anthropogenic threat affecting the site is vandalism which is the pulverization and damage of prehistoric and archeological structures without the capability of recovering them for future use or display. It is considered a continuing threat to cultural heritage sites as such acts are not always easy to detect and recognize until numerous visits by experts to the sites (Vella, et al., 2015). Studies have shown that there is a consistent and cumulative damage to archaeological remains as looting has increased exponentially over the years (Kersel and Hill, 2020). This has worsened over time due to the inefficiency in monitoring and managing the site, uncontrolled

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access, and reduced regulatory enforcement by governmental organizations as there is abundance in cultural heritage properties over the country (Bewley, 2019). Other natural threats affecting the site include climate change, erosion and weathering to the structures and monuments as well as possible biological decay. However, the site is most vulnerable to earthquakes as Pella is located on a geographic fault line on two shifting planes. Several damaging earthquakes have already struck Pella over the millennials, and it remains susceptible for future tremors (Walmsley, 2007). On a macro scale, the site faces challenges in coordination, communication, as well as on proper documentation, which ultimately affects the site's conservation and management process.

10. Current Condition of Pella

Statistics from the Ministry of Tourism and Antiquities (MOTA) reveal visitors' numbers in Pella over the years, where it last peaked in 2012, and since then have been declining rapidly (Ababneh, 2018). Through the Researcher's observations, the site's main entrance is through the entry gate. It is difficult to walk through the site due to its challenging geographic terrain, unclear path, and steep valleys. However, access to the site is confusing as many tend to begin their journey from the rest house, on the other side of the site, where several archaeological remains can be found. This route tends to overlook other important remains on the site (Ibid). Pella also lacks several interpretation signs, and those present are not up to date and are in a deteriorating state. Further, those present do not portray the site's significance in its historic stratigraphy or a story line of its sequence of continuous settlements. In addition, several broken fences are found around deep excavation sites, of which pose a danger to anyone on site. Thus, the site is not prepared to safely receive tourists who wish to explore without a tour guide.

11. Conclusion and Opportunities

Pella embodies immense significance on a multitude of dimensions that can be further highlighted and portrayed to the public. The site is inscribed on UNESCO's Tentative List as a Cultural Site since 2001, under the criteria (i) "to represent a masterpiece of human creative genius," (iii) "to bear a unique or exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared," (iv) "to be an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates significant stages in human history" (UNESCO, 2021). With further attention and research on these Outstanding Universal Values OUV and attributes of these

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criteria, the site is more likely to be inscribed under the World Heritage List. In addition, proper identification of the site's significance allows opportunities in the future for further research in a variety of fields that can improve the site's existing knowledge and reveal its future possibilities. This also aids in developing an integrated conservation and management plan, which the site lacks, thus, establishing principles to further achieve a holistic and sustainable built heritage that ensures the longevity of the sites.

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دراسة أهمية تسلسل الاستيطان المتواصل في موقع بيلا الأثري في الأردن باعتباره تراثًا مبنيًا مستدامًا

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ملخص البحث:

يمثل موقع بيلا الأثري في الأردن صورة مصغرة متواصلة من الحضارات منذ العصر النطوفي. يجسد تسلسل الاستقرار المستمر للحضارات قدرة الموقع على الاكتفاء الذاتي على مدى سنوات عديدة، مع الاحتفاظ بقوة وقيمة كبيرة تاريخياً وجغرافياً. ومع مرور الوقت أصبحت بيلا مهمشة وضعيفة بسبب عدم فهم قيمة الموقع. تسلط هذه الورقة الضوء على بيلا، الموقع الفريد من نوعه، كيفية اشتقاق اسمها، وتضاريسها الجغرافية، والخصائص التاريخية المترابطة عبر الفترات الزمنية المختلفة، فضلاً عن القيم والسمات والفرص التي تقدمها كتراث مبني مستدام. هذا سيعزز القيمة العالمية الاستثنائية للموقع لكي يتم إدراجه كموقع تراث عالمي.

الكلمات الدالة: بيلا، الأهمية، الاستيطان المتواصل، التراث العمراني المستدام.

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