

## **The remaining buildings in Unaizah, Saudi Arabia**

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### **Abstract**

Unayzah is located in the Qassim region in the center of the Kingdom of Saudi Arabia, and its geographical location in the past had a great role in becoming a passage for commercial caravans and pilgrims convoys coming from Iraq heading to Mecca to perform Hajj and Umrah and there are still historical evidence on this and archaeological remains that prove the presence of pilgrims and commercial caravans.

Unayzah includes many archaeological and heritage monuments such as Al-Bassam Heritage Palace, Al Hamdan Heritage House, Al-Khuraizah Mosque, Al-Jawz Mosque and the Great Mosque, and it has a minaret that overlooks all parts of the old city and is considered one of the prominent landmarks in Unaizah Governorate, in addition to the site of Zubaydah, Qasr Al-Sanqar and Al-Ain Palace.

Many European travelers visited Unayzah, who - although they came for mostly political purposes - described the features of this city, including: George Foster Sadiler (1819), Carlo Claudio Guarmani (1864), Charles Doughty (1878), Charles Huber (1880), Baron Eduard von Nolde (1893), Harry St. John Bridger Phillby (Abdullah Phillby) (1918) and Amin al-Rayhani (1922).

The research aims to shed light on the urban heritage in Unaizah, which includes religious and civil buildings and military rulings, through two axes: the first provides a description of the remaining buildings in it in the light of what was written by European travelers, and the second provides an analytical study of urban planning and the architectural elements of these buildings.

**Key Words:** Unaizah, palace, house, castle, fences, Eduard von Nolde.

### **1. Introduction**

Unayzah<sup>1</sup>: (Fig. 1) represents a corridor for commercial caravans and pilgrims 'caravans (Fig. 7: 3), and it consisted of the neighborhoods of Al-Janah, Al-Taktaz, Al-Khuraisah, Aqiliyah, and Mleiha, and it remained a period of time (from the year 494 AH / 1100 AD until the year 1097 AH / 1686 AD) separate from each other Some form a separate entity surrounded by a wall (Fig. 2), (About Unaizah, See: Bindaqī, 1978 , p. 61. Gamundí, 2010, p.61. Altorki, 2013. Al-Jukhaidib, 1991. <http://www.saadsowayan.com/index.html>). The wing located in the north is considered the first block in the entity of this city, and it was the seat of the emirate of each wing from the date of its establishment in 494 AH (1101 AD), until the date of the emergence of the Emirate of Unayzah in 1097 AH (1686

AD). Al-Gharbiyya is bordered by Al-Aqiliyah from the southern side, and from the north by Al-Juz. It was created between the year 630 AH (1233 AD), the date of the birth of Al-Malihah, and the year 900 AH (1494 AD). The date of the birth of Al-Aqailia not far from the well of Unaizah. It is separated from Unayzah by agricultural areas, as it was outside its first and second Syrians since the year 1082 AH (1671 AD) until the annexation of the third wall at the end of the century (13 AH / 19 AD) after the city expanded and its neighborhoods expanded outside the second wall.

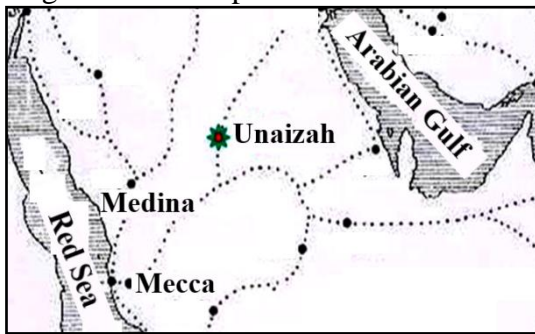


Fig. 1. Map of the Unaizah site

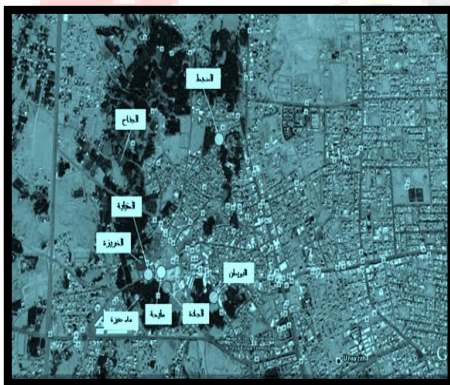


Fig. 2. Orchard villages in Unaizah



Fig. 3. The first wall of Unaizah



Fig. 3. The second wall of Unaizah

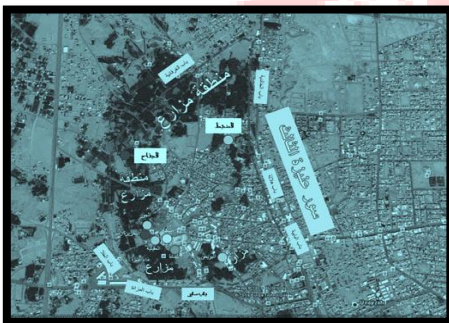


Fig. 3. The Third Wall of Unaizah



Fig. 6. The southeastern neighborhood of Unaizah



Fig. 7. Northern Unaizah neighborhoods

In the year 1097 AH (1686 AD), when the ruler of Makkah invaded Al Aqiliyah, plundered and demolished its wall, the people of Al Aqiliyah, Al Khuraisah, and Malihah met; they formed their own emirate, Then they built a single fence that included the neighborhoods, which they all called Unayzah. In the year 1110 AH (1699 AD), all of

them were merged to form the nucleus of the city (Al-Bassam, 1999, pp. 69-70).

The urban growth of the city has passed through three main stages, as follows:

The first stage: Before the year 494 AH (1100 A.D.), which is the name of Onaiza it is mentioned in it before the beginning of the building of the northern part of it, which is the wing that is considered the oldest of its neighborhoods.

The second stage: the growth of the city in the period between 494-1322 AH (1100-1904 AD) in which the main neighborhoods that were formed at the end of the first district with Jinnah emerged and extend to the last wall that surrounds them.

The third stage: the growth of the city in the period between 1322-1410 A.H (1904-1990AD), which includes the exit of the city from its walls since the fifties of the thirteenth century AH, the period that accompanied the unification of the Kingdom of Saudi Arabia and the resulting stability, which negates the need To the fences.

Unayzah received unparalleled attention from European travelers, many of whom visited it from the beginning of the nineteenth century until the beginning of the twentieth century, where a number of them referred to the urban heritage by Unaizah such as: George F. Sadiler (1819), (Sadiler, 1983, pp. 105-105. Perrin, *The Discovery of Arabia*, p. 243. Al-Jasser, 1997, p. 29), Carlo Claudio Guarmani (1864),(Gurmani, 1938, pp. 42-92-93), Charles Doughty (1878), (Baldoll, 1989, pp. 79: 86-83-85-86), Charles Hooper (1880), (Huber, 1891), Eduard von Nolde<sup>ii</sup> (1893), (Al-Badi, 1997, pp. 9-10-8 -12), Harry St. John Bridger Phillby (Salman, 1991, pp. 148-155-214-228-361. Al-Badi, 1997, p. 410. Philippi, 1997, pp. 35-36-90-97-98. Salman, 1988, pp. 208-316. Safwa, 1999, pp. 89-90), (Abdullah Phillby) (1918) and Phillby (1918). and Amin al-Rayhani (1922), (Zarkali, 1986, pp. 18-19. Rihani, 1982, p. 25. Al-Zarkali, 1985, p. 283. Rihani, 1987, p. 8. Salman, pp. 316-335-336-340. Al-Uthaymeen, 1996, p. 291).

## **2. Urban heritage as Unaizah as mentioned by European travelers**

Sadiler (Perrin, *The Discovery of Arabia*, p. 243. Al-Jasser, 1997, p. 29) talked about the city of Unaizah<sup>iii</sup>, (Sadiler, 1983, pp. 5-105-106), and it was completely destroyed as a result of Ibrahim Pasha hitting the walls with cannons, where the fort fell on the fate that afflicted the other fortresses, and was blown up with artillery, and fire broke out in an ammunition depot on a tower, which allowed him to enter easily, and that the Saudi garrison in the fortress of the city (its fortress) Muddy) she resisted for five days and then left with her arms and belongings after surrender, and Guarmani stated that Unaizah was distinguished by the enormity of its walls (Gurmani, 1938, pp.42-92-93).

Doughty (Baldoll, 1989, pp. 79: 77-83-85-86), described lanes, streets, farms, and commercial markets, separated by areas of farms and interspersed with narrow alleys that

cover most of the palm trees. In the vaults and vessels of wicker, he described the commercial movement and traditional industries and that the craftsmen of the craftsmen manufacture weapons and household utensils. He mentioned copper, goldsmiths and carpenters, those who work to cut stones and dig wells and those who carve marble, in addition to builders and plasterers, as well as tailors and Embroidered, beads, and goldsmiths who gained fame for mastering the art of engraving and ornamentation in gold and silver. Hooper also mentioned the palace that has ruins.

As for Nolde, his interest in urban heritage (Nolde, 1892) and military fortifications is evidenced by a detailed description of the inner and outer wall of Unaizah, which he mentioned that Unaizah is surrounded by two fortified walls (Al Badi, 1997a, p. 74). Here he talks about the wall built before 1182 AH (1678 AD) and the wall built after 1285 AH (1869 CE) and his circle expanded due to the expansion of the city, and Nolde praised the military strength of Unaizah, while the two main mosques in Unaizah, although he did not appoint them, but certainly the Great Mosque was One of them, and the other may be the Mother of the donkey Mosque<sup>iv</sup> or others, has visited some important parts of the city, including the crowded market (Al Badi, 1997a, p. 84).

Philby (Al Badi, 1997b, p. 410. Philippi, 1997, pp. 35-36-90-97-98. Salman, 1991, pp. 208-316. Safwa, 1999, pp. 89-90) described the minaret of the Great Mosque, and said that it is 80 feet (24 meters) high and that it is mud, and in addition to what was previously mentioned about the Great Mosque, it monitored some of the urban features of the city, including the old fortress, and mentioned that the city's corridors and streets in the old neighborhoods are winding and most of them are narrow (Salman, 1991, pp. 148-155-214-228-361).

As for Amin al-Rayhani, (Rayhani, 1982, p. 25. Zarkali, 1985, p. 283. Rihani, 1987, p. 8. Salman, 1991, pp. 316-335-336-340. Al-Uthaimen, 1996, p. 291), he described the small markets (the roads) as the basements of the many bridges over them. From it and the low to renew fresh air, and on its walls are engineering plaster drawings on a clay floor, and among the methods of urbanization we find that bridges are built between the two sides of the house if it is separated by a street (market) and the area is called the street that is surmounted by a bridge (dome), and it is like basements of many bridges and domes in One street, making it dark as Basement, which although it obscures the light of the sun, but it protects against wind and rain (Rayhani, 1987, pp. 608-611).

## **1. 2. Military entitlements**

**1. 1. 2. Fences:** The city's fencing has gone through several stages (Al-Khwaiter, 2010, <http://www.unaizah.net/showthread.php?t=35671>), over its long history (Figs. 2:7). The succession of these stages is controlled by two parallel factors: urban and agricultural expansion, the military need and the security necessity of its people. As for the primary walls, each of the ancient Unaizah neighborhoods had a special wall, and all these villages became one town called Unaizah (Al-Bassam, 1999, pp. 232-233 and later), Perhaps

Unaizah neighborhoods before their unification were scattered, so it was necessary to administer a wall around each of them, then the construction increased and the walls were removed and the structures were adjacent to the structure, and this development in itself may have paved the way for the first wall to appear as what was known as the city of Unaizah (Figs. 6-7).

#### **The first wall**

If the prevailing view is that the city of Unaizah first appeared with this name when its neighborhoods were united, thus distinguished from the relatively close wing and the relatively remote control from it, then this may require that a fence used to envelop each of these neighborhoods separately, then the idea of uniting them with one wall came (Fig. 3). And if the appearance of the first wall surrounding the city of Unaizah after the emergence of its name as an urban flag, let us follow the clues and historical texts that it referred to with this name, to link this with the creation of its first wall, as it was mentioned in the seventh century AH (13 AD) (Al-Omari, 2002, p. 350), and that its establishment was in the year 630 AH (1233 AD), It was reported that before that, there were separate neighborhoods belonging to the pavilion, and that in 1097 AH (1686AD) it was conquered by Sharif Ahmed bin Zaid for its prosperous construction and its political and economic weight, which led the people of Unaizah to take two steps that preserve their dignity and protect their sanctities, namely, electing a leader and building a wall to protect it. One of the doors of the fence was the door of Sarar on the northern side, which is a door with a compartment length (20 m), and opposite each door in the second wall is a door on the first wall, as there were two other doors in the south and west.

#### **The second wall**

It was built before 1182 AH (1768 AD), the year in which it occurred that Unaizah annexed the first Saudi state barn, and the Saudi army entered the city from Sharikh, one of the gates of the second wall and the battle took place after it (Al-Bassam, 1917, p. 170), and in Sadiler's message (Sadlier, 1983, pp. 5-105-106), about the fortification of the city of Unaizah came that its great fortress was built During the seventy years (1163 AH / 1750 CE), what would be a good presumption for trying to determine the time of the second wall, given that the message was sent after the fall of Unaizah in 1233 AH (1818) in the hands of Ibrahim Pasha's forces, and he included all the villages except the villages of Al-Janah and Al-Dhabt, they are still far (Fig. 4), from the above, we conclude that the time of construction of the fence was before the year 1182 AH (1768).

The fence is made of mud using veins<sup>v</sup>, mud brick and stones, and it is equipped with small and large towers, and its thickness ranges from (1.50-2.0 m), and its height (3.60 m-4.50 m). And its circumference (3.5 km), and includes an area estimated at (11 km<sup>2</sup>), and most of the cities we find surrounded by two internal walls surrounding houses only or with orchards and the outer outer double, and between the double walls a vacuum filled with mud, and the height of the wall ranges from (12-15) feet ( 3.60 m-4,50 m), as for its doors from the east, the door to the air and the door of Sharikh, and from the west the door to the western node, and from the south the door to the southern node and the door of Sarar and it is possible that this door is a point of contact between the two walls to be one of the doors of the second wall as it was one of the doors of the first wall .

**The third wall** (Fig. 5, Pls. 6: 1)



Pl. 1. The remains of a tower located in the far northeast corner of the third wall



Pl. 2. The same tower



Pl. 3. The remains of one of the towers in the eastern part of the fence



Pl. 4. Part of the eastern side of the fence



Pl. 5. Part of the eastern side of the fence



Pl. 6. Sectional of the third fence and its thickness is graded from bottom to top

It was built by Prince Zamil bin Abdullah Al-Saleem between 1285-1308 AH (1868-1891AD), and his reign was the most brilliant of the political and military history of Unaizah, and his reign was marked by urban development. He mentioned in the narration of the Al-Satwa<sup>vi</sup> incident in the year 1322 AH (1904 AD) that the Salim family attacked On Unaizah with the support of King Abdul Aziz, they entered from a narrow, fortified opening with no door, and then they renewed the fence with stones and mud in the way of veins (Al-Bassam, 1917, p. 170), and it consists of three vertical two layers between them a vacuum filled with mud, and its height from (5–6 m) and its thickness from (2-3) It expands below and narrows above, and is supported by observation towers, the distance between each of them (50 m), and the gates are built from Stone, clay, and on top of each compartment, and the breadth of the door opening (3.5 m) and height (2.5 m), doors of wood and reinforced with nails and iron-like doors that were present the Great Mosque (Pl. 11).

It is noted that the wall has old secondary doors, which suggests that it was on a previous wall of 1322 AH (1904 AD), which also confirms that the wall of the wall preceded that date, and that what happened is nothing but a reorganization of its entrances and fortification more than before, and one of the city's gates was called the door of Sayer (Al-Deghether, Deghether. Chosen stories).

**Al-Sangar Fort:** (Pl. 7) was established in 1302 AH (1885 CE), and is located northeast of the city of Unaizah and the people call it the Observatory of Unaizah, which is built with medium stones, and from the remaining monuments two towers each take a circular shape



in diameter (7.8 AD), and the thickness of the wall (0.85 m), and there were several small holes in it (1.8 m) and the diameter of each hole (20 cm).



Pl. 7. The remains of the Castle of Falcon

## **2. 2. Mosques**

### **1. 2. 2. The Great Mosque of Unaizah:** (Plate 11: 8):

It is located in the heart of the city and was called the Al-Talha Mosque before the year 800 AH (1398 AD), then it was called the Jarrah Mosque, founded by Jarrah bin Zuhri, and it was renewed and expanded in 1179 AH (1766 AD).

The mosque was built of mud and yogurt and covered with wood of stools and groves, and it has three doors, a retreat, lamps, and a part of it covered, and the main huge doors were located on the northeastern side (Pl. 9) and each gate has two shutters each of length (2.20 m) and width (1.70 m).

The mosque has a minaret built in 1307 AH (1889AD) by Ibn Sweileh from the people of Unaizah (plate 8-10), in the southern corner of the mosque near the main gate of clay, but it is certainly not the first, as it was subjected to obsolescence to weakness in its construction, which necessitated its demolition And its renewal, its height (24.0 m), the base circumference (21.50 m) and the diameter of its base circle (5.75 m) and narrow from the top so that its circumference is (5.0 m) and the wall thickness at the foundation (1.50 m) and at the highest point (0.15 m), which is made up Of the five floors reached by a spiral staircase, and the number of degrees (76) degrees, while the upper floors connect the first minaret to the roof of the mosque and the next floor there is a wall in it T, and the barrel of the minaret (Jawasaq) divided into two halves, one closed and the other open out of it for the muezzin to prayer and also used to control, surface distracted by an Gargoyle seen at the top of them as seen small windows for each role.

The Qibla rewaq (Al-Misbah) has a flat roof over more than 300 coated stone pillars topped with pointed arches of the predominant type in the architecture of the Najd mosques.



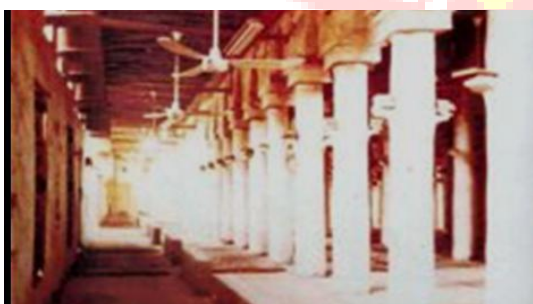
Pl. 8. The Great Mosque



Pl. 9. One of the gates to the Great Mosque



Pl. 10. The Great Minaret Minaret



Pl. 11. Qibla rewaq (Al-Misbah) in the Great Mosque

**2. 2. 2. Khurizah Mosque:** (Pl. 15:12): It is located in the Khurayzah neighborhood, it was built in 1210 AH (1795AD) and was renovated in 1337 AH (1919AD), and it remained in its old architectural style with its majestic minaret and the main material in its building clay and mud brick. The polished gravel and ceilings are the trees of the ideals, palm leaves and wicker trees, as plaster material is added to add aesthetic elements to the internal façades. The striking feature is the presence of a fresco on which he wrote: "The Khuraisa Mosque was renewed in 1337 AH" (1919AD).

The mosque consists of a basement (retreat) on a lower level than the ground and a ground floor, while the internal composition consists of a roof lamp mounted on cylindrical stone pillars that have been fixed by stucco (Pl. 15), and the lamp is entered through two doors on the north and south sides of the outdoor courtyard (Al-Sirha).



Pl. 12. Khuraisa Mosque



Pl. 13. Khuraisa Mosque in 1408 AH (1987 AD)



Pl. 14. The external courtyard of the Khuraisa Mosque



Pl. 15. Khuraisa Mosque

**3. 2. 2. Al-Jouz Mosque:** (Pl. 19:16): It is located to the north of the Khuraisa Mosque and is attributed to the Al-Jouz neighborhood. It was built in 1237 AH (1821AD), and despite the removal of the old neighborhood, it was preserved on the mosque built with mud and mud brick, pebbles, rosewood, palm fronds and wicker. Plaster was used to cover the interior facades and columns.

The mosque is characterized by the presence of Al-Sarha (12 x 15 m), which is the outer courtyard surrounded by a fence, which is exposed, as well as the Misbah (20 x 9 m), which is the roofed part in which the prayer is performed. It also contains a retreat (cellar) with the same area of the Misbah whose ceiling is based on cylindrical columns number (13) A column with windows (Faraj) numbered five, and it is noted that both the retreat and the Misbah do not take the rectangular shape as they are bevelled from the north and south, narrowing towards the direction of the qiblah and widening from the back.



Pl. 16. The eastern facade of Al-Jouz Mosque



Pl. 17. Al-Jouz Mosque



Pl. 18. The door to the Al-Juz mosque



Pl. 19. The door to being alone in the Al-Juz mosque

**4. 2. 2. Al-Janah Mosque:** It is the oldest mosque in and around Unaizah, because Al-Janah is the oldest settlement of urban housing in the vicinity of what is now known as the city of Unaizah, and dates back to the end of the fifth century AH (11 AD), and on this, Al-Janah Mosque becomes a pre-established The Great Mosque.

### 3. Analytical study

#### 1. 3. Urban planning and architectural elements

Unaizah remained until the beginning of the second half of the twentieth century, retaining its urban planning, social environment, customs and traditions. Sadiler was the first to talk about the urban heritage of Unaizah, where he mentioned its fortifications and towers that contained warehouses for ammunition, and that the fortified fortress was built with mud, and Guarmani indicated to The enormity of its walls, Doughty, Philippi and al-Rayhani described the urban planning of the city in the old neighborhoods, where they talked about lanes, streets, farms and commercial markets, and that the corridors and streets are winding

and most of them are narrow, separating the lanes are areas of farms and interspersed with narrow alleys that cover most of them Tiff palm, usually separates the street between the two partial house up a bridge between them (the dome), small markets (roads) are similar to the basement of the large number of household bridges over it, which blocks sunlight and protects against wind and rain.

Al-Rayhani gave a description of the reception hall as it is long and spacious, and its ceiling is high in parchment wood and is based on pillars of stone painted with plaster, while the windows are double on two levels, and on the walls are engineering drawings engraved with stucco on a clay floor, and Hooper mentioned the palace which became ruins, Philippi mentioned the minaret of the Great Mosque and its height is (24 m).

As for Eduard von Nolde, he talked about the second and third suras, and he mentioned that the walls had towers, and the fence consists of two walls between them separated by dirt<sup>vii</sup>, which makes the fence resistant to shelling, and he spoke about the two main mosques in Unaizah, although he did not mention their name but it is certain to be the Great Mosque one of them.

So Sadiler, Filby, al-Rayhani, Nolde, and Guarmani talked about Unaizah ramparts, impregnable fortifications, and mud-tower towers. Doughty, Philippe, and al-Rayhani spoke of urban planning for a city with winding, mostly narrow, winding streets, and small (street) roads that looked like basements over many bridges over home. Al-Rayhani gave a description of the reception hall. As for the religious buildings, Philippi spoke about the minaret of the Great Mosque and Nolde mentioned the two main mosques.

### **1. 1. 3. The architectural design of the military entrenchments**

Fences (Pl. 6: 1) were erected with mud and stones in the way of veins and mud brick. The third fence may be of three vertical layers with two vertical layers between them, a vacuum filled with mud that widens at the bottom and narrows at the top, and the thickness of the inner wall is from (1.50-2.0 m), and the height (3.60 m) -4.50 m). As for the outer, it reaches a thickness of (2.0-3.0m) and a height of (5.0-6.0m). It was supported by observation towers, the distance between each of them (50.0 m), and the gates are built of stone and mud and on the top of each compartment door, and each gate has a huge door of wood supported with iron nails (copied) width (3.5 m) and height (2.5 m).

The thickness of the wall at the top decreases by tilting the walls inward to support it, and this method was also used in minarets to focus the push of the walls inward, and this was taken into account in the construction of fences<sup>viii</sup> (Zaki, 1958, pp. 111-123. Zaki, 1968, p. 74. Shokry, 1970, pp. 85-86).

The city's entrances were carefully planned with warfare through which good control of entry and exit from the city and control of every part of it was supervised by soldiers and guards, and the doors of this fence are provided with stairs that ascend them to a (booth) board over which each door can be viewed and monitored, given the Its height and

supervision over the spaces outside the city, and thus the heart of the city is surrounded by a central internal fence, which is considered the final line to protect the center of power.

The entrances had gates with iron-leaf shutters to resist the enemy's strikes if it was able to reach them, and between the outer and inner fences there was an empty space suitable for defending the last wall, and this area is called the platoon and the enemy can be hunted in it if he can cross the outer wall.

The idea of complete disability of the attacking armies and not even reaching the city easily is evident as a result of the possibility of climbing the high walls, and this was achieved by building the fence that was first built with mud brick and then a desire to increase its durability to resist the strikes of the attackers built with stone, so this development achieved greater capabilities and increases the possibility of defense. Choose the location of the towers Originally, to achieve a better vision, and to be able to ride the attacking enemy, then it was also seen that this fence has an important position in the attack on the enemy and is not limited to a passive defense position, and until the fence achieves this purpose it is designed to be above in the form of a corridor or a walkway that can defend soldiers from Doing work They are of a high standard and give the infantry or stirrups a better view and a wider and further goal (Osman, 1985, pp. 13-138).

The walls were fortified with square towers and pillars, to give the defenders under the walls a wider area that they could monitor everyone approaching and aim their arrows towards those who were trying to excavate them from the enemies<sup>ix</sup> (Shukry, 1970, 67).

Among the remaining effects of Al-Sangar Castle (Pl. 7) are two towers, each of which takes a circular shape (Pl. 7) with a diameter of (7.8 m) and a wall thickness (0.85 m). There were several small holes at a height of (1.8 m) and the diameter of one hole of them (0.20 m) The circular planning was to take into account the durability of the fortifications and it represents an advanced stage in the war planning of the walls of cities, (Al-Baghdadi. 1969, p. 66), in order to fulfill the required purpose by giving an integrated and clear vision to the soldiers defending the castle if the planning was rectangular or square (Zaki, 1969, pp. 57-58), as this rounded planning achieved an economic purpose in terms of saving In construction costs<sup>x</sup>.

The castle consists of two circular observation towers, often surrounded by a wall that represents the first line of defense and the two towers represent the last refuge for the defenders (donjon) (Murabit, 1953, p. 156. Zaki, 1968, p. 65), and the tower was at most, at most times, composed of two floors and a terrace and provided with boilers that take a circular shape, and includes a number Of the rooms and stores for the weapon and other equipment, and above represents a place of observation, and was called the treasury, i.e. the central or main part of the castle, and it is the most powerful and strongest of its parts (Zaki, 1958, 130-132).

With regard to the fact that the two towers were surrounded by a wall, military architecture included the necessity of establishing a second defense line within the main square of the castle, and the necessity of building a fortified tower or treasury which would be the defense line or the last shelter in case of attack.

### **2. 1. 3. Architectural design of mosques**

The mosques of Unaizah (plate 19: 8) were distinguished by the fact that each of them consisted of a Misbah (the prayer house) covered with a ceiling on the columns of pointed columns and arches (plate 11-17). The lower floor of the mosque represents a retreat (cellar) located at the bottom of the prayer house, while the minarets (plate 10-12) take the circular shape and its diameter decreases at the top and consists of several roles of five in the minaret of the Great Mosque and the ascent to the surface of the mosque is from the second round of the minaret, As for the decorative elements in mosques, the geometric stucco decoration executed on the layer of mortar covering the walls has spread.

Hence, the planning of Unaizah mosques does not follow the planning of mosques with arcades and a nave, which represents the first planning system on the basis of which mosques were designed in Islamic architecture, and consists of a square or rectangular area that is divided into corridors by a number of patents consisting of rows of columns or pillars topped by decades. This layout represents the second system on which mosques and other types of religious and non-religious buildings were designed from the early period, along with traditional styles (Al-Haddad, 2006, p. 498). Perhaps the presence of this planning<sup>xi</sup> (Rapino, 1936, pp. 405-408. Fikri, 1965, p. 145. Cresswell, 1984, Figs. 112-115. Silitotti, 1994, pp.126-129. Al-Haddad, 2004, pp. 174-176. 2006, pp. 184-186, fig. 116) from the early period reveals that the traditional planning was not the only planning during the first centuries and became a model for university mosques since the AH 5 / AD 11th century. The reason for the non-proliferation of mosques with arcades and courtyards is due to the hot climate, which led the architects to close the Qibla rewaq (Al-Misbah) so that it is used to pray during daylight and winter days, and prayer is performed in the courtyard (Al Sirha) at night times, and every mosque has a retreat on the ground floor to achieve the same purpose.

As for the doors of the mosques, they are made of wood and supported with iron nails, and colored geometric motifs consisting of squares, half-squares, and circles containing geometric and floral motifs (plate 19) were executed, often without motifs (plate 9-23).

### **2. 3. Elements of Urban Planning for the City of Unaizah**

The most important conditions for establishing the city were the proximity to the source of the water that helps to supply it with the water needed for its inhabitants, so the neighborhoods arose around or near the Unaizah well, and we draw from what was mentioned by Doughty, Philippi and al-Rayhani about the fact that Unaizah's corridors and streets were winding and mostly narrow, and that the small markets (roads) The streets resemble the basements of the many bridges over them, and Nolde mentioned markets and two major mosques. The elements of Unaizah's urban planning can be identified as



follows:

1. 2. 3. The Great Mosque: It was the first of the foundations of planning, as it was established in the city's center (Envoldesn, 1980, p. 1), to be a social institution that attracts all the pillars of the structure of society (Lewis, 1953, p. 383). Also, the human relationship with the environment indicates the importance of design (Friedmann, 1980, p. 4) , as the true and functional meaning of the mosque is to create the place for human and religious activity, the way to find this place and how to equip it to meet the human needs is the most important, then this influence extended to the planning of the city as a whole where it is distributed then Its elements and plans around the mosque (Othman, 1988, p. 235).

Therefore, planning proceeded in the style of the unit in the design, architectural elements and diversity in the elements, which led to the compatibility of the building styles according to the construction in a desert environment, in the sense that the architectural elements are unified in a way that does not prevent their diversity in the external appearance or engineering design without any difference in the material and style of construction, and the architectural design was based For city elements on the environmental conditions of the region (Al-Rifai, 1991, pp. 171-185).

The urban environment had a great impact on planning. The nucleus represented in the Great Mosque was respected and made it the focus of interest in erecting other buildings around it and confirming the space orientation of streets and squares with the strictness of directing internal spaces accordingly. One of the conditions of construction was to pay the harms and bring the benefits, so the harms would be paid by constructing fences, as well as bringing the benefits by choosing good air places, and taking into account the conditions of choosing the site to face the climate and environmental conditions (Othman, 1988, p. 12).

2. 2. 3. The city's buildings: The buildings converge to represent a single architectural block to resist climatic factors (El-Khouly, 1977, pp. 46-50), due to the limited space on which the city is located and its location within the walls, and due to the design of narrow streets and the narrow spaces free, so the architect resorted to establishing internal courtyards (Al Sirhat) To provide air and natural lighting and provide social privacy for the city's residents, the thickness of the walls helped to provide shadows and reduce exposure to sunlight (Ibrahim, 1982, p. 37).

The architects were also keen on grouping the buildings into groups with high building density, where they followed in the establishment of the city a number of environmental conditions that ruled the design according to two principles. The first was that it had fortified walls and major longitudinal and transverse streets that meet at the center where the Great Mosque is located, while the second is represented in the roads The subdivision and distribution of residential building sites according to the size of the city, taking into account any new buildings. With its construction adjacent to each other with the aim of reducing the area of the external surfaces of buildings to achieve appropriate thermal insulation, and to reduce the area of open interstitial voids, this is evident in the middle section that represents the organized social center (the mosque) and which attracts all corners of the structure of society.

The buildings were directed appropriate guidance with the aim of exposing them to the air and ensuring that the gardens surround the city, especially the northern section, as they help to improve the climate environment and help to soften the air and reduce its

temperature in various parts of the city, while planting trees and orchards working to reduce the temperature as a result of moistening the environment Urbanism.

3. 2. 3. The inner courtyard: It is the yard or skylight (the serha) in the middle of the flat building to illuminate and ventilate the interior units (Al. Hussayen, 1995, pp. 13-91). Climatic factors had a great impact on planning and designing the basic elements (Khair al-Din, 1997, pp. 855-877)., and the courtyard was helping to moisturize the air by getting hot air up to be replaced by the cold air.

One of the most important axes of the relationship between them is the visual effects between the mosque and its urban environment, which gives a sense of contrast between the narrow, winding spaces filled with movement and life, and the spacious, simple, and well-formed courtyard around the mosque. The visual formation is through the degrees of domination and visual control when the mosque dominates the space and urban environment for the city (Sadiq, 1999, pp. 37-56).

4. 2. 3. The external openings: The house was distinguished by the scarcity of the external openings from the windows and doors as the number is limited and the surface is very small so that the external walls of the buildings appear to be deaf and solid. The openings are narrow from the inside and wide from the outside to expand the angle of view and prevent direct radiation from entering (Pl. 24-25), where they are used for guarding and observing, and the narrow windows represent the entrances to the air pushed into the rooms to exit from the other side to complete the movement of air, also used to achieve a degree Great privacy and enables them to see the outside view, which gives a sense of reassurance.

5. 2. 3. Streets: The streets between the elements of the city were narrow, and Doughty described the lanes separated by areas of farms and interspersed with narrow alleys that cover most of the palm trees. The width of the streets and alleys is limited, and the building blocks permeate the courtyards (Salman, 1982, pp. 7-8). The narrow streets have helped to reduce their exposure to direct sunlight, especially with the increase in buildings and diversity.

The streets were directed so that the facades of the buildings and roads would not be exposed to sunlight and would not be vertical with the apparent movement of the sun, and this is what makes the streets acquire shadows throughout the day, as the streets were characterized by their winding and ending with slightly wide places (metaphors) that play the role of the yard and work to store the cool air At night and prevent leakage with the first wind gusts.

The narrowness of the streets prevents this from happening by meandering and bending over and providing shaded areas as well. The architecture used methods to cover the streets and used moguls<sup>xii</sup> (Abdel Halim, 1999, p. 66), or protrusions to protect the streets from the heat of the sun and rain, and Philippi stressed that the corridors and streets are winding and most of them are narrow (Othman, 1988, p. 263), and al-Rayhani likened the markets (roads) and streets with basements to the abundance of home bridges over them, which blocks sunlight and protects against wind and rain (plate 23:20).

6. 2. 3. Building materials: materials that help to preserve heat and prevent the effects of sunlight and thermal insulation such as mud, brick, yard, lumber, palm frond and wicker are used.

The plaster also enters to make a layer of mortar that provides good thermal insulation for the spaces (Michell, 1978, p.135) , and helps to keep the internal spaces with its cool air during most of the day during the high air temperature outside, and the use of paint to

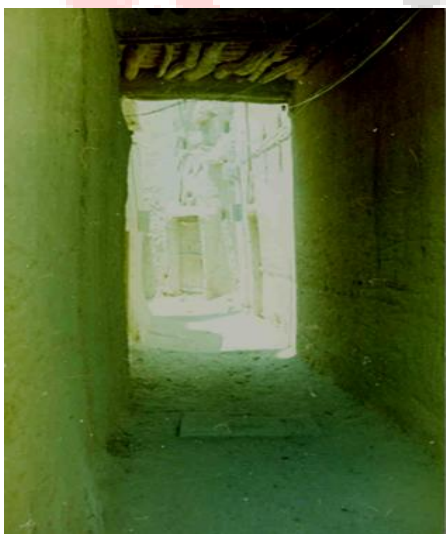
protect buildings, as it is a soft, fragile material that can absorb moisture in the air, and its use spread in coating Walls in areas with high temperatures and humidity where the white color reflects the sun's rays and reduces the absorption of heat by the surfaces (TeII, 1990, pp. 48-65). When exposed to heat in dry air, it loses stored moisture, causing a decrease in the surface temperature of the plaster and the air in contact with it. The plaster works on The walls are insulated, protected from rain and strengthened. As for the upper floors, due to the low thickness of the walls and the warmth of the air in the evening, narrow windows are used to provide these floors with cold air at night.



Pl. 20. Houses from Unaizah



Pl. 21. Covered Street in Unaizah



Pl. 22. Covered Street in Unaizah



Pl. 23. A door in a house in Unaizah



Pl. 24. Ventilation holes for houses from Unaizah



Pl. 25. Ventilation holes for houses from Unaizah

## **Conclusion**

- Although the research deals with Unaizah's architectural heritage in the light of the writings of German traveler Eduard von Nolde who spoke about the walls of the Unaizah and the two main mosques in it, what Sadiler, Guarmani, Dutti, Hooper, Philippe, and al-Rayhani deserve to be audited as they provided valuable information on this heritage which complements what Nolde mentioned .
- The travelers 'mention of Unaizah walls, fortifications, muddy towers, narrow winding streets and corridors, and small markets (roads) that resemble the catacombs of the many bridges over them, could not be ignored, just as Nolde was not the only one to mention the Great Mosque and its minaret as it was preceded by Philippi.
- The fences were erected with mud and stones in the way of veins in milk, and the thickness of the fence at the top is reduced by the inclination of the walls to the inside in order to support it, and the third fence consists of two vertical layers between them a vacuum filled with mud that widens at the bottom and narrows at the top, and was supported by observation towers and gates built of stone, mud and at the head of each door A compartment, and each gate has a huge door supported by iron nails, and the city's entrances have been carefully planned with a war layout, and they are equipped with stairs that ascend them to the council (compartment.(
- The Castle of Al-Sangar consisted of two circular towers for observation, often surrounded by a wall representing the first line of defense and the tower was at the most part consisting of two floors and a balcony and equipped with barges that take a circular shape, and includes a number of rooms and stores of arms and equipment, etc., and above represents a place of observation.
- The Unaizah mosques were distinguished by the fact that each of them consisted of a Misbah (the prayer house) covered with a ceiling mounted on lattices of pointed columns and contracts, and the prayer house is provided with an open courtyard (sirha) surrounded by a wall and the lower floor of the mosque represents a retreat (cellar) below the prayer house.
- The minarets take the circular shape and their diameter is less at the top, and they consist of several floors. Climbing to the roof of the mosque is from the second round of the minaret, and the minarets were to announce the prayer as well as being watchtowers.
- The planning system for Unaizah mosques represents planning with porticos without a nave. This layout became a model for university mosques, as it appeared since the 5th century AH / 11AD A.D. in Al-Janah Mosque. Then the layout of Unaizah mosques prevailed later, and architects were keen to close the Qibla rewaq (Al-Misbah) so that it was used To pray in times of the day and in the winter days and pray in the courtyard (Al-Sirha) at night times, and in every mosque there is a retreat on the ground floor to achieve the same purpose.
- The features of the urban planning of the city were represented in the proximity of the Unaizah well, and climatic factors had a major impact on its planning and design of its basic elements.
- The buildings of the city represented a single architectural block to resist climatic factors, and the architect resorted to erecting the inner courtyards (Al-Sarhat) to illuminate and ventilate the interior units. And solid, and the streets between the elements of the city are narrow, separated by areas of farms and interspersed with narrow alleys that cover most of the palm trees, and the corridors and streets are winding and most of them are narrow, and small markets and streets resemble the

basements of the many bridges over them.

- Building materials used to preserve heat and prevent the effects of sunlight and thermal insulation were used, such as clay, brick, lumber, vine, wicker and plaster.

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#### Notes

- <sup>i</sup> The reason for the name is due to a hill that is black in color, east of Unaizah, which is called the word Anz, and the name Unaizah.
- <sup>ii</sup> His journey was printed in a book entitled: *A Journey into the Center of Arabia, Kurdistan, and Armenia, 1892. Reise nach Innerarabien, Kurdistan und Armenien 1892*. Vieweg, Braunschweig 1885. Neudruck: Olms, Hildesheim, Zürich, New York 2004.
- <sup>iii</sup> This visit came immediately after Ibrahim Pasha destroyed Unaizah fortifications when he seized it with the rest of the countries of Najd in his campaign against the first Saudi state (1816-1818).
- <sup>iv</sup> This mosque was established in 1105 AH (1694 AD), and it is located in the east of the ancient Unaizah within its first wall, and it was built with mud, until its architecture was renewed in 1403 AH (1983 AD), which caused its archaeological features to be changed. This is because there is a well to water a woman with a donkey.
- <sup>v</sup> The method of construction (with mud veins) is one of two methods of building with clay, which is stronger and safer than building with milk and is based on building a short height of the fence with a horizontal image of clay mixed with hay and then left to dry and then construction is done on top of it.
- <sup>vi</sup> Attack on the enemy, usually associated with surprise and surprise.



<sup>vii</sup> In fact it is (2.0-3.0 m) and its height is (5.0-6.0 m).

<sup>viii</sup> It is a phenomenon, we find it in all the buildings of the ancient Egyptians, and it may be due to the keenness to strengthen the fort by making its base as thick as possible, as it is exposed before every part in it to attack, and this appeared from the beginning of the dynasties, as the photos of the tombs of Bani Hassan castles with thick walls tilted in Its lower part is straight in its upper part, and the Byzantines were constructing fortresses with sloping fences as well, and the outer walls were thickened to help the construction durability and not enable the enemy to puncture them easily, and on the third hand provide a walkway for the soldiers at the top, and the height at this level provides a better view As far as possible.

<sup>ix</sup> Outstanding pillars or towers were executed with the Pharaonic walls.

<sup>x</sup> The circumference of a plot of land in the form of a circle is less than the circumference of the square equal to it in the area by (11.25 m).

<sup>xi</sup> This layout stems from the planning of mosques, known as the plan with arcades without the middle nave, which was known in the Mosque of Amr ibn al-Aas (21 AH / 641AD), and there are examples dating back to the late two centuries (1-2AH / 7-8AD) until the 5th century AH (11AD).

<sup>xii</sup> The sapat is a roofed passageway between two houses or two walls, and it represents a suspended bridge that rises above the courtyard or street space between two opposite houses. The sapat help shade courtyards or streets.