

Dar al-Sultan at Al-Abbad Al-Alawi's: An Archaeological and Architectural Study

ZOHRA AYAD*	AICHA FATMI
Archaeological Heritage and Valorisation Laboratory –University of Abou Bakr Belkaid, Tlemcen, Algeria	Archaeological Heritage and Valorisation Laboratory –University of Abou Bakr Belkaid, Tlemcen, Algeria
Zou.ayad91@gmail.com	Fatmiaicha@yahoo.fr

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• Abstract:

Dar al-Sultan in Al-Abbad Al-Alawi is a rare example of a temporary royal residence in the central Maghreb (modern-day Algeria). In this article, we explored the architectural and artistic aspects of the Dar (house), which has preserved the typical features of Islamic architecture, particularly the use of the open courtyard in its design. We highlighted the key architectural and artistic characteristics, including the variety of plaster and mosaic decorations, which demonstrate the skill of Islamic artisans in depicting and diversifying decorative themes, ranging from vegetal to geometric and calligraphic motifs.

Keywords:

Dar Al-Sultan , Historical Landmark , Islamic Architecture , Historical Complex of Sidi Abu Madyan ,Temporary Royal Residence.

• Introduction

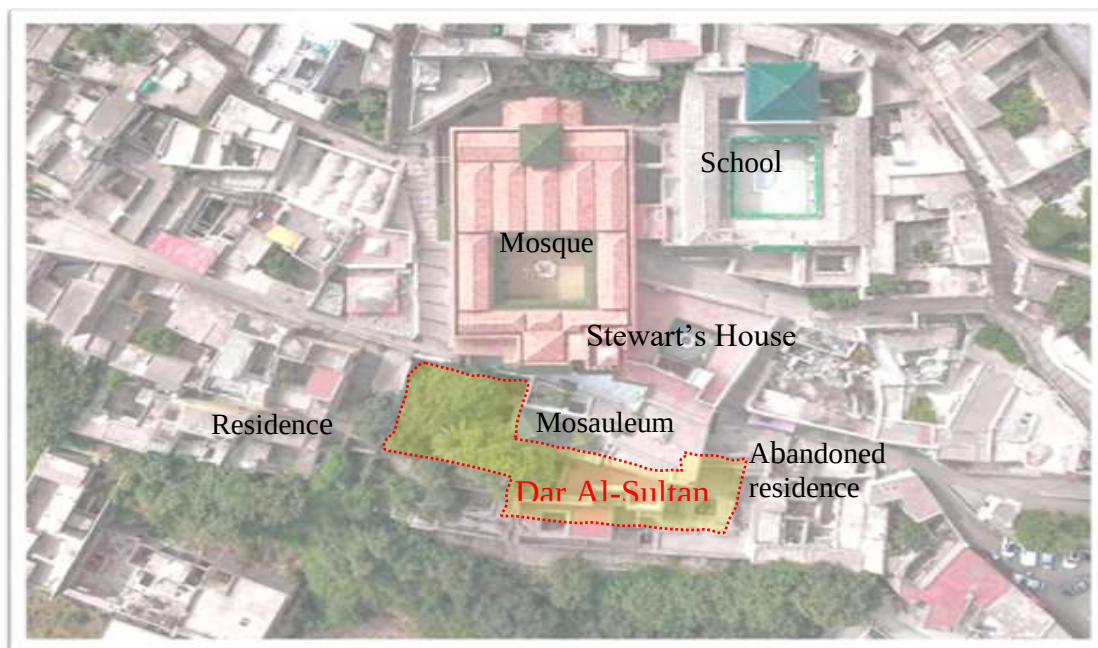
Tlemcen, a prominent historical city in the central Maghreb (modern-day Algeria), is home to numerous landmarks that serve as enduring testimonies to the city's cultural and architectural achievements during the Islamic era. One such landmark is Dar al-Sultan, located within the historic complex of the holy site of Sidi Abu Madyan Shu'ayb. This complex comprises the mausoleum, the mosque, the madrasa (Islamic school), the pilgrims' house, and the steward's residence. Despite the passage of time and natural decay, Dar al-Sultan has retained significant architectural features, including structural supports, connections, and roofing, alongside ornamental elements that highlight the expertise of Islamic architects. This prompts us to ask: What are the architectural and artistic characteristics of Dar al-Sultan in Al-Abbad Al-Alawi? Has it preserved the typical features of Islamic architectural style?

We selected this site for study with the aim of shedding light on its architectural and artistic value as an important historical monument of Tlemcen. To address these questions, we applied a historical methodology for tracing the origins of the building, a descriptive approach for detailing its features, and an analytical method to examine its architectural and artistic elements. This helped us determine whether the Sultan's house (Dar Al-Sultan) maintained the recognized style of Islamic palaces and residences.

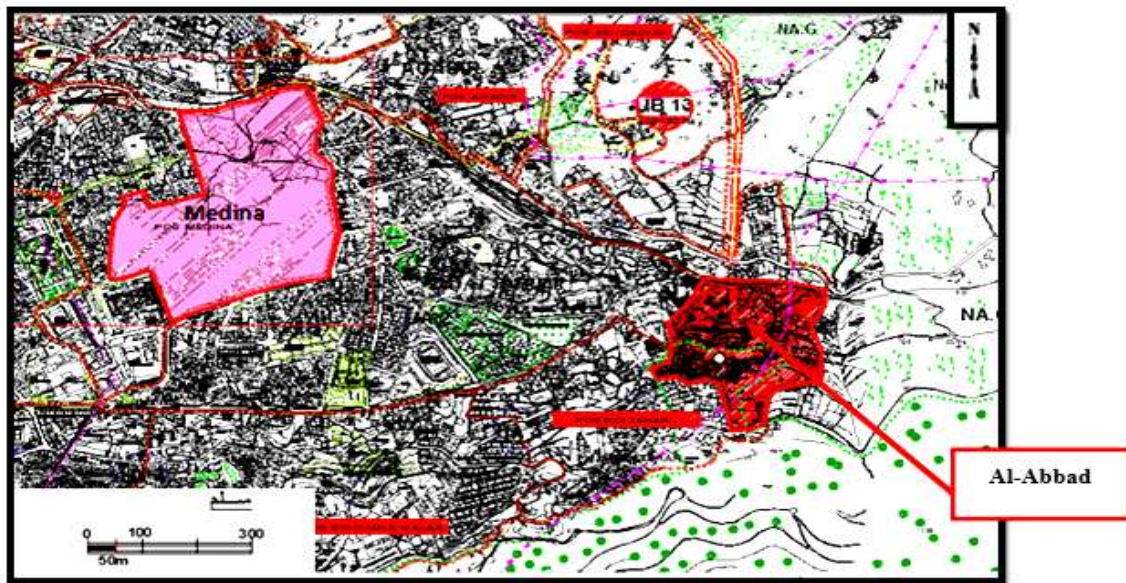
1. Site Location

Dar Al-Sultan is situated within the historical architectural complex of Al-Abbad (refer to aerial image: 01), approximately two kilometers (2 km) east of Tlemcen (see map: 01). More specifically, it is located to the southeast of Tlemcen, at the foot of Mount "Al-Ba'al." The site is bordered to the north by a belt of trees classified as part of the city's national park. To the south, it adjoins a guesthouse for visiting pilgrims, near the mausoleum and mosque. On the eastern side, it is surrounded by several private neighboring residences, while to the west, it is adjacent to an abandoned dwelling.

Picture 01 : The location of Dar Al –sultan within the historical complex of sidi abou madyan



Source: Google Earth 2024

Map 01 :The location of Al-Abbad in Relation to Tlemcen

Source: General Urban Planning and Development Plan (PDAU 2007)

2. History of the Building

The exact construction date of Dar Al-Sultan ^{1*} is not mentioned in historical texts, nor is it found in any physical evidence such as archaeological inscriptions. Although these texts refer to the landmarks of the Al-Abbad complex, the historian Ibn Marzuq^{2**} recorded the works of Sultan Abu Al-Hasan Ali ibn Uthman Said (731 - 749 AH / 1331 - 1349 AD) during his occupation of Tlemcen (737 - 749 AH / 1337 - 1349 AD). He detailed the mausoleum, the madrasa, and the mosque extensively but did not mention this specific residence, even though he listed other royal residences and palaces in Mansoura.³ The Marçais brothers, however, dated the house to the same period as

^{1*} The local residents refer to the site as "Dar Al-Sultan" (The Sultan's House). The word "Dar" (meaning "house" or

"residence") is the predominant term found in the texts of Al-Hasan. It appears either independently or accompanied by the word "Qasr" (meaning "palace") in historical sources, such as those by Ibn Marzuq and Abdul Aziz Mahmoud Al-Aaraj. For further reference, see: The Marinid Monuments in Zayyanid Tlemcen, p. 381.

^{2**} Abu Al-Hasan was a Marinid Sultan named Ali ibn Uthman ibn Yaqub ibn Abdullah, commonly known as Abu Al-Hasan and given the title "Al-Mansur Billah" (the one victorious by God). For more details, see: Al-Nasiri Al-Salawi, *Al-Istiqsa li-Akhbar Al-Maghrib Al-Aqsa*, edited by Al-Nasiri and Mohammed Al-Nasiri, Vol. 3, Dar Al-Kitab, Casablanca, 1955, p. 118. And Ibn Marzuq, *Al-Musnad Al-Sahih Al-Hasan fi Dhikr Mawlana Abi Al-Hasan*.

³ Ibn Marzuq, *Al-Musnad Al-Sahih fi Ma'athir Mawlana Abi Al-Hasan*, edited and researched by Dr. Maria Jesus Viguera, National Publishing and Distribution Company, Algeria, 1981, p. 288.

the other architectural elements of the complex, including the mosque, madrasa, and mausoleum, and considered it an integral part of the group.⁴

It appears that this landmark fell into neglect during an unknown historical period, leading to its destruction. It became little more than a pile of rubble, and its features were lost until it was rediscovered through excavation and restoration efforts conducted by the Historical Monuments Department of Tlemcen during the colonial period between (1303 - 1304 AH / 1885 - 1886 AD)⁵. At that time, it was merely ruins, necessitating the reconstruction of its layout. The remnants of decorations found during the excavations confirm the high praise given by Arab historians⁶, who described the palace as resembling the Alhambra Palace⁷.

Picture 02 : The palace after the excavation process



Source: W&G ,Marçais ,Les monuments Arabes de Tlemcen

While the exact purpose of the building remains uncertain, some accounts suggest that it was a temporary residence frequently visited by the Sultan⁸. It is believed to have been a seasonal retreat for Sultan Abu Al-Hasan Ali ibn Uthman Said, who resided in the city of Mansoura during the Marinid occupation of Tlemcen⁹.

⁴ W. & G., *Les Monuments Arabes de Tlemcen*, Ancienne Librairie Thorin et Fils, Paris, 1903, p. 267.

⁵ W. & G., *op. cit.*, p. 266.

⁶ E. Duthoit, *Une Mission Scientifique et Littéraire en Algérie*, Ministère de l'Instruction Publique des Cultes et des Beaux-Arts, Tome 1, 3rd series, National Printing Office, Paris, 1850-1890, p. 320.

⁷ G. Marçais, *Tlemcen*, ENAG (Éditions Nationales Algériennes), Algiers, 2011, p. 74.

⁸ G. Marçais, *op. cit.*, p. 75.

⁹ Dr. Rizki Sharqi, *The Historical Monuments and Archaeological Sites of Tlemcen in the Lenses of 19th-Century Photographers*, Ibn Khaldoun Publishing, Tlemcen, 2013, p. 126.

3. Architectural Features of the House

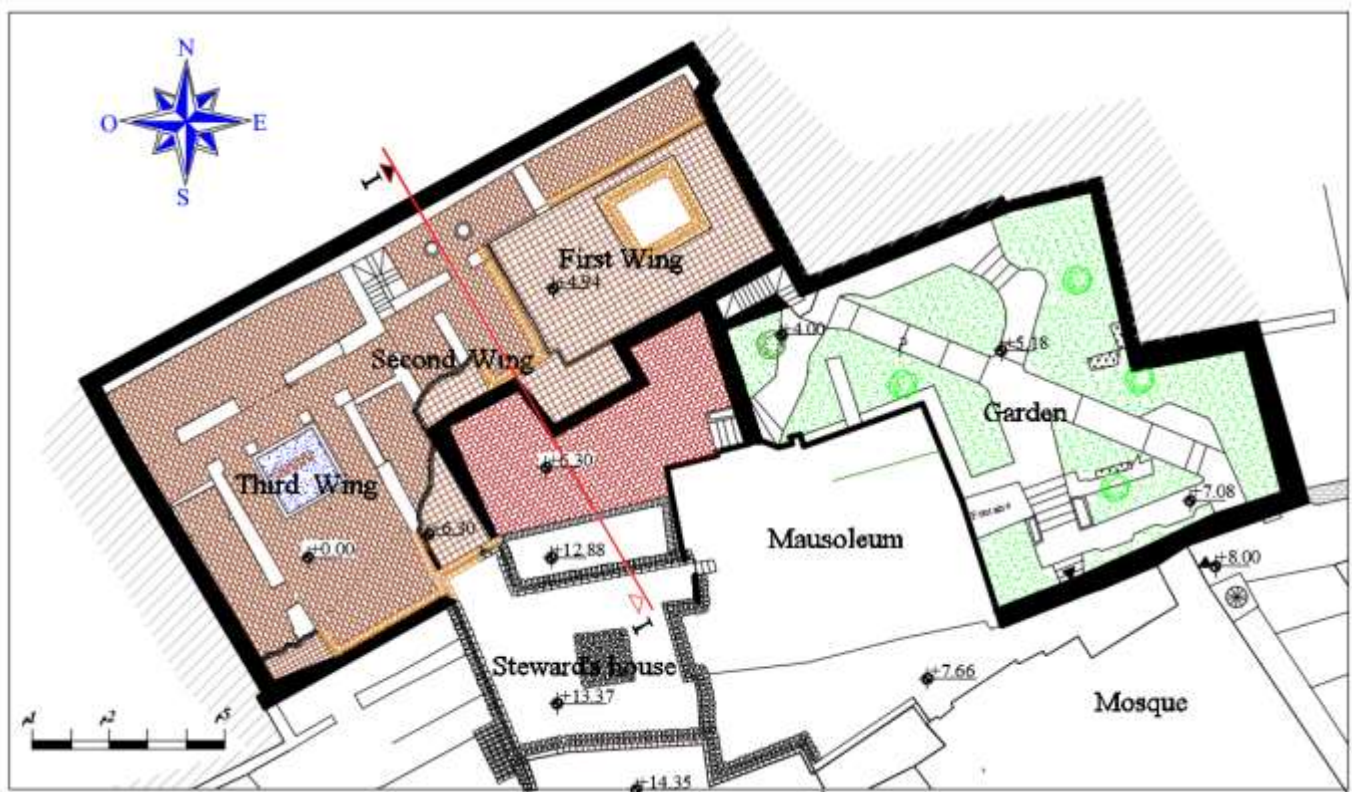
3.1 External Description

3.1.1 Extent and Area

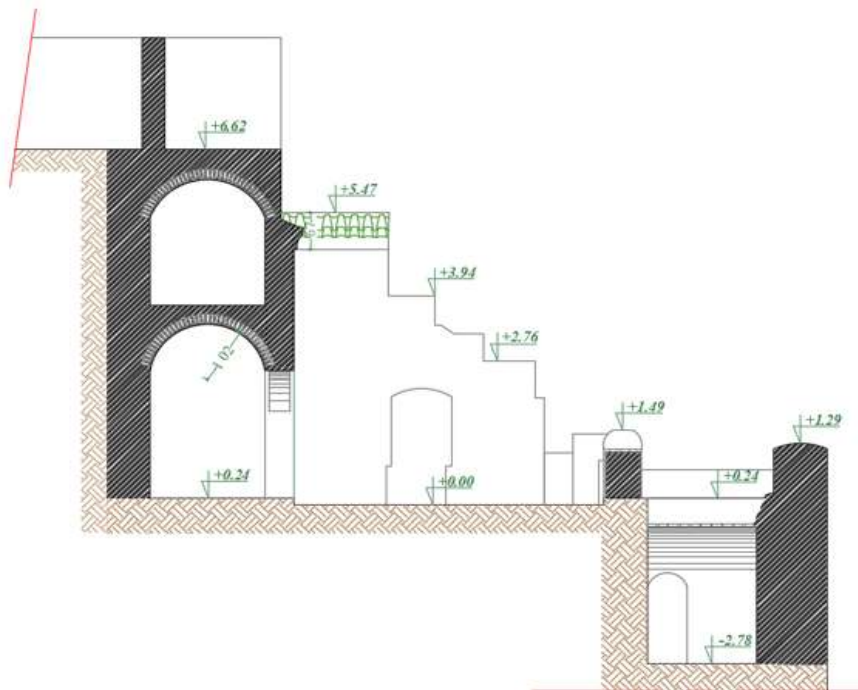
The building of Dar Al-Sultan extends from east to west, forming an irregular rectangular shape that is enclosed and lacks variation in its volumes and masses. It covers a total area of approximately 2,008 square meters.

The exterior of the house harmonizes perfectly with the topography of the site, adapting to the constraints and challenges of the sloping terrain that descends from south to north. This is achieved by constructing a stepped foundation for the building mass, with walls rising gradually from north to south (see cross-section plan II). The southern walls of the building rest on the rocky slope, acting as retaining structures.

Plan 01 : block plan



Source: authors

Plan 02 : Section plan II

Source: authors

3.2 Northern and Southern Facades of the House

Dar Al-Sultan has only two visible facades: the northern and southern facades. The eastern and western sides are adjacent to neighbouring residences.

3.2.1 Northern Facade

The northern facade originally overlooked lush orchards, though today only a small patch of greenery remains, as the surrounding area has been occupied by modern buildings. The facade allows us to distinguish between the three wings of the house, each at different levels. The first wing's facade is solid, featuring a central entrance flanked by two small openings, each measuring 0.3×0.5 meters. The second wing's ground floor has a central door, while the upper floor features a single window on its western side. This wing has lost a significant portion of its structure, including its northern facade.

The third wing has also lost many of its architectural elements, including its northern facade. The remaining visible section is its inner facade, which opens onto the central courtyard. This facade features a portico with three semicircular arches, the middle one being the largest.

3.2.2 Southern Facade

The southern facade serves as the main facade, as it contains the primary entrance to Dar Al-Sultan. It faces the northern facade of the mausoleum and is a solid wall with no openings except for the entrance.

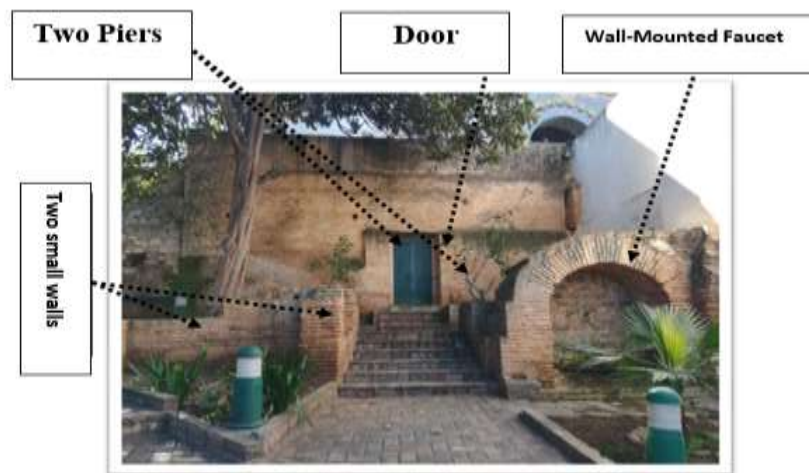
3.3 General Layout of the House

Dar Al-Sultan is designed across three levels, following the natural slope of the terrain, which descends from south to north.

3.3.1 First Level

The first level includes the garden and the upper floor of Dar Al-Sultan (see first-level plan). The garden acts as a forecourt to the house, covering an area of approximately 208 square meters. It serves as a transitional space between the interior and exterior, currently accessible via a door facing the external ablution area of the mosque. This entrance is situated at the southwestern corner of the garden wall, measuring about 1.6 meters in width. It is flanked by two protruding wall supports, followed by five steps. Opposite the steps, at a distance of one meter, there are traces of two additional supports and two small walls. On the left side, there are remains of a wall-mounted faucet adjacent to the western wall of the mausoleum. It is set within a rectangular recess measuring 2 meters in length and 1.7 meters in width, topped by a horseshoe arch supported by two wall-mounted piers. Inside the recess, a small basin receives water from the faucet. The arch was originally flanked by additional wall arches, the beginnings of which are still visible and connected to the western wall of the mausoleum.

Picture 03 :Open door to the garden opposite the mosque ablution



Source: authors

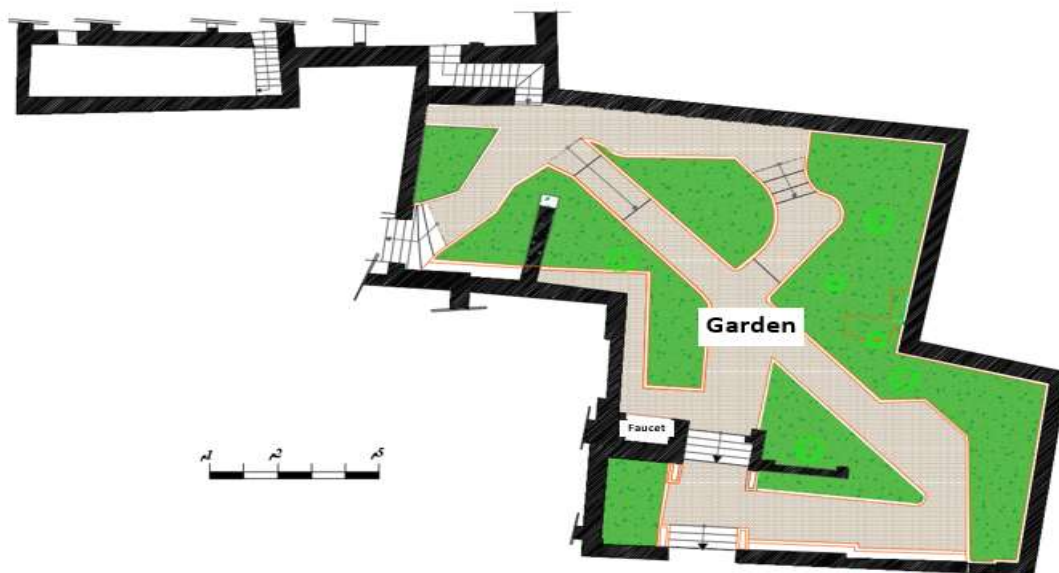
There are also traces of a blocked door on the southeastern side of the garden wall, which contains the previously mentioned entrance. Additionally, there is another door that serves as a connection between the garden and the Pilgrims' Rest House, which currently serves as the main entry point to Dar Al-Sultan.

Picture 04 : A blocked door on the eastern façade of the southern garden wall



Source: authors

Plan 03 : First –level plan

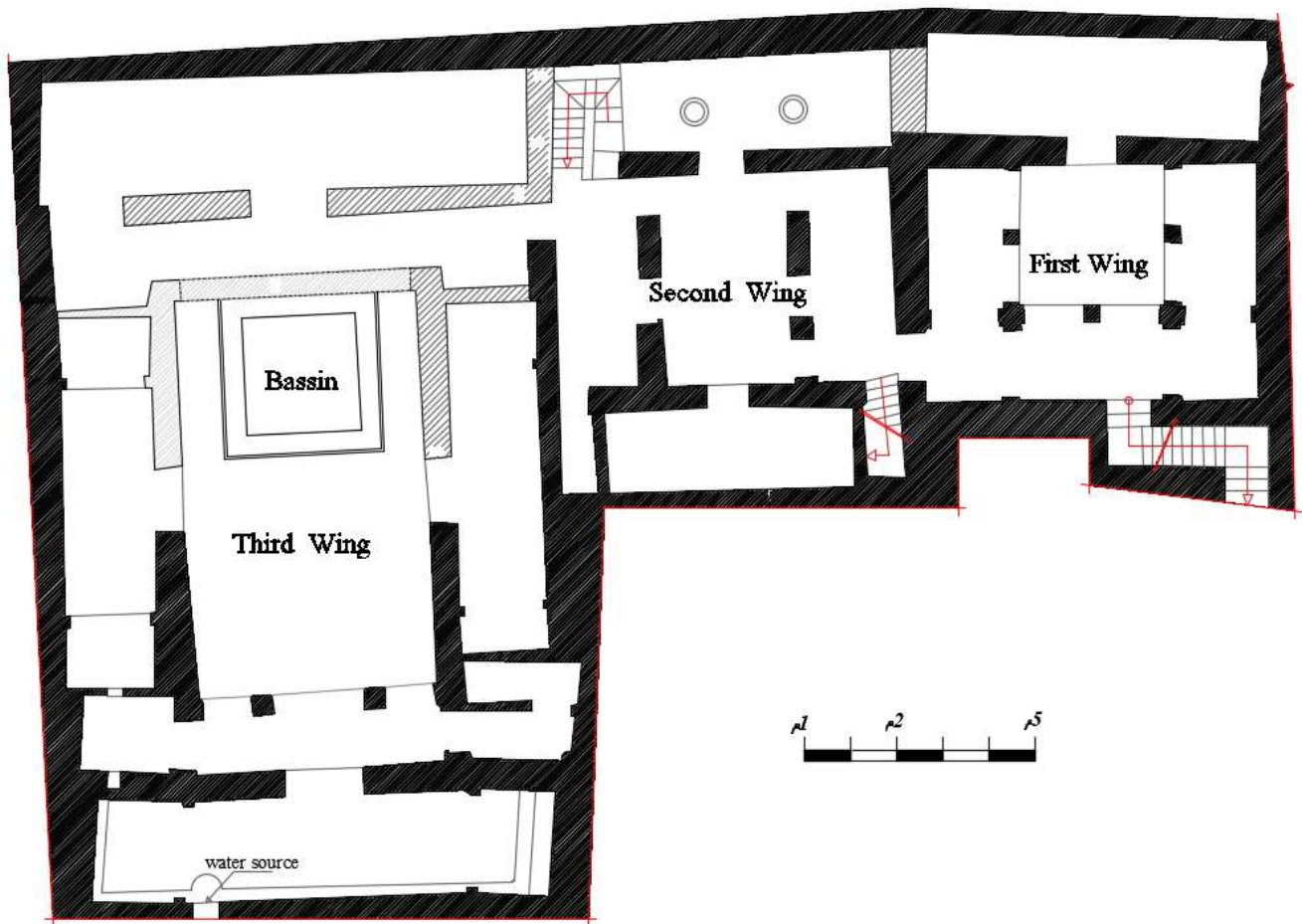


Source: authors

3.3.2 Second (Middle) Level

This level comprises the three wings of Dar Al-Sultan, arranged in a near-square rectangular shape centered around a central courtyard, surrounded by corridors and rooms in each wing (see second-level plan).

Access to this level is via a staircase descending from the south side of the first wing, which serves as the main entrance to the wings of the house through the garden.

Plan 04: Second –level plan

Source: authors

3.2.1 First Wing

Access to the first wing is through a staircase consisting of 12 steps that descend from the garden. The wing has a nearly square shape, measuring 10.80 m × 10.10 m, making it the smallest of the three wings. It has a central courtyard measuring 3.60 m × 3.50 m, surrounded on three sides (east, west, and south) by arcaded corridors. The corridors are 5.60 m long and 1.80 m wide, featuring arches with traces of plaster decorations. Each arch spans 1 m and rests on either rectangular or intersecting piers. The north side of the courtyard opens directly through a semicircular arched door, 1.40 m wide, leading to a balcony. The balcony overlooks the exterior from the north and is rectangular in shape, measuring 7.80 m × 3.10 m. Its wall features two arched niches, topped with a prominent eave covered with half-cylindrical tiles.^{10*}

^{10*} The Arab Archaeological Landmarks of Tlemcen by the Marçais brothers, this balcony was originally a room whose roof had collapsed, leaving only its inner wall intact

Panel 01: First Wing

Picture :courtyard of the first wing



Picture :Eastera corridor of the first Wing



Picture :Westera corridor of the first Wing



Picture :Nortnen corridor of the first Wing



Picture :Balcony of the first wing

Source: *authors*

3.2.2 Second (Middle) Wing

The second wing is accessed through a door on the south side of the western wall of the first wing. This wing has a rectangular layout, measuring (9.50 m × 11.50 m.) It opens into the western room of the wing, with a larger central courtyard compared to the first wing, measuring (5.30 m × 3.80 m). Unlike the first wing, the courtyard here lacks side corridors and is surrounded by three rooms. The western room opens onto the courtyard through three doors, measuring (3.50 m × 1.60 m.) It extends southward into a rectangular corridor, 2.50 m long and 0.70 m wide, with a staircase leading up to an upper room, which mirrors the southern room in shape, size, and height (5.70 m × 2.60 m). Its northern wall features a window measuring 0.70 m × 1.30 m, the only window at this level. The eastern room is identical in shape and size to the western room and extends southward into a narrow rectangular hallway, measuring 2.20 m × 0.90 m. The northern side features a balcony, 6.10 m × 2.80 m, with two circular openings in the floor, each 0.50 m in diameter (see second-level plan). A staircase on the western side leads to the underground (third) level.

Panal 02 :Second Wing**Picture :** Southern Room**Picture :** Eastern Room**Picture :** Western Room**Picture :** Balcony of the Second wing**Picture :** Courtyard the Second wing*Source: authors***3.2.3 Third Wing**

The third wing is rectangular, measuring 22 m × 13.50 m, and is the largest of the three. It is accessed via a passage connecting it to the second wing, located in the northwest corner, near the staircase leading to the underground floor. The central courtyard of this wing is larger than those of the previous two, measuring 10.10 m × 6.20 m. It features a small basin, 2.90 m × 2.80 m and 0.70 m deep, surrounded by a water channel fed by a spring located in the southern wall of the southern room. The southern side of the courtyard features a corridor with three arches, the middle arch being the widest (2.50 m), while the smaller arches span 1 m. The arches rest on rectangular brick piers. The flooring of the corridor still preserves some fragments of decorative zellige tiles.

This wing has lost many of its structural elements, particularly in the eastern and western rooms, of which only parts of the walls and ceilings remain, along with traces of plaster decorations. The restoration efforts aimed to preserve and protect these elements from weather damage. The remaining rooms, likely two symmetrical chambers on the same axis, directly overlook the courtyard. The first room measures 8.50 m × 2.30 m, while the second measures 7.79 m × 2.40 m.

Each room opens onto the courtyard through a door 1.30 m wide. The rooms are divided into three sections, with the central section being the largest and at a lower elevation than the side sections. The southern room opens onto the southern corridor through a door measuring 1.80 m in width and measures 11 m $\times$ 2.40 m. It is also divided into three sections, with the central section being the widest. The walls and ceiling of this room are adorned with plaster decorations, some of which remain intact. The rear walls show traces of water channels, one of which directs water towards the toilet area, where droplets are still visible. On the western side of the corridor, there is a square niche measuring 2.10 m in length and 1 m in width, with a door at its northeastern end, 0.70 m wide, leading to a rectangular toilet.

It seems that the northern side of the wing also featured a corridor similar to the southern one, though only traces of its supports remain. According to the Marçais brothers, the palace originally contained more than 12 rooms, but field observations suggest fewer rooms remain.

Panal 03 :Third Wing



Picture : Southen corridor of the third Wing



Picture : Courtyard



Picture :Remains of the Eastern



Picture :Water Outler in the Southen Wall of the Courtyard



Picture : Southern Room

3.3 Third (Underground) Level

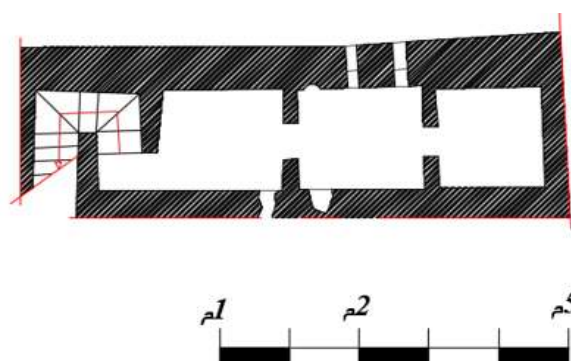
This level consists of three rooms of similar shape and size, accessed via a staircase in the northwest corner of the second wing. The rooms are connected by doors measuring 0.60 m between the first and second rooms, and 0.50 m between the second and third rooms, with all doors featuring a flat arch except for the third room, which has a horseshoe arch. The rooms are rectangular, extending from east to west, with the first and second rooms measuring 10.20 m × 1.90 m. The third room is square, with a side length of 1.70 m. The three rooms have barrel-vaulted ceilings with a central circular opening, 0.50 m in diameter, for ventilation and lighting. There are also traces of water channels along the southern wall (see third-level plan).

Picture 05 :Rooms of the Basement Floor



Source: authors

Plan 05: Third –level plan



Source: authors

3.4 Staircases:

The palace features three staircases located in different parts of the structure. The first staircase occupies the southern wall of the first wing, providing access to the garden and serving as the main entrance to the house. The second staircase is located in the southeast corner of the second wing and leads up to the upper room. It features three triangular landings, preceded by seven steps, each measuring 0.90 m in length and 0.25 m in width, with a rise of 0.25 m.

The third staircase is in the northwest corner of the second wing and descends to the underground level. It occupies a rectangular space divided into two equal parts and turns at two right angles with a step separating them. Each turn features two triangular landings, with each step having a rise of 0.25 m, except for the last step, which rises 0.35 m above the floor.

Picture 06 :Staircase 1



Source: authors

Picture 07 :Staircase 2



Source: authors

Picture08 :Staircase 3



Source: authors

3.5 Entrance

The entrance block is rectangular, measuring 3.90 m in length and 1.69 m in width. It features a bent entrance, with a door approximately 1.10 m wide that opens directly into the southern corridor of the first wing's courtyard (see image). The entrance comprises a descending staircase with 12 steps and two turns, with the first turn having two steps, followed by eight steps in the second turn. It connects to the southern corridor of the first wing via two additional steps, each measuring 0.90 m in length, 0.27 m in width, and 0.30 m in height.

1. Building Materials and Decorative Techniques

4.1 Raw Materials

4.1.1. Tabiya (Rammed Earth)

Tabiya is a construction material that became widespread throughout the western Mediterranean basin and in various regions of the world, but it saw particularly extensive use in the Maghreb. Its natural properties make it effective for defense, cost-efficient, easy to obtain, and easy to shape¹¹. Tabiya is a mixture of earth, lime, brick dust, and crushed stone, with a small amount of water added¹². It was used as the main building material for the construction of the house.

4.1.1. Brick

Bricks were employed as a primary building material alongside tabiya in the construction of the palace. They were used in building walls, arches, arcades, piers, and vaults. Bricks also formed the door frames and were used to cover the floors and roofing during restoration efforts. The bricks came in three different sizes, as shown in the table below:

Table 01: size of brick

Length	Width	Thickness
23 cm	12 cm	4 cm
25 cm	12 cm	4 cm
25 cm	12 cm	3.5 cm

Source: authors

4.1.2. Stone:

Stone was used selectively in certain parts of the house, alternating with tabiya and brick. It can be found in sections of the garden wall and in the western wall of the first wing.

¹¹ Hassan Al-Wazzan, *Description of Africa*, Volume 1, translated by Muhammad Hajji and Muhammad Al-Akhdar, Dar Al-Gharb Al-Islami, Beirut, Lebanon, 2nd Edition, 1983, p. 127.

¹² *Ibid.*, p. 639.

4.1.3. Roof Tiles:

Conical semi-cylindrical red clay tiles, measuring 39 cm in length, with a first diameter of 21 cm and a second diameter of 27 cm, were used. They were primarily applied along the eaves of the courtyard walls.

4.1.4. Plaster (Gypsum)

Plaster covered the walls and ceilings of the house, with some remnants still visible in the arcades of the first wing and the rooms of the third wing.

4.1.5. Zellige (Moroccan Tilework)

Zellige refers to glazed terracotta tiles, typically 10×10 cm in size, though smaller sizes of 5×5 cm or even 3×3 cm and a thickness of about 1.2 cm are also found¹³. They are arranged according to intricate patterns, creating beautiful decorative panels with geometric, floral, or calligraphic designs. Zellige was mainly used for flooring, wall cladding, and decorating door thresholds and staircases¹⁴. Some fragments of zellige remain visible around the arch openings in the courtyards of the first and second wings.

Picture 09 : Zellige Tilework at One Openings
of the Southern Corridor of the First Wing



Source: authors

Picture 10 : Zellige Tilework at One Openings
of the Southern Corridor of the Third Wing



Source: authors

¹³ A. Piccard, *Morocco: Traditional Islamic Craftsmanship in Architecture*, Annecy, Ed. Atelier, 1974-1981, p. 357.

¹⁴ Almi Lakhdar, *Architectural Ornamentation during the Marinid and Zayyanid Eras*, PHD dissertation in Islamic Sciences, University of Tlemcen, 2012, p. 52.

4.2 Construction Techniques

4.2.1. Foundations

The ground beneath the house is rocky, sloping from south to north. It was prepared to accommodate the foundations, which often required leveling and chiseling the rock. The foundation layer was filled with a high-lime mortar mix, followed by a second layer of tightly packed debris stones (crushed stones), which were set using a wooden form that was removed only after the mortar had fully dried. At a depth of 50 cm, a thinner stone wall was constructed, rising between 20 cm and 50 cm to protect the lower section of the wall from water damage, which could erode the tabiya over time.¹⁵

4.2.2. Walls

➤ Load-Bearing Walls Made of Tabiya:

Most of the external walls were constructed using tabiya. The southern walls also serve as retaining structures, supporting the adjacent soil and nearby buildings.

➤ Walls Made of Brick or Stone:

These walls are also load-bearing but are located inside the house. They combine brick and stone, particularly in the southern wall separating the toilet from the eastern room of the third wing.

Picture11 :Eastera Room
of the Third Wing



Source: authors

Picture12 :Westera Room
of the Third Wing



Source: authors

Picture 13 :Westera wall
of the First Wine



Source: authors

➤ **Brick Walls:** Various techniques were employed in constructing the brick walls:

¹⁵ Doat, P., Hays, A., Houben, H., Matuk, S., & Vitoux, F., *Building with Earth*, Paris, 1983, p. 17.

-Double Course Method: This method integrates two systems: vertical brick courses and arched brickwork at a certain height. The arch merges seamlessly into the wall without a wooden form, serving a supportive function. This technique is visible in the northern wall of the eastern room in the middle wing and the eastern wall of the southern room in the third wing

Picture 14 :Eastern wall of the southern room in the third wing



Source: *authors*

-Longitudinal and Transverse Method: Used in building piers and door frames.

-Vertical Course Method: This method involves stacking bricks vertically with a mortar layer between each piece. The walls built using this technique are approximately 40 cm thick and can be found throughout most parts of the Dar (house).

-Herringbone Technique: This technique involves arranging bricks diagonally in alternating directions, forming a pattern with a tilt of 45° to 50°. It is typically used alongside other techniques, such as the vertical course method. It is seen in parts of the garden wall and the upper sections overlooking the courtyard of the third wing.

➤ **Composite Walls of Brick and Tabiya:**

This method was used for the walls overlooking the courtyard in the third wing, combining brick and tabiya in alternating layers with debris stones, resulting in a wall thickness of up to 60 cm.

4.2.3. Support Elements:

➤ **Piers:** The house features various types of piers supporting the roof arches:

- **Square Piers:** These are found in the arcades surrounding the courtyards. Their side lengths vary, measuring around 45 cm in the third wing and 30 cm in the side sections of the first wing. They rise to heights of 190 cm and 320 cm in the third wing. Each side supports two arches.
- **-Cross-Shaped Piers:** These piers have a cross (+) shape, supporting two arches on each side, typically found in the courtyard of the first wing.

Picture15 :Cross-Shaped (+) and Square Piers in the first wing



Source: *authors*

➤ **Arches:** The arches in the house vary in shape and are constructed from medium-sized bricks (0.4 cm × 12 cm × 26 cm). The mortar layer compensates for size discrepancies between the inner and outer faces. Notable types include:

- Semicircular Arch : Found in the arcades of the third wing and the palace doors, except for the middle and northern doors of the eastern room in the middle wing.
- Overreaching Semicircular Arch: Extends beyond 180°, used in the garden fountain, niches, and arcades of the first wing.
- Curved or Chord Arch: Found above certain door openings in the middle wing.
- Broken Semicircular Arch: Used for the door connecting the first and second wings and in some basement doorways.

Panel 04 :Type of arches in the places

Picture :Semi-circular Arch
above door opening



Picture :Overreaching Broken
Arch above the Door Connecting
the First and Second Wings



Picture : Semi-circular
Overreaching Arch above opening
of the First Wing Corridors



Picture :Chord Arch above
Door Opening of the Rooms in
the Second Wing

Source: *authors*

4.2.4. Roofing System

Two roofing methods were used in the house, utilizing bricks with dimensions of 12 cm × 25 cm and a thickness of 4 or 5 cm. The bricks were bonded with mortar of similar thickness, creating a strong and balanced roof structure capable of bearing upper loads.

- **Barrel Vaults:** These were used to cover the rooms of the basement and the middle wing.

Picture16 :Barrel Vaults



Source: *authors*

- **Flat-Topped Pyramidal Vaults:** These were employed in the side wings, aligned with the longitudinal span of the spaces.

Picture 17: Flat-Topped Pyramidal Vaults



Source: *authors*

5. Artistic Features of the House

The decorative elements used in the house include geometric, calligraphic, and vegetal motifs. These were skillfully applied to create plaster panels that adorned the ceilings, wall surfaces, and arches, showcasing a variety of decorative themes. The ceiling decorations primarily consist of symmetrical palm frond fans, forming parallel horizontal bands. Each band is made up of repeated patterns, typically in the form of trilobed arches. These motifs were executed differently from one wall to another.

The plaster decoration on the ceiling closely resembles the ceiling decorations but is distinguished by fine lobed details, featuring fine lobed details, fronds are filled with interwoven veining of engraved palm fronds and a lobed flower whose petals are visible in the third wing (see Panel 1 of the Third Wing).



ing closely resembles the decorations on the arches script. The arch spandrels are set against a background of a single arch stands out with a part of the eastern room of the Southern Room

Picture 18 : Plaster decoration on the lower part of the western Room Wall

Source: *authors*

Panel 05: Plaster Decorations on the Walls and Ceiling of the Southern Room of the Third Wing



Source: *authors*

The vegetal decorative panels are characterized by the presence of geometric interlacing, formed by circles that are either spaced apart evenly or positioned closely together horizontally. These circles are interconnected by straight lines extending in all directions, resulting in various shapes, predominantly star patterns that repeat within the designs. The calligraphic decorations were executed in Andalusian Naskh script, featuring the repeated phrase: "Al-Mulk Al-Da'im Lillah, Al-Izz Al-Qa'im Lillah" ("The everlasting sovereignty belongs to God, the perpetual glory belongs to God"). This inscription is found within the bands surrounding the decorations on the arches and walls. In some cases, it serves as a divider between two successive decorative elements, such as on

the left wall of the southeastern room in the third wing. The length and width of the inscription vary depending on its placement within the panel.

Picture 19: Variation in the sizes of Calligraphic Bands in the plaster panel of the southern room in the third wing



Source: *authors*

Conclusion

In conclusion, this study highlights the ingenuity of Islamic architecture in adapting to the topography of the site, that Dar al-Sultan was constructed across three successive levels, giving the impression of being built on multiple floors. Despite the wear and tear over time, Dar Al-Sultan has retained a significant portion of its original layout, which illustrates the typical style of Islamic architecture. The central element of the design is the open courtyard (sahn), whose size and architectural details vary from one wing to another. The interior spaces were arranged symmetrically around the courtyard, with a focus on internal orientation rather than external lighting and ventilation. The walls and floors were richly adorned. Although only a few plaster and mosaic decorations remain, they provide a comprehensive picture of the house's ornamental style.

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