

Traditional Architecture of Maaloula

Typology and Materials Methods

Rama Aldaher^{1*}

¹ Institute of History, Faculty of Humanities and Social, Pázmány Péter Catholic University, 2087 Piliscsaba, Egyetem str. 1., Hungary

* Corresponding author, e-mail: aldaher.rama@hallgato.ppke.hu

Received: 12 May 2021, Accepted: 27 October 2021, Published online: 20 December 2021

Abstract

Maaloula is a Christian village with exceptional architecture and location. It has a world reputation due to its dialect; people converse and write in the Aramaic language. It is one of the Qalamoun's three villages with Bakhaa and Jabaden. Consequently, the village has attracted linguists worldwide; moreover, it has been the goal of many travellers since the 19th century.

Like many of the traditional sites, Maaloula was affected by modern lifestyles and changing needs. These factors altered the village's architecture and construction techniques. This paper highlights the main characteristics that have been identified by Maaloula's situation. The article will cover various traditional features and the main typology of houses that are starting to disappear. Finally, the difficulties that Maaloula faced before, during and after the Syrian crisis.

Keywords

Maaloula, Ma'lula, traditional architecture, resident typology

1 Introduction

Maaloula is a secluded Syrian village of the Qalamoun; a mountain range that stretches between the plain of Damascus and Anti-Lebanon. It is located at an altitude of 1600 meters away from major roads. The village is enclosed by two narrow defiles, surmounted by two high rocks, and built amphitheatrically on the escarpment walls, as shown in Fig. 1. This environment has affected the settlement in various ways. Many studies show that people resided in the Maaloula area in the early middle Pleistocene; the most probable localities for caves or rock shelters are on the Anti-Lebanon flanks. Kaus Kozah is a cave in Maaloula that has contributed significant results regarding the settlement at the time of the development from a foraging economy to one based on agriculture and sedentism (Conard et al., 2005). During the Aramaic period, Maaloula was part of the Soba kingdom (Al-Majdi, 2000), where it is recorded as an Aramaic village in the first century B.C., although the first human traces found in Maaloula date back to the Stone Age (Joud Allah, 1999).

The question is, how could a village like Maaloula maintain its Christianity and conserve its oral and written Aramaic?

This issue arises when we see the surrounding villages converted to Islam and starting to lose the language. It is



Fig. 1 Aerial photo of Maaloula (Wikimedia)

likely the village's location, a site between two gorges away from danger, where travellers pass without noticing its existence. In addition to the bravery of their people, Maaloula avoided outside contact and interactions, staying away from all the effects. It was like many other minority sects, who have often taken the mountain areas as home, seeking refuge or isolation from the majority. This was often the main reason that saved their religions, and in the case of Maaloula, also their language (Provence, 2005; Bliss, 1890).

The Aramaic language and the Christian identity distinguish Maaloula, which is evident in the festive sequence. Christianity has been deeply rooted in Qalamoun from the beginning of the fourth century (Nasrallah, 1952). From AD 313, Constantine had proclaimed freedom of Christian worship. He favoured Christianity and became its official defender against paganism and heresy.

Maaloula is an excellent example of building churches over pagan temples. The Christian festivals are also part of a "reinvention of tradition" trend that seeks to promote and maintain what still belongs to popular culture in Syria. Those involved in these festivals are well aware that these are one of the last celebrations of their type and intend to preserve the "authentic" character. The festivals last for 25 days; the first and the most important one is the feast of the Cross on September 13th and 14th. On September 23rd, the feast of Sainte Thecla, and on October 6th, a feast to honour St. Sergius (Chiffolleau, 2006).

2 Landscape and location of Maaloula

The natural environment affects the village architecture; it is clearly illustrated in the buildings and construction materials that depend on feasibility and availability. These combined factors shaped the culture and society, creating a lifestyle where the natural environment imbues the day-to-day activities. Today, new materials prevail over traditional ones. Therefore, it is imperative to understand the importance of vernacular architecture that achieves sustainability and adapts to the climate.

The unique site gives Maaloula its characters, where houses in the old village are superimposed and partly carved out of the rock, shaping the narrow alleyways. Irregular steps connect the houses, this technique forming a labyrinth only the locals know. In the old village, there are two types of axes; the main axes lead from the surrounding area to the court, where they meet in the middle. At the same time, the auxiliary lanes are a crossed net that connects the properties. These paths are specified for pedestrians and animals (e.g. donkeys and horses) that play an essential role in Maaloulites lives, especially the peasants. Many springs supply the village with water that irrigates the valley extending to the south, where the cultivation of fruit trees dominates, such as apricot and vines, as shown in Fig. 2. Like everywhere else in Syria, Maaloula suffers from drought, but it still represents a pleasant garden known for its healthy atmosphere. Most Maaloulites now live in Damascus or abroad; few young people stay in

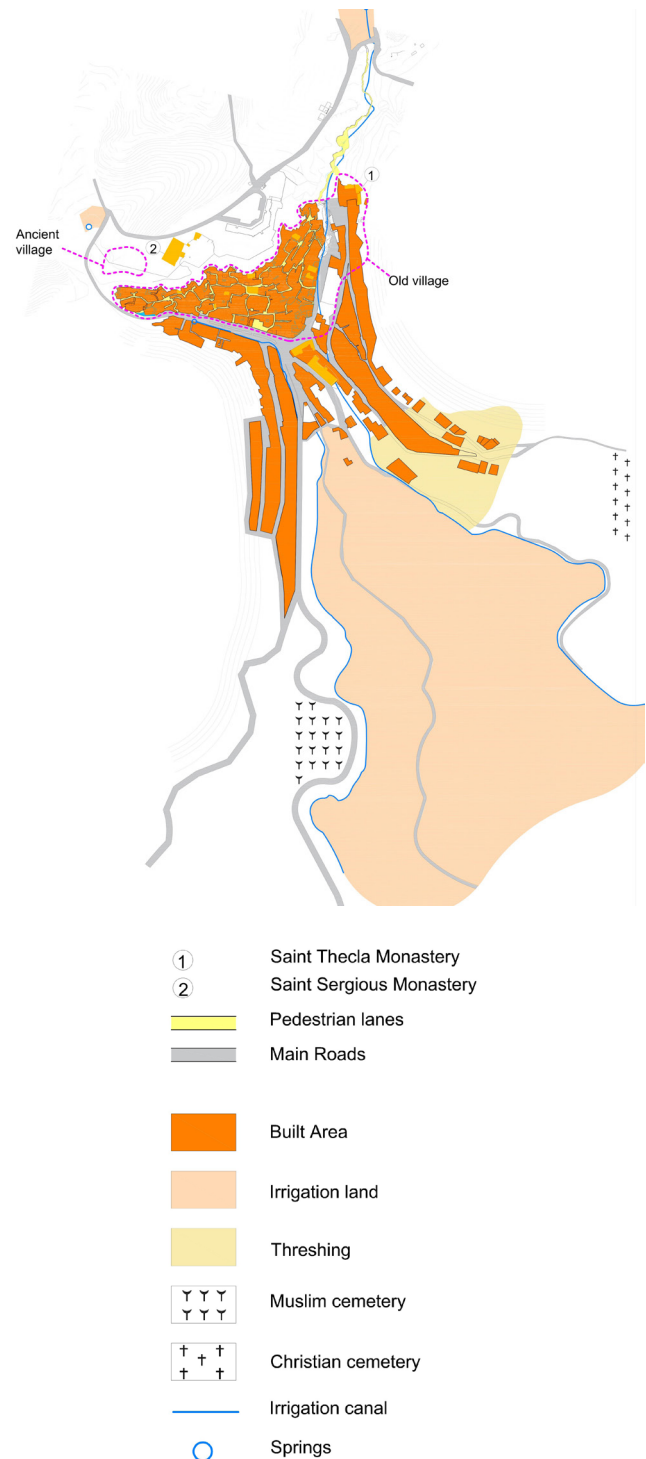


Fig. 2 The plan of Maaloula, water supply, and the field irrigation (Escher and Pfaffenbach, 2002).

the village year-round compared to the elders (Escher and Pfaffenbach, 2002). However, Maaloulites, living away from the village, keep either an old house or a recent one where they spend the summer and the holiday season, conducive to strengthening family ties.

3 The residential features of Maaloula

Regardless of its form, the countryside home has essential components that make it completely different from the city version. These components are related to the lifestyle that revolves around agriculture, raising livestock and related activities. Consequently, houses have three main spaces: human space, animal space, and food storage. These parts and their arrangements depend on the climate and seasons (Al Asali and Shahin, 2016). The residential typology in Maaloula recognises the distinguishing features that differentiate the types due to the free shape that the rocky site imposes. We can sort the houses related to the plan, and depending on the evolution over time, we can define the following types.

3.1 The ancient village

During the Roman era, people in Maaloula lived in the old part of the community known as *Blota Olia* in Aramaic, meaning the upper village. It included spacious houses, 5 to 8 meters long and 3 to 4 meters wide, cut in the rock, some of which were on two floors. These houses are considered adequate and reachable by carved stairs. The interior space is divided by differentiating the levels. The lower level was for animals; the upper one was regarded as a living room and raised by 50–70 cm, with many rooms opening to this space. Most of these caves contain holes used for wine fermentation and a rocky terrace at the entrance, directed to the south (Helal, 2018), as shown in Fig. 3. In the Byzantine period, the population overflowed into the outlet of the western gorge, the houses even invaded the steep slopes of the oriental side during this time. (Joud Allah, 1999).

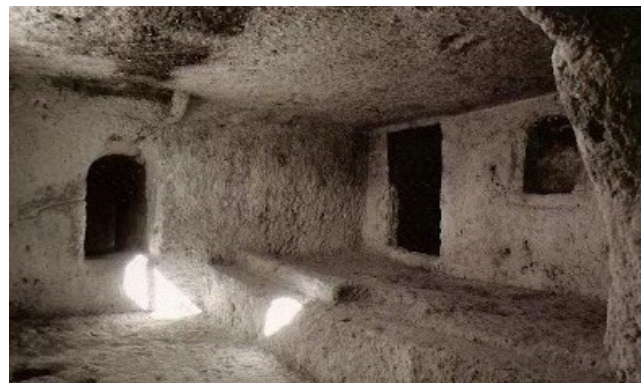
3.2 The simple house

The simplest and most common form consists of a housing unit, food storage, and space where animals are kept. The house is built from local materials. The walls, in the simplest form, do not usually have large openings except for ventilation and exhaust for smoke. The internal design contains different levels reflecting its purpose in the house; livestock are kept on the lower level while the bedrooms and living rooms are on the upper level.

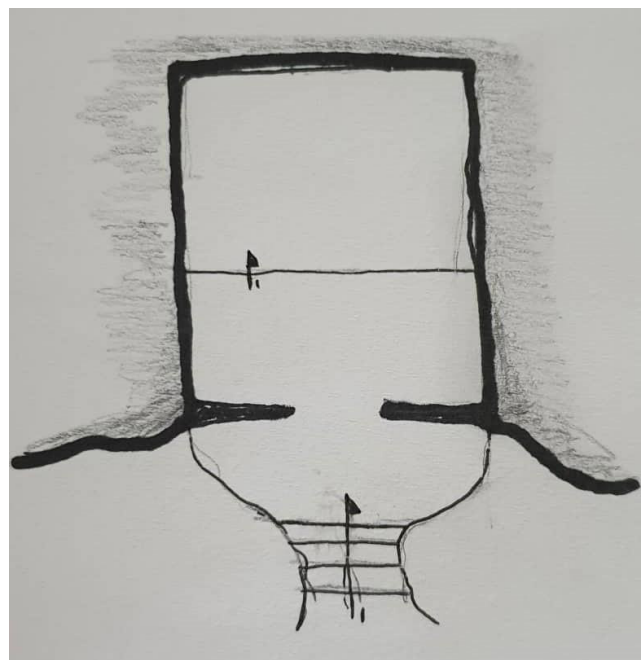
This type of house takes the cave as part of its design, where it is used as food storage. External activities such as cooking, baking, sleeping during summer, and processing agricultural products are designated to be done outside using the balcony or roof. There is no standard building method or dimensions; this type is unorganised and defined by the site, as shown in Figs. 4 and 5.



A



B

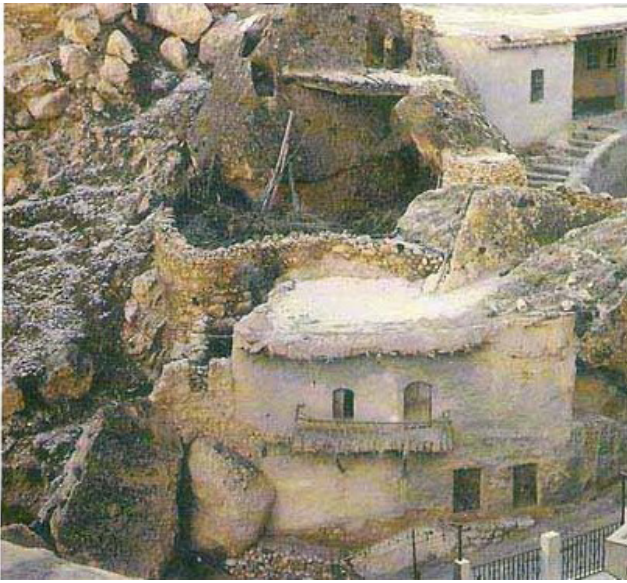


C

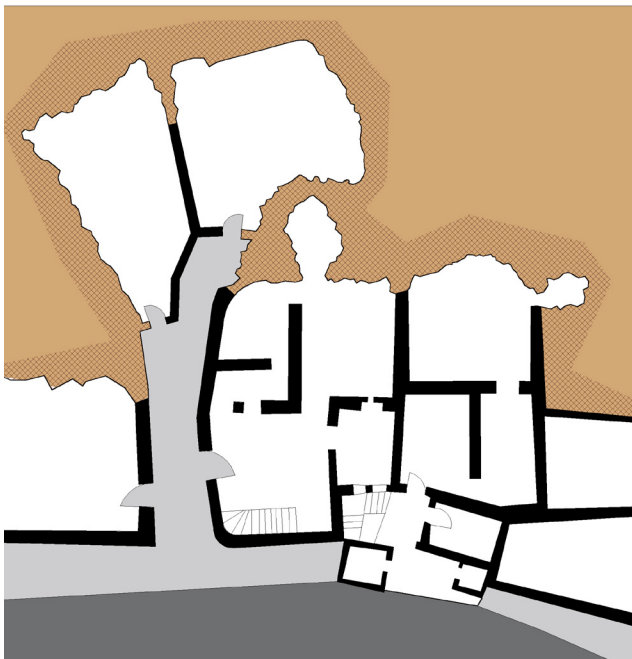
Fig. 3 A – presents the ancient Maaloula *Blota Olia* (Major, 2019); B – shows the interior view of the home (Major, 2019); C – shows simple plan of the ancient home (by R. Aldaher).

3.3 The arcade house

This form is found in the low level of the old village. It has a long arcade covering the entire elevation of the house,



A



B

Fig. 4 A – shows a simple house with livestock at the bottom level (Al Homsy, 1984); B – shows different houses that takes the cave as part of its plan (Hadad, 2011).

either on the ground floor or the first floor, reached by external stairs. The arcade differs from the bench or the porch of a house. It is a fundamental design element rather than a simple addition, as shown in Figs. 6 and 7.

3.4 The courtyard house

The structure lies on the boundaries of the property, with all windows opening an internal courtyard. The enclosure

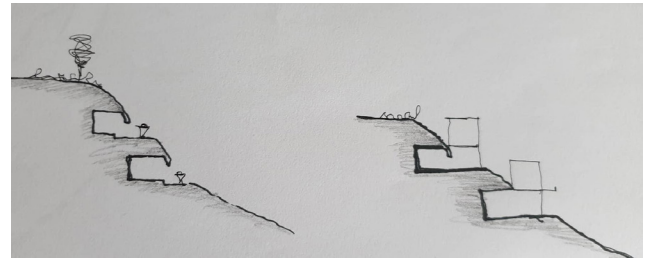


Fig. 5 This figure shows how people moved from the ancient village [carved houses] to the next type, which takes the caves as part of it, this type is the common one in the old village by R. Aldaher.

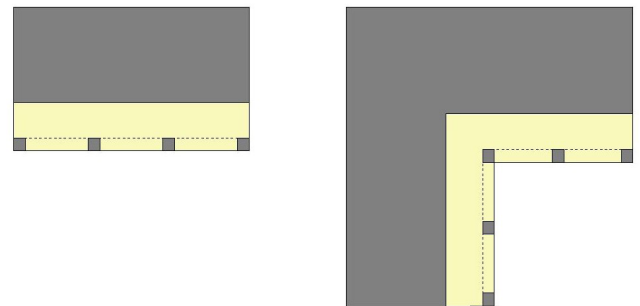


Fig. 6 Shows a plan of the Arcade house types, where the arcades exist in line shape or L shape, by R. Aldaher.

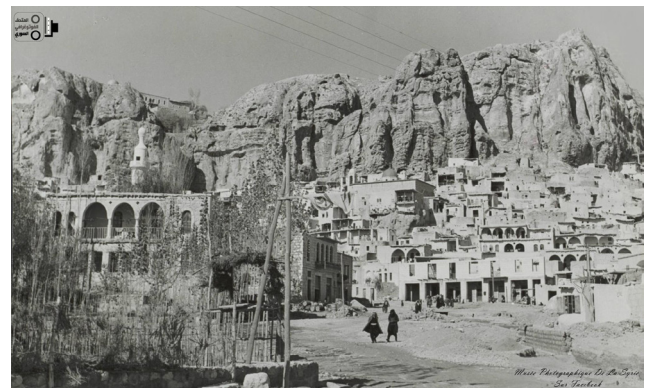


Fig. 7 This photo shows the spread of the arcade houses in the village's perspective during the 30s of the last century (Hadad, 2011).

is the external space for most activities, and sometimes a part of it is allocated for animals. The courtyard can have an outer wall on one side, forming what is called a Hosh. In this case, the Hosh is shared with other houses belonging to relatives around the courtyard. It creates an external space for all activities and social bonding between families; see Fig. 8.

4 The traditional architectural art of Maaloula

Geographical, climatic and religious features have their architectural and cultural influences. They naturally impacted the architecture, habits and lifestyles of local populations. Lifestyles change from place to place, with

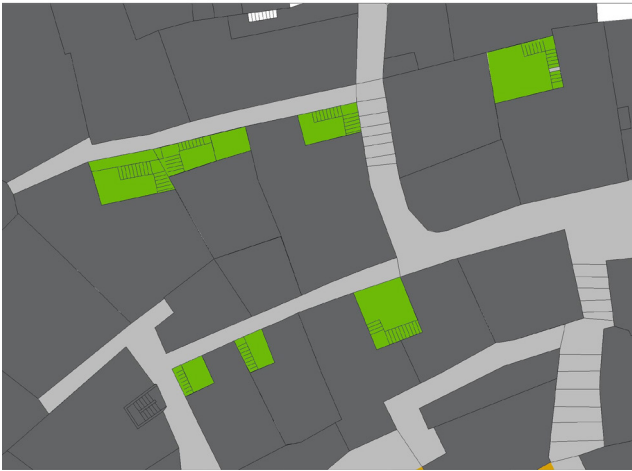


Fig. 8 Plan shows types of the courtyard houses, where this residence zone represents different forms related to the place of the court by R. Aldaher.

the building materials changing according to availability in a particular area and producing different building typologies. The abundance of certain building materials defines the building typology, the shape of the buildings and their overall appearance.

According to Fathy (1986), people must consider the environment; they must remember that they do not build in a space or on a blank sheet. They are introducing a new element into an environment that has maintained the balance over time. People are responsible for the surrounding site. If they ignore this responsibility and construct without considering it, they commit an act against architecture and civilisation.

Traditional architecture depended on handcrafts and building materials made from natural components; this is noticeable in the style, colour and dimensions of buildings, all adapted to local lifestyles and needs. Some of these characteristics have withstood over time; others have changed or adapted to the modern style. This can be observed in Maaloula architecture, as its architecture has a typical appearance and details.

4.1 Rough stone walls

This type is used in rural areas, where stone is used to build different shapes and sizes of walls. The foundations that support these walls are to a depth of 50 cm and reach 100 cm in width. Typically, the foundation consists of large uncut rocks with rubble packed between them (CORPUS Levant, 2004). However, in Maaloula, the walls are built directly on the rocky ground due to the rocky site. Many types of walls can be found in the village. Generally, limestone is the primary material in traditional construction buildings. The craftsmen excelled

in procuring these materials, abundant in the region, carving them and cutting them. These walls are built in different ways (Hadad, 2011):

1. Double facing grouted cavity wall consists of two stone faces about 25 cm wide each. The core is usually filled with rubble and earth mixed with straw. Therefore, the double-faced wall is about 60–70 cm thick and plays a critical insulation role.
2. The thick wall is built of carved stone. Mud mortar is used to join the stones together and is also used in pointing the external walls to fill in the gaps.
3. One Face wall: this type is built with single carved stones.
4. A thick wall built of uncut stones.
5. Mixed wall, partly carved and partly built. In this type, the cliff stone is used as a wall. A built part is added to complete and refine the wall.
6. This type of carved wall is found in the houses that take caves as part of it, as shown in Fig. 9.

The thickness of walls is between 40–60 cm on average, and stone walls are built of rubble stone with a thickness of up to 70 cm. Lime mortar was used as a binder and replaced by new cement mortar for ease of handling and durability.

4.2 Lime plaster

Lime rendering is still used as a rendering material for stone walls in cities and some towns all over Syria. It is a beautifying element and plays a role in protecting the walls from the external effects that may, in the long run, affect the wall's durability and structural condition. Lime rendering is applied in three layers:

- **First:** The *Bsmar* layer consists of dust with hydrated lime, and sand with water.
- **Second:** The *Bitaneh* layer is made of lime, hard sand, dust and hemp with water.
- **Third:** The *Dahra* layer is made from lime, fine sand, dust and water.

Lime rendering must be prepared according to particular standards to ensure its cohesiveness and effectiveness. Specifically, the time between the applications of each layer must be taken into account. The quality of the original surface to which the rendering is being applied is an essential factor in reaching a good final result. Therefore, to avoid cracks, dampening the wall before coating is essential to ensure that the wall does not absorb the water of the rendering. In general, rendering is sensitive to external effects. Therefore, it must be renewed and fixed periodically.

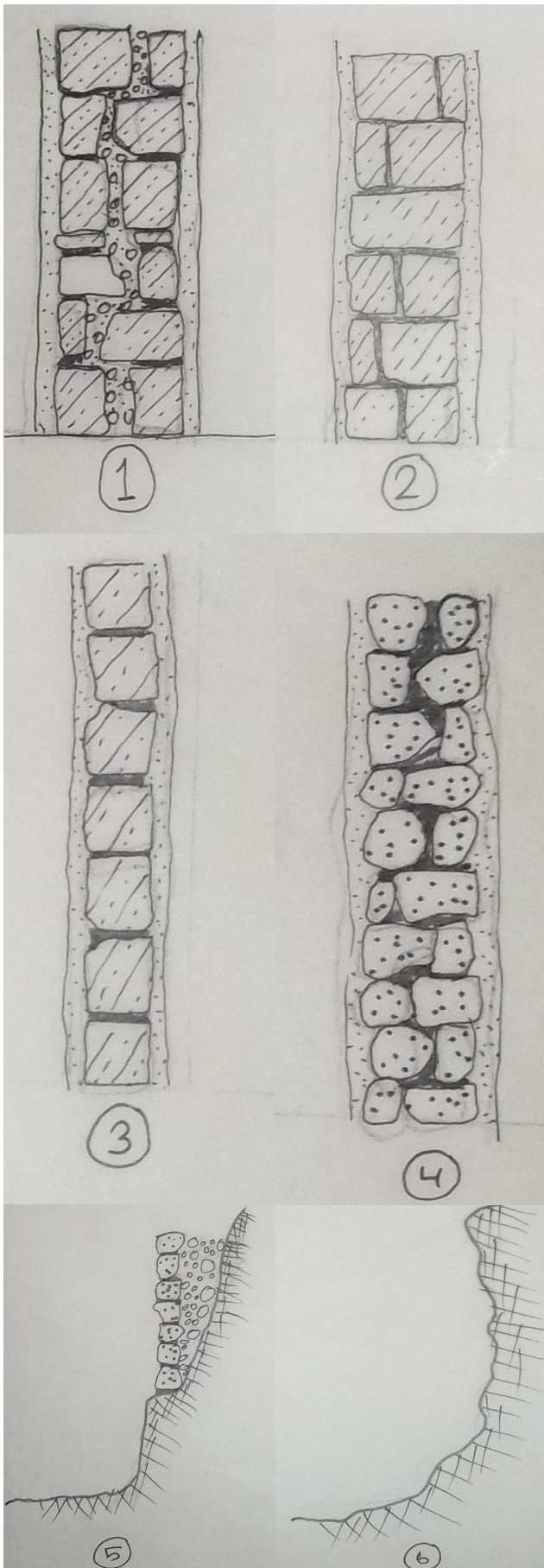


Fig. 9 Shows different types of stone wall in Maaloula (Hadad, 2011).

Blue wash is used for stone and mud walls; it is usually liquid, made from limestone soaked in water for several days until it is ready for use. It is applied in one layer and produces a bright blue colour called Hwarah. A lattice brush, called a Molsha in Aramaic, is used to apply the wash. It is used instead of paint on the inside walls, as shown in Fig. 10.

4.3 Thatched roofing covered with mud

This type of roofing is found in the Damascus region in different shapes and styles according to the availability of raw materials. It can also be found in some parts of Latakia region and surrounding areas. The roof construction in Maaloula depends on a central beam made of lazab or ash wood with a 25–30 cm diameter. Perpendicularly above it, secondary 12–15 cm poplar limbs (beams) are positioned parallel to each other. The covering layers of straw, reeds and leaves, known as (Rakz), are added to a depth of 6 cm. A layer of rough wet earth (Bellah) applied over the top, the thickness ranging between 15–30 cm, Fig. 11. A slope is created to offer smooth movement of rainwater to the gutter, the connecting point between the wall and the roof; it takes a curved shape to provide good cohesiveness.

In many cases, a wooden column is added in the hall's centre to support the roof (CORPUS Levant, 2004). There are two types of roofs related to the family's wealth. In poor and middle-level families, the Rakz contain straw, reeds and leaves. In contrast, wealthy families use wooden panels over the secondary beams (Hadad, 2011).

5 Maaloula over time

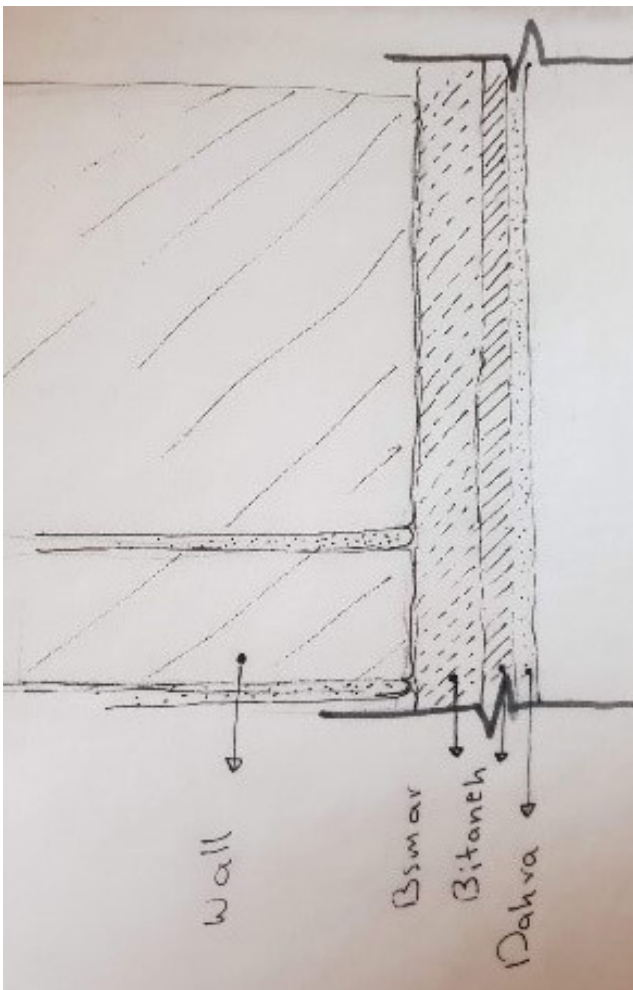
Traditional housing always needs considerable care and professional input to ensure the correct level of restoration. Significant effort must be invested into rehabilitation programmes, especially considering that the development process is steadily underway.

In this context, traditional Syrian architecture in rural areas suffers from neglect and deterioration. This is exacerbated by a shortage of artisans and technicians due to the new building techniques, which neither use traditional crafts nor support them. Furthermore, there is a tendency to replace traditional building materials with newer, more durable materials that are faster and easier to implement. In some cases, the residents do not want to use traditional architecture; they want to follow modern material trends or mitigate the high renovation costs. Therefore, people have started to replace the vernacular architecture with cement bricks. These affect the view, the residents and the equilibrium of the environment.

Consequently, most villages will lose one characteristic of the green building, which depends on using land and



A

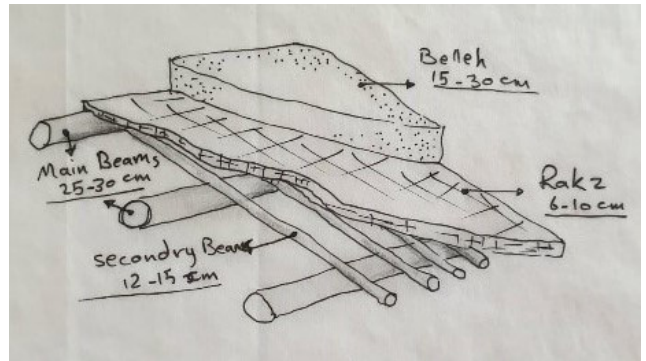


B

Fig. 10 A – shows a woman applied the Hwara (Helal, 2018); B – shows details of the lime plaster (by R. Aldaher).



A



B

Fig. 11 A: shows a roof in Maaloula (Helal, 2018); B: shows details of the thatched roof (by R. Aldaher).

energy efficiently. One of the main ways to improve the building's energy efficiency is the insulation wall (Howe and Gerrard, 2010). The traditional stone wall reaching 70 cm width is a better-insulated item than the alternative cement wall with a maximum of 25 cm. Additionally, most experienced builders and traditional artisans have left Syria or changed their work; this has been a significant setback for the continuity of traditional crafts. This situation faced Maaloula before the Syrian crisis, where the general character started to fade. The cement block occupied the place of the mud one; as a result, the essential factor of Maaloula's importance, the perspective, has been affected, as depicted in Fig. 12.

The first concerns were raised in 1966 when the Syrian government realised the importance of Maaloula as one of the most valuable sites. For this reason, the site was officially registered for the first time with decision No.2/a dated 09/01/1966. This stipulated the ancient village (Blota Olia) registration with two gaps (Al-Faj) in archaeological sites. After that, the encroachment on the old city and its urban fabric began to appear, which prompted the authorities to reconsider the first registration decision. Committees of various parties were formed to



Fig. 12 This photos show the change of architecture over time. The cement blocks occupied most of the view in the lower picture. Where the upper photo shows the same view before the change (Hadad, 2011).

study this reality and concluded Decision No. 243 / a dated 13/10/1976. The decision declared the reason for the registration where (Directorate-General for Antiquities and Museums, 1976):

- 60% of the old district is ancient buildings minimum age 200 years.
- 20-25% are combined homes that have been deformed by some renovations, as we find in a house. For example, a cement roof over walls made of stones and blocks or a concrete balcony attached to a house of stones.
- 10-15% new cement houses.

International concern was raised when Maaloula was registered on the UNESCO Guidelines or tentative List on June 8th 1999, by the V-VI Standards (Criteria 5-6). Article 77 of the guidelines for implementing the World Heritage Convention stated, in February 2005, that the committee considered the property to be of exceptionally high value if it met one or more of the specified criteria.

Selection criteria UNESCO (1999):

- V. To be an outstanding example of a traditional human settlement, land-use, or sea-use representative of a culture (or cultures), or human interaction with the environment, especially when it has become vulnerable under the impact of irreversible change.
- IV. To be directly or tangibly associated with events or living traditions, ideas, beliefs, and artistic and literary works of outstanding universal significance. (The Committee considers that this criterion should preferably be used in conjunction with other measures).

Despite the municipality's attempts to control the building system, violations continue. The benefit of registering Maaloula is to preserve the general structure of the village, which now consists of parts that are predominantly modern.

However, according to UNDP (2015) reports, Maaloula was mainly affected by the Syrian crisis, where at least 60% of buildings were disturbed. The damage varies from severe to mild. This situation introduced a new factor of change that Maaloula is facing. Out of 5000 habitats, only 1500 people still live in the village, most of the population moved abroad. Before the crisis, Maaloula was losing its traditional identity. However, the crisis accelerated the loss, especially in the absence of rehabilitation standards.

6 Conclusion

In principle, it is possible to create a new standard following the mainframe dictated by the traditional architecture, avoiding distortions to the environmental, cultural and traditional factors. It is essential to ensure continuous maintenance to prevent abandonment. There are many aspects in the field of restoration; for Fathy (1986), "Every injunction of the tradition must be strictly observed. Thus, if one element were changed in a traditional method, that change, though small, could destroy the entire validity of the building as a satisfactory solution to the local climate problems". In this sense, both the material and the way it is used are essential. While UN-HABITAT (2001) thinks

that traditional architecture requires continuous maintenance, it is an expense. Therefore, the designer should suggest methods to avoid the known issues and simultaneously maintain the originality.

The village should be a place where the people feel the need to stay, live, and work. It should provide the conditions to fulfil an accepted lifestyle close to the culture, with physiological levels of comfort and sufficient welfare. The pattern of any settlement is created from the

logical organisation, daily needs, and climate requirements; changing any of this aggregation means losing the uniqueness of the settlement.

Consequently, these issues require further examination, with more attention focused on the traditional architecture in the city and countryside. It is the identification of any area. Experienced work teams should be assigned and trained to maintain and renovate traditional buildings according to suitable rehabilitation techniques.

References

- Al Homsy, M. (1984) "Maaloula documentation", His private archive.
- Al-Majdi, K. (2000) "Almotaqadat Alaramya" (Aramaic beliefs), Dar Al-Shoroq, Dubai, UAE . (in Arabic)
- Al Asali, M. W., Shahin, I. (2016) "Rural Habitation in Syria: The Culture of Traditional Architecture and Its Role in The Reconstruction Process", METU Journal of the Faculty of Architecture, 33(2), pp. 101–119.
<https://doi.org/10.4305/METU.JFA.2016.2.6>
- Bliss, F. J. (1890) "Ma'lula and its Dialect", Palestine Exploration Quarterly, 22(2), pp. 74–98.
<https://doi.org/10.1179/peq.1890.22.2.74>
- Chiffolleau, S. (2006) "Fêtes et processions de Maaloula: une mise en scène des identités dans l'espace d'un village chrétien" (Maaloula festivals and processions: a staging of identities in the space of a Christian village), Revue des mondes musulmans et de la Méditerranée, 2006(115–116), pp. 173–189. (in French)
<https://doi.org/10.4000/remmm.3028>
- Conard, N. J., Bertzke, K., Hillgruber, K. F., Masri, M. A. (2005) "Research in 2005 at Kaus Kozah Cave", In: Conrad, N. J. (ed.) Tübingen-Damascus Excavation and Survey Project 1999–2005, Kerns Verlag, Tübingen, Germany, pp. 195–205. [online] Available at: https://www.researchgate.net/profile/Nicholas-Conard/publication/336563420_Chapter_8_Research_in_2005_at_Kaus_Kozah_Cave/links/5da5c8cda6fdccdad545eddc/Chapter-8-Research-in-2005-at-Kaus-Kozah-Cave.pdf [Accessed: 18 August 2021]
- CORPUS Levant (2004) "Traditional Syrian Architecture", Corpus Levant, Avignon, France.
- Directorate-General for Antiquities and Museums (DGAM) (1976) "Archive of the Syrian Directorate General of Antiquities and Museums", Directorate-General for Antiquities and Museums (DGAM), Damascus, Syria.
- Escher, A., Pfaffenbach, C. (2002) "Malula: vom syrischen Bauerndorf zur internationalen Sommerfrische" (Malula: from the Syrian farming village to the international summer resort), Geographische Rundschau, 54(2), pp. 36–42. (in German)
- Fathy, H. (1986) "Natural Energy and Vernacular Architecture: Principles and Examples with Reference to Hot Arid Climates", The University of Chicago Press, Chicago, IL, USA.
- Hadad, W. (2011) "Manzel Taqlydy Namozajy dmn sharehat Alswq Alaly fy Qaryat Maaloula" (Typical traditional house in the high market slice in Maaloula), Master degree, Damascus University, Architecture Faculty. (in Arabic)
- Helal, E. (2018) "Maaloula", His private archive, Maaloula.
- Howe, J. C., Gerrard, M. B. (2010) "The Law of Green Buildings: Regulatory and Legal Issues in Design, Construction, Operations, and Financing", American Bar Association, Washington, DC, USA.
- Joud Allah, F. (1999) "Soria Naabee Alhadarati, Tarikh w Jughrafiat 'ahami Almawaqie Al'atharia" (Syria is the source of civilisations, the history and the geography of the most important archaeological sites), Soria Naabee Al-Hadarat, Tarekh wa Jougrafia Aham Al-Mwaqee Al-Athareya, Damascus, Syria. (in Arabic)
- Major, B. (2019) "Maaloula", His private archive.
- Nasrallah, J. (1952) "Le Qalamoun a L'Epoque Romano-Byzantine" (Qalamoun in the Roman-Byzantine Period), In: Les Annales archéologiques de Syrie, Indiana University Library, pp 149–168. (in French)
- Provence, M. (2005) "The Great Syrian Revolt and the Rise of Arab Nationalism", University of Texas Press, Austin, TX, USA.
- United Nations Development Programme (2015) "Rehabilitation and restoration of the village of Maaloula", The Ministry of Local Administration, Damascus, Syria.
- UNESCO (1999) "Maaloula: Description", [online] Available at: <https://whc.unesco.org/en/tentativelists/1299> [Accessed: 18 August 2021]
- United Nations Centre for Human Settlements (UN-HABITAT) "Learning from tradition to improve housing design", [pdf] United Nations Centre for Human Settlements, Erbil, Iraq, [online] Available at: <https://mirror.unhabitat.org/downloads/docs/homestead.pdf> [Accessed: day month year]
- Wikimedia "Maaloula photo", [online] Available at: <https://upload.wikimedia.org/wikipedia/commons/8/8b/Maaloula-%D9%85%D8%B9%D9%84%D9%88%D9%84%D8%A7.png> [Accessed: 11 May 2021]