



Morphology and Facade Study of *Umah Pitu Ruang* (Case Study: *Umah Edet Reje Baluntara* in Toweren Village, Aceh Tengah)

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Abstract

Aceh Tengah is home to various tribes, notably the Gayo tribe, known for their unique houses and philosophies with rich historical significance. One such house, Umah Edet Reje Baluntara in the Toweren Uken village, has stood for over a century, bearing historical traces, particularly in its changing morphology over time. This research uses a qualitative descriptive method that consists of two stages, namely collecting secondary data from various online literacies to become the initial basis for describing Umah Edet Reje Baluntara and collecting primary data as field data which is carried out directly at the location of Umah Edet Reje Baluntara by interviewing trusted sources. and observe the object. This data was processed to reconstruct Umah Edet Reje Baluntara by digitizing it using SketchUp Pro 2022 software. Reconstruction via software found several changes in materials and space. These changes are caused by natural factors, family, and time that has passed for a long time. Since this house was built in 1860, the changes in shape that have occurred are in the serule roof elements which have changed to tin roofs, the natural stone ompak foundation has changed to cast concrete, the Titi construction has been lost, elements of the stairs and stair doors are also missing, space the kitchen at the back has been dismantled, the pepir ornaments have been damaged, and many of the lisplang ornaments have been broken.

Keywords: Aceh Tengah; building morphology; facade; Gayo; Umah Pitu Ruang; Umah Edet Reje Baluntara

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1. INTRODUCTION

Traditional houses in Aceh have unique constructions that can be found in form, structure, function, decoration, and construction methods (Sahputra & Arie Edytia, 2021; Sari, Pratama, and Setiawan, 2020). The traditional architecture of each region has different characteristics of forms according to

the culture and nature around it, especially the gayo land, which has its own traditional house, namely *umah pitu ruang*. *Umah pitu ruang* comes from the Gayo language vocabulary, *umah*, house, and *pitu ruang*, seven rooms. Over time, *umah pitu ruang* is very rare in the Aceh area. In the Aceh Tengah district, there are only four houses, each located in Toweren Uken, Kung Pegasing, Buntul Linge, and Bebesen. The form of the building that is very

close to the original is only *Umah Edet Reje Baluntara* which is in the village of Toweren Uken because there are no significant changes and restorations to change the shape of the building as a whole (Sari, Pratama, and Setiawan, 2020).

Morphology is a study that traces the origin or process of the formation of architectural work, both concerning architectural elements and the form and mass of the building as a whole. Some things emphasized are changes in shape, either partially or entirely, including the causal factors and influencing factors in the change in shape itself (Iskandar, 2005). The form is related to the elements of a building, namely: floors, walls, and roofs, which are also space dividers. Morphology is related to the clarity of expression of the spatial boundaries that determine the character of a building/environment (Norberg-Schulz, 1988). Changes in the shape of the *umah pitu ruang* are related to natural, political, and cultural disasters, and unexpected things even cause damage caused by time. Especially *Umah Edet Reje Baluntara*, which has a very long history, its changes in shape must have occurred in the decades after the house was built.

The traditional house of *Umah Edet Reje Baluntara* changes shape for several reasons. The author wants to find out more about the changes in shape so that the archival data can be the primary material for the morphological reconstruction process of this historic traditional house.

This study aims to reconstruct the morphological changes of the *umah pitu ruang* in the village of Toweren Uken, namely *Umah Edet Reje Baluntara*.

2. METHODS

The research method used to see changes in shape (morphology) at *Umah Edet Reje Baluntara* in Toweren Uken village is a qualitative descriptive method, namely a research approach where the data collected are in the form of words, pictures and not numbers (Meleong, 1989). Each data collected will be a paragraph sentence explaining the problems that the author will discuss in detail. There are several stages and ways to find supporting data, namely:

2.1 Secondary Data Collection

The collection of literature study data regarding the morphology of buildings is very much needed to be a reference and additional information before and after in the field. The first technique is to search for secondary data through journals, books, videos, and images that can be searched through the library and Google Scholar.

2.2 Primary Data Collection

Observation is a systematic observation and recording of the elements that appear in a symptom in the object of research (Widoyoko, 2014). Any data obtained in the field will be collected through visual observations to obtain detailed information about *Umah Edet Reje Baluntara* to produce primary data. Furthermore, the authors also conducted interviews to obtain information that was not obtained in secondary data, so they had to ask the informants who were directly related to the object of research by *Umah Edet Reje Baluntara*. The way to collect interview data is by compiling questions to ask the interviewees; then, the writer will record the answers and the conversations discussed.

2.3 Computing

This technique is used to view three-dimensional visualizations in digital form with the help of SketchUp Pro 2022 software. Secondary and primary data are combined to produce a final shape decision from the shape changes that occurred at *Umah Edet Reje Baluntara*. The changes that occurred were visualized in three dimensions using SketchUp Pro 2022 software.

2.4 Research Site

The research location is at *Umah Edet Reje Baluntara*, located in Toweren Uken, Lut Tawar District, Aceh Tengah Regency, Aceh Province. This village is the first territory to be established, so it is the oldest area compared to the surrounding area, which came from the expansion of Toweren Uken village.



Figure 1. Research Location
Source: pngwing and Google Earth, 2022

3. RESULT AND DISCUSSION

3.1 History of *Umah Edet Reje Baluntara*

The traditional Gayo traditional house is a heritage building from the reign of the kings who ruled the Gayo region before the region transformed a modern region with government centered at the local level (Setianingsih, Dafrina, and Lisa, 2017). *Umah Edet Reje Baluntara* is one of the historic buildings that still stands firm even though it is hundreds of years old. The natural conditions of Toweren Uken village have the potential to become a tourist village because it has historical traditional houses (Kamarudin, Adha, and Julita, 2021). Now the house has become a cultural heritage site protected by the Aceh Cultural Heritage Preservation Center under the auspices of the Ministry of Education and Culture. This house was built in 1860 by the first Reje (King), namely Reje Jalaluddin or Reje Baluntara, and has been passed down from generation to generation until now to the 4th generation, namely Mr Syeh Syamsuddin.

Located in Toweren Uken, Lut Tawar District, Central Aceh Regency, this house is squeezed by the Birah Panyang mountains on the back and right and residents' housing on the left and left front of the house. In the area to the left of the *Umah Edet Reje Baluntara* yard, there is a pool, and above this pool, there is a Doyah/Joyah building which is only for use by women. On the other side of this pool, on the left, there is also another water element, namely a river (Yanti, Arafat, and Wulandari, 2023). It has been a special characteristic since ancient times that Gayo people's houses were built close to water sources (Iswanto, Ramazan, and Suryana, 2022). Various historical events can

not escape from the building that has been standing for more than a century. Syeh Syamsuddin (2022) stated that an incident almost destroyed this house without a trace, precisely during the DI/TII period. There is a condition that makes the community not accept the presence of DI/TII suspecting this traditional house to be a base that is used to formulate an attack strategy so that a group of people comes to burn the village and this traditional house. However, an unexpected incident occurred when they set fire to a column in the left corner of the house. Even though it was doused with kerosene and sprinkled with fire, these columns did not catch fire, so until now, we can still see this building standing strong.



Figure 2. Cultural Heritage Site Signboard
Source: personal documentation, 2022



Figure 3. Information Inscription
Source: personal documentation, 2022

3.2 Typo-Morphology of *Umah Edet Reje Baluntara*



Figure 4. Front Perspective
Source: personal documentation, 2022



Figure 5. Rear Perspective

Source: personal documentation, 2022

Umah Pitu Ruang has a concept that extends from east to west (Salwin and A, 2019). These rules were made to make it easy to know the direction of the prayer Qibla (Zahrah, Dewi, Putra, and Nichols, 2021). However, in the case of *Umah Edet Reje Baluntara*, this house is oriented towards the lake. In general, *Umah Pitu Ruang* has three main rooms with a larger size and is further divided into several smaller rooms called *umah rinung* (Putra et al., 2021).

Umah Edet Reje Baluntara has a square pattern in every space with a combination of triangles on the saddle-shaped roof. According to Syeh Syamsuddin (2022), this house is called *Umah Pitu Ruang* because it has seven rooms. There are four bedrooms in the middle, flanked by a *serami rawan* (men's porch) and *serami banan* (women's porch), and the *lepo* room is the main house terrace. *Serami rawan* serves as a gathering place, receiving guests, and spending the night for men, while *serami banan* is used for gathering, cooking rice, receiving guests, and for women and girls to spend the night. The *serami* room is often used also when carrying out certain days such as circumcision, the Prophet's birthday, and weddings (Tammar et al., 1996). At the front, there is a *lepo* (terrace) which is used as a place for art and gathering. This house has *kites* (stairs), which consist of one in the front with four steps and two in the back with six steps.

Several doors and windows function as ventilation and openings in this house, and two doors that function to access the *serami banan* and the *serami rawan* are in the front. In comparison, behind it, there are also two doors to access the kitchen or *serami*. In addition, each room has four doors in each *umah rinung* (bedroom) and four windows. There are also

several windows on each wall, giving air access from outside into the porch. There are two windows on the *serami banan* and one on the *serami rawan*. Above the first room is a place to store things called *parabuang*. The residents use this *parabuang* to put things, one of which is *santon* (traditional mat) (Pinan, 2003).

There are carvings of typical Gayo motifs in certain parts, such as the boards above and below the bedroom door, *bere bujur*, *kasu*, and several other parts. The Gayo filigree carvings on *Umah Edet* generally numbered 13 types (Salihin, Juned, and Dharsono, 2019). These carvings can be found outside and inside *Umah Edet Reje Baluntara*.

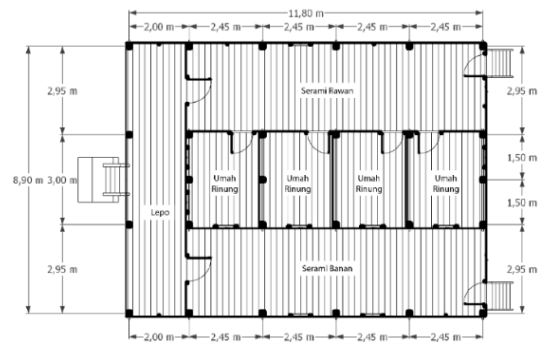


Figure 6. House plan in 2022

Source: personal documentation, 2022

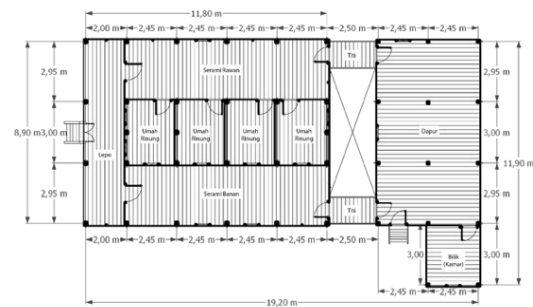


Figure 7. House plan in 1980

Source: personal documentation, 2022

Figure 6 shows a house plan in 2022, which the author describes after conducting a field survey. The house's condition is the same as in the previous explanation, different from before the 1980s. Before the 1980s, the house's condition still had a kitchen in the back, which was separated from the main building. This kitchen is connected via a *titi* (bridge) slightly lowered to the size of about four human fingers to distinguish the kitchen building and the main building in different zones.

On the left side of the kitchen is a room or cubicle usually used by the second person to sleep and rest. Right next to the room, there is a staircase that connects the kitchen to the outside, giving people access to enter the kitchen without going through the *serami* at the front of the house.



Figure 8. Serami Banan, Facing Back
Source: personal documentation, 2022



Figure 9. Serami Rawan, Facing Forward
Source: personal documentation, 2022

Currently, the kitchen behind the house no longer exists because it has been dismantled and sold by the relatives of Mr. Syeh Syamsuddin. However, some kitchen column remnants are still under the house due to failure to sell due to the weight of the poles, which are impossible to carry freely.

Some windows have different shapes; the windows in the first, second, and fourth rooms have the same shape, different from the shape of the windows in the third room, which has its characteristics and has ventilation for air entering the room. In addition to rectangular windows with a ratio of 1:2, there is also a small window called a *tingkep*. It has a ratio of 1:5, extending transversely to the side. This *tingkep* is located on the back wall of *serami rawan* and *serami banan* with one *tingkep* each.



Figure 10. 1st, 2nd, and 4th Room Window (left)
3rd Room Window (right)

Source: personal documentation, 2022

Umah Edet Reje Baluntara has an *atu kunulen suyen* (column foundation) structure, originally a natural stone with a stacked position to support the *suyen* (column) in the house. When the author came to the field in August 2022, the column foundation supports had been replaced with cast concrete.



Figure 11. The Foundation of the House in 2022
Source: personal documentation, 2022



Figure 12. The Foundation of the House in 2015
Source: Ifani, 2015

To access the *lepo* (terrace), we have to climb the *kite* (stairs) and pass through the *ulu ni kite/awah ni kite* (stairway door), which means mouth or head of the ladder (Hurgronje et al. 1996). Initially, this house had a staircase, as

shown in Figure 13 there is no longer the visible element of the door standing in front of the stairs. It is thought to have been missing since the 2000s.



Figure 13. *Lepo*

Source: Schefold, Nas, and Domenig, 2004



Figure 14. The Current Condition of *Lepo's* Front Door

Source: personal documentation, 2022



Figure 15. Rear Stair Condition in 2018

Source: Beruh, 2018

In 2018, the back door was added with a ladder element to get access to the exit to the backyard. This ladder still had railings and eight steps by adjusting the local ground holder. The house's contour experiences a height difference between the contour under the foundation and the contour right under the last step.

Table 1. Elements classification of *Umah Edet Reje Baluntara*

| Element Name | Original Eeement Images |
|--------------------------|-------------------------|
| Ruk Cover Board Ornament | |
| Stairs Ornament | |
| Tolak Angin (Lisplang) | |

| Element Name | Original Eeement Images | Element | Material | Information |
|---|-------------------------|---------|--|---|
| Leg Structure and Ornaments (Except Foundation) | | | Meudang Jeumpa | This structural element is used to support the load on the walls so that the load can be transmitted to the column. Size: 21 cm x 4,3 cm |
| Roof Structure | | | Meudang Jeumpa | This structural element is used as a support for the roof structure. Size: 6,5 cm x 5 cm |
| Ornaments in Bere Bujur and Suyen (Pole) | | | Meudang Jeumpa | This structural element is used to support the battens on the roof structure. Size: 4,3 cm x 4,5 cm |
| Lepo door | | | Meudang Jeumpa | This structural element is used to support the tin roof and serule leaf lining. Size: 3,5 cm x 4,2 cm |
| Roof Material | | | Meudang Jeumpa | This structural element is used as a support for the roof structure and the load is transmitted to the body and column foundation. Size: 20 cm x 4,3 cm |
| Pepir (Tolak Angin) | | | Meudang Jeumpa | This structural element is used as a wedge between two longitudes on each left and right side. Size: 19 cm x 8 cm |
| Column Foundation | | | Meudang Jeumpa | These structural elements are used as floor supports and stiffen between gergels in house construction. Size: 7 cm x 5 cm |
| | | | Meudang Jeumpa (Column) | This structural element functions as a support for the entire building construction system whose load will be channeled to the sub-base and ends on the ground. |
| | | | Natural Stone (Foundation of the past) | |
| | | | Cast Concrete (Current Foundation) | |

Source: personal documentation, 2022

3.3 Umah Edet Reje Baluntara Structure

Umah Edet Reje Baluntara has 27 suyen (columns) to support the construction structure of this traditional house. Reje pole is located under the second room, while the peteri pole is under the first room. The construction system in this house has several elements that support each other to distribute the dead load and live load on the house. The construction elements in this house are described in table 2 as follows:

Table 2. Structural elements of Umah Edet Reje Baluntara

| Element | Material | Information |
|---------|----------------|--|
| | Meudang Jeumpa | This structural element is used as the front fence of the lepo, the floor, and the house walls Size: 20 cm x 2 cm |

Source: personal documentation, 2022

3.4 Modelling *Umah Edet Reje Baluntara*

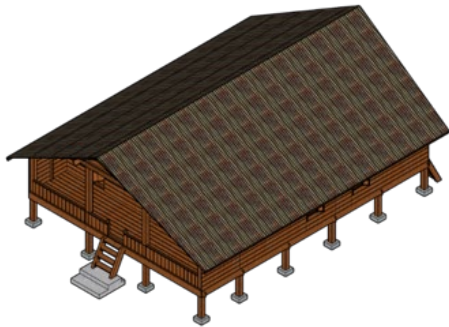


Figure 16. *Umah Edet Reje Baluntara* in 2022
Source: personal documentation, 2022

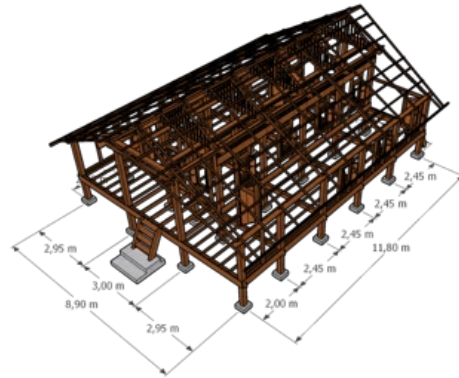


Figure 18. Structural Perspective
Source: personal documentation, 2022



Figure 17. *Umah Edet Reje Baluntara* before 1980
Source: personal documentation, 2022

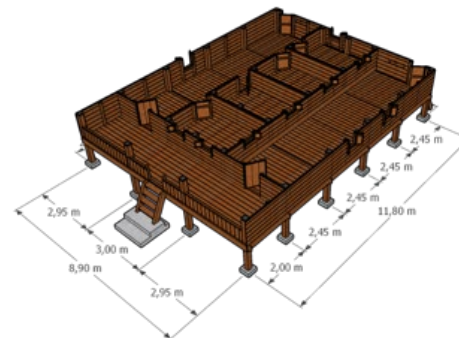


Figure 19. Space Perspective
Source: personal documentation, 2022

3.5 Modelling *Umah Edet Reje Baluntara* in 2022

Visually, the diagram illustrates the perspective of the typology of a house that has lost its kitchen space and *lepo* door. At the foot, there is a change in the shape of the *atu kunulen suyen* (column foundation) which was originally a natural rock, while the current condition has changed to cast concrete. Cast concrete is also applied as support in stairs for parts that have been broken due to eroding time. If we refer to the isometric exploded house, it can be seen that the roof uses a type of zinc material. In visualizing the perspective of the space, precisely between the stairs and the *lepo* room, it does not appear to show *ulu ni kite/awah ni kite* (stairs door).

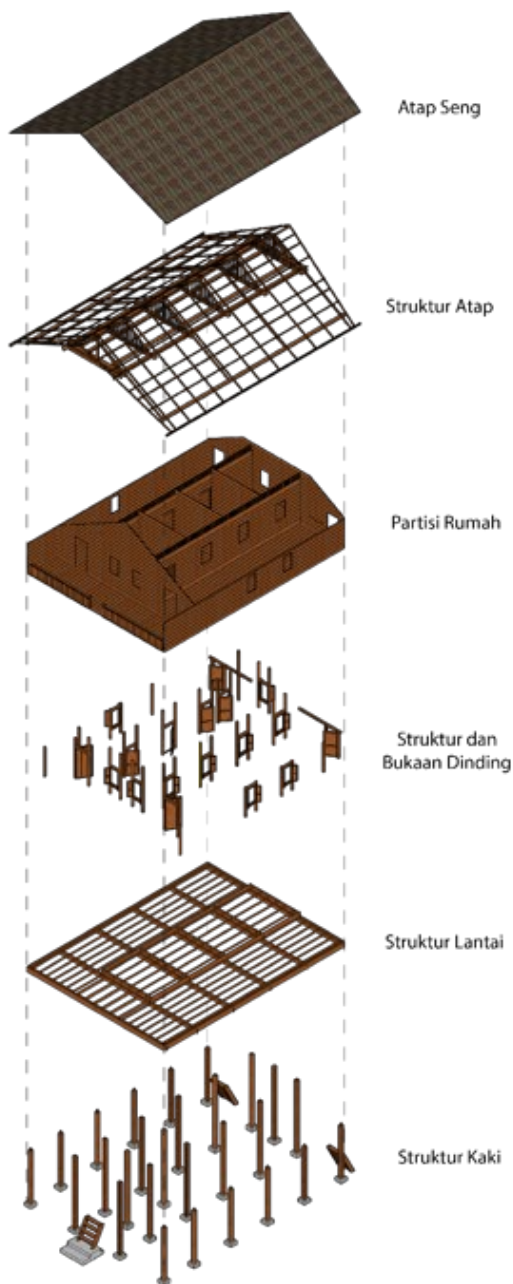


Figure 20. Exploded Isometric
Source: personal documentation, 2022

3.6 Modelling *Umah Edet Reje Baluntara* Before 1980

The following is a visualization of an image of *Umah Edet Reje Baluntara* before the many changes that occurred in 1980. An *ulu ni kite/awah ni kite* (stairway door) stands upright between the railings as a partition between the *kite* (stairs) and the *lepo*. An *ompak* (rocks) is arranged in piles to be a foundation for the

house's pillars. At the back, it is clear that there is a building that functions as a kitchen for the house's residents. A room juts out to the side, right next to the kitchen, which functions as a resting room. The roof used when the house was originally built was made of *serule* material from the surrounding forest.

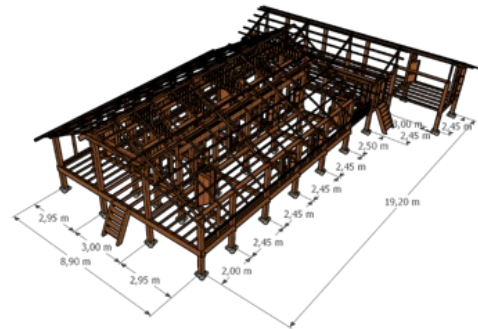


Figure 21. Structural Perspective
Source: personal documentation, 2022

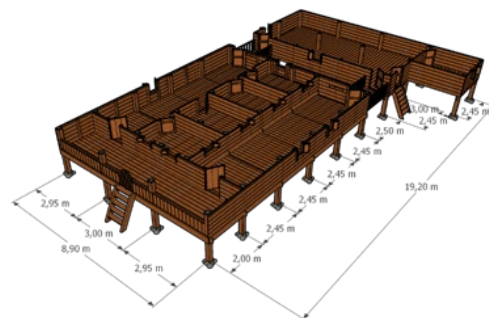


Figure 22. Space Perspective
Source: personal documentation, 2022

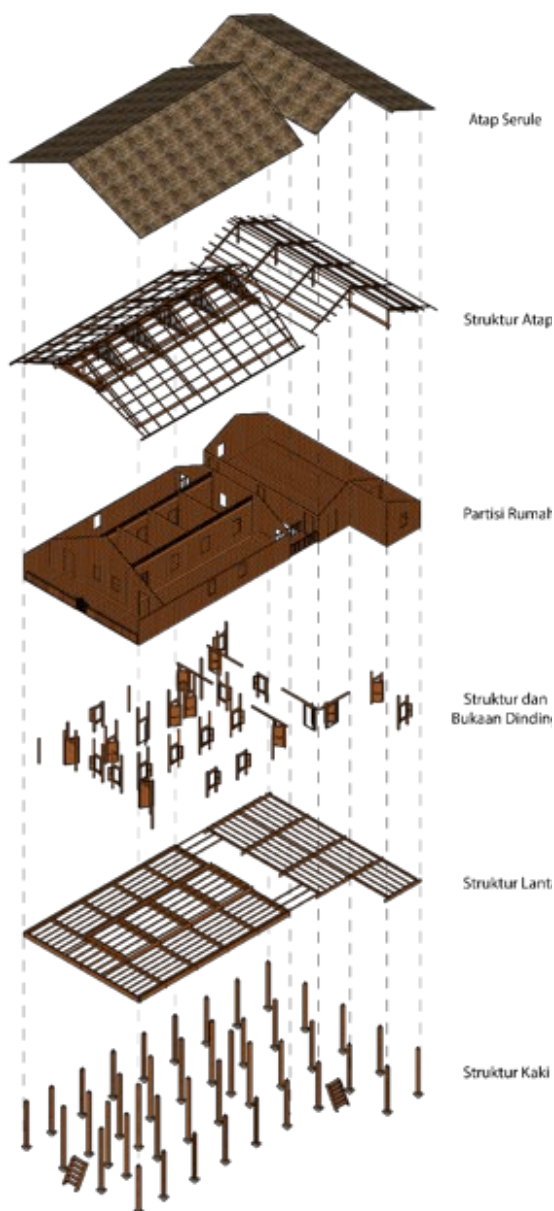


Figure 23. Exploded Isometric
Source: personal documentation, 2022

4. CONCLUSION

Umah Edet Reje Baluntara is a traditional house of the Gayo tribe, which has been more than a century since its establishment in 1860. This house applies the concept of a typology of forms such as *Umah Pitu Ruang*, which is in the form of a stage by presenting a room of *serami banan*, *serami rawan*, *umah rinung*, and *lepo*. In every corner can be found many hand carvings that adorn every element of the structure and space. The elements in this house are still well preserved except for some parts

that have changed due to natural factors, family, and time that has passed for a long time.

The changes in this house are studied using the concept of morphological analysis. The transformation of the shape of the house in the past few decades has caused the original elements that have a traditional concept to turn into a more modern one. However, some old elements are lost and damaged due to age factors without restoration to a modern concept. The elements that change in this house are roof material, *ompok* foundation, *titi*, stairs, stairway doors, kitchen room, *pepir* ornaments, and *lisplang* ornaments.

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