

The Architectural Detail

Week 41 & 43

Stefan Vuijst

29 oktober 2021



Assignment 1A

Choose a building in your neighbourhood and analyse the facades in different perspectives





Building Isometric



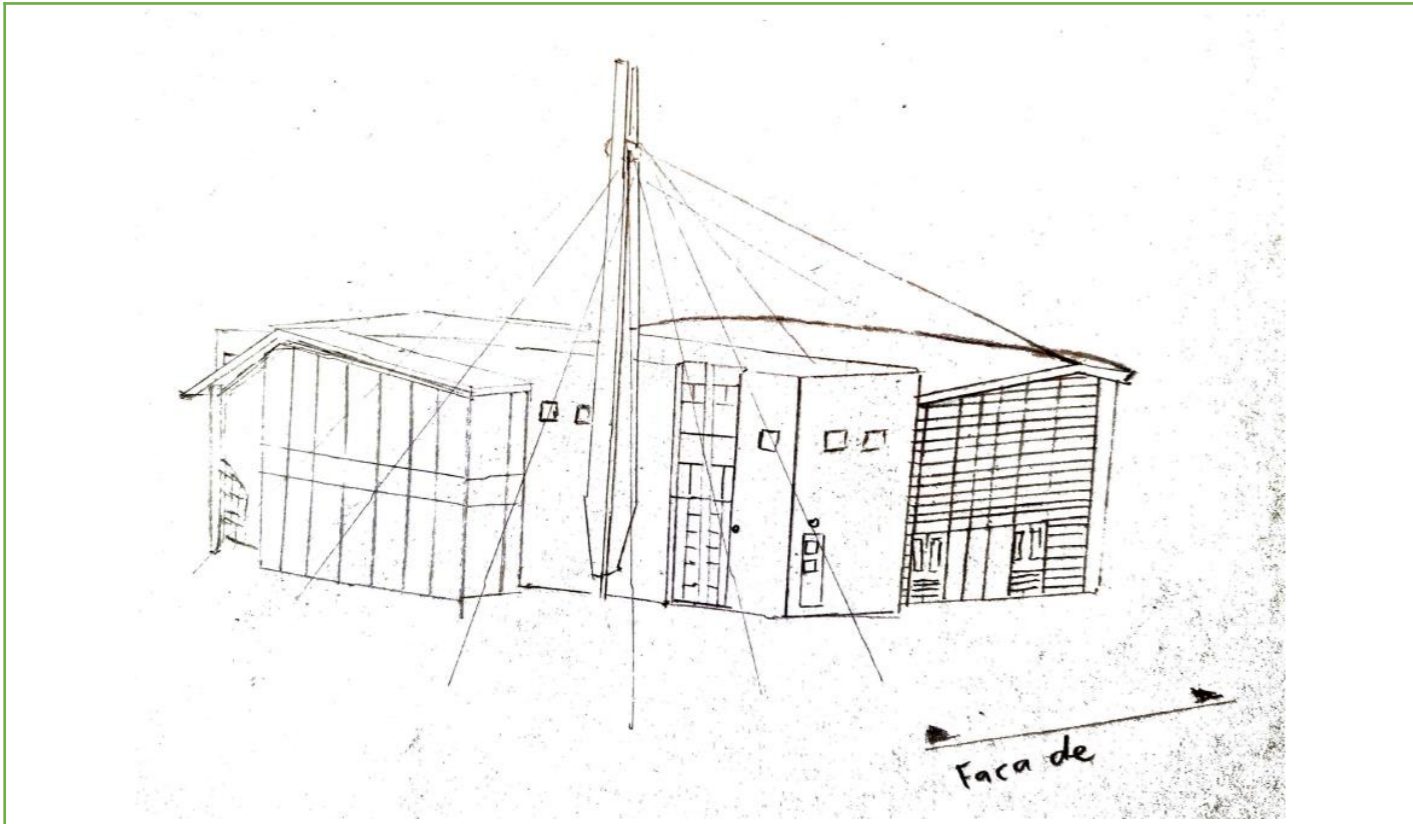
Facade Orthographic



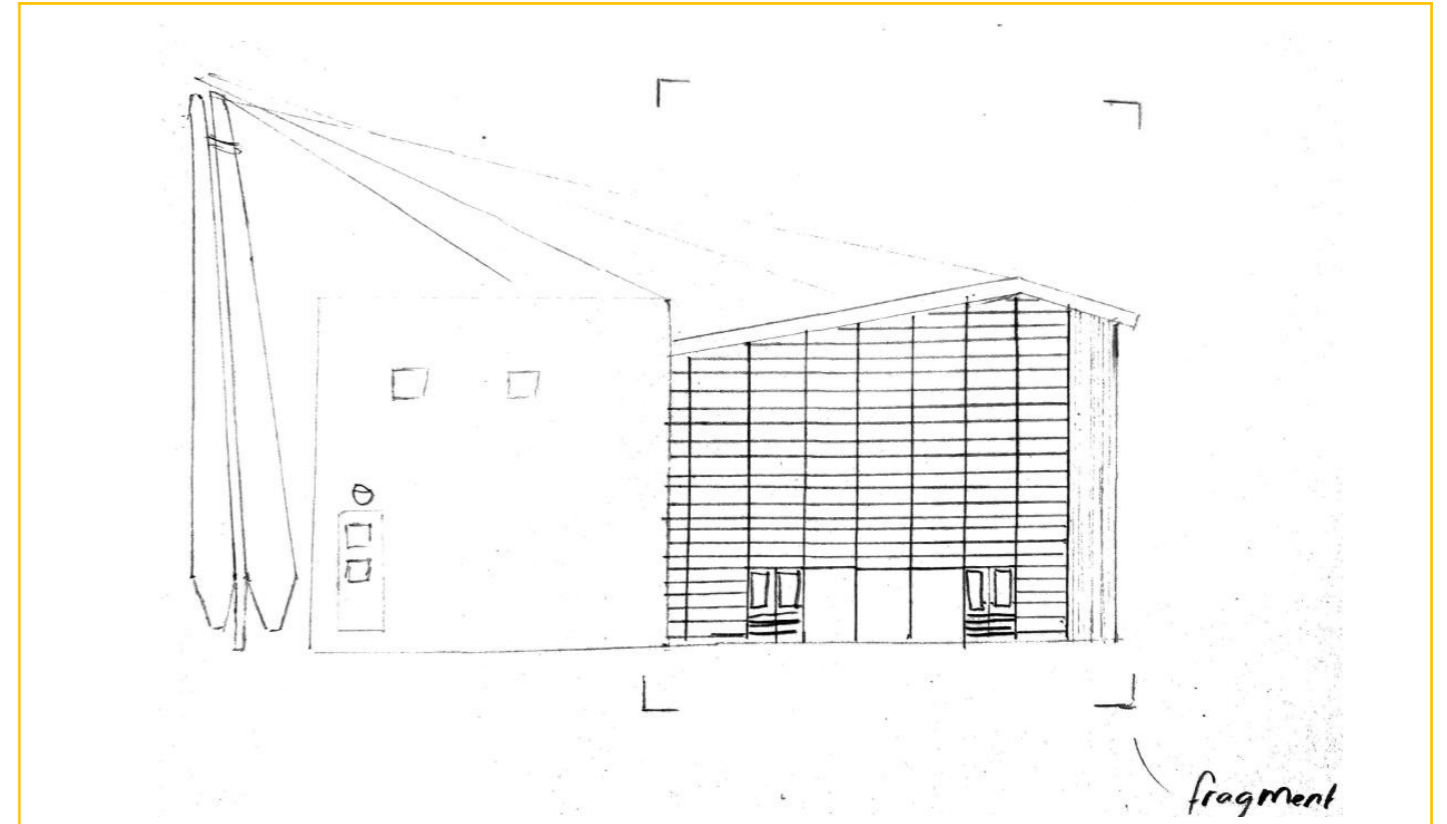
Fragment Orthographic



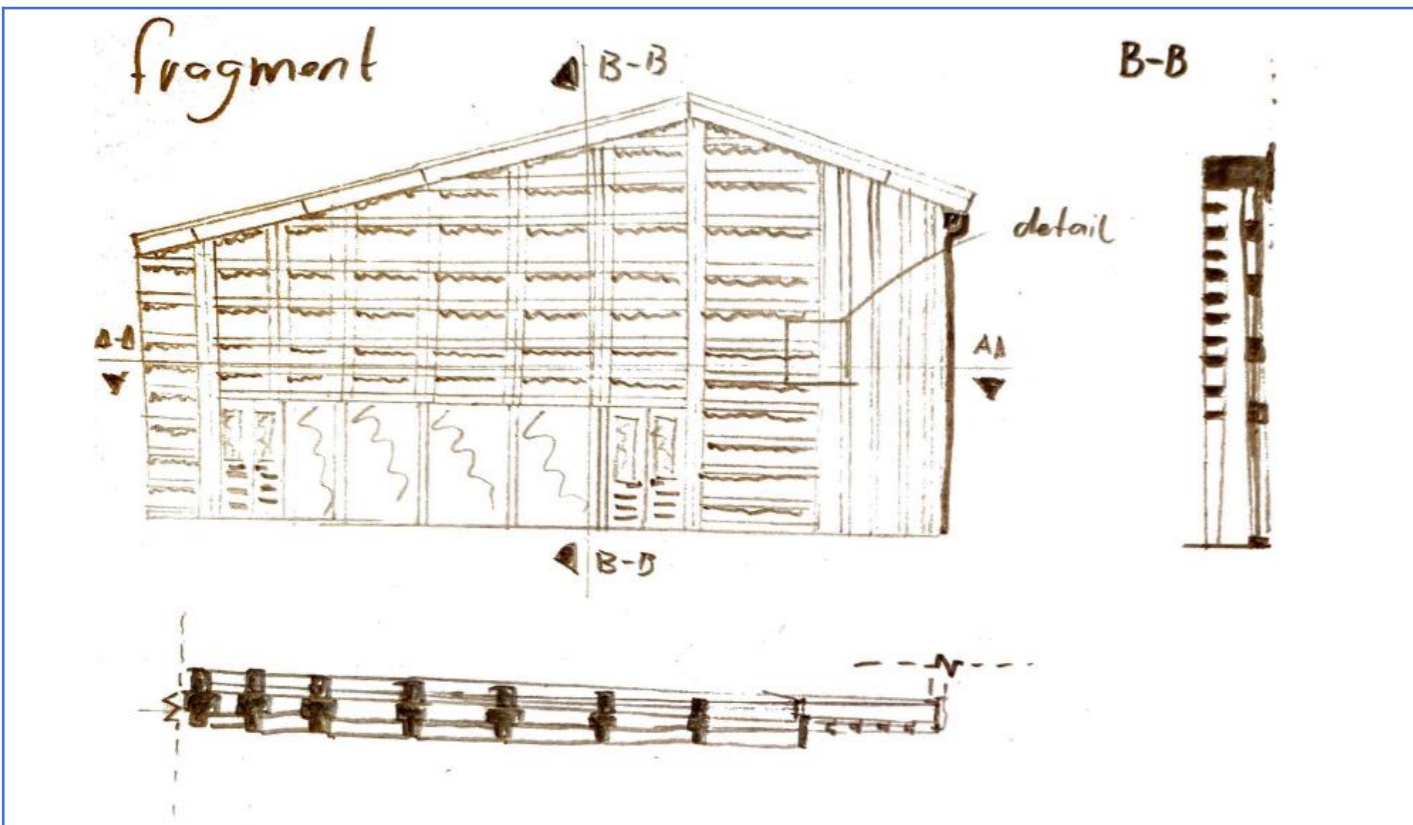
Detail Isometric



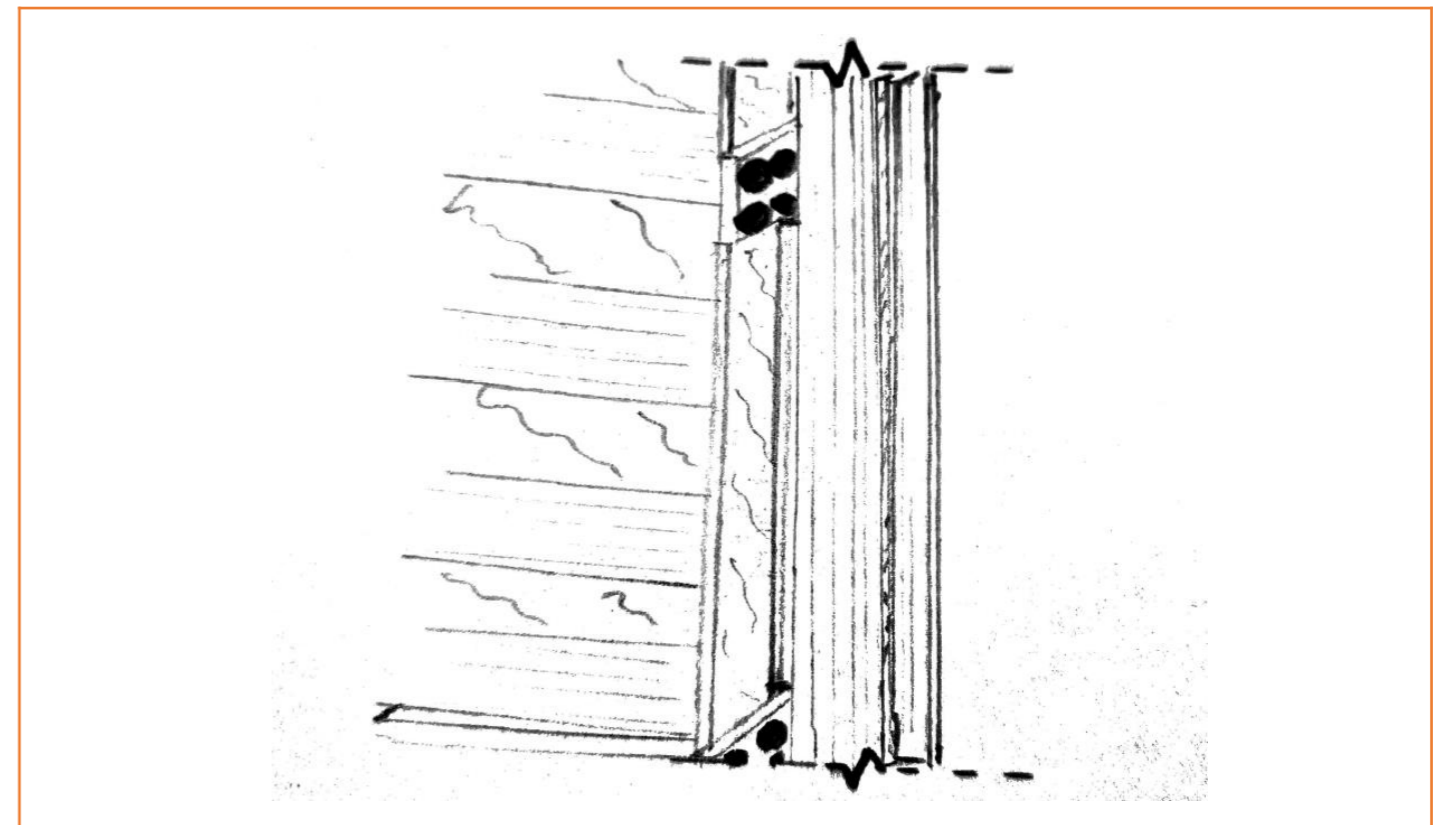
Building Isometric



Facade Orthographic



Fragment Orthographic



Detail Isometric

Explanation of Thoughts



I have chosen to work out this building because in this building in the facade wood, brick and metal are processed. In the facade I have chosen you can also find all the materials used in the building. Interesting in this facade are the loggia panels. These are located in front of the windows and serve as sunblinds. They also have a connection that is clearly visible.





Assignment 1B

Do some research to an interesting building of the architect Frank Lloyd Wright

David and Gladys Wright House

Minor: architectural design
17-10-21



| | |
|--------------------------|---------------|
| Mark Bekkema, | 406240 |
| Manon ten Hoor, | 406127 |
| Wick Michielsen, | 384980 |
| Bruun Timmers, | 405786 |
| Stefan Vuijst, | 406042 |
| Ben Wieldraaijer, | 406617 |

| | |
|---------------------------------|----------------------------------|
| Date: | 17-10-2021 |
| Educational institution: | Hanzehogeschool Groningen |
| Minor: | Architectural Design |
| Group: | 4, Frank Lloyd Wright |
| Assignment: | 1B |

Inhoud

- 3 **Analysis of the works and the ideas of the group architect**
- 4 **Analysis of the context**
- 5 **Analysis of the building as a whole**
- 8 **Analysis of the facades**
- 9 **Analysis of materials**
- 10 **Analysis of the details**
- 11 **Conclusions**
- 12 **Bibliografie**



Analysis of the works and the ideas of the group architect

The David & Gladys Wright house is actually named '**How to Live in the Southwest**'. Frank Lloyd Wright designed this building for his son David and daughter-in-law Gladys (Frank Lloyd Wright Foundation, 2021). The circle like texture of the building makes the building fit better in nature because it's a more organic form than the usual square shaped buildings. The guiding theme is providing a home for family that is sustainable and liveable in a desert. Focusing on the view by elevating the ground floor and the organic forms of nature in the building itself.

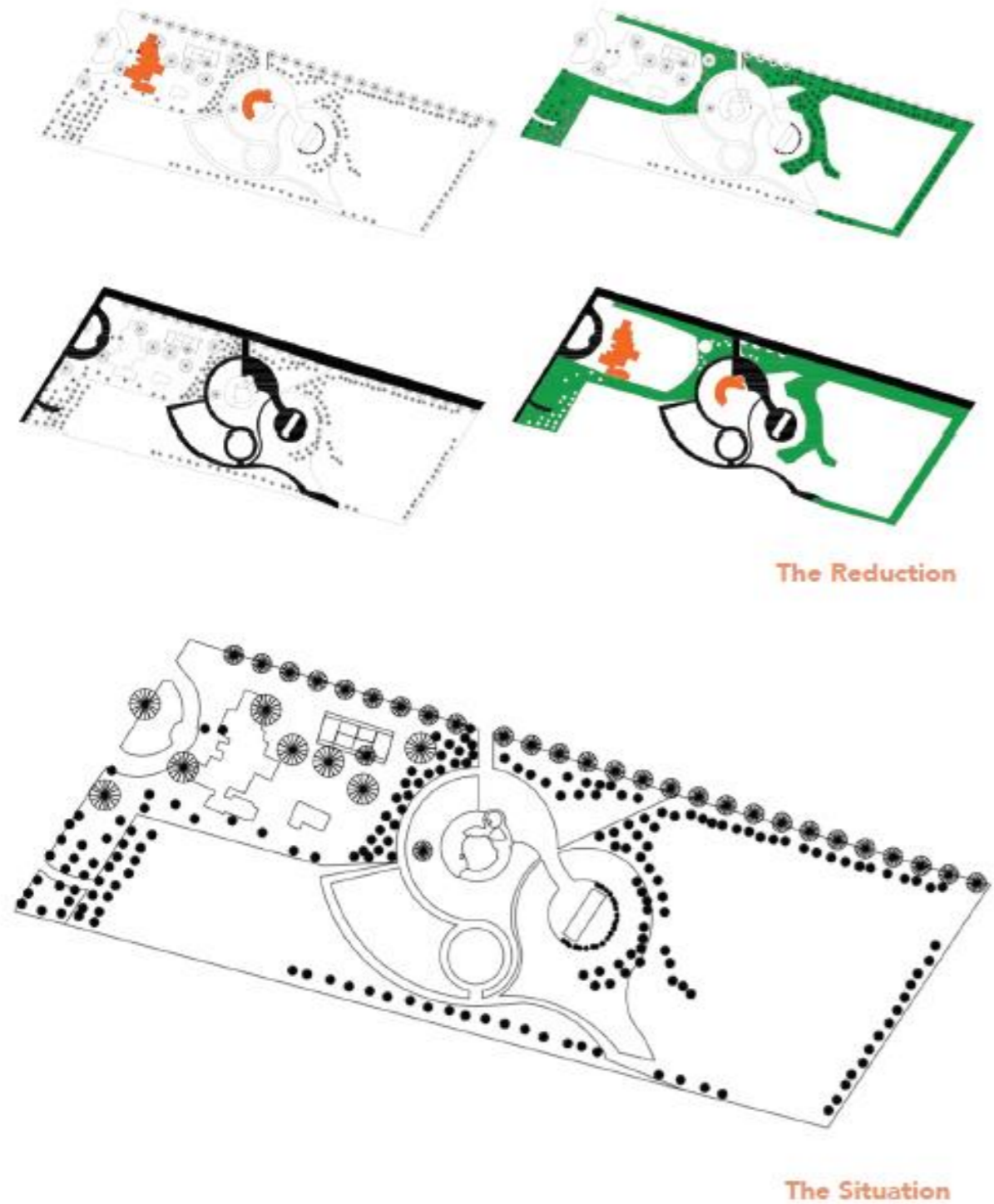
In the oeuvre this building is the first of the three spiral designs Frank Lloyd came up with (Frank Lloyd Wright Foundation, 2021). The spiral designs are the latest ideas in the oeuvre of Frank Lloyd.



Frank Lloyd thought architecture had to be organic and the structure had to be in harmony with nature. The home doesn't fit into the surrounding because the modern homes that have been built since the delivery of the house (1951) are mainly squares (Frank Lloyd Wright Sites, 2012). The David & Gladys Wright House was an inspiration for buildings like the Guggenheim Museum (Talon, 2018).

Analysis of the context

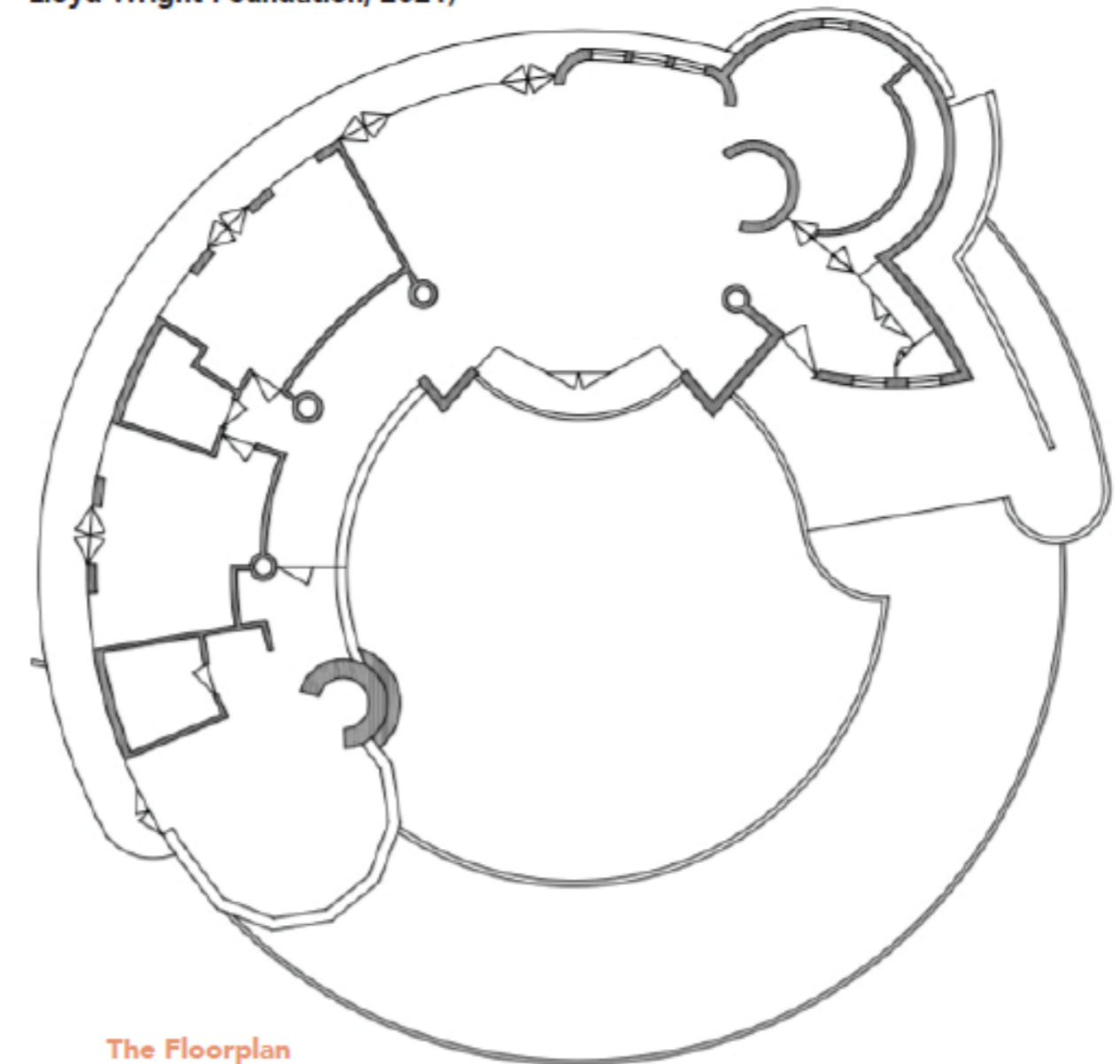
The David and Gladys Wright house is located in Phoenix in Arizona. It is located between a trio of roads along with an apartment complex and another villa lot. A large part of the area consists of sand and there are a number of trees in between. There is also a guest house on the lot. Furthermore, near the building there are a church and a number of resorts.



Analysis of the building as a whole

The building was made to look like a curled-up rattlesnake, native to phoenix, Arizona. The building has an almost perfect circle shape from above with the living area taking up most of the space and a ramp to enter the building completing the circle. From a distance it looks like it has multiple stories, but the living area has only one and is flat. The living spaces are elevated to make full use out of the beautiful views of camelback mountain. Also, this makes a nice lawn unnecessary because you're looking at the tree tops bellow, making it look like grass. Although the house still has a big, nice lawn.

The rounded corners are designs so air could circulate around it actively cooling it in the hot desert summers. Also, the raised floor allows a cool breeze to pass underneath. For the living area, you start of in the living room, after that making your way to the first and second bedroom with a conjoined bath, after which is the master bedroom with its own bath. Next to the living room is a shielded of and private workspace. The living space isn't all that big with 204 square meters but because of the height and big pillars under the building it seems to have much more mass than it really has. (Frank Lloyd Wright Foundation, 2021)

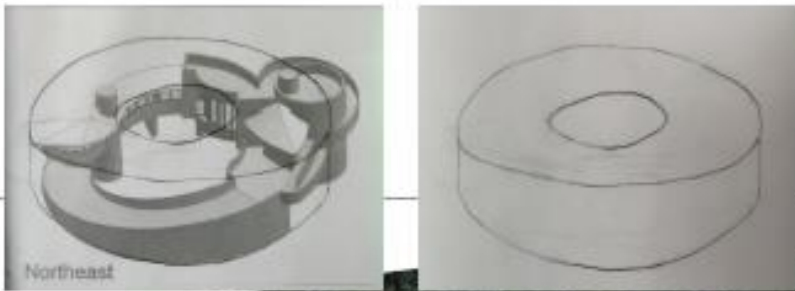




Situation from above



The interior



The shape of the building



The movement of the building



Ground floor



Entrance



Ramp

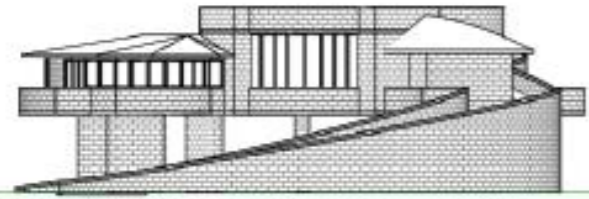


Roof terrace



Back of the building

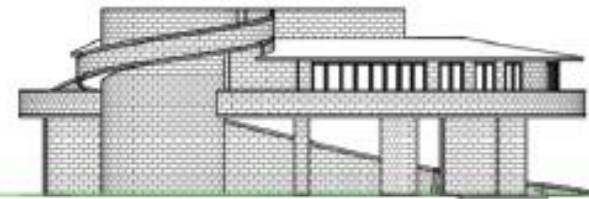
Analysis of the facades



1 East
1 : 200



2 North
1 : 200



3 West
1 : 200



4 South
1 : 200



Perspective



Close-up



Analysis of materials

The main material used for the house was concrete.

Wright's original design was made only with mahogany wood but because of the important role his son played for a concrete block manufacturer he changed his design to fit better.

The interior and the window frames remain mostly mahogany. The building has sheet metal roofing painted in a light turquoise color to reflect the heat and to resemble terne (a combination between steel and lead) or oxidized copper. The kitchen counters were made from laminate surfacing which was a first in residential buildings. (Wikiarquitectura, 2010)



Analysis of the details

The detail contains different sizes of wall thickness.

The vertical cone that holds the house is actually twice as thick as for example the wall of the bedroom. The architect has chosen this because it strengthens the cone and makes it hold the weight of the house.

What's also interesting are the sizes of the concrete blocks that are used for the walls. They are much smaller in the corners of the house because this way it's possible to make corners with a shorter radius. The rest of the house has corners with a longer radius and can have walls that contain longer blocks.

The frames are made of wood. The frames are all straight and not curved, at that time the windows weren't curved yet. The width of the opening of the window frame is 0.5 meters. The height of the opening of the window frame is 1 meter.



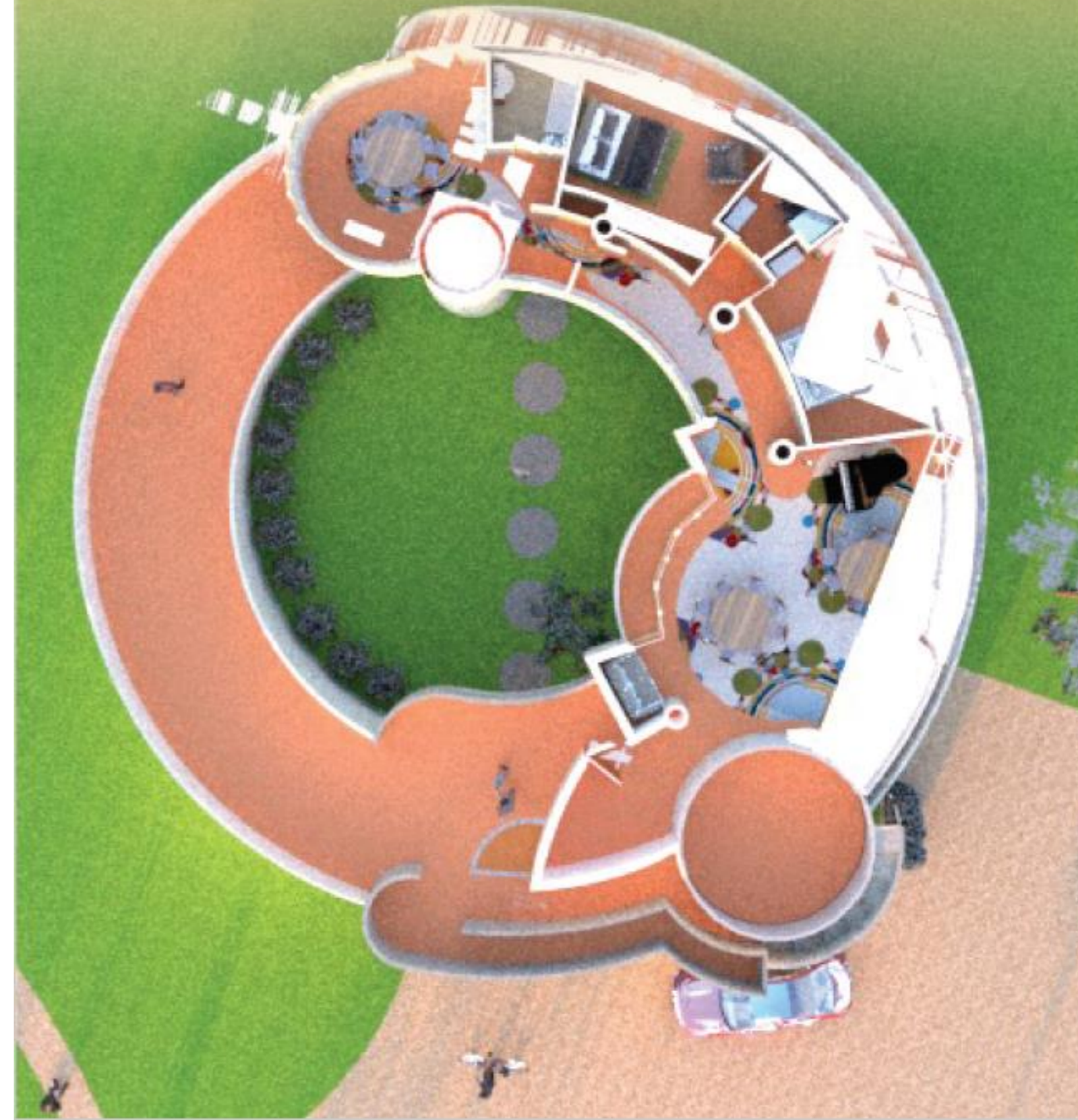
Intersection of the building

The blocks



Conclusions on the design choices

So in conclusion, almost everything about the design is made to fit in the desert but stand out in the rest of the neighborhood.



Bibliografie

Frank Lloyd Wright Foundation. (2021, oktober 12). David and Gladys Wright House. Opgehaald van Frank Lloyd Wright Foundation: <https://franklloydwright.org/site/david-wright-house/>

Frank Lloyd Wright Sites. (2012, oktober 25). David & Gladys Wright House. Opgeroepen op oktober 12, 2021, van Frank Lloyd Wright Sites: https://franklloydwright-sites.com/arizona/wright/david_wright_house.html

Talon, K. (2018, september 9). The spiral house of Frank Lloyd Wright. Opgeroepen op oktober 12, 2021, van NSS Magazine: <https://www.nss-mag.com/en/pills/16029/the-spiral-house-of-frank-lloyd-wright>

Wikiarquitectura (2010) David Wright House. Opgeroepen oktober 10, 2021, van <https://en.wikiarquitectura.com/building/casa-david-wright/>

The background of the slide is a close-up photograph of a tree trunk's cross-section, showing concentric growth rings in shades of brown and tan. A large, semi-transparent light blue circle is overlaid on the left side of the image, containing the text and a horizontal line.

Assignment 2A

Analyse a material and search for
reference images

| | | | | | | | | | |
|--------------|------------------|----------------------------------|--------------------|------------------------|------------------|---------------------------------|---------------------------|----------------------|--------------------|
| Transparency | | | | | | | | | |
| | Name of Building | SOMA college | Private house | Aspen Art Museum | GÖSTA SERLACHIUS | The Saadat Abad Office Building | Damiani-Holz & KO company | P+R parkeergarage | Child Care Centre |
| | City | Harderwijk, Netherlands | Uster, Switzerland | Aspen, USA | Mänttä, Finland | Teheran, Iran | Bressanone, Italy | Zutphen, Netherlands | Drulingen, France |
| | Architect | Wind Architecten Adviseurs (WAA) | Gramazio Kohler | Shigeru Ban Architects | MX_SI | LP2 Architecture Studio | MoDus | Moederscheim-Moonen | Fluor Architecture |

| | | | | | | | | | |
|---------|------------------|--------------------------|----------------|---------------------------|---------------------|----------------|----------------------------|-------------------------|---------------------------|
| Texture | | | | | | | | | |
| | Name of Building | Lonsdale Links Clubhouse | Paint it Black | Knarvik Community Church | Woven Veneer Screen | Office off | Latticed Bamboo Barn B | Timber Waterfall | Woven Wicker Panels |
| | City | Point Lonsdale | London | Knarvik | Aspen | Burgenland | Goshen | Tokyo | Miralles Tagliabue (EMBT) |
| | Architect | Woord and Marsh | Peter Zumthor | Reiulf Ramstad Arkitekter | Shigeru Ban | Heri and Salli | Leon & Primer Architecture | Kengo Kuma & Associates | Shanghai |

| | | | | | | | | |
|--------|------------------|----------------------------|----------------|----------------|-----------------------|--------------|----------------------|---------------------------|
| Colour | | | | | | | | |
| | Name of Building | House K | Volga House | Liyuan Library | Fogo Island Inn | Office Off | Timber House | Knarvik Community Church |
| | City | Stockholm | Tverskaya | Beijing | Fogo Island | Burgenland | Newmarket | Knarvik |
| | Architect | Tham & Videgård Arkitekter | Peter Kostelov | Li Xiadong | Saunders Architecture | Heri & Salli | Kühnlein Architektur | Reiulf Ramstad Arkitekter |

| | | | | | | | | | |
|------------|------------------|-----------|---------------------|-----------------------------------|---|---------------------|-------------------|--------------------|-----------------------|
| Innovation | | | | | | | | | |
| | Name of Building | Longhouse | half-timbered house | kinked house | Casa Munita Gonzalez | Săpânța-Peri Church | HAUT | Sanctuary of truth | W350 Project |
| | City | Hitzacker | Elzet, Limburg | Amsterdam | Batuco | Săpânța | Amsterdam | Pattaya | Tokio |
| | Architect | VIAS | Vullings de Moor | Daan Bruggink, Steven van Leeuwen | Arias Arquitectos, Surtierra Arquitectura | Dorel Cordos | Team V Architects | Lek Viriyaphan | Sumitomo Forestry Co. |

| | | | | | | | | | |
|---------|------------------|------------------------------------|--------------------|--------------|--------------------|--------------------------------|-------------------|---|--------------------|
| Pattern | | | | | | | | | |
| | Name of Building | Yang Liping Performing Arts Center | Solid wood Tambour | Underhill | Artisans Ayutthaya | The Greenest Home on the Block | Arayaasanee House | Korean National Arboretum Children's school | One North |
| | City | Dalian | Chaska | East Hampton | Ban Run | Seattle | Suan Luang | Pocheon-Si | Portland |
| | Architect | Zhu Pei | Surfacing Solution | Bates Masi | Bankok Project | Caron Architecture | DminusplusB | Geuimplus | Holst Architecture |

| | | | | | | | | | |
|--------------|------------------|----------------------|--------------|------------------|---------------------|---------------------|-----------------|---------------|--------------------|
| Construction | | | | | | | | | |
| | Name of Building | Borgund stave church | Patch22 | Metropol parasol | Jakarta hotel | International House | Mjosa Tower | Timber museum | Timber pavillion |
| | City | Borgund | Amsterdam | Sevilla | Amsterdam | Sydney | Brumundal | istanbul | Helsinki |
| | Architect | Karl Mohrman | Tom Frantzen | Jürgen Mayer | SeARCH Architecture | Tzannes | Voll Arkitekter | Kengo Kuma's | Verstas Architects |

| | | | | | | | | | |
|------|------------------|-------------------------|-----------------------|-------------------|-------------------------|-------------------------|-------------------------------|---------------------|-------------------------------------|
| Size | | | | | | | | | |
| | Name of Building | Fireplace for Children | Small Wooden Pavilion | Wooden Box House | Residence Terschelling | Georgica Cove Residence | BUGA wood Pavilion 2019 | The Farmhouse | Olympia Place |
| | City | Trondheim | Philipstown | Kawaguchi City | West aan Zee | East Hampton | Heilbronn | Unknown (not built) | Amherst |
| | Architect | Haugen/Zohar Arkitekter | MQ Architecture | Suzuki Architects | Achterbosch Architecten | Bates Masi | ICD – University of Stuttgart | Studio Precht | Holst Architecture/ DiMella Shaffer |

Group 4 Frank Lloyd Wright Poster Wood

Assignment 1A

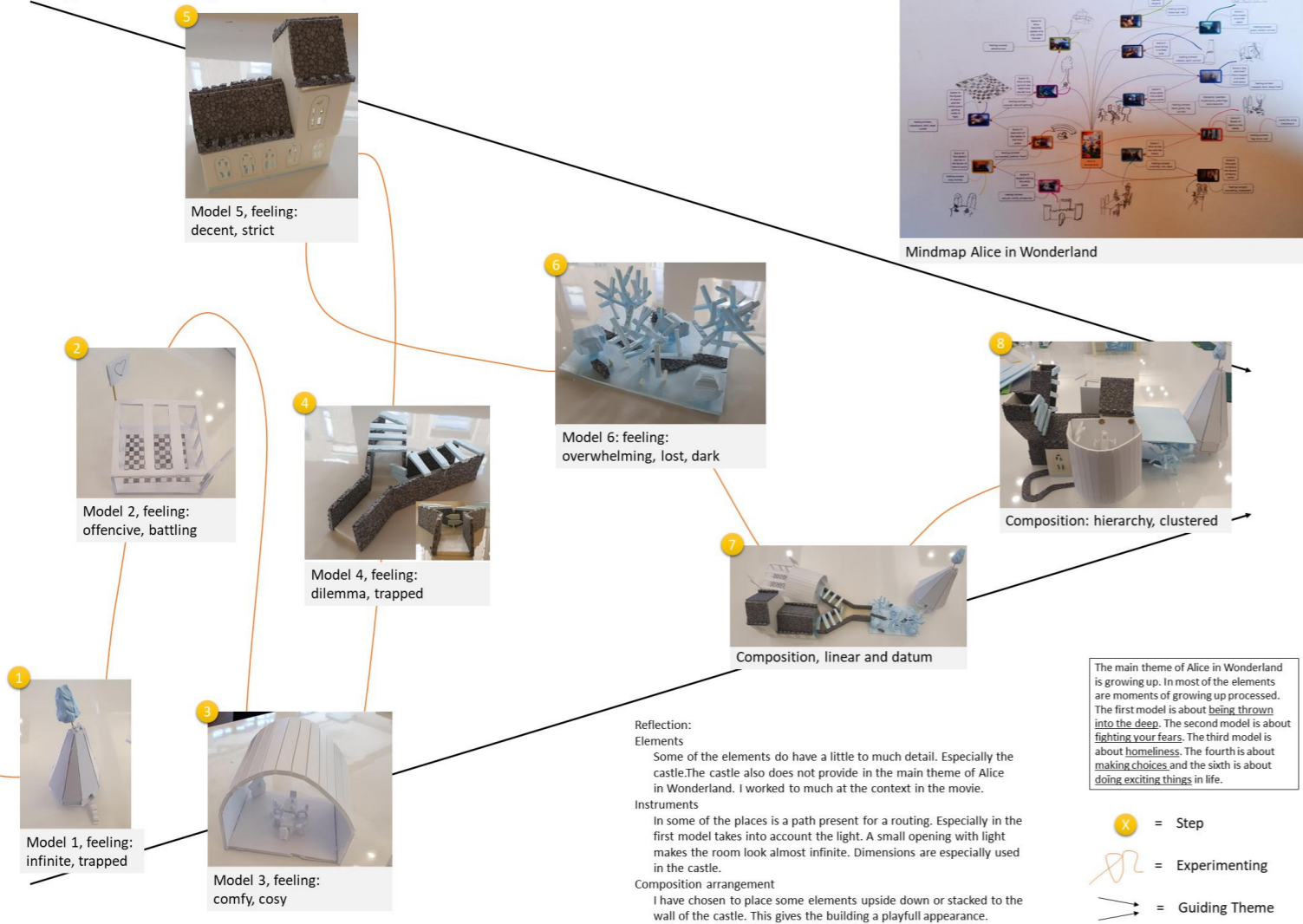
- Mark Bekkema, 406240
- Manon ten Hoor, 406127
- Wick Michielsen, 384980
- Bruun Timmers, 405786
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- Ben Wieldraaijer, 406617

Assignment 2b

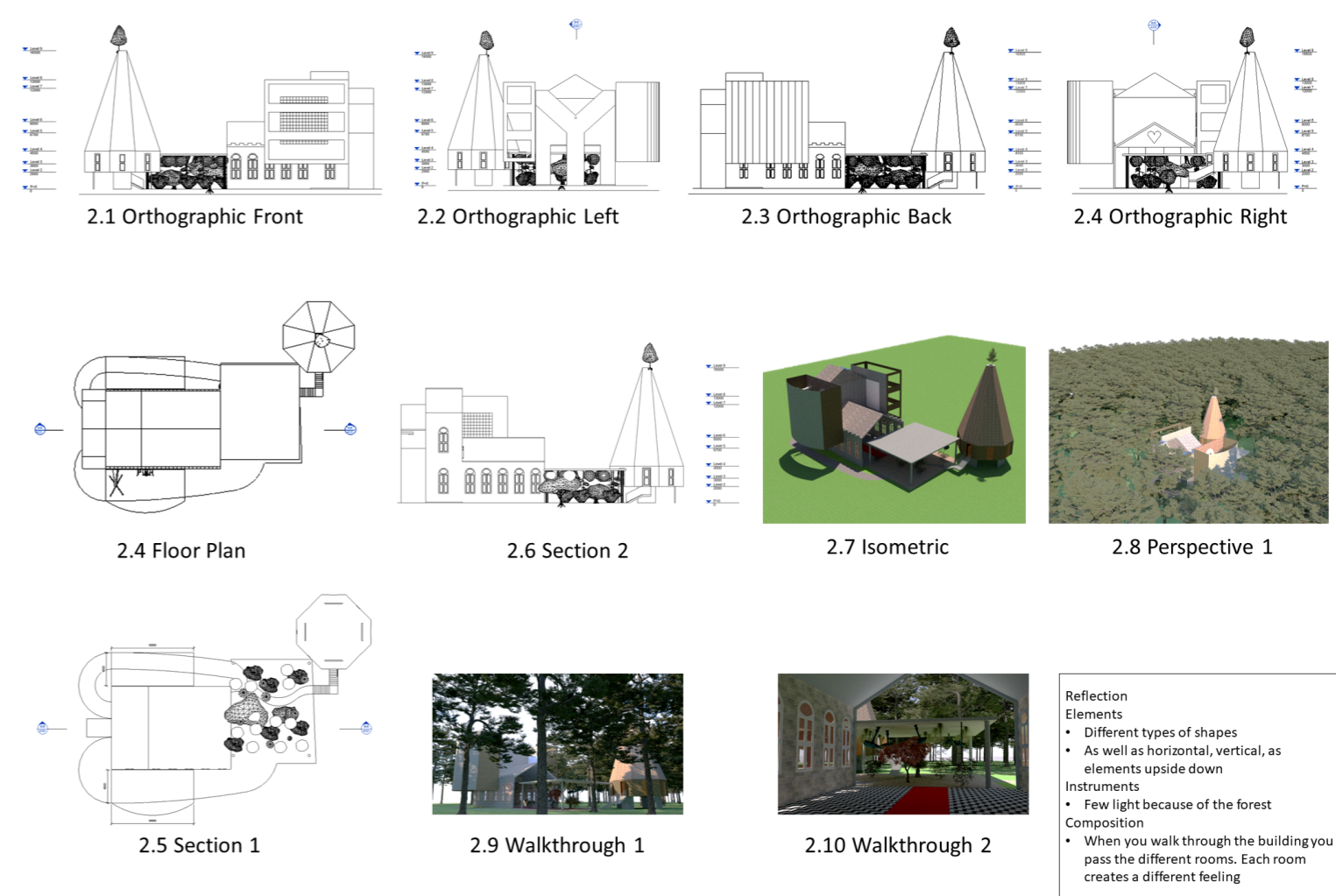
Specify the design of the composition made in the week of Architectural Composition



Guiding Theme (Proces)



Isometric and Orthographic Drawings

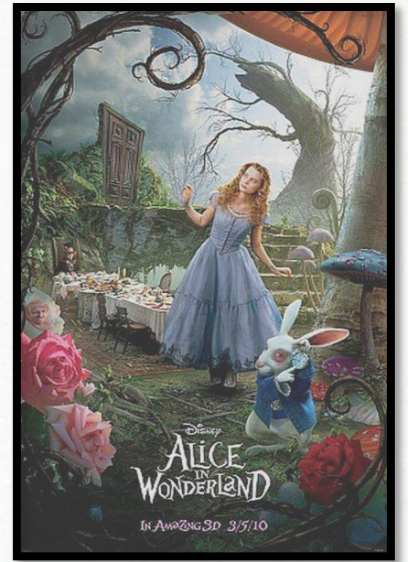


Guiding Theme Architectural Composition

In conclusion: Alice in wonderland is a story about growing up and making choices

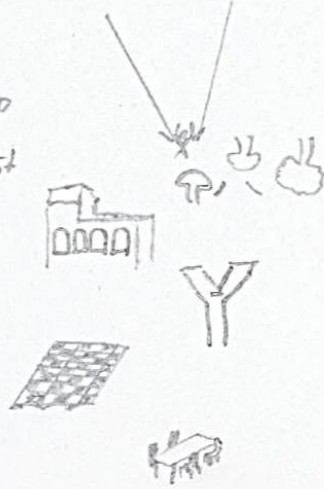
Guiding Theme:

Growing up and Making Choices



Elements of the Building:

- Element 1: Cone: thrown into the deep
- Element 2: upside down forest: feeling lost
- Element 3: Castle: entering the big society
- Element 4: the Y-junction: Making choices
- Element 5: Chess board: challenges to face
- Element 6: Dining table: cosiness and domestic



Abstract feeling

1. ☀️
2. ~~~~~
3. ○
4. Y
5. ↔
6. 🍴

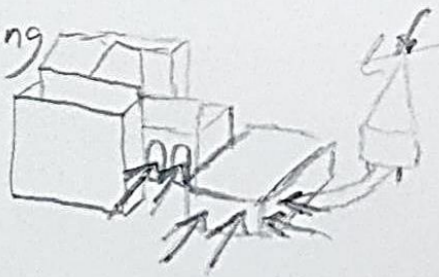
two opposites → different side of the building

Main Routing

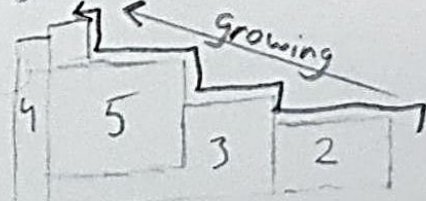
Shaped like a heart what refers to the Queen of Hearts in the story



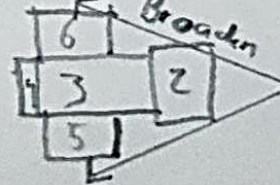
Lighting



Dimensions



Facade

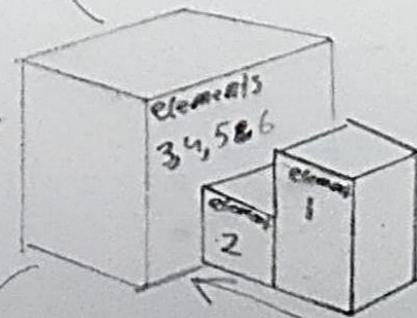
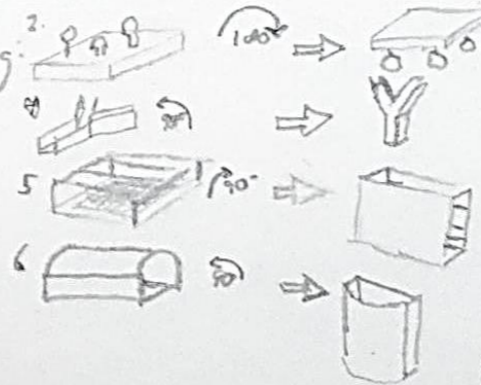


Floor plan

Materials

- ex. Wood
- ex. Concrete
- ex. Stone
- ex. Plastic

Stacking (rotation)

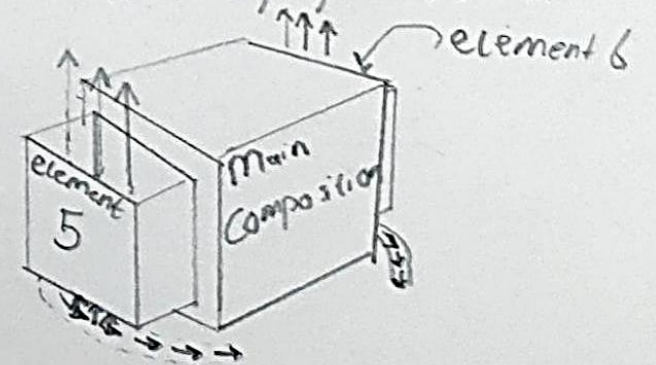


The elements 1&2 illustrate the everyday of childhood. This is why it is positioned in front of the main composition.

Requirements materials

- Natural look because of the context (Forest)
- enough openings to provide natural light
- relatable to the guiding theme of growing up and making choices

element 5 & 6 do you do together with others. In this composition you look at the elements from a perspective view.

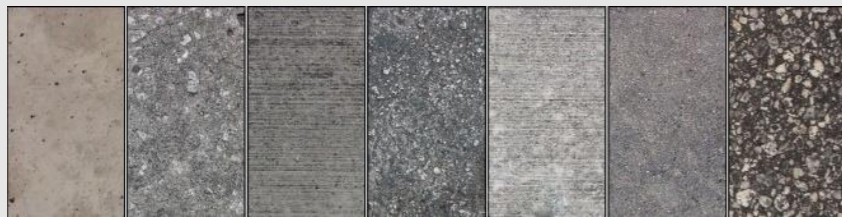


Context adapted from Architectural Composition

- Context: Forest
- Approach: Blue arrow
- Oriëntation: Yellow arrow



Concrete



Concrete is the material that is used often in jails. In the story of Alice in wonderland Alice is trapped in a room with only very small doors. She feels trapped. The same feeling people have in jails but than a bit more litteraly.

- Transparency: None
- Texture: Vertical cut
- Colour: Dark grey
- Pattern: Vertical stacked
- Size: Prefab walls

Wood



In the story, the rabbit hole Alice falls in is located next to a oak. In addition the oak is a tree that's growing very fast and alice in wonderland is very much about growing up.

- Transparency: None
- Texture: Rough – Natural
- Colour: Dark brown
- Pattern: Vertical elements
- Size: Wide planks

Stone



The story is about growing up. The brick does look like the perfect stacked stone. But life isn't perfect. This is the reason stone is used

- Transparency: None
- Texture: Unequal
- Colour: Light colours
- Pattern: Prairie Bluff
- Size: Prefab elements

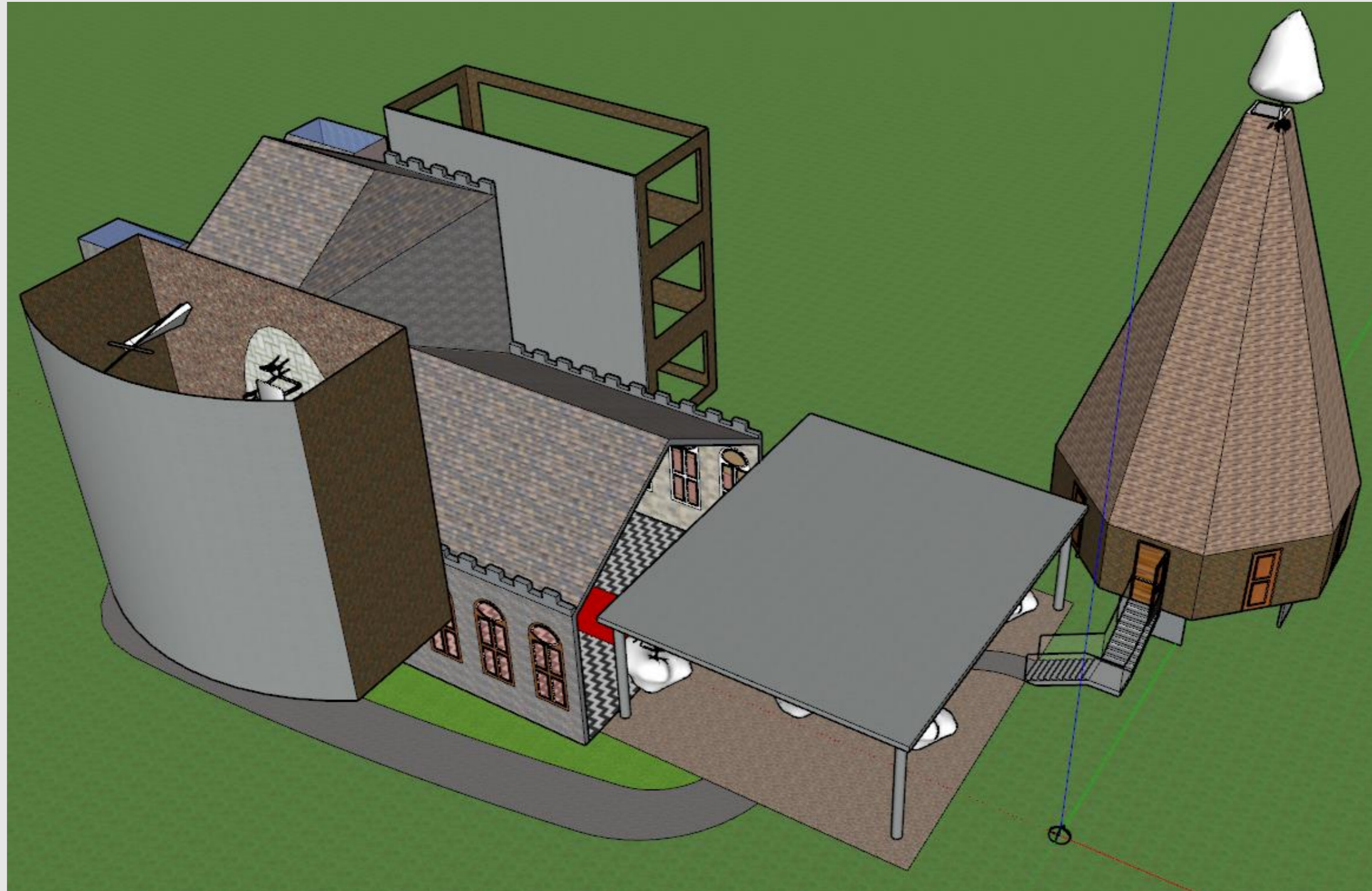
Composite



Alice in wonderland is also about surrealism. To recreate these surreal elements composite is the most realistic material.

- Transparency: Variable
- Texture: Rough
- Colour: Variable
- Pattern: Repetitive
- Size: 3d printed in different sizes

Component Architectural Composition



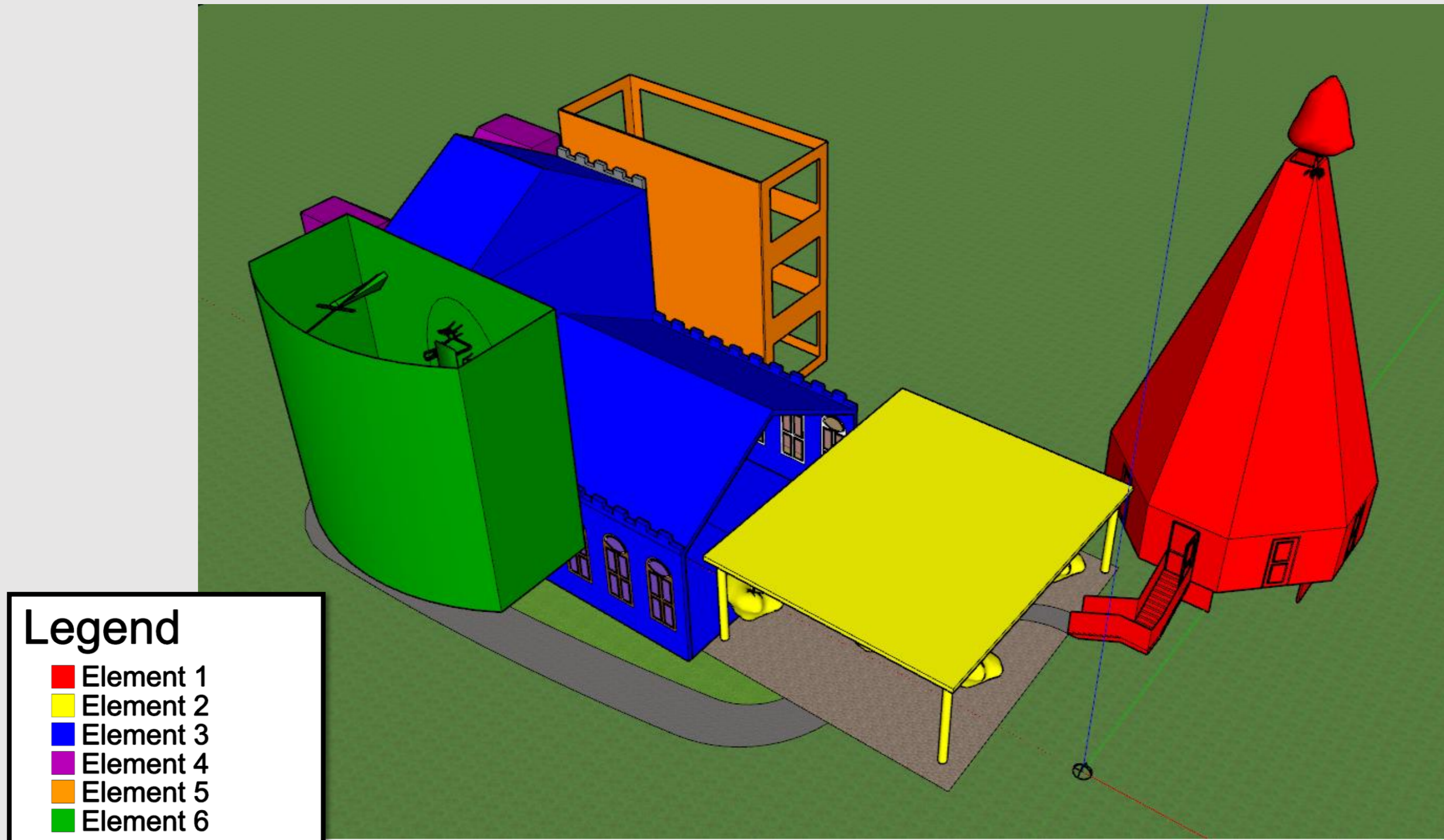
Step 2: Choosing the materials

Let's wipe out the materials! ...

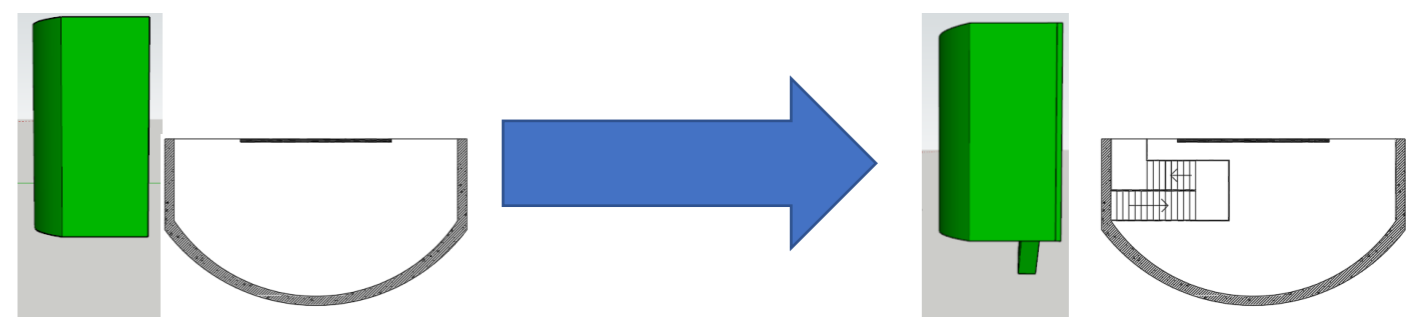
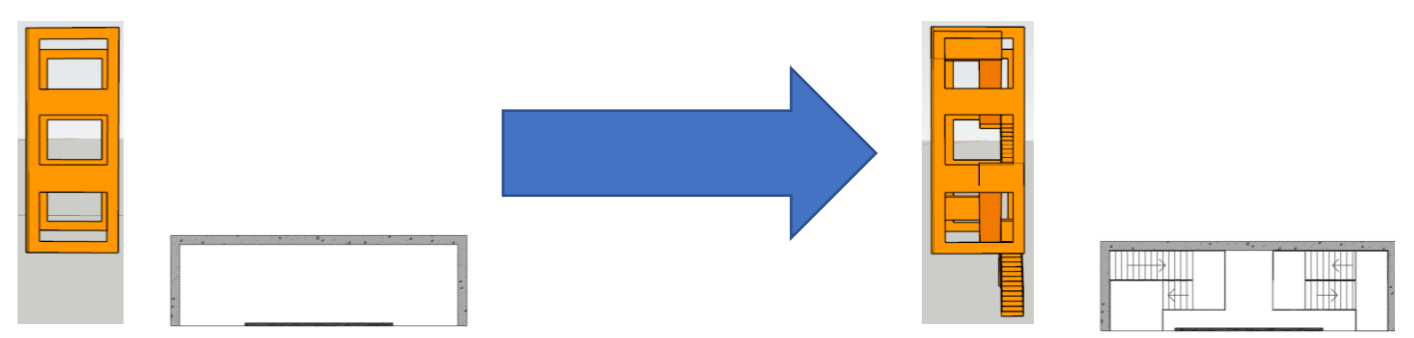
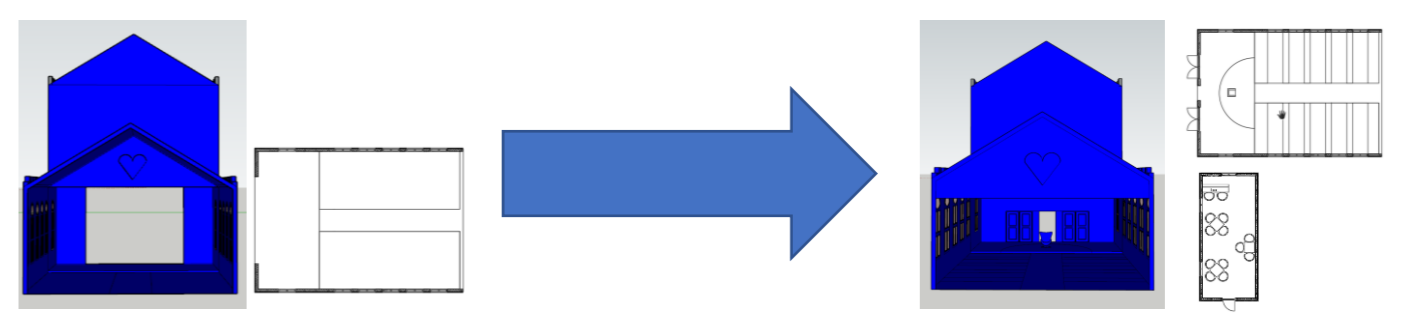
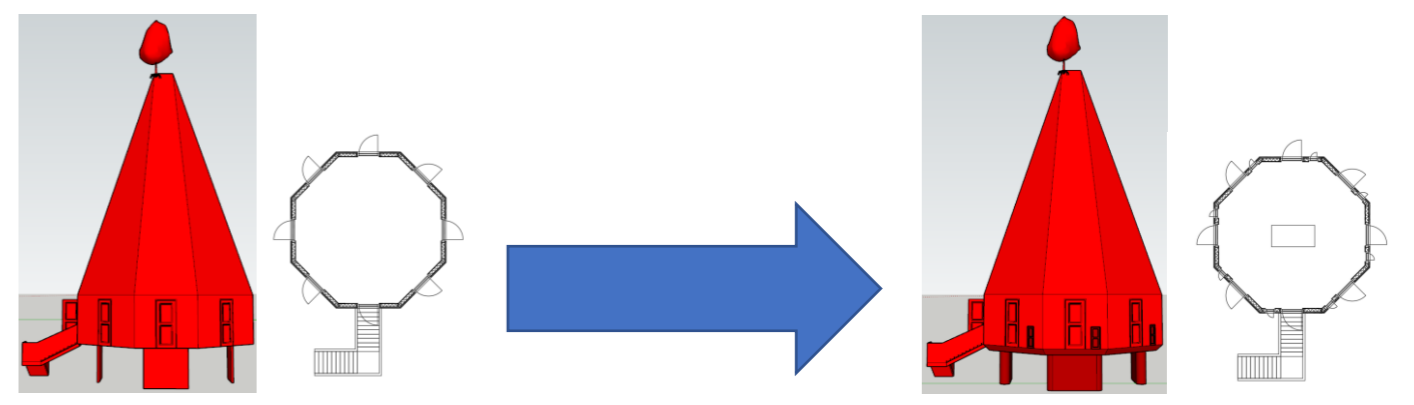


Clean model Architectural Detail

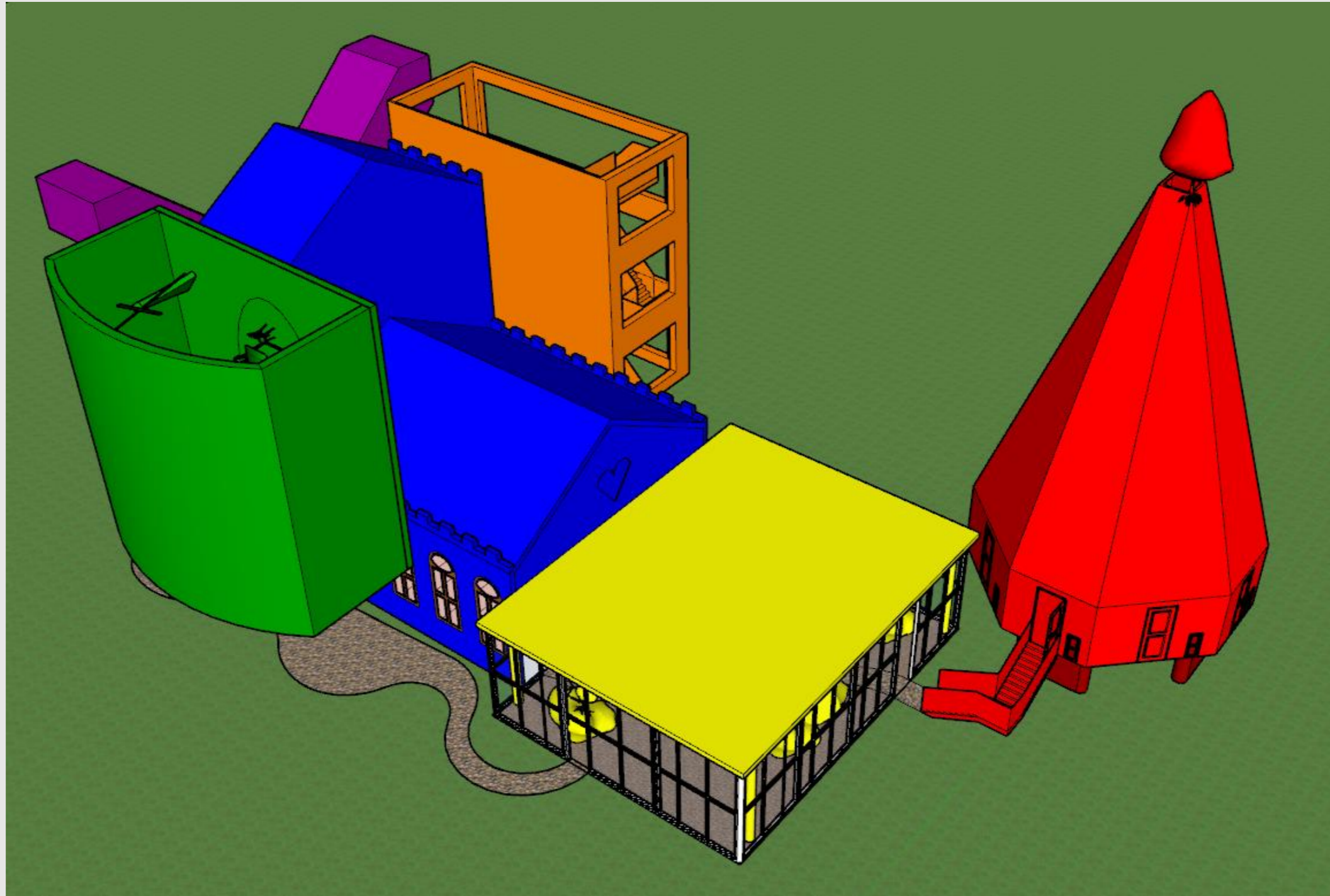
Step 2: Choosing the materials

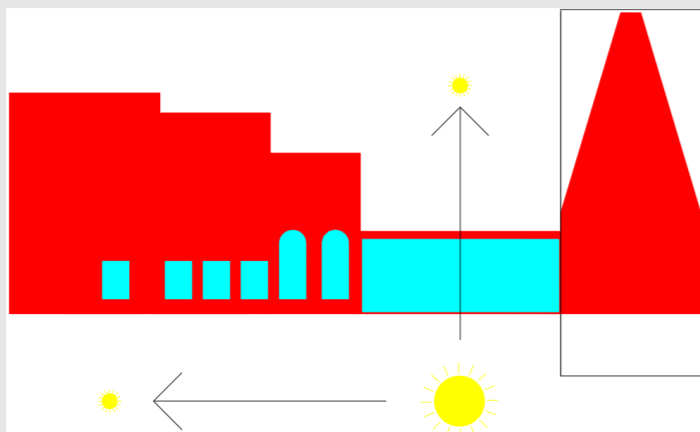
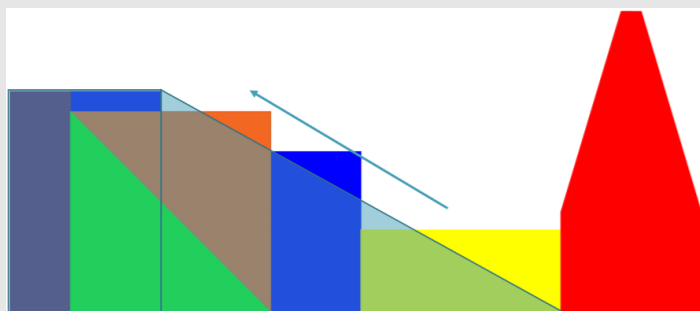
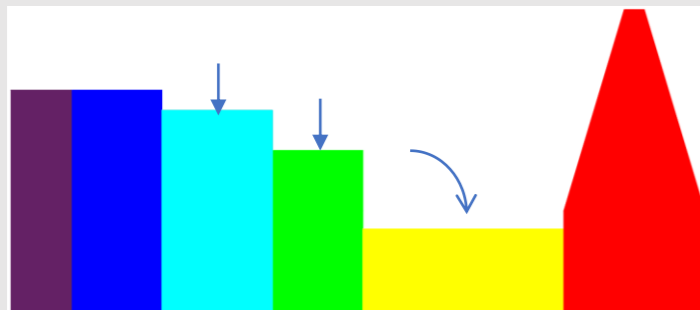
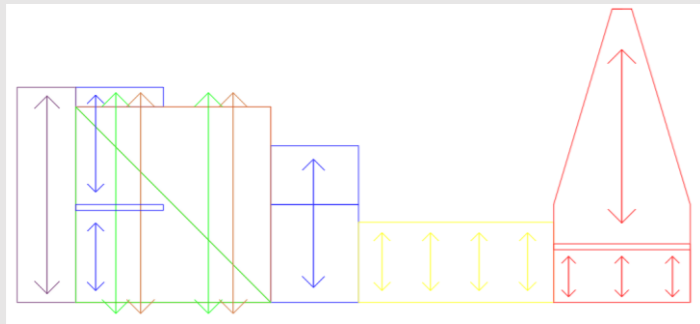
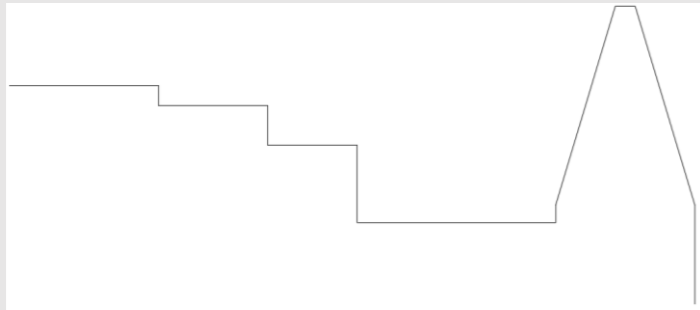


Transforming facades, floor plans and shapes



Stacking of the new elements

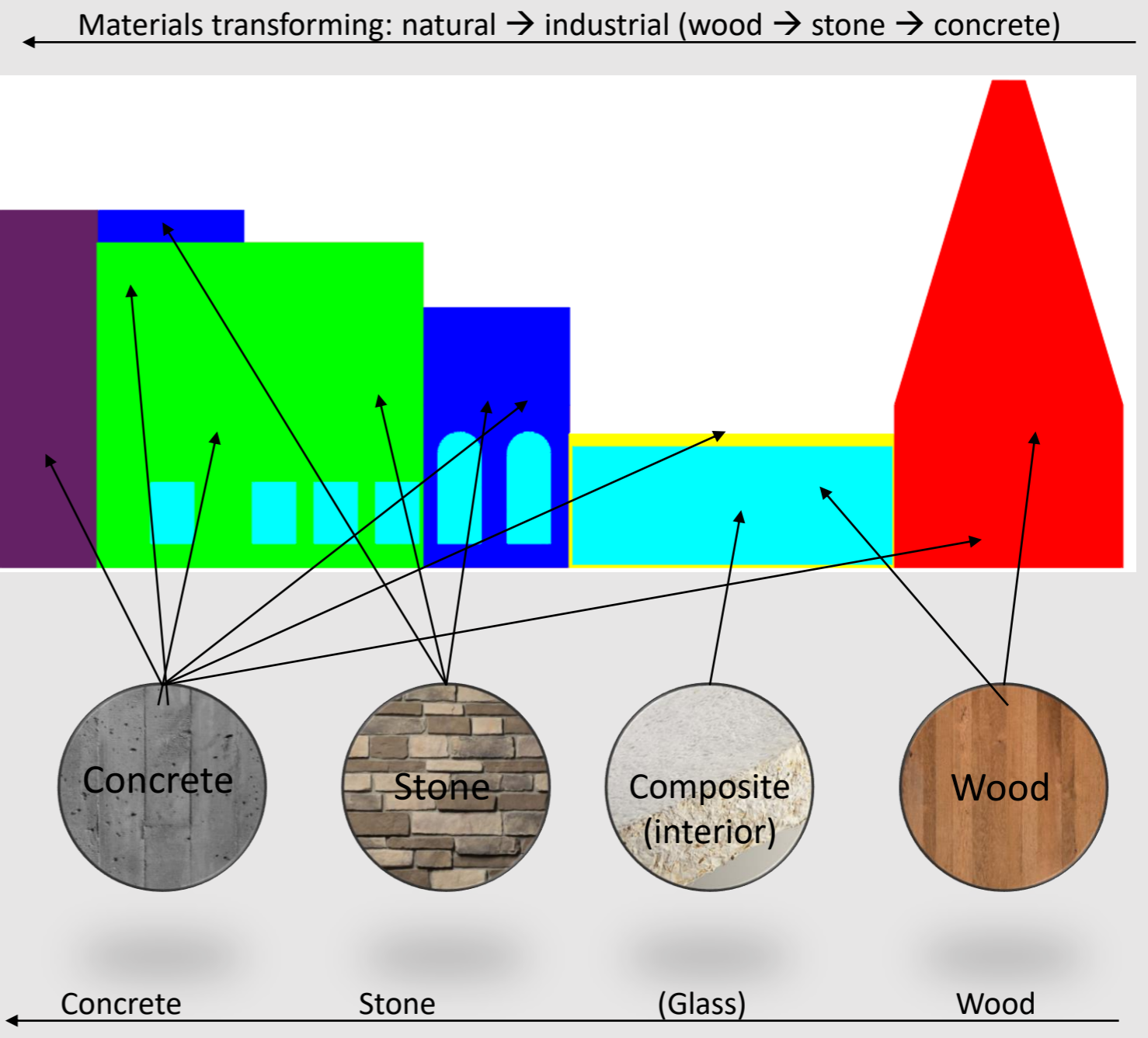




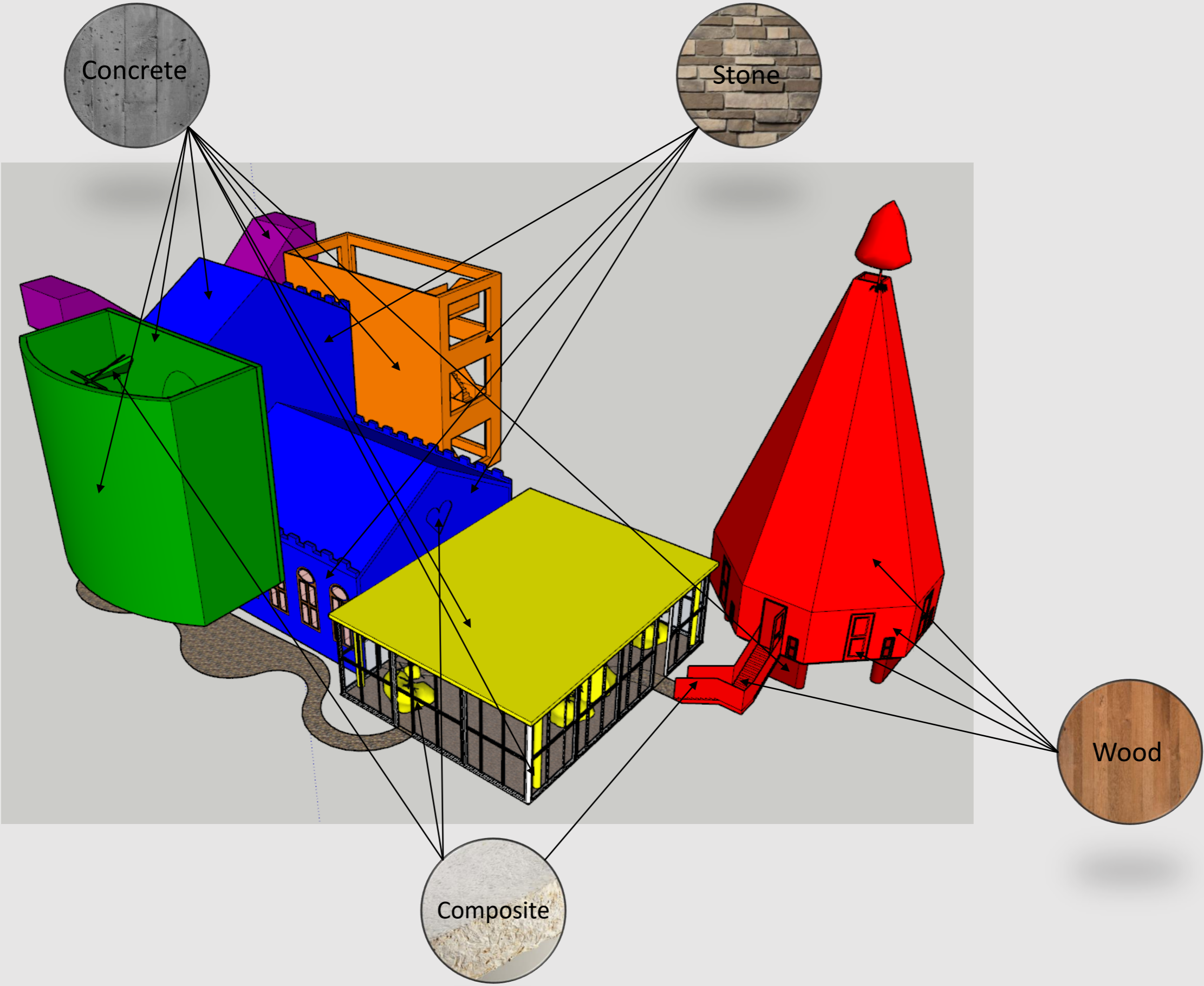
Composition Analysis

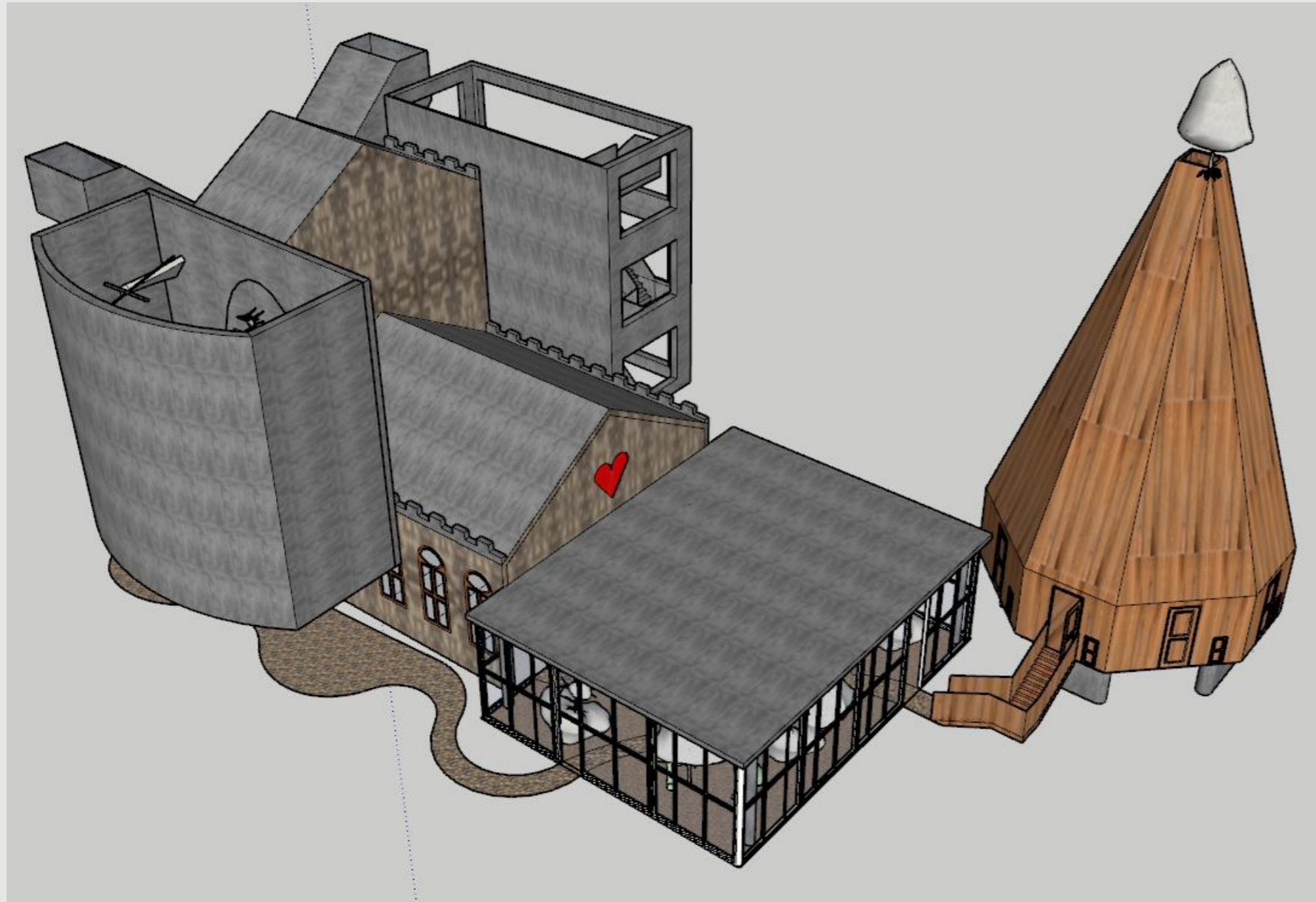
1. **Contours:** The cone is very remarkable because that is the only shape in the composition that has no square corners.
2. **Elevations:** There are a lot of high ceilings used in the building. There are two elevated floors (in the main building and in the cone).
3. There is a rotation between the main building and the entrance. The main building has only vertical rectangular façade-elements and the entrance is horizontal.
4. When you look at the façade from left to right. You notice that the building is growing. What fits very well to the guiding theme of *Alice in Wonderland*.
5. The further you enter the building the darker it becomes.

Addition of materials

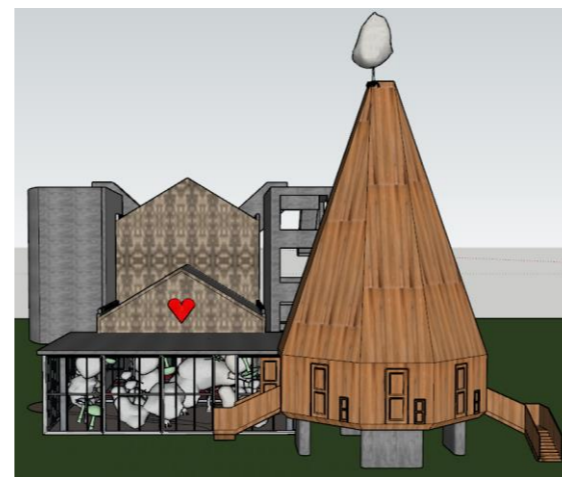
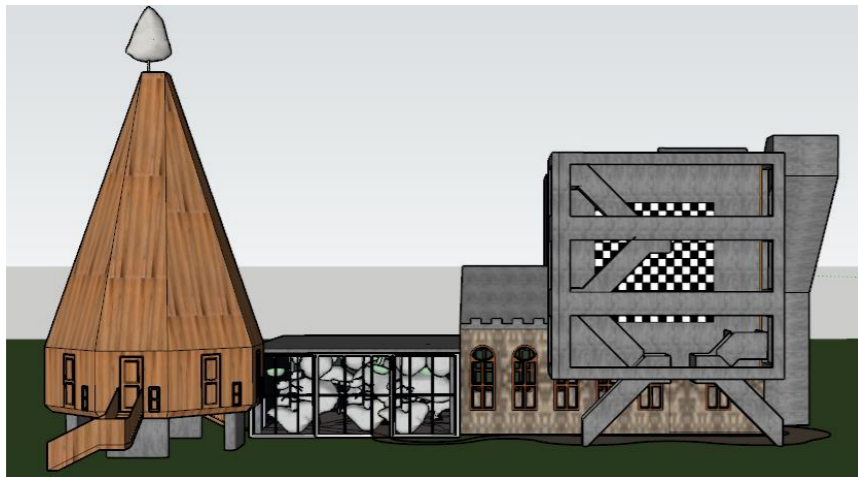
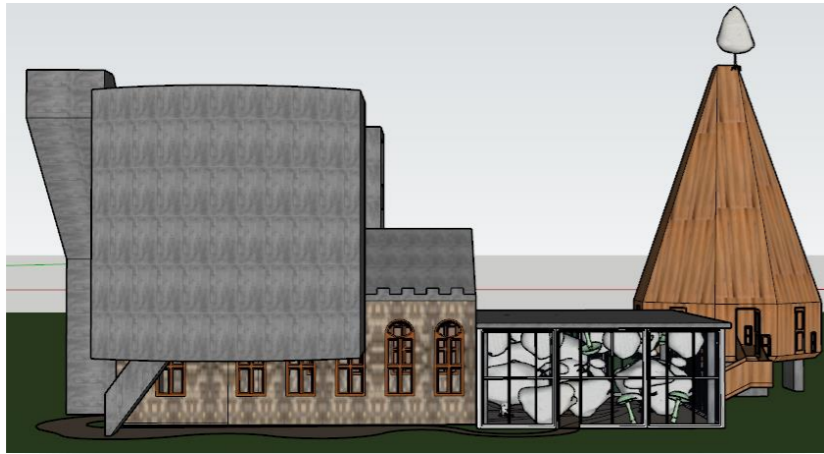


Step 3: Specify the Design





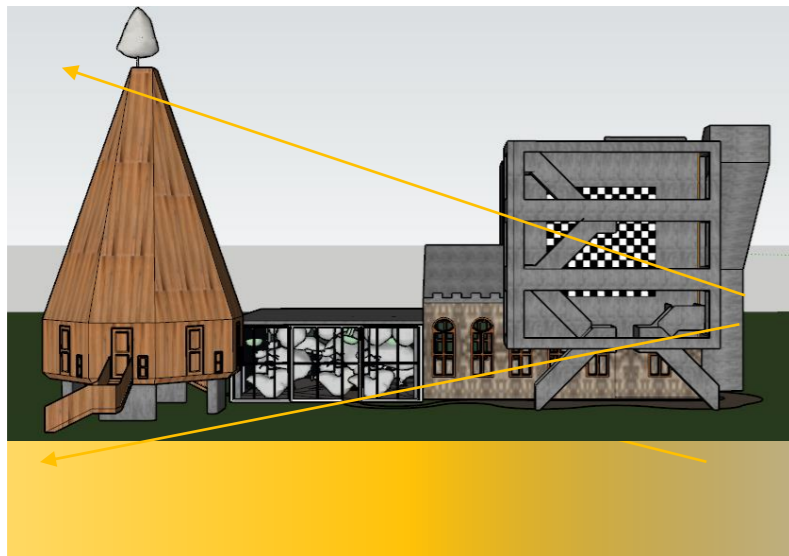
Materials added



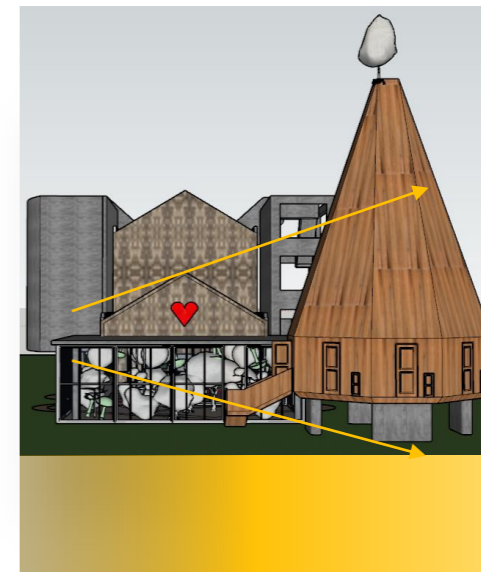
Materials on
the façades

Facades relating to the guiding theme

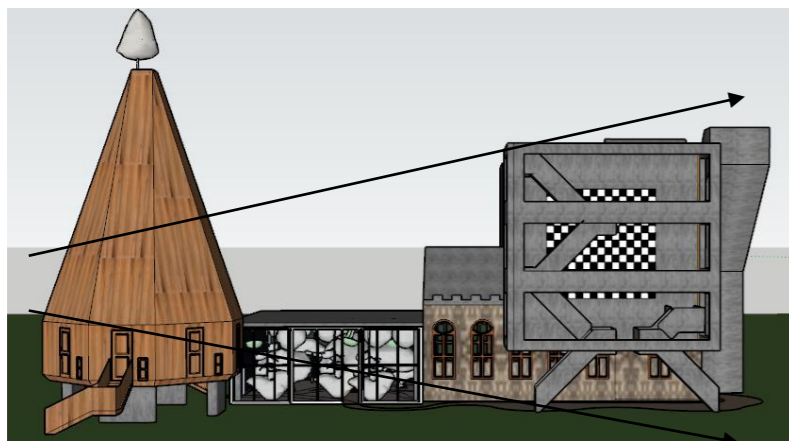
Light



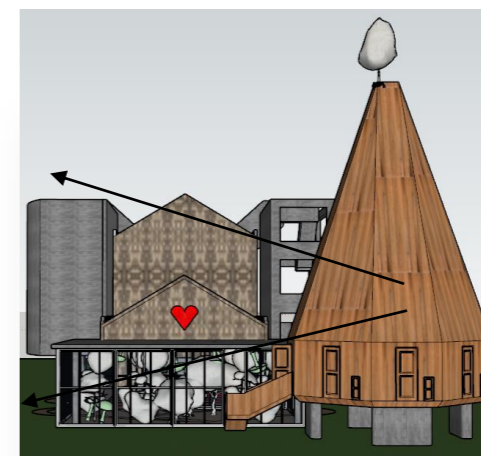
The light intensity is growing
By walking through the building



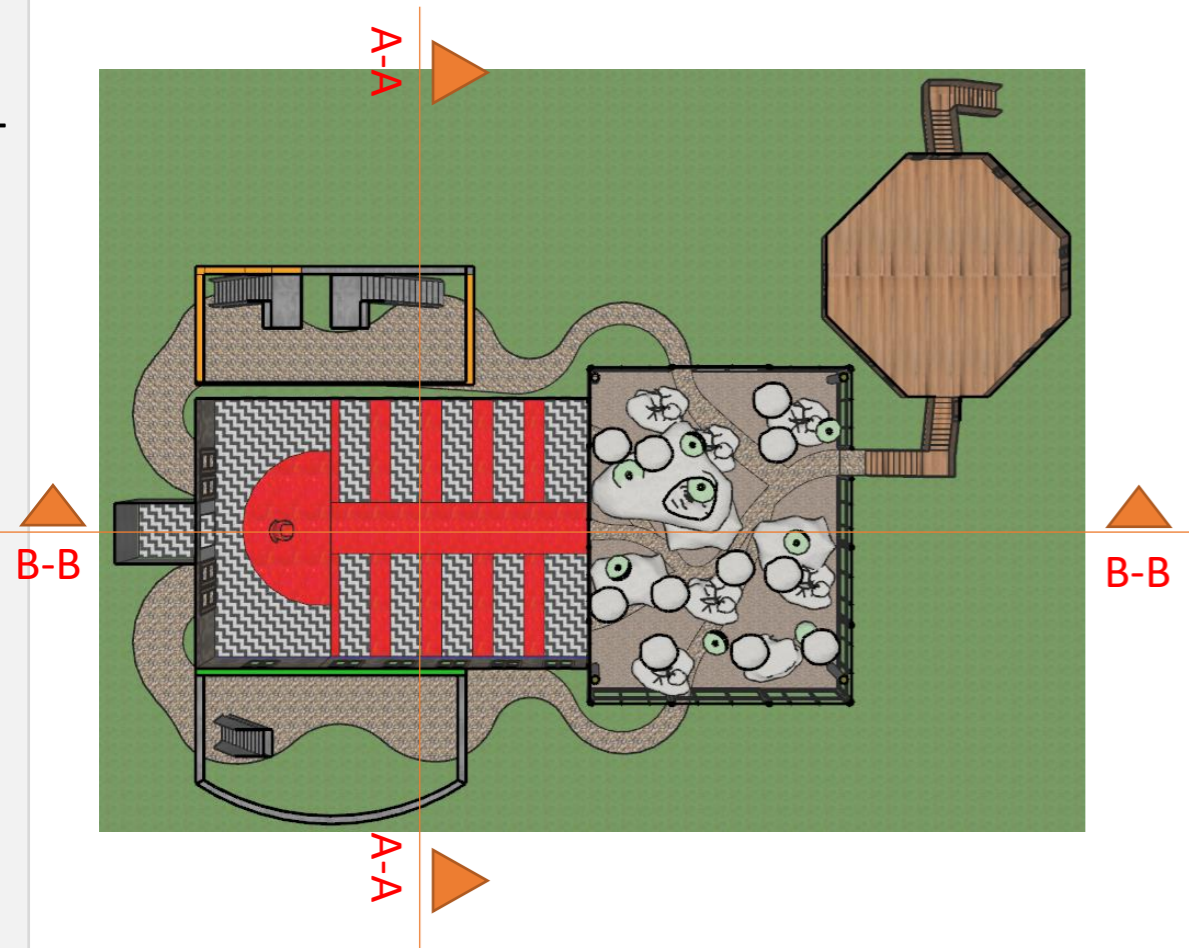
Material



When you walk through the building
the materials that are used are more
and more hand made (industrial)
what refers to the making of choices
in the Guiding theme

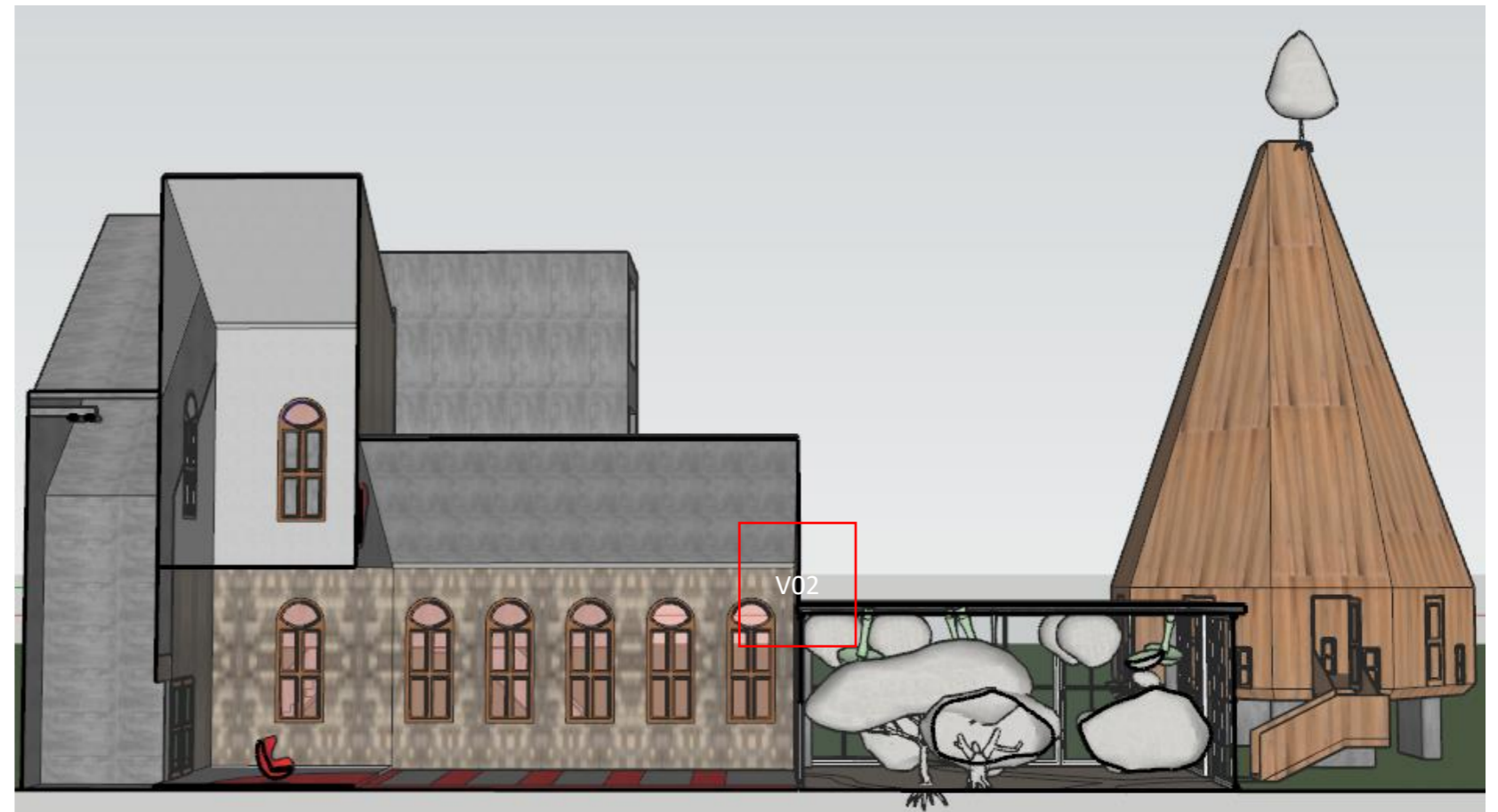


Section A-A

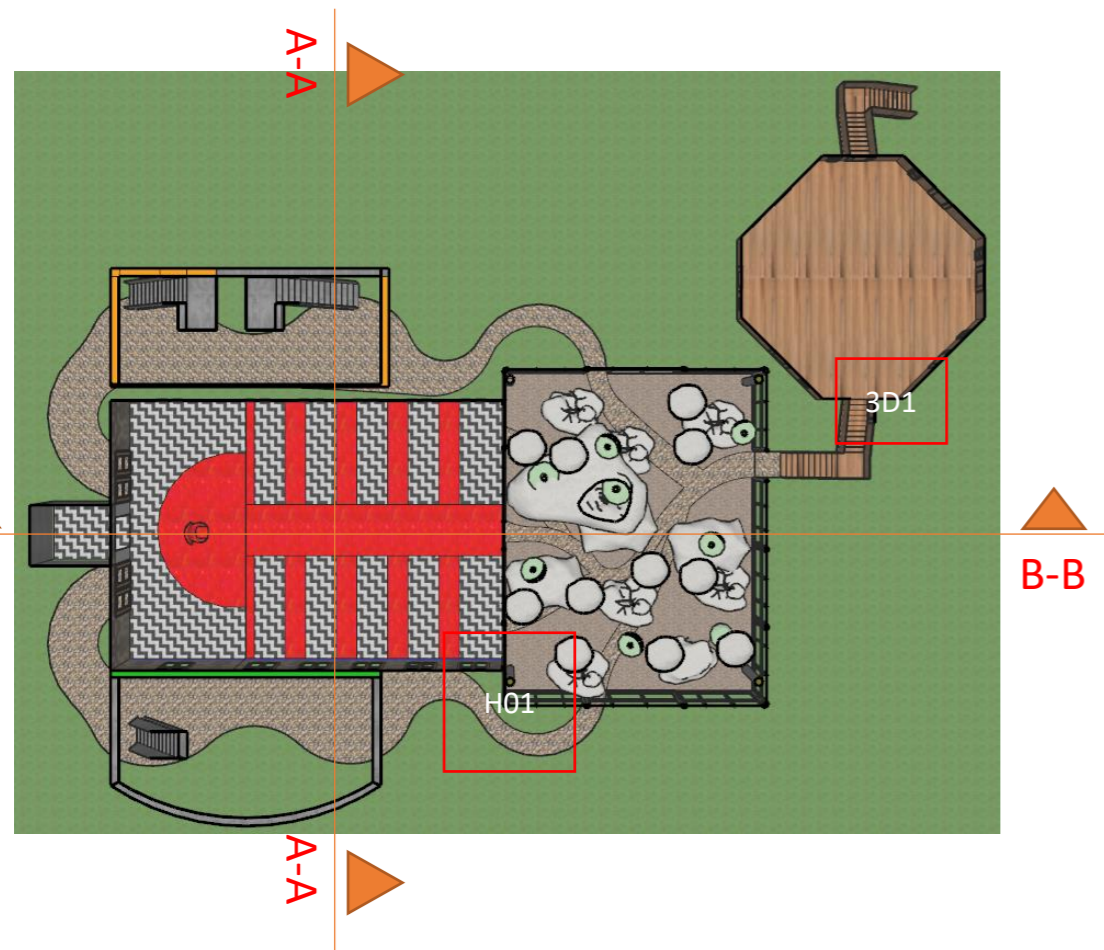


- In this section there are a lot of interesting connections. In this part of the composition there is a lot of concrete and stone used. The advantage of concrete is that it could be pre-fabricated.
- The connection that will be worked out in a detail is: Foundation – Ground Floor – Window

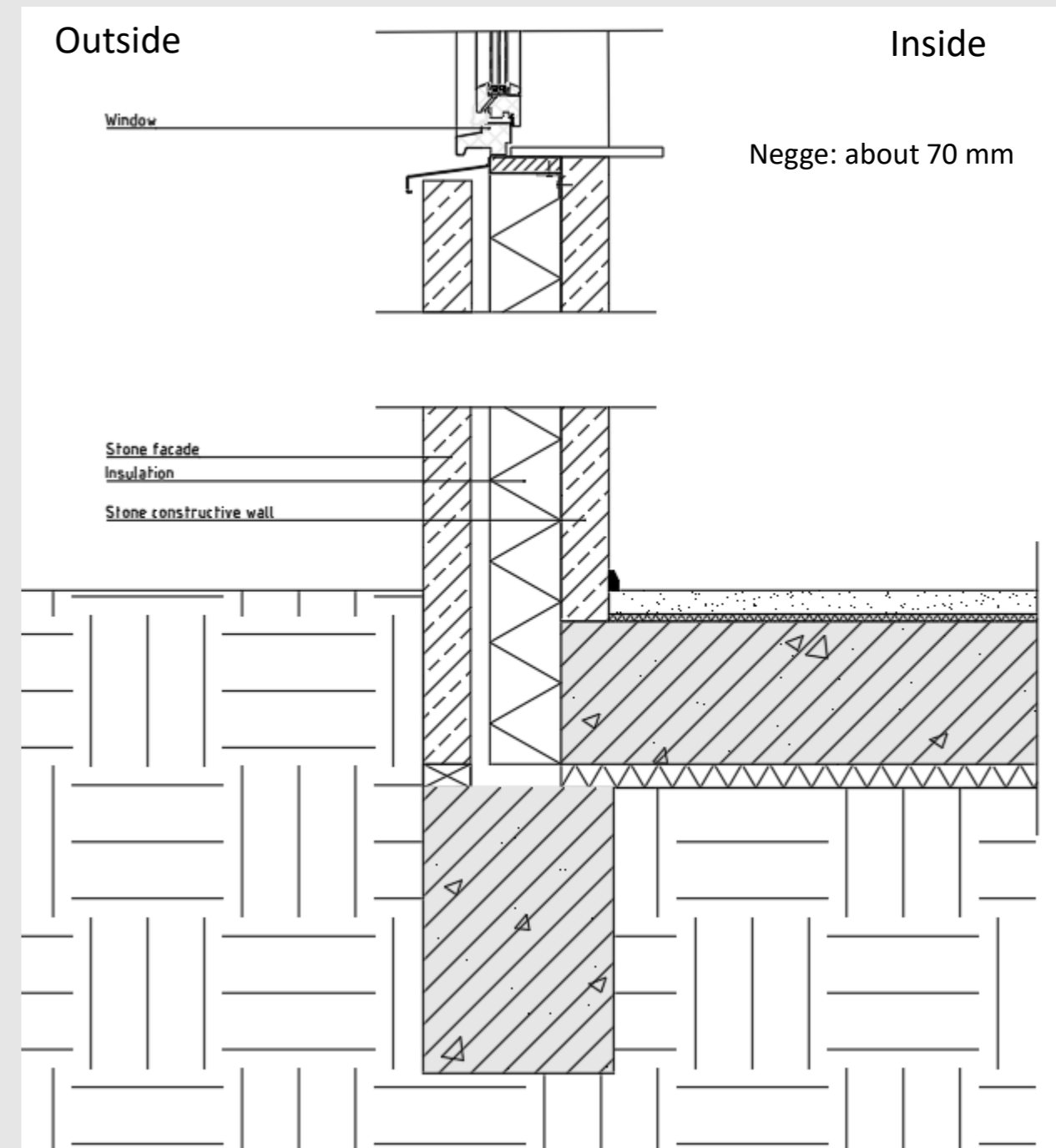
Section B-B



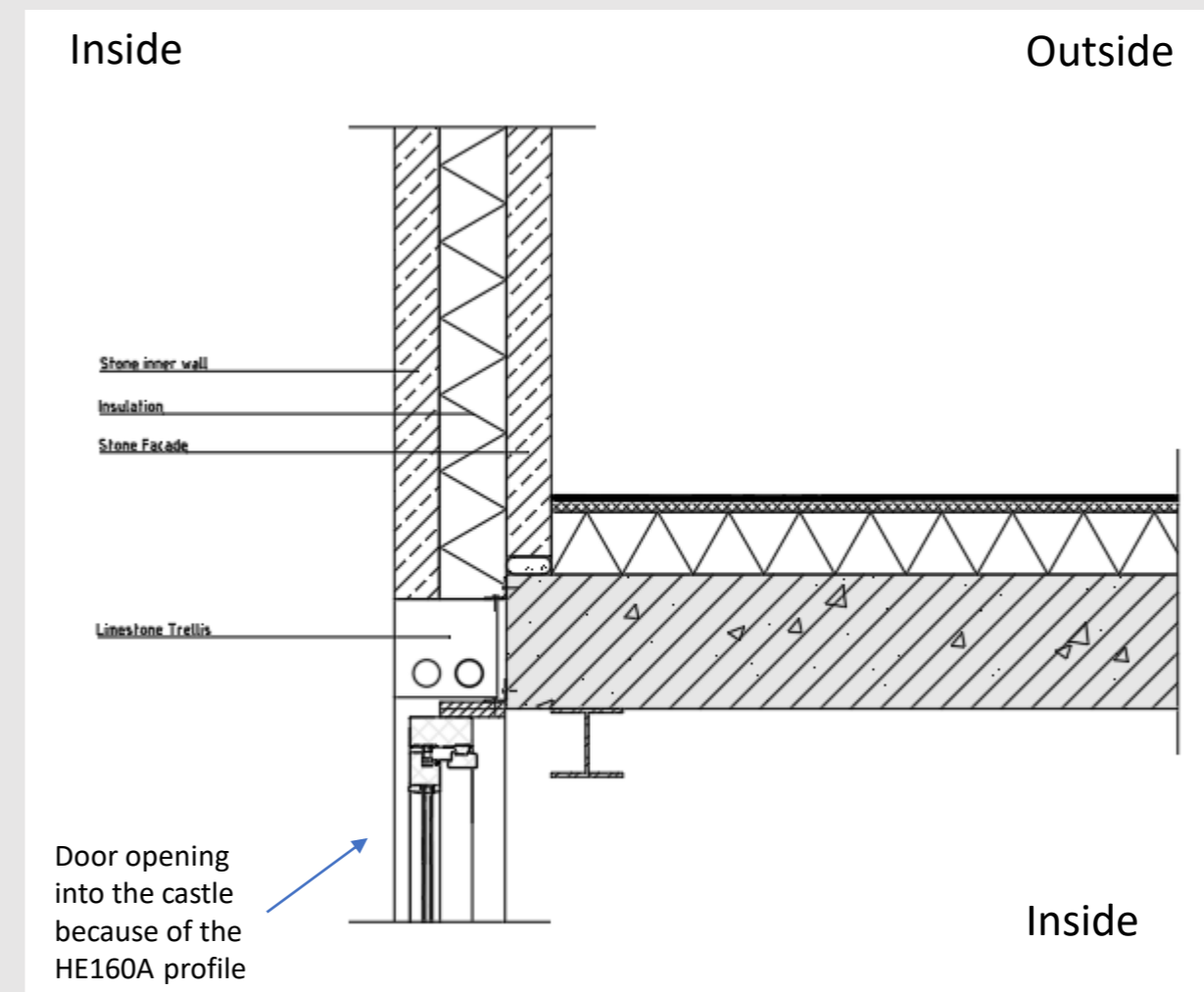
- In this section is the transformation of the materials visible. The cone is fully made out of wood. The castle is made out of stone and the Y-junction is made of concrete.
- The connection that will be worked out in a detail is: Wall – Roof serre
- The horizontal detail will contain the connection of the stone wall and the serre
- The 3D detail is will contain the connection of the wall and the roof of the wooden cone.



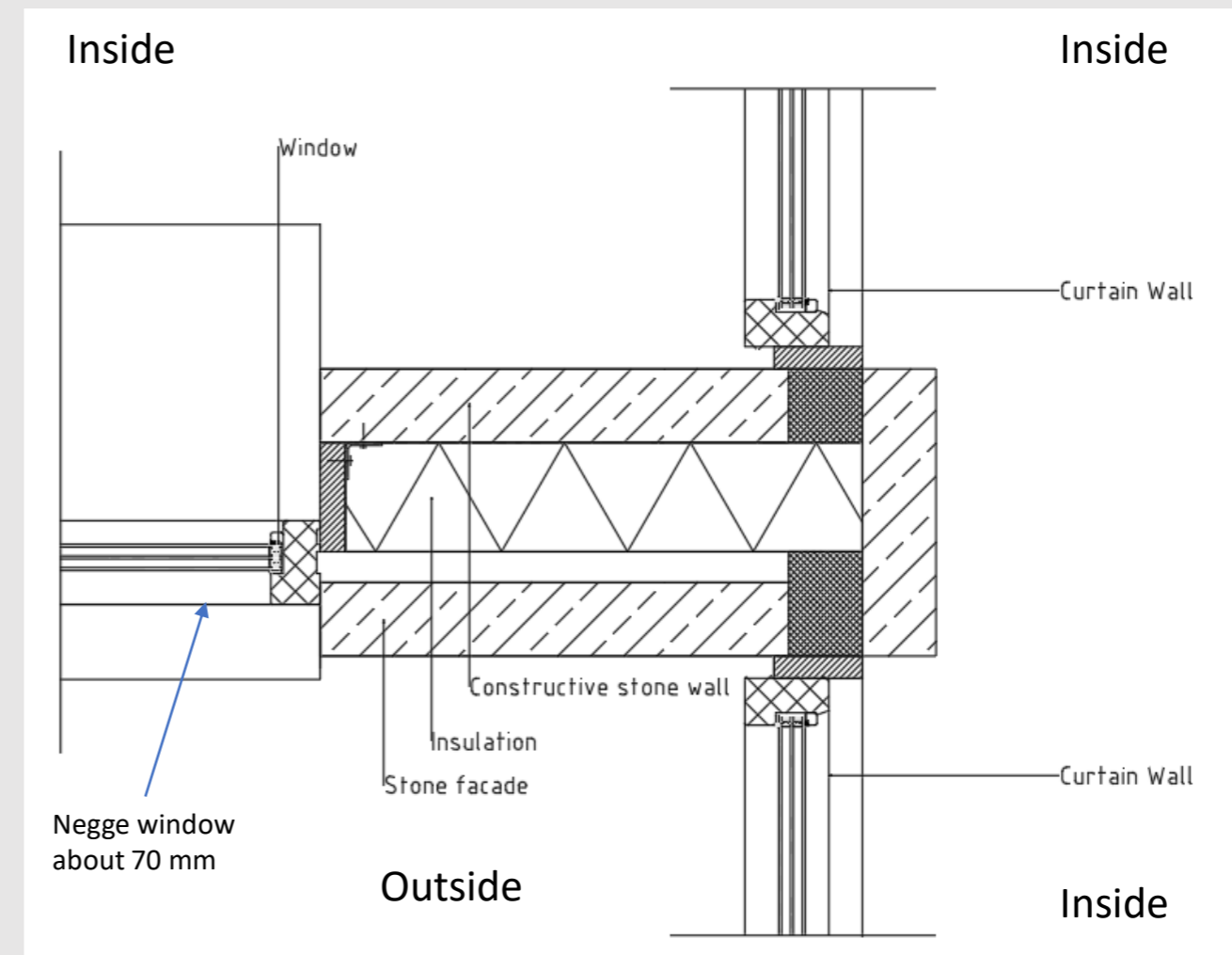
Detail V01



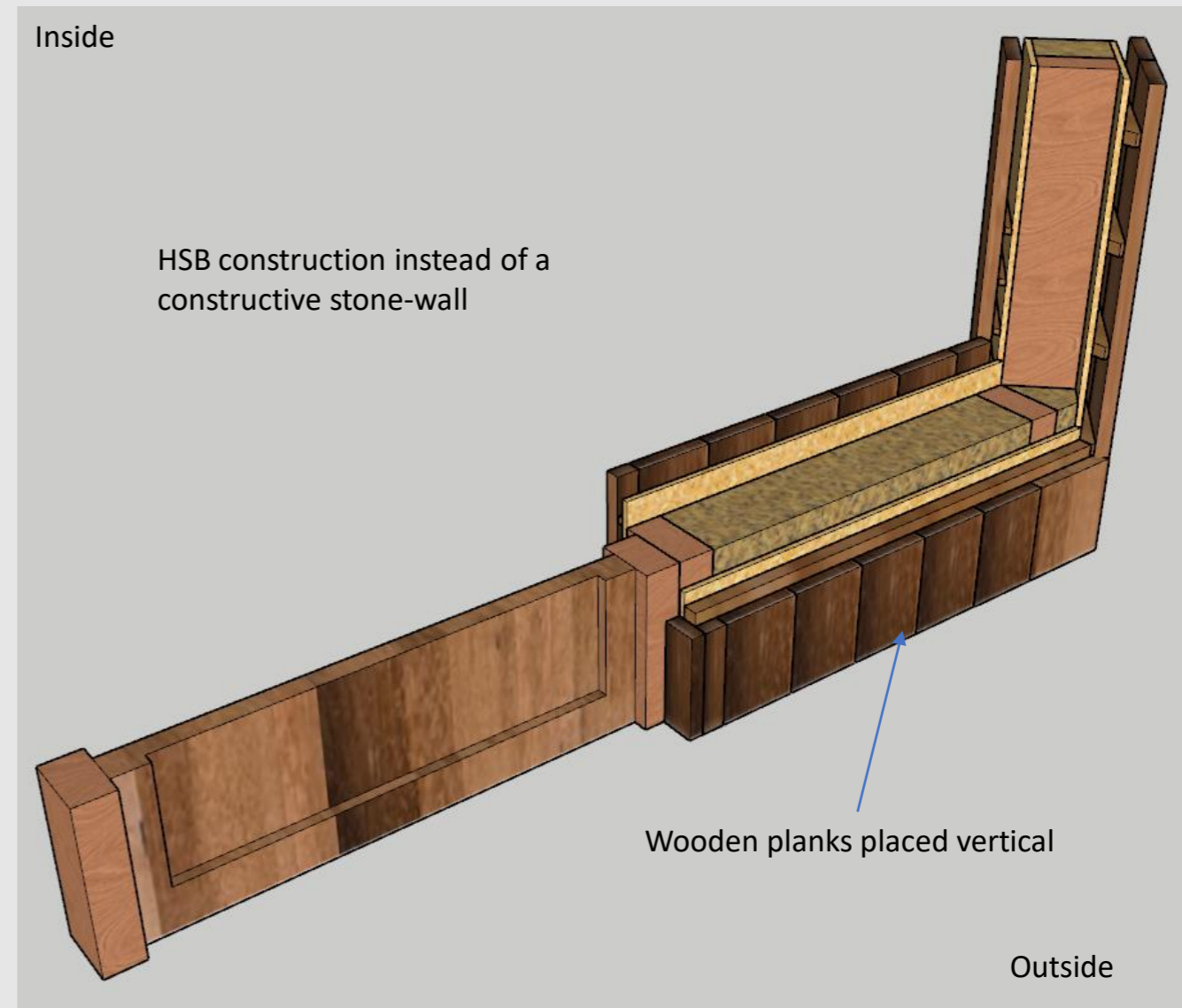
Detail V02



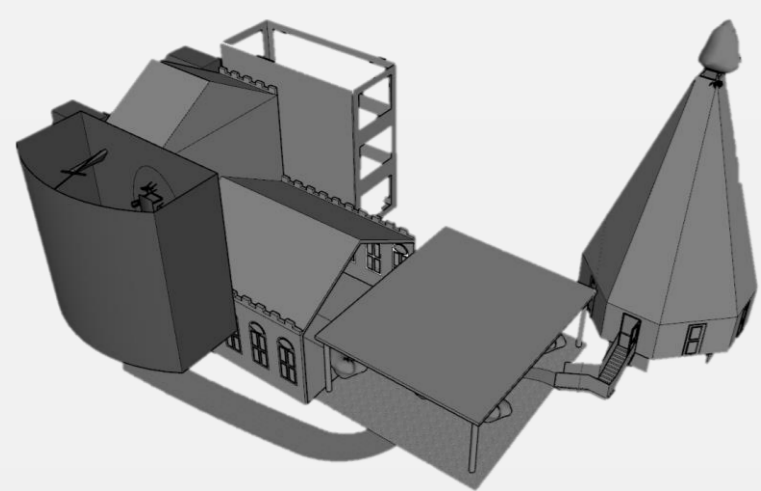
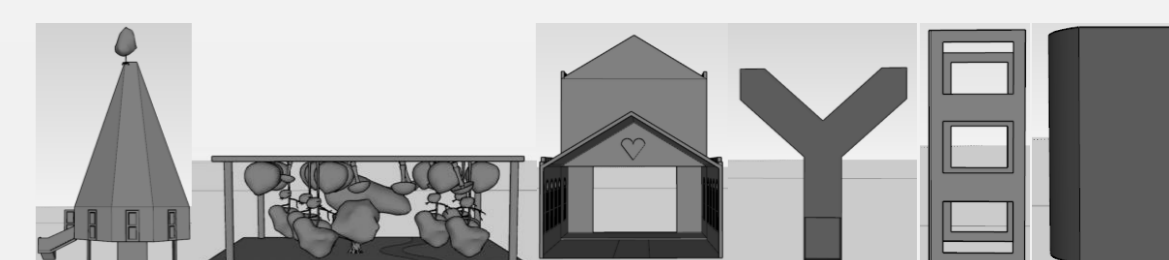
Detail H01



Detail 3D1



Growing up making choices



Element 1: cone : thrown into the deep

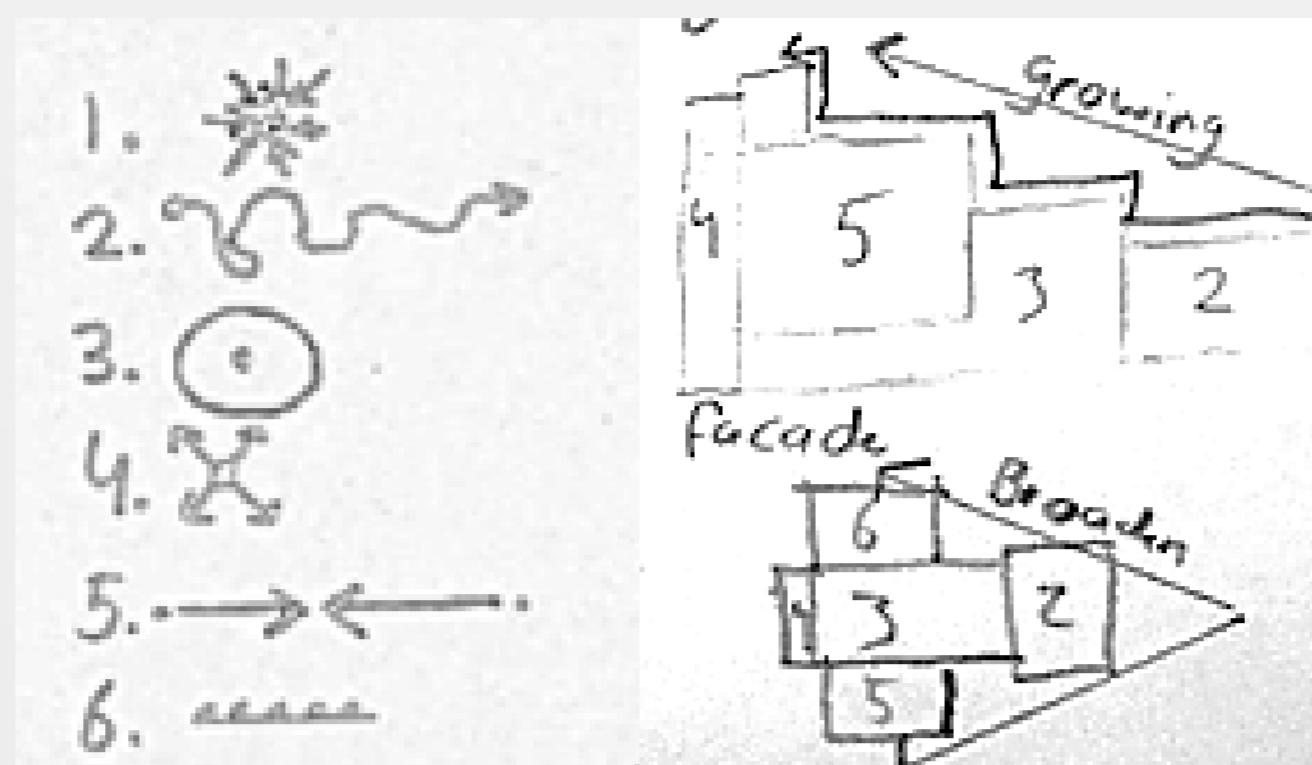
Element 2: upside down forest: feeling lost

Element 3: castle: entering the big society

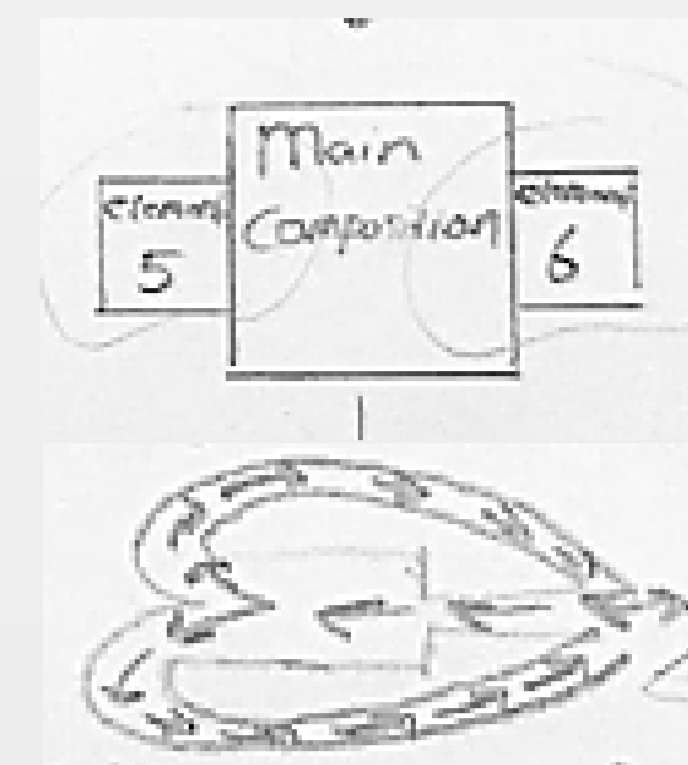
Element 4: the Y-junction: making choices

Element 5: Chessboard: challenges to face

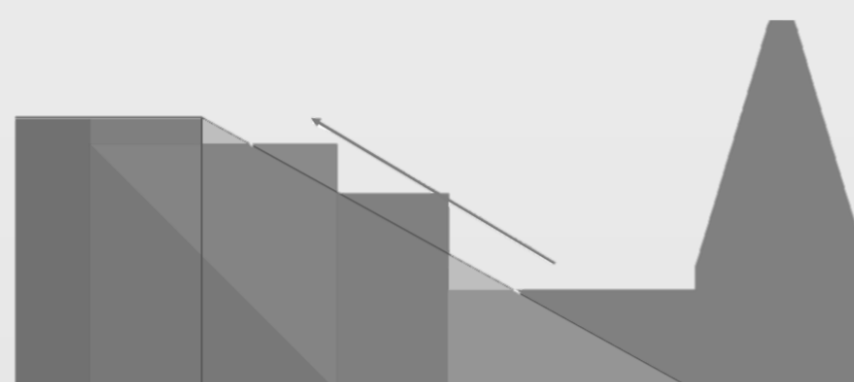
Element 6: Dining table: cosiness and domesticity



Guiding theme → visual guiding theme:
The building has to grow / to broaden

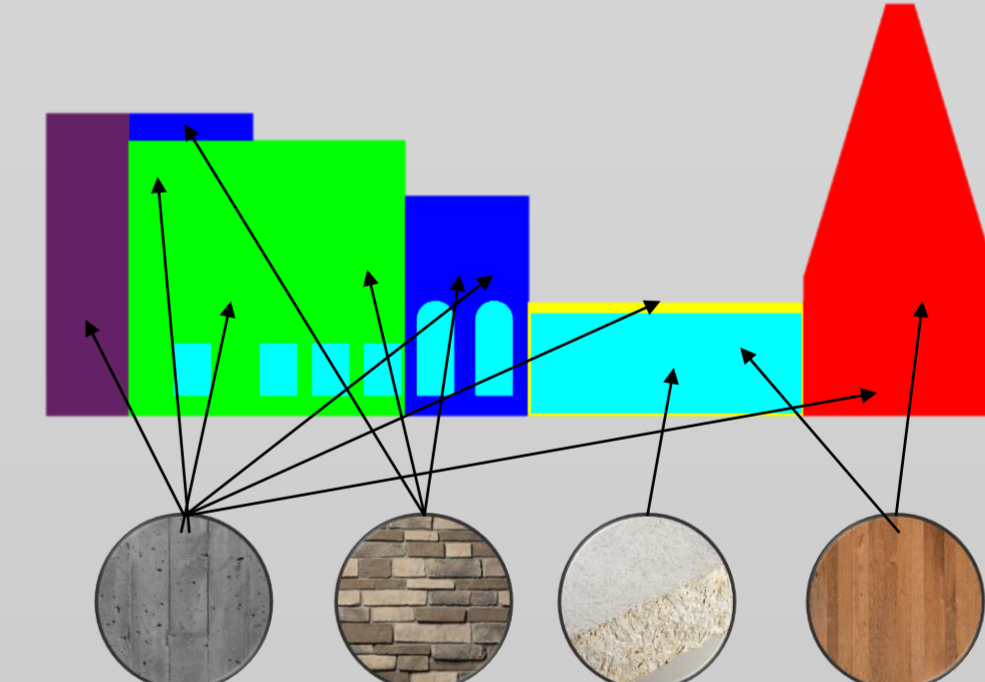
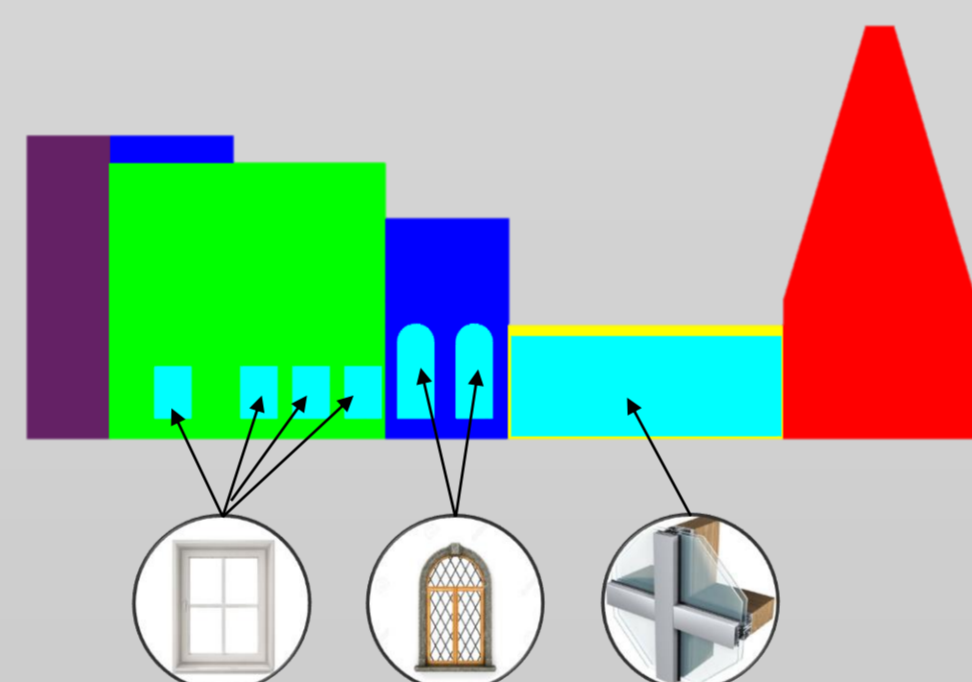
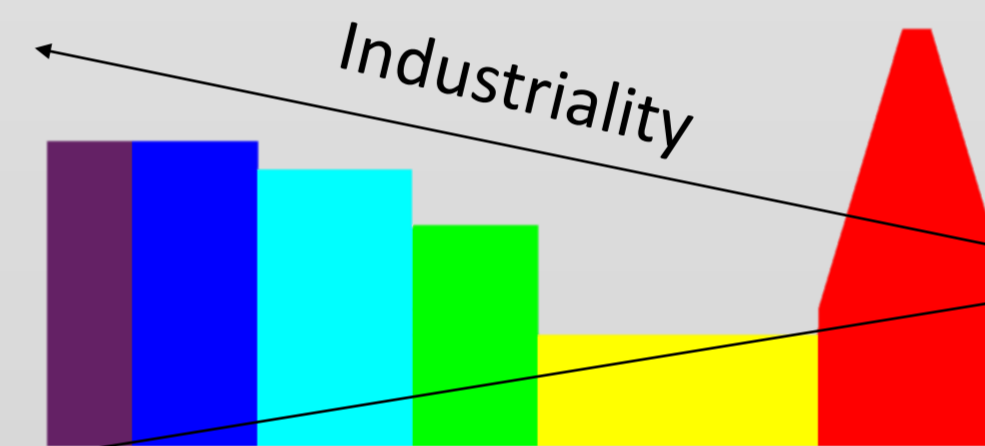
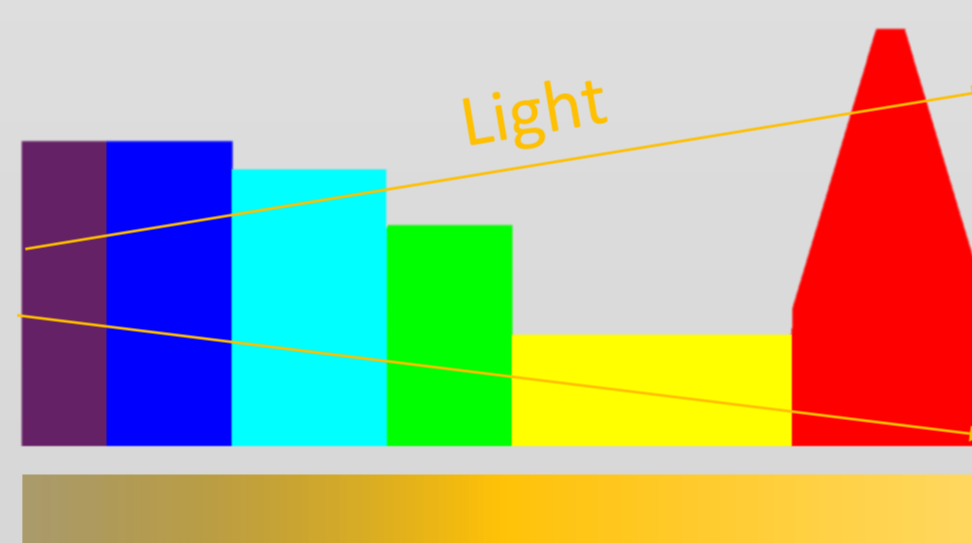
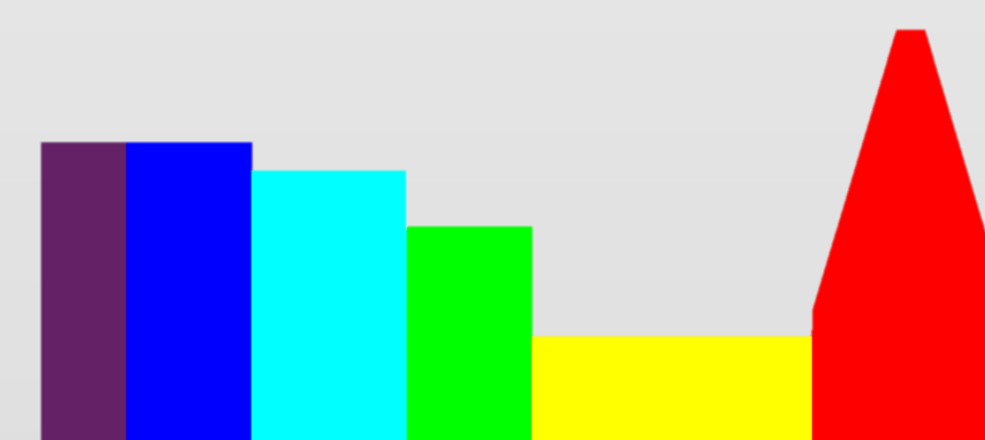
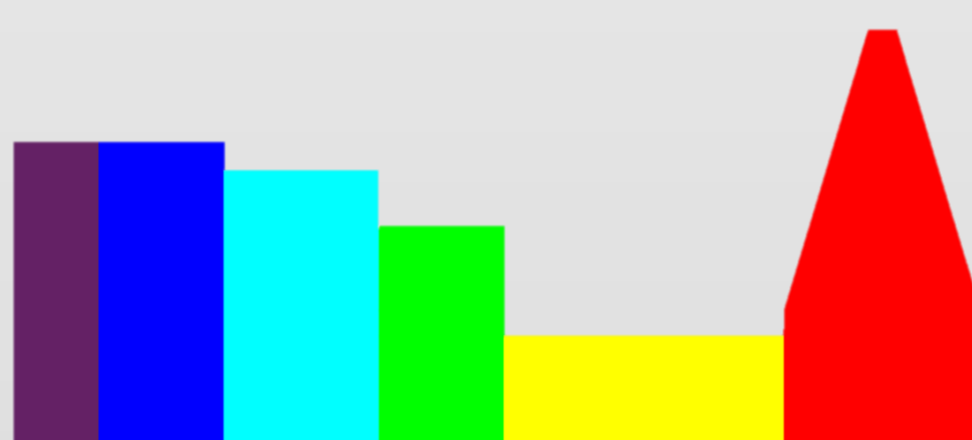


Feeling 5 and 6: opposites
↳ Different facades
↳ Routing → Heartshaped
↳ Refers to the queen of hearts in the story

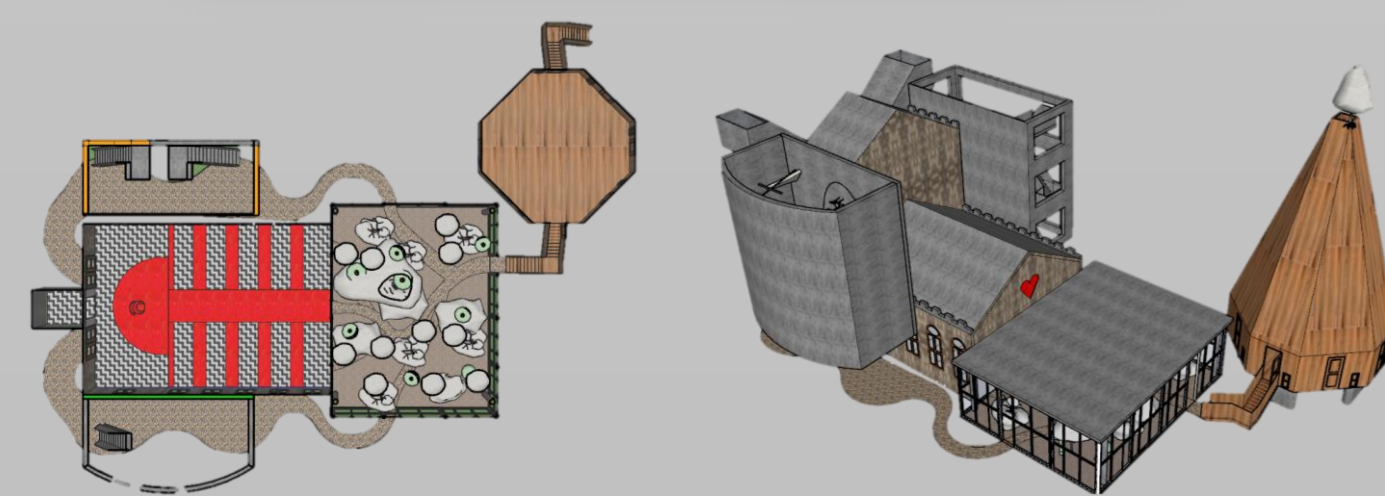
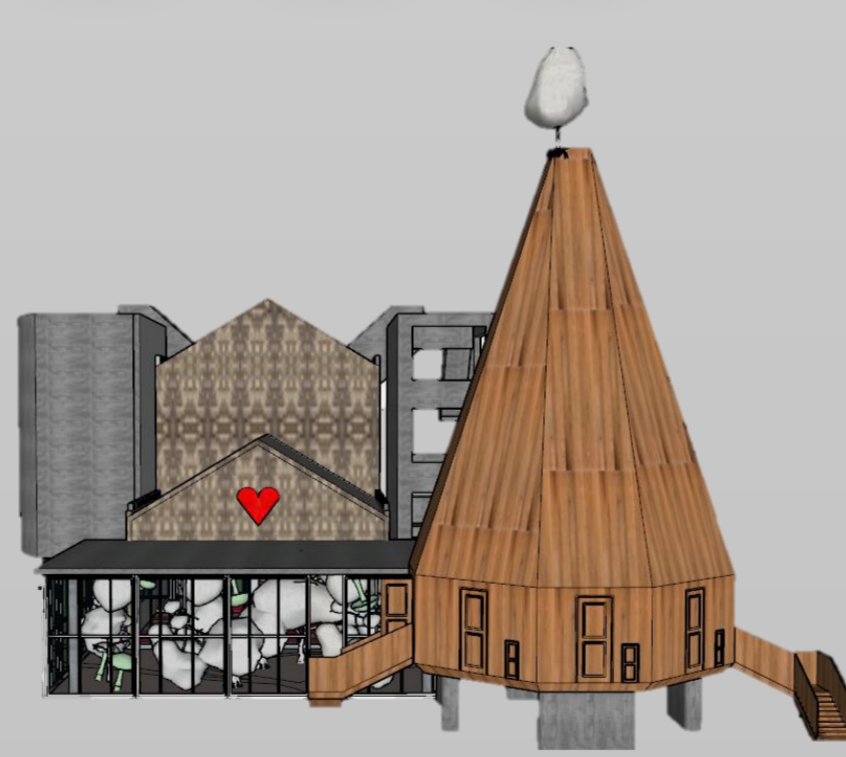


Light

Materialisation



Transforming the model



Conclusion:

After analysing the parti and after taking a look at the Guiding Theme of Architectural Composition, there could be concluded that the Guiding Theme of Alice in Wonderland is about growing up. After visualising the story and the Guiding Theme, the main abstract image became the two widening arrows. This abstraction could be used in different ways on the façade. In this design, there was chosen to use the natural light and the materialisation to be emphasized by the widening arrows.

