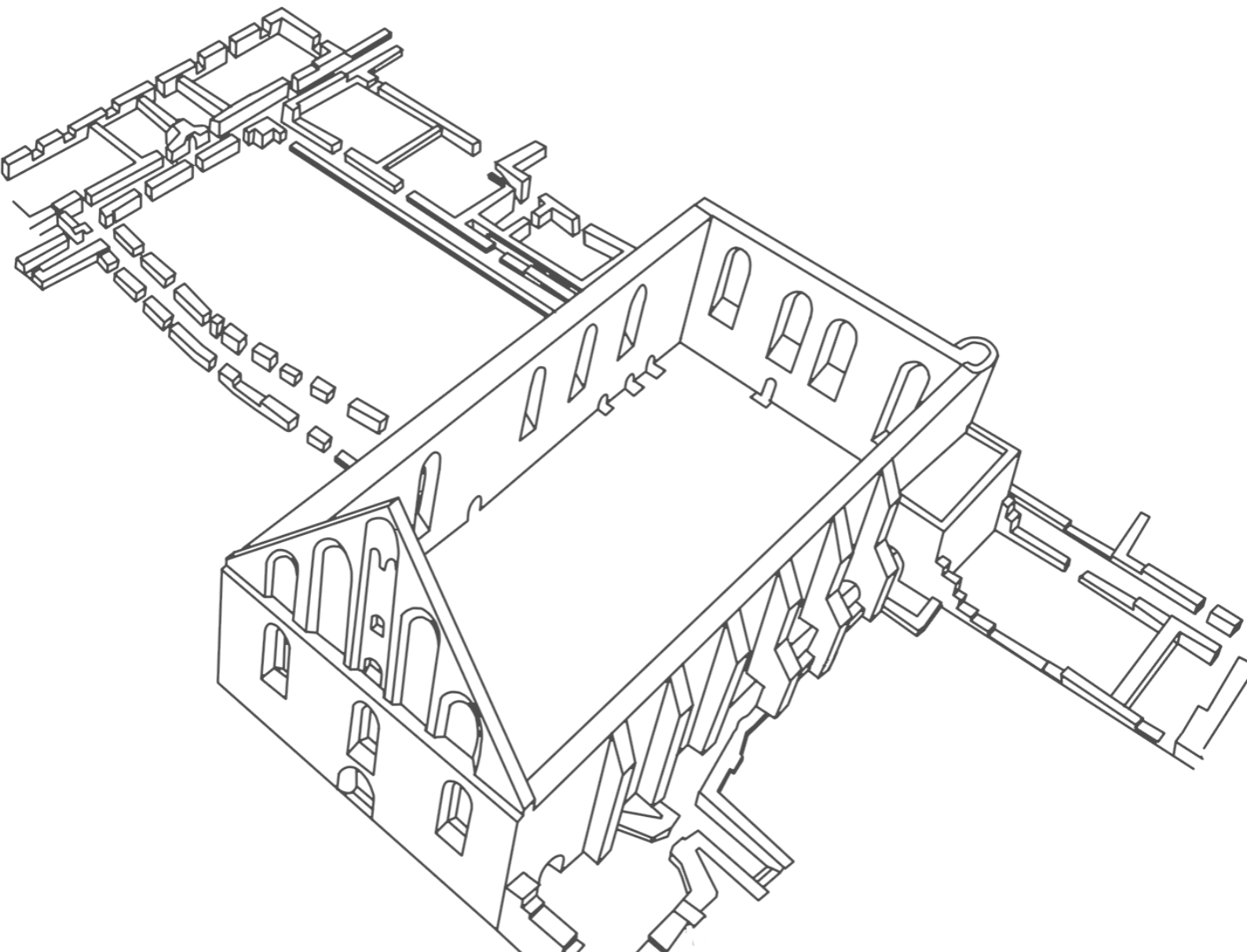


# DESIGNING WITH A RUIN

A reflection report concerning the process during the graduation studio 'A Matter of Scale'

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# T I T L E P A G E

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ruin

*/ˈruːɪn/*

*the remains of a building, typically an old one that has suffered much damage or disintegration.*

plural noun: ruins

"the ruins of the castle" - Oxford Languages

# I N T R O D U C T I O N

This reflection report is written for the graduation studio 'A Matter of Scale' from the Methods of Analysis and Imagination Chair of the Master Architecture at the Technical University of Delft. The graduation studio 'A Matter of Scale' revolves around the urban context of Tallinn, with a specific focus on the coastal zone as a potential surrounding for new architectural interventions. Tallinn has a broad coastal zone, with various urban settings, starting with the Pirita harbour in the far east. In this neighbourhood stands the Pirita Convent, a Medieval monastery, bordered by the Pirita River in the east and the Pirita tee (the main road from Tallinn) in the west.

The Pirita Convent was founded by three merchants from the Rule of St. Bridget. The monastery was active from 1407 until 1575 and consisted of three parts: the monk's (or brothers') quarter in the south, the nuns' (or sisters') quarter in the north, and a church reaching from west to east, dividing yet connecting both sides. The convent was built in the Gothic architectural style, with the use of limestone, a traditional building material in Estonia at that time. The church has an area of 1.360 square meters with a front façade reaching up to 35 meters high, making it a historical landmark. The quarters of the brothers and sisters were designed based on the courtyard principle, having an opening in the middle, surrounded by an arcade hallway, and connected rooms on the outside. After an invasion in 1575, the monastery was brutally destroyed, and it eventually turned into a ruin.

Nowadays, people can visit the ruins of the Pirita Convent. Some tourists can be found here, walking around, imagining what life would be like by reading the signs that explain the history of the place. Occasionally the church is used as an event venue, serving as a magical location. In the summertime, for example, people can participate in the musical experience of the St. Bridget Festival, while in the winter months, the venue can be used for a Christmas market. Because of its open construction, they constantly have to build a temporary construction on top of the church, in order to be able to dim the light inside and use it for events during the colder months, and set up tents around the place used for wardrobes and toilets, which costs a lot of time and money. Besides the new function of the church, a new convent was built on the same building plot as the ruins, to the north of the previous monastery.

Although it is a sensitive place to create a new building, it is thought that developing an architectural structure, that stands apart from the ruins to prevent any damage, and that aims to enable year-round use of the event venue, considering Estonia's climate, can have great added value for the area. Additionally, by integrating a music school that is open to everyone, the building can serve as an inclusive community center.

Based on this information, I developed the following research question: *"How can an intervention revitalize and repurpose a historical ruin to a public function while enhancing its architectural elements and ensuring its preservation?"*

# P R O J E C T   D E S C R I P T I O N

The project was executed by focussing on the four key themes mentioned below:

## 1. Historical Connection

Regarding my main research question, it was important for me to explore the history of the Pirita Convent. What did the monastery use to look like, what used to be the function of the different rooms, what was the circulation within the building, et cetera. The research I conducted enabled me to make significant design decisions, some of which aligned with the preceding structure, whereas others formed a contrast with the historical context. The proportions and shapes of the new additions, for example, are mostly based on the original structure, but with a contemporary touch. Another example can be seen in the layout of the building and the positioning of the rooms, which is based on the historic functions. This can be observed in the sisters' quarter at the music school's main entrance, which was formerly the sisters' quarter's main entrance; the concert rooms were previously the chapter house and the festive dining hall; the classrooms and meeting rooms were originally the nuns' workrooms; and the separate music rooms were once the nuns' dormitories. The traditional main entrance of the church will now serve as the entry to the event hall; which was formerly the south-west chapel is being used as a wardrobe; the original wrought ironwork workshop is now an office room; and the former monks' dining hall and connecting auxiliary room is reused as a café with kitchen. On the contrary, new elements have been added to create a more logical routing.

## 2. Spatial Organisation

During my design process, I continuously kept the routing of the visitors in mind. How do they enter, where do they go first, what will they see, and so on. At the music school, people anticipate seeing a reception upon entering, thus they can find out where they are supposed to go. Therefore, I expanded the building on the inside of the sisters' courtyard, so once entering through the main entrance, visitors will proceed directly to the reception area from where they can be directed to either the concert or music rooms or the waiting area. The visitors of the event venue will enter through the historical portal of the former church, where they will undergo an intriguing experience with a rich past. They approach this massive, heavy front façade, walk through what appears to be a rather tiny opening in relation to the façade, and then the space opens once again. They will continue through the previous monks' corridor, which is currently shielded by the glass shell, as they head to the café or to hang up their coats. In addition, one of my main priorities was to make the buildings accessible for wheelchair users. Wheelchair accessibility can be challenging to achieve in an old structure or ruin, but I made an effort to make the buildings accessible by using ramps and wide passageways, including disabled restrooms, and adding an elevator at the music school. I also evaluated the logistics in addition to the building's frequent visitors. I constructed a loading dock on the outside of the building, which is conveniently accessible, unobstructed by any ruin, and will not disturb guests.

### 3. Sensory Experience

Designing for the senses is, besides about what people see, also about what the visitors can hear and feel. I started by examining the sensation of sight, paying attention to several features. In order to connect the contemporary additions with the ruins, I established sightlines that correspond with the historical sightlines and highlight the important elements of the ruin. Since illumination is crucial in churches and monasteries, the incidence of light was also incorporated into the design. At a church, light is mostly let in from above. For the same reason, I placed windows between the two roof surfaces so that light from the sun can enter and brighten the spaces from above. Additionally, since the corridors were formerly a cloister, many windows have been added to the hallways, to recreate the feeling of an open arcade. Dimensions and proportions were another issue covered in sight. I made an effort to keep the ruins as the focal point of the structure rather than overpowering them with my new additions. I experimented with various roof heights and number of floors, and I shaped the roof forms and pitches based on the church's buttresses. In addition, I decided to match the horizontal lines of the former monastery's ruins with the horizontal cladding on the new additions and to use glass for the structure of the church to serve as a transparent protective box. Sound is another sense that is essential to my design. I focused on this particular aspect in the music school. In order to prevent sound transfer from one concert room to the next, I decided not to position the concert rooms directly next to one another and instead to place a hallway or restrooms in between. In addition, I made the choice to use double timber frame walls, open box floor systems and acoustic ceiling panels for additional sound absorption. Lastly, I looked into the sense of touch. I refused to cover the ruins with any material—like glass, for example—because it would change the texture entirely. I intended to preserve the ruins' natural limestone condition in its current state. The addition of new natural wooden elements also adds another layer of roughness. Although it is softer than the limestone, the edges and nerves that run through the wooden beams or boards are still detectable.

### 4. Local (Natural) Materials

Inspired by the question that Pierre Jennen asked me during my P2 presentation, stating “where do you get the materials from?”, I decided it would be interesting to investigate this subject. Using local materials for a building would result in reducing transportation costs, thus minimizing the environmental impact, and supporting the local economy. Besides, according to the St. Bridget Rule, the buildings should be constructed of natural materials, not brick, which is a man-made material. Another requirement for the choice of materials was that it would be possible to deconstruct the building without excessively damaging the ruins. This resulted in the next choices using as many locally sourced and naturally occurring materials as possible:

- Construction: Kerto LVL, laminated veneer lumber, beams and columns, and Kerto Ripa floor and roof elements from Metsä Wood (Finland)
- Cladding: Wooden detachable façade elements from Thermory (Estonia)
- Ceilings: Wooden acoustic panels from Aikkon (Estonia)
- Windows: Wooden frames with aluminum cladding, to protect the wood from the heavy weather, from Viking (Estonia) or MagnorVinduet (Norway)

# P R O C E S S R E F L E C T I O N

The studio topic, A Matter of Scale, focuses on architecture in relation to human proportions. The Pirita Convent is a perfect example of a building that has lost its human scale, because of its enormous height of about 35 meters, the emptiness of the ruin, and the low walls at the brothers' and sisters' quarters corresponding to the high facades of the church. Therefore, I aimed to reestablish the human scale and revive these ruins with my design. I originally intended to investigate the human scale and bring it back into the Pirita Convent by experimenting with scale models on multiple scales. Although this could have been an interesting method to work with, I investigated and designed more through drawings—either by hand or on a computer—instead. Combining both two- and three-dimensional drawing techniques allowed me to constantly shift among the various scales. Another important component was that I reintroduced the human scale by using a praxeological method of thinking, considering the variety of visitors to my building. I explored the different usage scenarios by developing diagrams for the various routing options of each type of user, resulting in a building designed to accommodate a wide range of visitors.

Integrating ruins in architecture is a very sensitive topic. With my design, I aimed to illustrate several approaches to designing with ruins and attempted to determine the ideal balance between preserving the ruins and adding contemporary extensions, as an inspiration for similar projects. At the music school, I positioned the new additions behind the ruins, intending to make the contemporary building appear not as prominent and create the impression that this side is more private. The ruins remain the dominant feature seen from the outside, but also inside the building, they are still noticeable from every point of view. Thus, the visitors of the music school will have a constant interaction with the ruins, reminding them of the rich history of the place. On the contrary, I decided to cover up the ruins at the café. The new addition continues to exist within the original utmost building lines. The ruins in this instance serve as the main focus inside the building. These two additions, although based on two very different approaches of designing with a ruin, appear to be one entity, due to their identical materials and geometric dimensions. The church is a very other experience. I made a glass box that fits on top of the church's ruined walls and folds over on one side. Even though it is a big gesture, what I merely did was replicate the historic church's shapes with glass and add wooden vaults. In this manner, guests will be able to differentiate the historical from the contemporary while retaining an overall understanding of the original structure.

Currently, it is an ongoing question whether or not the Pirita Convent should have a roof build on top or not, in order to be able to use it throughout the year. This information was discovered by reading articles about it in the Estonian newspaper, which eventually led to an interview with the director of the St. Bridget festival. This enhanced the project's relevance and accuracy by incorporating the additional information gained from the interview. My design can therefore be used to demonstrate to Tallinn residents—or even from Estonia—what a ruin like the Pirita Convent could become, as an 'extreme' option. To help them discover the possibilities of a ruin, since they are currently too hesitant to engage in any measures with such sensitive places.