

THE RECOVERY OF PRINSENHOF DELFT

a values and research based design strategy

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RESEARCH BOOKLET

1. INTRODUCTION	04	5. VALUES & ATTRIBUTES ASSESSMENT	77
Presentation of chapters	07	Methodology	78
2. RESEARCH APPROACH	08	Personal observations	79
Research framework		Geogaming	81
Problem statement	09	Content analysis	83
Literature research	10	Final drawing	90
Research gap	11	Conclusion	91
Questions & sub-questions	12	6. DESIGN STRATEGIES	92
Aims and goals	13	Program	93
Research methodology		Design points of action	95
Theoretical framework	14	Design strategy	96
Methods and tools	17	Interior routing concept	97
3. CASE STUDY	19	Design concepts	99
History	20	7. CONCLUSIONS	105
Urban context	40	8. REFERENCES	110
Building context	44	9. ANNEX	112
4. CO-CREATION & DECISION MAKING PROCESS	55		
Workshops			
Introduction	56		
Trial workshops with minor students	57		
Trial workshop Prinsenhof	59		
Stakeholder involvement process	63		
Results	64		
Conclusions and recommendations	75		



INTRODUCTION

This research booklet is developed as a requisite for the master graduation project in Heritage & Architecture, under the chosen studio "Heritage4all-Univer-Cities". This research booklet will present the research done, the used methods and tools, a case study and ultimately, translate these results into design concepts on which the design made in next semester will be based. The first semester will consist mostly of research, while the second and final semester will be focussed on creating a design which is aligned to the research done. In other words, the first semester will focus on research for design while the second semester will also focus on design research (Laurel, 2003).

The studio Heritage4all focusses on the collaboration between all the different stakeholders involved in a debate over the conservation and development of buildings and its surroundings, from residents to the municipality, all interested parties should be involved in the process. This process is denominated as co-creation, one of the main driving factors of this studio. In order to intervene at an heritage site that needs to be redeveloped, it is important to involve the stakeholders related to the site. This way the design will be a result of the co-creation between all the stakeholders and thus will be based on arguments made by people that will actually use the site or are related to the site in some way.

The chosen site that will be used as a case study is the Prinsenhof museum in Delft and the main research question will be: "How to involve citizens into the adaptive design process of heritage museum buildings?"

Co-creation design workshops with the corresponding stakeholders were conducted, using the block-building game of Minecraft to define the problems and values of the site found important by the stakeholders (de Andrade, Poplin, & Sousa de Sena, 2020). The expected result was to compile design ideas from stakeholders structured on a values assessment (Tarrafa Silva & Pereira Roders, 2012) in order to define design concepts to be further developed in the next semester.

The Heritage4all studio addresses 4 main research themes (see figure 1), these themes will be the underlying base of the research done by the students. These themes are:

- Co-creation
- Digital Heritage
- Univer-Cities
- Sustainability

Co-creation (Who/What)

There are 4 types of customer co-creation: co-designing, collaborating, submitting and tinkering (O'hern & Rindfleish, 2010). For this studio and our field of knowledge we will mainly focus on the co-designing part of co-creation. Meaning that we as designers work together with all the other stakeholders, who don't necessarily have a background in design, in the design development stage. As stated in the studio manual (TU Delft, 2020): "We define co-creation design as an approach that brings together experts and Univer-Cities stakeholders for co-designing sustainable development scenarios based on heritage values (economic, social, ecological, political, scientific, age, aesthetic and historic)."

Digital Heritage (How)

The introduction of digital technologies added a new layer of heritage to the built environment, also known as Digital Heritage. This new field of research is mentioned by UNESCO as following:

"The digital heritage consists of unique resources of human knowledge and expression. It embraces cultural, educational, scientific and administrative resources, as well as technical, legal, medical and other kinds of information created digitally, or converted into digital form from existing analogue resources" (UNESCO, 2009).

This research will focus on using Digital Heritage, games in particular, as a new communicating language together with stakeholders. The block-building game of Minecraft is chosen for this application since it is a digital building game where players can built anything they envision (de Andrade, Poplin, & Sousa de Sena, 2020). Furthermore, Minecraft players can place, demolish and interchange coloured and textured blocks of 1x1x1m all through a simple and understandable user interface. Exploring the use of Minecraft as a communication tool to involve stakeholders in the co-design and decision-making processes is something this research will elaborate upon.

Univer-Cities (Where)

The term Univer-Cities is used for cities and univercities that have a symbiotic relationship together. In other words, the university and the city are depending on each other to flourish together (Teo, 2015). As stated in the conference on Univer-Cities in 2015: "Universities are an important cornerstone of modern societies. By 2050, it is estimated that three-quarters of the world's population will live in urban areas. Universities in the 21st Century will, therefore, play a catalytic role in pushing growth frontiers for major cities (Teo, 2015)". Considering this statement, universities will play an important role in the devel-

opment of Univer-Cities. Univercities are becoming more internationally aimed and it is a challenge to stay rooted in the local and regional context.

Concluding, the univercities play a vital role in the host city developing but considering univercities becoming more international oriented it is a challenge to upkeep the relationship with the host city (Teo, 2018). For this research the aim is to search for a mutual beneficial relationship between the TU Delft campus and the Prinsenhof museum.

Sustainability (Why)

Sustainability should always be one of the goals in a design process. With the current climate change and ecological decline of the past decades, we as designers are obliged to create sustainable solutions with our designs. Sustainability is a concept that can be interpreted in a lot of ways, for this research the concept of sustainability is about creating a zero carbon redesign while keeping the values of the heritage building. More specifically, another topic of sustainability, the efficient use of land, is something this research will focus on. By implementing mixed use and shared space, buildings can have multiple functions (CE Delft interview 2020, see annex). For instance, a residential buildings with retail on the ground level ensures that the building is in use at any moment throughout the day.



Figure 1 – Topics of Heritage4all - (TU Delft, 2020)

CHAPTER 2 – RESEARCH APPROACH

After the introduction, this research booklet will explain the research approach used for this research. This chapter will start with the problem statement, explaining the initial problems found for the Prinsenhof ensemble. After that the research framework will explain the research that will be conducted during this research together with defining the research gap. The main research question and the corresponding sub-questions can also be found here together with concise aims and goals. After the research framework, the research methodology will be explained. This will result in the theoretical framework, explaining empirical research theories used to form a base for this research booklet. The exact way of working during the research will be explained in the 'methods and tools' part of this chapter, all used methods and tools will be described here.

CHAPTER 3 – CASE STUDY

The third chapter of this research booklet focusses on the conducted case study. The aim of this case study was to form an analytical base for the research; understanding the Prinsenhof building thoroughly. This chapter will start with a timeline explaining the historical development of Delft and the Prinsenhof. After this the individual building parts will be analysed to gain understanding at the purpose, function, design language and the relationship with other building parts and the ensemble itself. After this, multiple maps and drawings will explain the urban context followed by the building context.

CHAPTER 4 – CO-CREATION & DECISION MAKING

This chapter will explain the entire workshop methodology we used for this research. First all the workshops that were held will be shortly explained. Next the trial workshops conducted with TU Delft minor students will be described in detail together with the corresponding results. Following this the same will be done for the second trial workshop with Prinsenhof as the workshop theme. From this point onwards the focus will be on the actual co-creation workshops with Prinsenhof stakeholders. First explaining the methods and tools used for the stakeholder involvement process. Accordingly the co-creation workshops with Prinsenhof stakeholders will be described together with the workshop results. Part of the results are the conducted surveys (value assessment survey and Minecraft survey) during the workshops and the other part is the actual design intervention made by the Prinsenhof stakeholders using the game of Minecraft. The workshop's conclusions and recommendations will finalize this chapter.

CHAPTER 5 – VALUES AND ATTRIBUTES ASSESSMENT

Chapter 5 is the chapter which is aimed on the value and attributes assessment. First the overall value and attributes assessment methodology will be explained followed by personal observations of the place and a part on the use of geogames. After this, the content analysis will use the explained methodology for value and attributes assessing to analyse gained information such as existing sources explaining the values and attributes on Prinsenhof, together with the statements made during the expert interviews and the co-creation workshops. This will result in final values and attributes drawings, concluding the values and attributes of the Prinsenhof based on theory, experts interviews and stakeholder workshops.

CHAPTER 6 – DESIGN STRATEGIES

Finally the design strategy chapter will show and explain design concepts for the redevelopment of the Prinsenhof based on the conducted research. First the program will be defined followed by the design points of action. After this the actual design concepts will be showed.

CONCLUSIONS

The overall conclusions together with the answers on the research questions can be found in this chapter. Also future recommendations and newly emerged questions will be described here.



RESEARCH APPROACH

After reading the vision document made by the Prinsenhof museum and the conversation expert interviews together with my own experience of the place, the main problems of the Prinsenhof museum became apparent. My own experience of the museum being hidden away in the cityscape of Delft is backed by the Heritage Department of the municipality of Delft, in particular the interview with monument advisor Ilse Rijnveld (see appendix). Besides that, Rijnveld also stated that the museum in general needs modernizing, however, since the building is a listed monument the opportunities are limited. Also the museum routing inside and out should also be improved, people currently aren't able to find their way and the accessibility for elderly people is not adequate as stated in the vision made by the Prinsenhof museum (Moerman, 2017).

Besides the poor visibility and accessibility of the Prinsenhof museum, the visitors diversity is also an issue. The annual report of the Prinsenhof museum shows the visitor numbers and from which societal group they originate, here it became apparent that from the 6752 educational visitors only 220 visitors were students (Museum Prinsenhof Delft, 2019). For a campus city as Delft the number of students this important heritage museum is able to attract is strikingly low. Delft has approximately 103.000 inhabitants from which 15.500 are TU Delft students (15,5%) (Kences, 2019). Furthermore the Prinsenhof museum also aims to make the collection available for more people through digitalizing of the collection and using new techniques to engage visitors (Museum Prinsenhof Delft, 2019).

On top of these statements, some interesting challenges derived from the talk with Alexandra den Heijer. Alexandra den Heijer is a professor at the TU Delft from the chair of Management in the Built Environment and specifically focussed on Public Real Estate. Den Heijer also does research on campus real estate and the future of the university and campus. She

stated that heritage buildings, and specifically heritage buildings in the inner city of Delft, have some unique qualities that the TU Delft campus lacks. These heritage buildings can offer the campus spaces and qualities that will be perfectly suited for formal activities and meetings for instance. However, some more research should be done to truly find out which qualities the Prinsenhof in particular has to offer the TU Delft campus and vice-versa. Since the campus is lacking unique spaces (see appendix) and the Prinsenhof is struggling with attracting students (Museum Prinsenhof Delft, 2019), there's an opportunity to explore the possibilities for a mutual beneficial relationship between these two educational ensembles.

A mutual reinforcement of historic-, age- and scientific values, respectively Prinsenhof museum and TU Delft, will unfold a design strategy based on the concept of Univer-Cities (Teo, 2018).

After the positions of the municipality, TU Delft campus and the board of the Prinsenhof museum were made clear, it was time to conduct literature research to discover what research already has been done on these topics. Together with the previous research on expert interviews and desk work, the aim of the literature research is to both confront these references and identify or confirm the research gaps between the current state of redesign of museums (i.e. the problem) and the desired state (i.e. the goal).

The search terms used on "Scopus", one of the largest databases for access to abstracts and papers, to conduct the research were:

(Museum + Heritage) + X
X= Engaging / Involvement / Awareness / Students / Co-creation

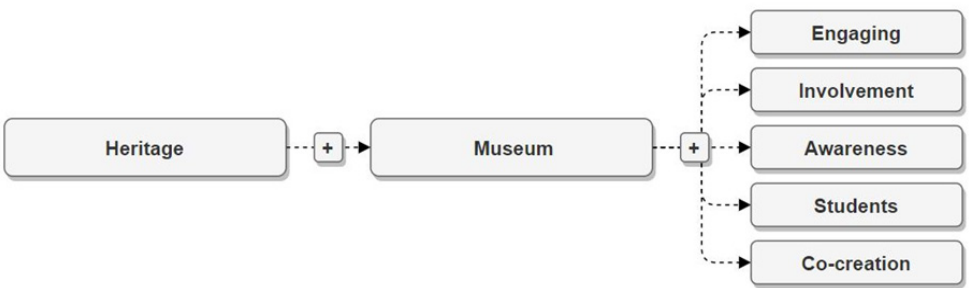


Figure 2 – Research terms, self made (2020)

To clarify the search combinations; the terms "Museum" and "Heritage" were always included in the search process since the research has to be relevant for heritage museum buildings like the Prinsenhof museum. Besides these two terms, one of the terms labelled as "X" above, were used in combination to find more specific research related to the research topic. The papers excluded were mainly focussed on the development of either the museums website or application. Since this research is aimed towards the design process of the museum itself and not on developing a museums website or application these pa-

pers were not of interest for this research. Eventually seven papers that came up proved to be useful.

Interestingly, almost all of the papers found were concentrated on involving stakeholders, using co-creation or co-design, in the decision making process during the development on new exhibitions for the museum in question. For instance Petrelli (2016) states in her research: "The full integration of technology with the exhibition or heritage requires approaching the design of the visitors' experience as a collaborative project that combines curatorial, technical and design aspects (pp.1) ."

On top of this, almost all the papers referred to using new technologies such as augmented reality, virtual reality and games to improve the co-design process; even if the search terms used didn't include terms like technology, gaming or augmented reality. The importance of using these new techniques in the "new" field of digital heritage mentioned in research done by Pisanu and Sanjust (2018): "This new field combines the traditional areas of expertise of heritage management, archaeology, history, museology with the great new digital information technology tools and has a big potential to face the new challenges of the heritage sector (pp. 2)." For the methodology of this research, explained later, the use of these techniques will play a relevant role as well.

Later, to explore the base on which the literature found was built upon, cross referencing their references appeared to be valuable. This way the foundation of the literature found became apparent. The method used was counting how often a researcher appeared in the reference lists of the literature found and compiling them in a table. Only when a researcher came forward more than two times they got added in the table. The results of cross referencing the references used by the seven papers found on "Scopus" are summed up in the table below:

Reference	Amount
Ciolfi, L.	8
Falk, J.	8
Hornecker, E.	8
Petrelli, D.	8
Marschall, M.	6
Van Dijk, D.	6
Dudley, S.	3
Fuks, H.	3
Hein, G.	3
Hooper-Greenhill	3

Figure 3 – Counting researchers, self made (2020)

Falk, J., Hornecker, E., Petrelli, D. and Ciolfi, L. came forwards the most; eight times. These researchers focus mostly on the potential of collaborative interactions in (heritage) museums, matching the search terms. Petrelli, Hornecker and Ciolfi for instance did research on the opportunity of new technology to advance the visitors' physical museum experience (Petrelli, et al., 2013). While Falk is focusses more on the shift in educational institutes, free-choice learning and how museums play a crucial role in educating citizens, he states:

"Societies are becoming nations of lifelong learners supported by a vast infrastructure of learning organizations. The centres of this learning revolution are not schools, but a network of organizations and media (museums, libraries, television, books, and increasingly the Internet) supporting the public's ever-growing demand for free-choice learning – learning guided by a person's needs and interests" (Falk & Diekring, 2005).

Therefore, it is crucial to keep museums vital and relevant, new technologies can assist in making this happen.

Research gap

Using co-design and augmented reality in museums to create interactive experiences is the general topic of the state-of-the-art-research done. A critical note on this topic is the fact that these papers are mostly focussed on the actual exhibitions of the museums, not necessarily on the museum building or ensemble (Claisse, Ciolfi, & Petrelli, 2017). The research done on the use of co-creation in design processes aimed towards the redevelopment of heritage buildings is lacking.

There is a gap in the research done over the implementation of new technologies (VR/AR/Mixed-Reality) as tools for the collaborative redesign of heritage buildings and sites. Petrelli et al. (2014) already showed in their research that co-creation with the use of workshops including multidisciplinary teams are of great value for creating a common understanding on what needs to be done. However this co-creation process was solely aimed to create more interactive museum installations and not for architectural design and decision-making.

For the research questions it's important to keep the four fundamental pillars of Heritage4all-Univercities in mind, namely:

- Co-creation
- Digital Heritage
- Univercities
- Sustainability

The part of the sub-question that relates to either one of these pillars will be highlighted in the same colour.

Main research question

How to involve citizens into the adaptive design process of heritage museum buildings?

Sub-questions

How to raise awareness on citizens about the cultural significance of the Prinsenhof ensemble, in particular historic, social, age and scientific **values?**

How to use **co-creation** (digital games/gaming tools) to involve stakeholders in the redevelopment of heritage museum buildings?

What will be the advantages and disadvantages of using **digital games** (Minecraft) for the redesign and decision making process of the Prinsenhof museum?

How does the quality of the Prinsenhof ensemble contributes to the needs of the **TU Delft campus?**

How to engage museum visitors by applying **new technologies** and **mixed use** in the design program?

Aim = to use co-creation as a tool to understand stakeholders values and thus support the design for Prinsenhof Delft.

Goal = to end up with a design strategies which are based on mediation from the stakeholders related to the Prinsenhof ensemble in Delft.

Theory on the societal role of heritage museums

The International Council of Museums (ICOM) defines museums as a “non-profitable, permanent institution in the service of society and opened to the public, which acquires, preserves, studies, exhibits and disseminates the tangible and intangible heritage of Mankind for study, education and recreation purposes” (ICOM, 2007).

UNESCO described the goal and outreach of heritage museums in special edition of “Museums and Heritage” of the periodic magazine “Culture & Development” aimed tot the reflection, exchanges and dissemination of ideas and issues related to heritage and development of communities. In effect, museums and cultural centres are:

“Museums and cultural centres as spaces to pass on cultural values, thus preserving and disseminating heritage, providing knowledge about other cultures, promoting cultural diversity and reinforcing both involvement and identity of their communities, with due regard to the fact that they constitute, moreover, assets of the cultural sector contributing to investment, economic benefits and job generation” (Hooff, 2012).

This implies that the role of a museum is not just to be a place to exhibit art or artefacts, but also to reinforce both the involvement and identity of their communities. This research will built upon this role of the museum by using co-creation in the redevelopment of the Prinsenhof museum. The aim is not solely making sure all the stakeholders are being involved and heard, but also to create a museum community and thereby strengthening the position of the Prinsenhof museum in society.

Theory on games

Studies on game-based learning in museums show the potential of using games and other new technologies to make the museum visit more engaging. Cosović & Brkic (2019) made an analysis using relevant literature, peer-reviewed articles and research studies to identify the pros and cons of using games in a learning environment such as museums. Such review resulted into the following table:

Pros:	Cons:
1. Positive effect of games on learning	1. No guidelines on how to integrate games in education curriculum
2. User engaged in a stimulating environment	2. Learning by gaming is still not recognized by formal educational systems
3. User rewarded for the accomplishment	3. Little available knowledge on current trends and use of applications of serious games for museums
4. Games fulfil educational needs	4. Lack of game mechanics, aesthetics, educational results, and museology features all in one
5. Games designed to complement, enhance, or augment the museum experience	5. No clear definition of the learning effects and how it is measured
6. Users can immerse into the virtual 3D museum	6. Designing games for different spaces of cultural heritage is considered to be multi-factorial and complex
7. Users can build and display their own virtual collections	7. Users overwhelmed if too many artworks are introduced simultaneously – attention span
8. Serious games based on multi use virtual environment (MUVE) in learning tasks can encourage collaboration (team-work)	8. Not-so-simple navigation
	9. The cost of developing high-fidelity virtual environments

Figure 4 – Pros and cons of using game-based learning. Copied from “Game-Based Learning in Museums – Cultural Heritage Applications”, by Cosović & Brkic (2019).

Table 2 shows how valuable game-based learning can be in a learning environment; even more so it proves the value of using these new techniques in engaging and stimulating visitors. For this research the use of games, in particular the block-building game Minecraft, will be applied for the co-creation design and decision-making process of the redevelopment of the Prinsenhof museum together with stakeholders in the city of Delft, South Holland, the Netherlands. Minecraft is a block-building game that uses over 500 coloured blocks, scaled approximately

1x1x1m, which players can place and remove to build creative structures. These structures can literally be anything as stated by de Andrade, Poplin & Sousa de Sena: “It enables the player to create the environment that represents a place, a city, a landscape, a continent or even the planet Earth” (de Andrade, Poplin, & Sousa de Sena, 2020).

Theory of values

In order to frame the theory around values, Pereira Roders (2007) and Tarrafa Silva and Pereira Roders (2012) will be the main references. Tarrafa Silva and Pereira Roders (2012) made a list categorizing all cultural values:

Table 1: The cultural values (ICOMOS Australia, 1999; Manson, 2002; Pereira Roders, 2007; English Heritage, 2008)

	Secondary Values	References
Social	Spiritual	beliefs, myths, religions (organized or not), legends, stories, testimonial of past generations;
	Emotional, individual	memory and personal life experiences;
	Emotional, collective	notions related with cultural identity, motivation and pride, sense of "place attachment" and communal value;
	Allegorical	objects/places representative of some social hierarchy/status;
	Use	the function and utility of the asset, original or attributed;
Economic	Non-use	the asset's expired function, which has it value on the past, and should be remained by its existence (of materials), option (to make some use of it or not) and bequest value (for future generations);
	Entertainment	the role that might be have for contemporaneous market, mainly for tourism industry;
	Allegorical	oriented to publicizing financially property;
Political	Educational	the education role that heritage assets may play, using it for political targets (e. g. birth-nations myths, glorification of political leaders, etc.);
	Management	made part of strategies and policies (past or present);
	Entertainment	it is part of strategies for dissemination of cultural awareness, explored for political targets;
	Symbolic	emblematic, power, authority and prosperous perceptions stem from the heritage asset;
	Educational	heritage asset as a potential to gain knowledge about the past in the future through;
Historic	Historic-artistic	quality of an object to be part of a few or unique testimonial of historic stylistic or artistic movements, which are now part of the history;
	Historic-conceptual	quality of an object to be part of a few or unique testimonial that retains conceptual signs (architectural, urban planning, etc.), which are now part of history;
	Symbolic	fact that the object has been part/related with an important event in the past;
	Archaeological	connected with Ancient civilizations;
	Artistic	original product of creativity and imagination;
Aesthetical	Notable	product of a creator, holding his signature;
	Conceptual	integral materialization of conceptual intentions (imply a conceptual background);
	Evidential	authentic exemplar of a decade, part of the History of Art or Architecture;
Scientific	Workmanship	original result of human labour, craftsmanship;
	Technological	skillfulness on techniques and materials, representing an outstanding quality of work;
	Conceptual	integral materialization of conceptual intentions (imply a conceptual background);
Age	Workmanship	craftsmanship value oriented towards the production period;
	Maturity	piece of memory, reflecting the passage/lives of past generations;
	Existential	marks of the time passage (patine) presents on the forms, components and materials;
Ecological	Spiritual	harmony between the building and its environment (natural and artificial);
	Essential	identification of ecological ideologies on its design and construction;
	Existential	manufactured resources which can either be reused, reprocessed or recycled;

Figure 5: The cultural values. Copied from: "Cultural Heritage Management and Heritage (impact) Assessments", by Tarrafa Silva & Pereira Roders (2012).

This research will mainly focus on the Social, Historic, Scientific and Age values mentioned in table 3 since these are the relevant values related to this research on the topic of redesigning the Pinsenhof museum. These four values are also summarized and colour coded in the table below (table 4):

Primary values	Secondary Values	References
Social	Spiritual	beliefs, myths, religions (organized or not), legends, stories, testimonial of past generations;
	Emotional individual	memory and personal life experiences;
	Emotional collective	notions related with cultural identity, motivation and pride, sense of "place attachment" and communal value;
	Allegorical	objects/places representative of some social hierarchy/status;
Historic	Educational	heritage asset as a potential to gain knowledge about the past in the future through;
	Historic-artistic	quality of an object to be part of a few or unique testimonial of historic stylistic or artistic movements, which are now part of the history;
	Historic-conceptual	quality of an object to be part of a few or unique testimonial that retains conceptual signs (architectural, urban planning, etc.), which are now part of history;
	Symbolic	fact that the object has been part/related with an important event in the past;
	Archeological	connected with Ancient civilizations;
Scientific	Workmanship	original result of human labour, craftsmanship;
	Technological	skillfulness on techniques and materials, representing an outstanding quality of work;
	Conceptual	integral materialization of conceptual intensions (imply a conceptual background);
Age	Workmanship	craftsmanship value oriented towards the production period;
	Maturity	piece of memory, reflecting the passage/lives of past generations;
	Existential	marks of the time passage (patine) presents on the forms, components and materials;

Figure 6: The relevant cultural values. Self made and inspired by: "Cultural Heritage Management and Heritage (impact) Assessments", by Tarrafa Silva & Pereira Roders (2012).

Theory on digital heritage

Digital heritage is a way of preserving cultural or natural heritage through the use of digital media, as UNESCO states on their website:

"Using computers and related tools, humans are creating and sharing digital resources – information, creative expression, ideas, and knowledge encoded for computer processing - that they value and want to share with others over time as well as across space. This is evidence of a digital heritage. It is a heritage made of many parts, sharing many common characteristics, and subject to many common threats" (UNESCO, sd).

Furthermore, in the Charter on the Preservation of the Digital Heritage, the definition of digital heritage is mentioned as followed:

"The digital heritage consists of unique resources of human knowledge and expression. It embraces cultural, educational, scientific and administrative resources, as well as technical, legal, medical and other kinds of information created digitally, or converted into digital form from existing analogue resources" (UNESCO, 2009).

The goal of preserving digital heritage is to make sure that it will be accessible for the public. However the hard- and software used to produce digital heritage is deteriorating quickly. Therefore, reliable software is needed to ensure digital heritage can be preserved (UNESCO, 2009). Minecraft could play a role in this challenge since the immense popularity of the game guarantees a long life span of the software used.

For this research digital heritage will be mainly related to the use of games as a tool to both document and preserve heritage digitally and facilitate the co-creation design and decision-making process.

Theory on sustainability

Sustainability and heritage are closely link to each other in this re-search. Such intersection, is aimed at preserving resources through stakeholders inclusion:

One of the most significant definitions of "sustainability" is reflecting the importance of economic, environmental and social factors in decision-making. Heritage is closely linked; identity, culture and preservation contribute to the durability of supply and reinforce stakeholder inclusion and economic, social, environmental and cultural dimensions (Ran & Han, 2018).

Therefore sustainability is framed in this research in such a way that the heritage building and the ecological environment will benefit from it. This means, for instance, applying mixed use as a method of maximizing the efficient use of space. Or even adding gardens that renew and produce top soil at the location of Prinsenhof. Sustainability will be an important matter during the workshops, attendees will be asked to come up with sustainable solutions and to define what sustainability means for them. This way the term sustainability will be made more concrete so the end users will benefit from a sus-tainable building, which not only preserves historical values but also the ecological values.

Rules and regulations

This research involves working with human participants. We do not expect any potentially critical ethical implications of the research results. However, we comply with the European Legal Framework and apply its ethical standards and guidelines. Also, comply to rele-vant EU legislation, including:

- The Declaration of Helsinki in its latest version;
- The charter of fundamental rights of the EU (2000/C 364/01);
- The principles enshrined in the Oviedo Bioethics Convention;

The Heritage4all workshop facilitators monitored Covid-19 situation in Delft, the Netherlands in order to control the number of partici-pants and make sure 1.5. social distancing is being respected in citi-zens engagement workshops.

Protection of personal data:

The Heritage4all researchers also comply with all requirements re-garding data management, privacy and human research ethics. Per-sonal data will not be disclosed and participants of the workshop will be kept anonymous.

Research integrity:

The Heritage4all researchers comply with the new version of the Netherlands Code of Conduct for Research Integrity as from 1 Oc-tober 2018, which includes five principles which form the basis of integrity in research: honesty, scrupulousness, transparency, inde-pendence and responsibility. Minecraft workshop were organized to provide a working environment that promotes and safeguards good research practices. In event of an investigation into alleged research misconduct, all relevant research and data will be made available for verification.

Besides answering the research question and sub-questions, the aim of this research is also to find out what the stakeholder's wishes and needs are related to the Prinsenhof museum in Delft. To come to these answers, different methods and tools were used. This chapter will explain all the methods and corresponding tools used during this research.

Expert Interviews

Multiple expert interviews were conducted during this research. The aim of these interviews was to start conversations with actual stakeholders and experts, this way the research will be based on primary sources. These interviews were either organized by someone in the team of researchers (Pien Tol, Diana Ugnat, Mick Bloemendal) or by the research mentor (Bruno de Andrade) or the design mentor (Alexander de Ridder). These interviews were conducted and recorded using online meeting applications like: Zoom, Microsoft Teams or Skype. After these interviews, the recordings were transcribed manually. The interviews conducted related to the Prinsenhof museum are:

08/10/2020 – Alexandra den Heijer, TU Delft Management in the Built Environment
08/10/2020 – Ilse Rijnveld, Monument advisor from the Municipality of Delft
30/10/2020 – Fokkema & Partners Architecten Delft
19/11/2020 – CE Delft
19/11/2020 – Delft Design
24/11/2020 – Werkgroep Prinsenhof Delft / Slag om Prinsenhof

Tools used during and after the expert interviews:

- E-mail or phone calls to contact the stakeholders
- Zoom, Microsoft Teams or Skype to conduct the interviews
- Zoom/Microsoft Teams/Skype recordings to transcribe the interviews

Stakeholder co-creation workshops

Since this research is focussing on discovering the needs and wishes from the stakeholders related to Prinsenhof museum Delft, co-creation workshops were conducted. The aim of these workshops was to explore the stakeholder's wishes and needs using co-creation, this resulted in a value assessment on the Prinsenhof museum and in different design intervention made with the game of Minecraft by the stakeholders themselves. Graduate students; Pien Tol, Diana Ugnat and Mick Bloemendal, worked as a team during these workshops. Each graduate student facilitated their own workshop, focussing on their chosen location, while the other graduate students assisted the facilitator and vice-versa. The workshops were supervised by research mentor; Bruno de Andrade. The conducted workshops are listed down below, the elaborate methodology of the workshops will be explained in the chapter "Workshops".

02/12/2020 – Gele Scheikunde co-creation workshop
03/12/2020 – Prinsenhof co-creation workshop
04/12/2020 – Kabelfabriek co-creation workshop

Tools used during and after the co-creation workshops with stakeholders:

- E-mail, phone calls, Zoom/Teams/Skype calls for contacting stakeholders
- Minecraft Java 1.12.2 with the Prinsenhof virtual model
- (Floor)plans and images of Prinsenhof with tracing paper and markers to support the design thinking.
- Mobile phones and camera's to take pictures and videos for documentation.
- Value assessment surveys to fill in by the stakeholders/participants.
- Minecraft surveys to fill in by the stakeholders/participants.

Trial workshops with students

To be prepared as a team for the co-creation workshop with stakeholders, first two trial workshops were held. These two trial workshops were both conducted with students from the TU Delft, however the both workshops had different approaches and aims. The first trial workshop was conducted with Heritage minor students from TU Delft faculty of Architecture. This workshop was held online via Zoom with the use of Minecraft Educational Edition and Florence was the virtual Minecraft location chosen for this workshop. The aim for this first trial workshop was to test out the workshop format, gain experience in conducting workshops, and learn how to deal with the decision making processes. The minor students were also asked out to fill in a basic value assessment matrix to support their design interventions. The second trial workshop was conducted with TU Delft students from different faculties. The aim of the second trial workshop was to mimic the actual co-creation workshop with stakeholders, this way the team of graduate master students could see if the format would work and implement changes if needed for the actual workshops. The second trial workshop was a physical workshop held at the TU Delft faculty of Architecture, the tool used was Minecraft Java 1.12.2 with the Prinsenhof built into the game virtually. The elaborate methodology of the trial workshops will be further explained in the chapter "Workshops". The dates of the trial workshop were as following:

11/11/2020 - Trial workshop with Heritage minor students
26/11/2020 - Trial workshop with students from other faculties

Tools used during and after the trial workshops:

- Minecraft Educational Edition with Florence as a virtual location.
- Value assessment matrix for the minor students
- Minecraft Java 1.12.2 with the Prinsenhof virtual model built into the game.

- (Floor)plans and images of Prinsenhof with tracing paper and markers to support the design thinking.
- Mobile phones and camera's to take pictures and videos for documentation.

Literature research

To answer the research question and sub-questions, literature research was done. This way the answers on the research questions are backed by literature and research done before on the subjects. The method used for conducting the literature research was reading online papers and research done with the online peer-reviewed literature database "Scopus" as a tool. This way not only the research is backed by other research done in the past but also the research gap could be defined this way. Besides the online peer-reviewed literature database "Scopus", physical books from the TU Delft Library were consulted.

Tools used for literature research:

- "Scopus" online peer-reviewed literature database
- Physical copies of books from the TU Delft Library

Archive research

Considering this research is focussing on the Prinsenhof museum in Delft, a heritage monumental building, archive research was also conducted. This way original plans, maps, drawings, pictures and documents related to the Prinsenhof museum and Delft in general could be consulted. This was crucial to understand the essence of the place and understand the changes that happened through time with the Prinsenhof plot and surroundings.

Tools used for archive research:

Original plans, maps, drawings, pictures and documents related to the Prinsenhof plot and Delft in general. Consulted from the "Stadsarchief Delft" and the TU Delft "Kaartenkamer".

Fieldwork

To explore the area of the Prinsenhof museum Delft, fieldwork was conducted. The tool used during the first visit at the Prinsenhof museum was the mobile game of Pokémon Go, a game in which urban exploring is stimulated. The tool of Pokémon Go assisted in the exploration of the Prinsenhof museum, the game shows points of interest where a player could go to and thus opens up new ways of looking at the city. Besides the game of Pokémon Go, which was only used as a tool during the first visit, fieldwork took place multiple time. Visiting the location of Prinsenhof helps in understanding the place during different times and days. Also the fieldwork was a perfect opportunity to take pictures, videos, make sketches and take measurements.

Tools used during fieldwork:

- Pokémon Go
- Mobile phones and camera's to take pictures and videos for documentation.
- Tape measurer
- Sketchbook

Digital modelling

Another method used for this research is digital modelling. Firstly digital modelling was done using the block building game of Minecraft. In Minecraft the location of Prinsenhof is recreated digitally by hand, to be used during the workshops. Besides the elaborate Minecraft modelling, the Prinsenhof museum is also recreated using Sketchup as a tool. This way a precise 3D-model could be used for analysing the building and surroundings, but also to implement the new design interventions in the future. Also 2D-maps of the Prinsenhof, the Prinsenhof surroundings and the city of Delft are created using AutoCAD and other programs like Illustrator, Photoshop and InDesign. These maps are also used for analysing and designing.

Besides this, the 2D-maps were also used for during the workshops to assist the design process.

Tools used during the digital modelling:

- Minecraft Java 1.12.2
- Google Sketchup
- AutoCAD
- Adobe- Illustrator, Photoshop, InDesign

Case Study

The aim of the case study chapter in this research booklet is to gain understanding on the architectural values of the Prinsenhof together with its urban morphology through time. From the city scale of Delft to the more architectural scale of the building itself, all architectural assets will be researched and documented in this chapter (Groat and Wang, 2013).



CASE STUDY

1403 – First mentioned; convent of nuns

The first mention of the Prinsenhof in Delft was on the 30th of April 1403. On this day the building obtained the status of nunnery (convent) and was named "Agatha". The name Agatha derived from Agatha Busers, the daughter of the first Mother Superior; Alyd Busers. Alyd and Agatha joined the nun group also known as the Delftse Zusters. Alyd Busers was a wealthy widow, therefore the Delftse Zusters could inhabit the Prinsenhof. Agatha, Alyd's daughter, became Mother Superior when Alyd passed away, during this period the group of nuns became larger and larger. The building expanded multiple times because of this and during the 15th century it became the largest and wealthiest nunnery enclosed by Delft's medieval city walls (Prinsenhof Museum, n.d.).

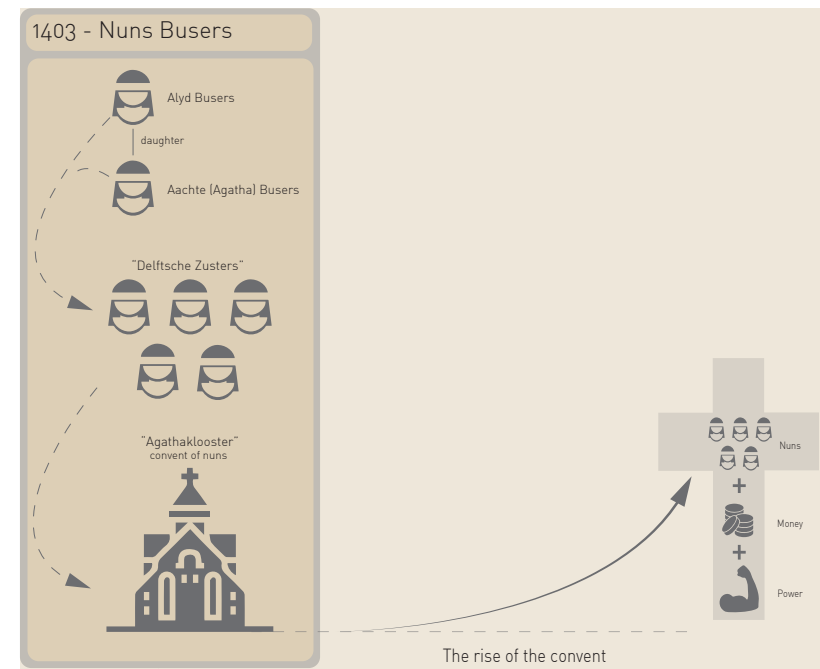


Figure 7 - Nuns Busers and the rise of the convent - self made (2020)

1536 – Big city fire

In 1536, a huge city fire stroke Delft, large parts of the inner city burned down. Both churches got damaged as well, however it's unclear if the Prinsenhof was damaged by the fire. After the fire, most of the buildings were constructed out of bricks instead of wood used before (Prinsenhof Museum, n.d.).

1566 – Beeldenstorm and revolting citizens

Since the Catholic church and thus the nunnery (Agathaklooster) became so powerful, more and more civilians began protesting against the power of the Catholics. During this period the Netherlands was ruled by Philip II, who also was catholic, and thus not independent but part of the Spanish empire. In 1566 the Beeldenstorm happened, reformist and revolting citizens started using violence to protest against the power of the Catholic church and Philip II. These reformists destroyed multiple churches and convents in the period of three months. The Agathaklooster stayed intact since Delft was a safe protected city with city walls. A revolution was coming (Prinsenhof Museum, n.d.).

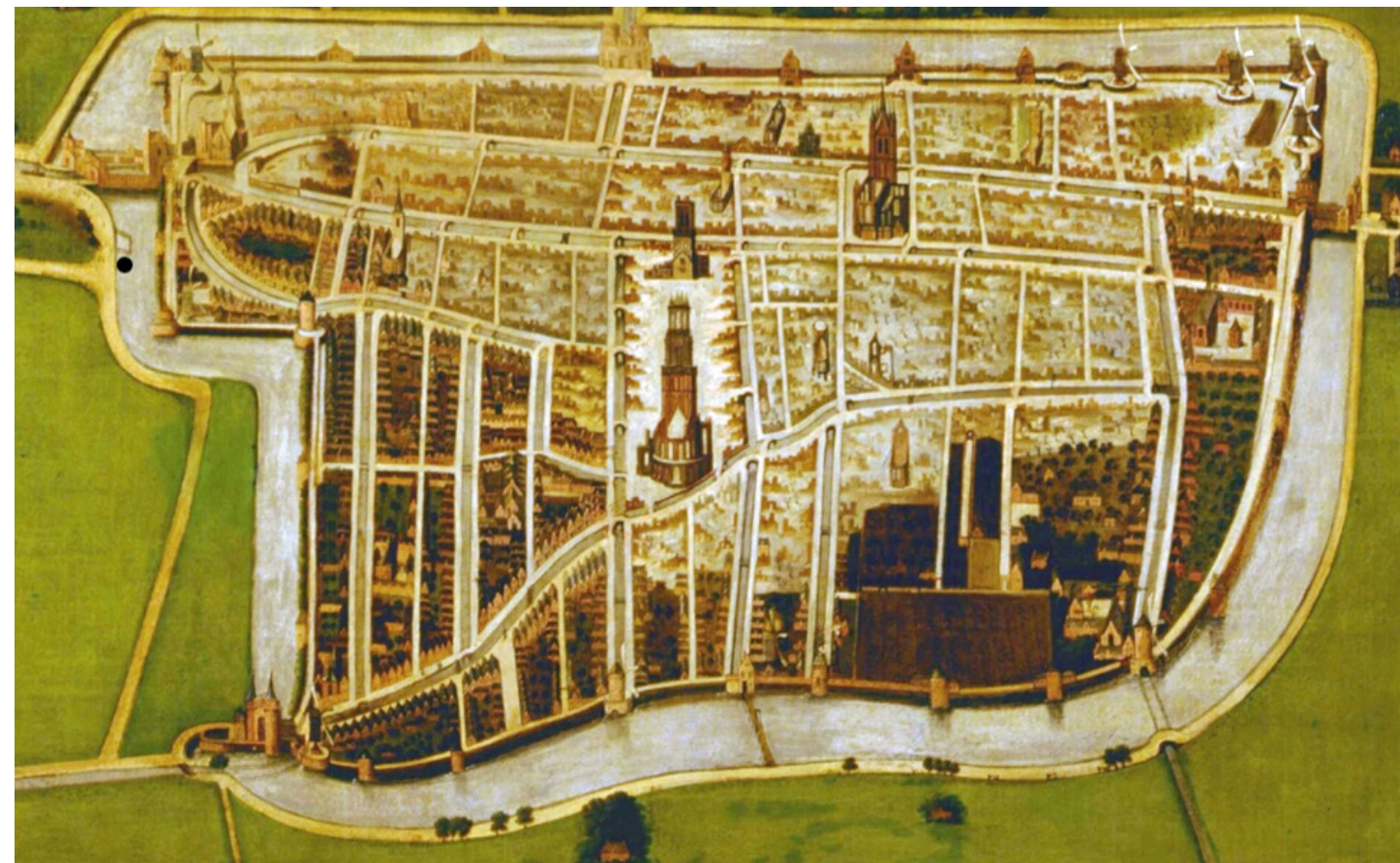


Figure 8 - Historic map of Delft after the city fire (1536) - retrieved from Kaartenkamer TU Delft

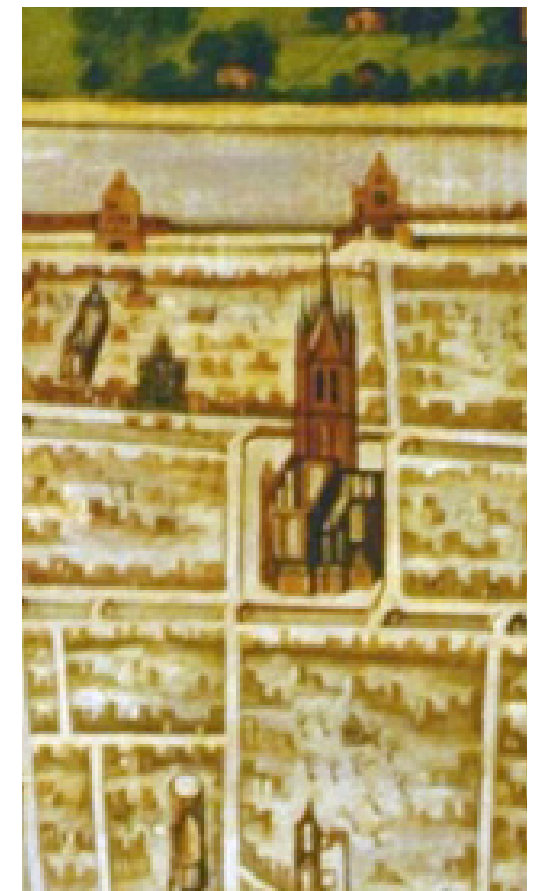


Figure 9 - Zoom in on Prinsenhof - retrieved from Kaartenkamer TU Delft

1572 – Willem van Oranje

In 1572, Delft became in control of the rebels led by Willem van Oranje. The monastery of Prinsenhof in that time was confiscated by the "Staten van Holland", the highest advisory body of the revolt. Their leader, Willem van Oranje needed a well-protected place to live and since the Prinsenhof, and Delft in general, was a safe space surrounded by a city wall, Willem van Oranje came to live in the Prinsenhof building. The building needed some adjustment though, the narrow spiral staircases didn't suit the house of a prince so a new and wider "staatsie-trap" (state staircase) was constructed. His living quarters were situated in the building on the corner of the Oude Delft and the Schoolstraat so he had a view on the Old Church. After Willem van Oranje was murdered by Balthasar Gerards on the previously mentioned "staatsietrap" in 1584, his wife Louise de Coligny offered the building back to the city council (Prinsenhof Museum, n.d.).

1584 – City council

During this period, the monastery of Prinsenhof was used for multiple purposes. The building was used for company spaces, storage warehouse and living spaces. Besides that, the building was also used as a guest house for important guests that visited the city of Delft. Also there were still some nuns living in at the Prinsenhof, they were allowed to live here but they didn't formed an official nunnery at that time anymore. The last nun of the Prinsenhof died in 1640 and thus the period of the Prinsenhof as a nunnery officially came to an end (Prinsenhof Museum, n.d.).

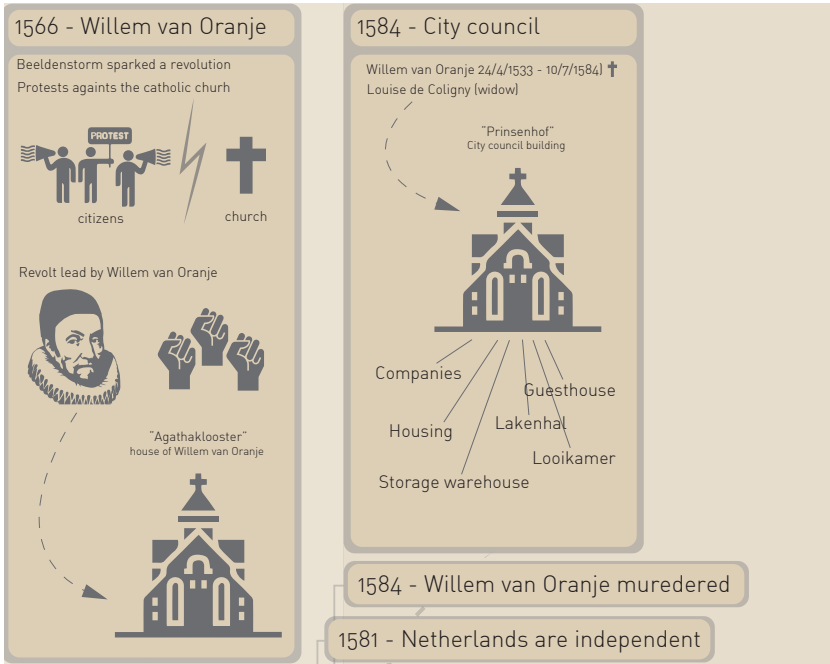


Figure 10 - Willem van Oranje and City council - self made (2020)

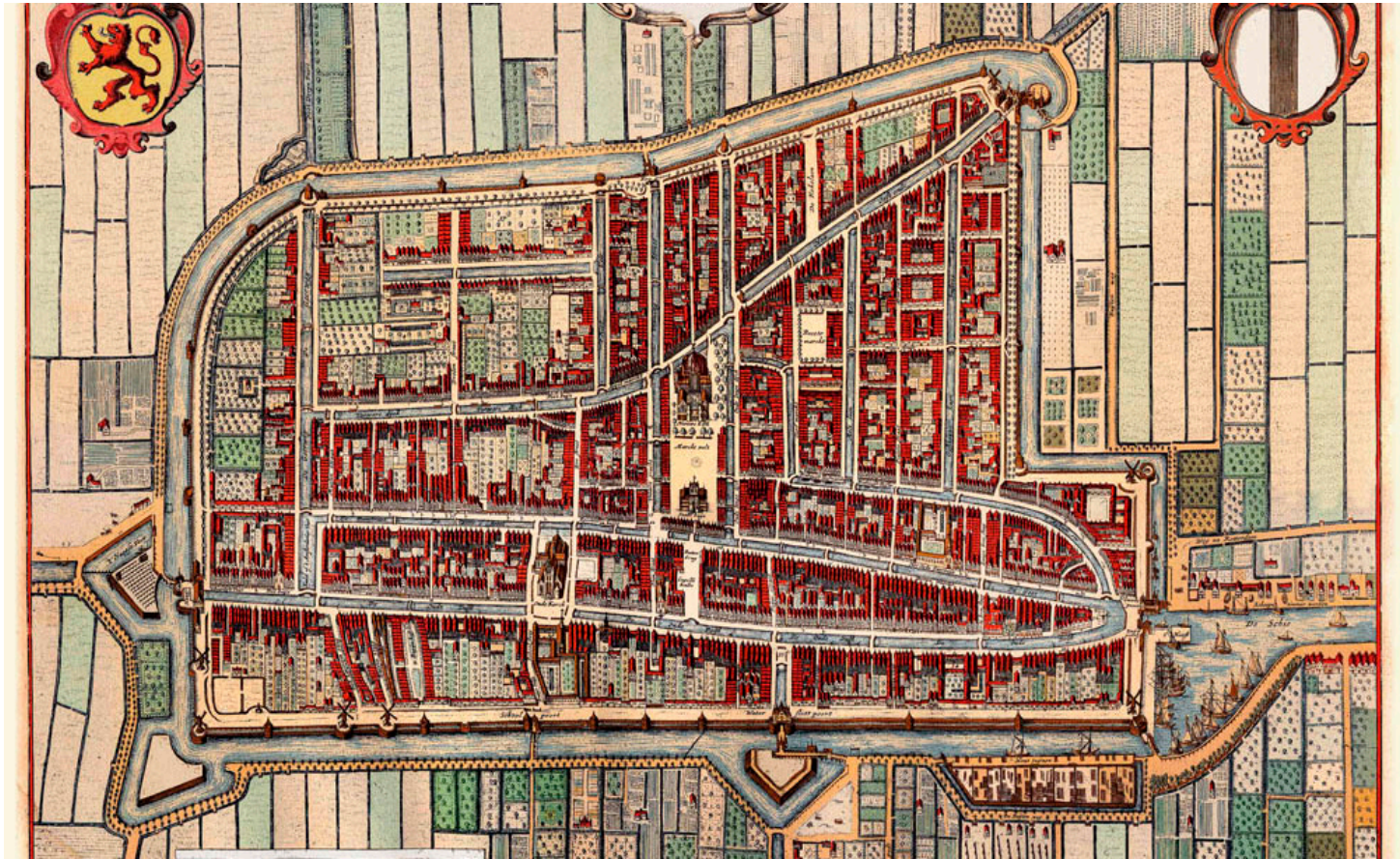


Figure 11 - Historic map of Delft (1649) - retrieved from Kaartenkamer TU Delft

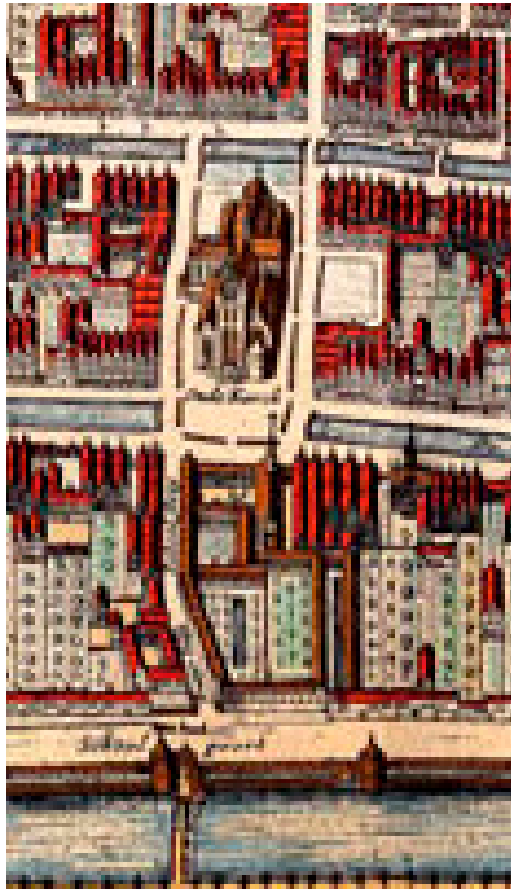


Figure 12 - Zoom in on Prinsenhof - retrieved from Kaartenkamer TU Delft

1776 – Latin School and Military use

After a long period of time where the Prinsenhof building had multiple functions but no real purpose, the building became the location of a Latin school (de Latijnse School) in 1776. This Latin school stayed at the Prinsenhof until 1807. The reason the school left the Prinsenhof had to do with the fact that during this period the Prinsenhof building was increasingly more used for military purpose. The building became a military barrack (Prinsenhof Museum, n.d.).

1900 – Museum function

After almost a century of military use, the city of Delft started to realise that the Prinsenhof building was not an ideal place for soldiers. The "staatsietrap" specially built for Willem van Oranje was wearing out by the soldiers walking around in the barracks and it was decided the building should be a national monument with a museum function. Already in 1884, in memorial of the 300th dead day of Willem van Oranje, the building of Prinsenhof hosted a exhibition in the "Moordhal" and the "Eetzaal". During this period these rooms also were renovated. From the year 1900 soldiers started to leave the building and already before 1900 more and more museum functions started to inhabit the spaces at the Prinsenhof. In the end of the 19th century more rooms at the Prinsenhof started to house museum functions (1887 – Historische Zaal van Prinsenhof, 1894 – Kapittelzaal). In 1925 the last soldiers left the Prinsenhof complex and until now the building still has a museum function (Prinsenhof Museum, n.d.).

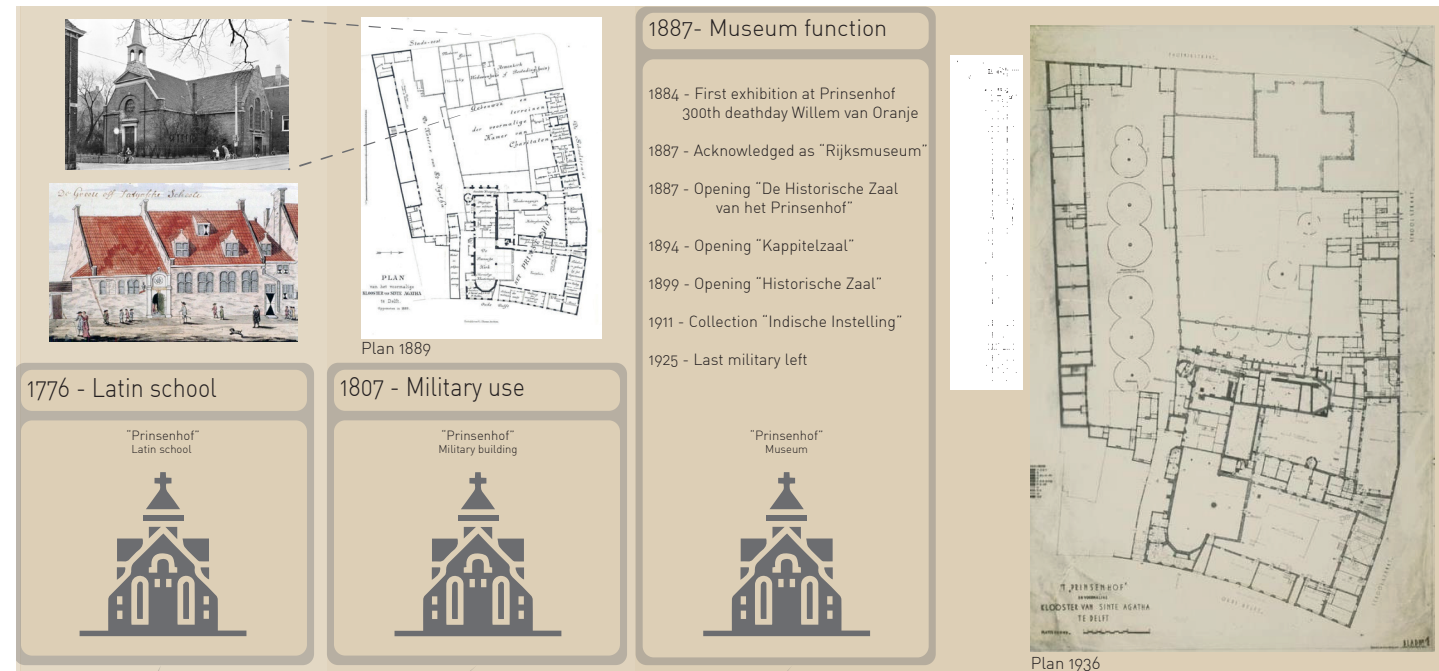


Figure 13- Latin School, Military use and Museum function - self made (2020)

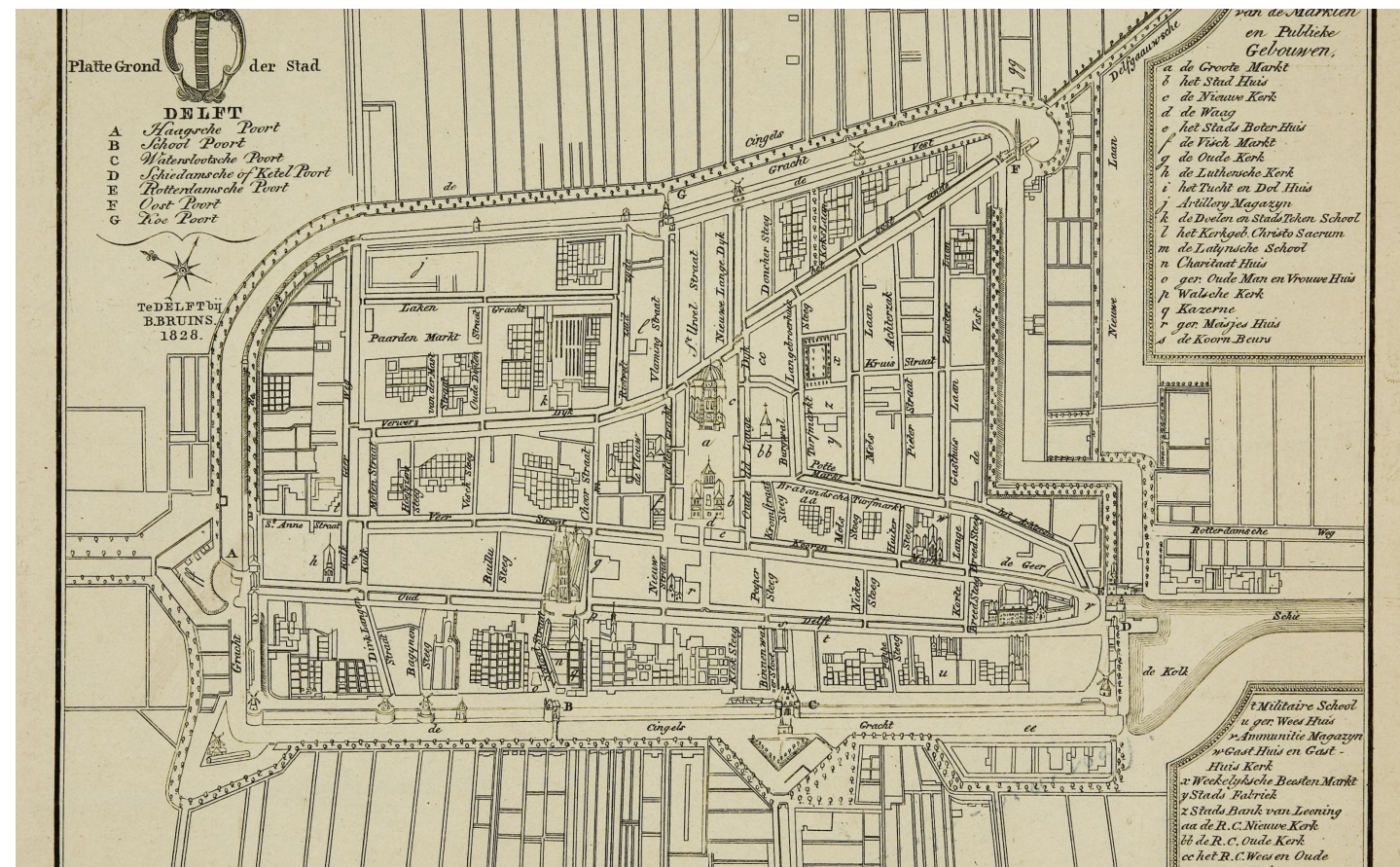


Figure 14 - Historic map of Delft (1828) - retrieved from Kaartenkamer TU Delft

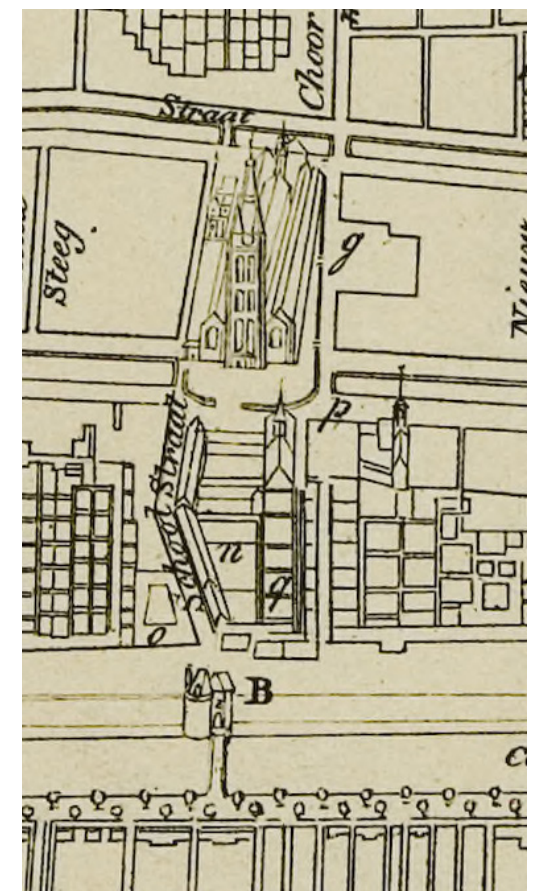


Figure 15 - Zoom in on Prinsenhof - retrieved from Kaartenkamer TU Delft

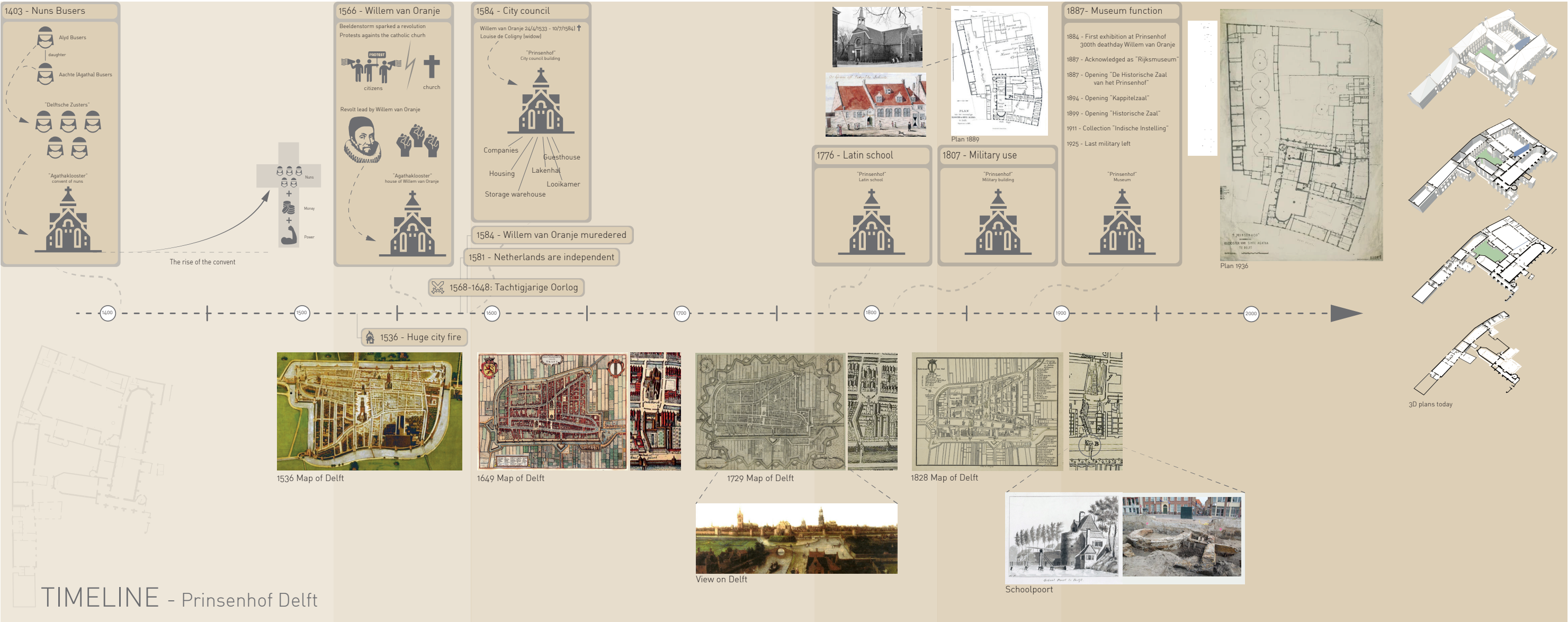


Figure 16 - Timeline visualisation of Prinsenhof Delft - self made (2020)

This part of the analysis will explain each building part of the Prinsenhof separately. Since all parts are built in different times and housed different functions over time, it's essential to look at all the parts individually to understand the whole building. The plan view on this page highlights all the individual building parts, the upcoming pages will highlight and explain each of these parts. The "Bouwhistorisch Onderzoek Museum Prinsenhof" (2018) will be the main reference for this analysis since this document conducted the most elaborate research on the building's history and development through time. The analysis and explanations deriving from the "Bouwhistorisch Onderzoek Museum Prinsenhof" (2018) will be translated and completed in the upcoming pages.

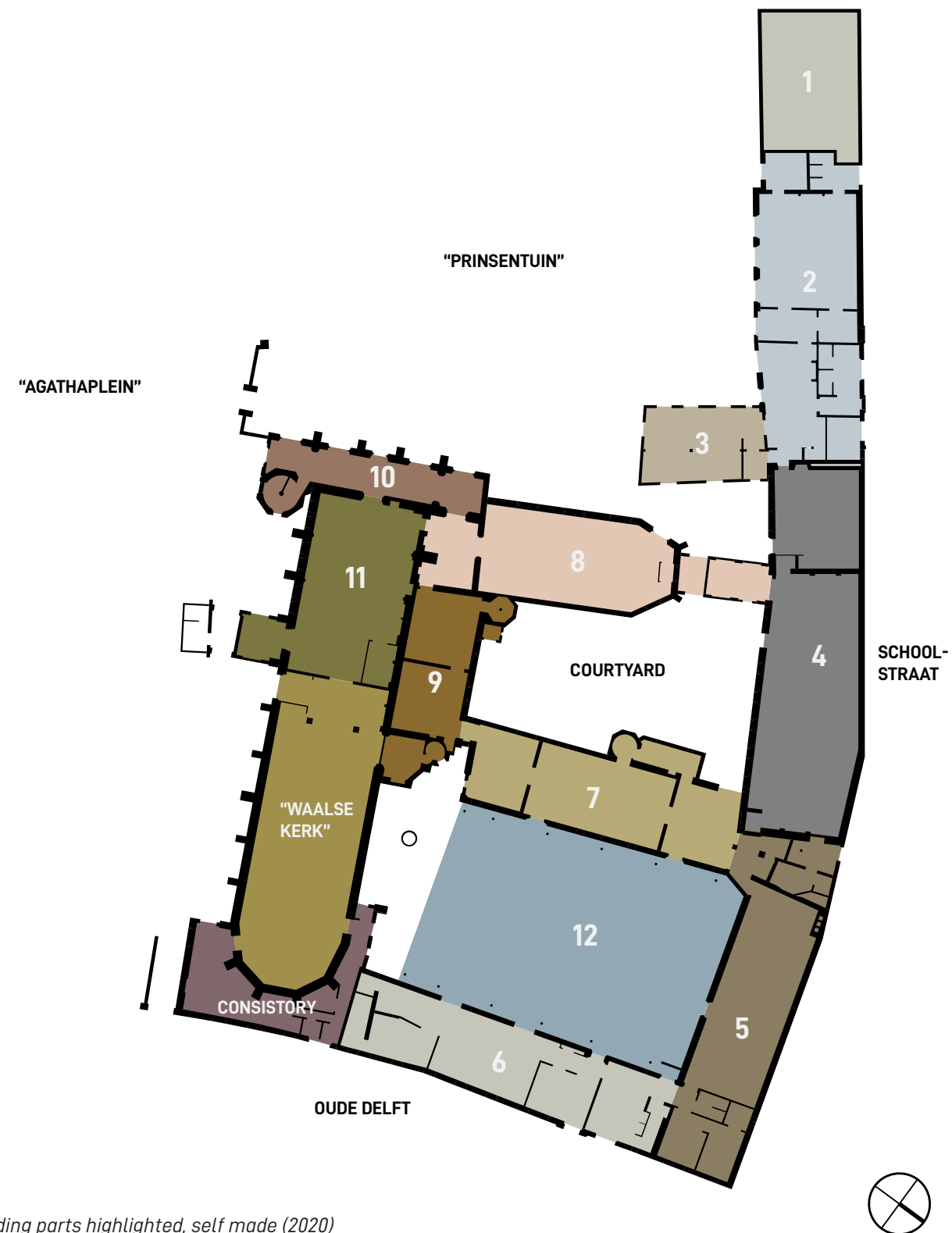


Figure 17- Plan view with all building parts highlighted, self made (2020)

Building part 1 is a relatively simple rectangular building volume which is part of the northeast wing alongside the Schoolstraat. Building part 1 was constructed in the 16th century but was rebuilt multiple times since. It mostly served as a private house separated from the museum. During the large renovations (+- 1960) this part was modified heavily, the current elevations and layout derive from these renovations. Completely new facades were built re-using the original bricks. This part has 2 floors and an attic, both floors function as a house and the attic is part of the Prinsenhof museum storage. Also a small part at the east side of the ground- and first floor belong to the museum, previously this part belonged to the "Kamer van Charitate". The gable roof was rebuilt according to the original situation, the wooden trusses are mostly original and were re-used during renovations.



Figure 19 - Left

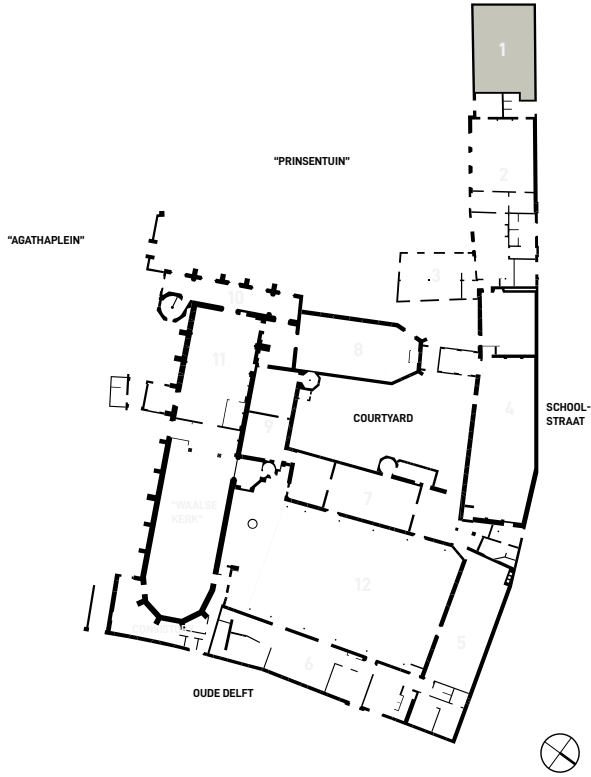


Figure 18 - Plan view with all building parts highlighted, self made (2020)



Figure 20 - Middle



Figure 21 - Right

Images
Left: View on building part 1 from the Schoolstraat
Middle: The attic of building part 1
Right: View on a window from the "Prinsentuin"
All images are taken from:
Bouwhistorisch Onderzoek Museum Prinsenhof (2018)

Building part 2 is long stretched rectangular volume which is part of the northwest wing alongside the Schoolstraat. This part consist of two floors and an attic below the gable roof. There is no basement. Building part dates from 1467-1471, however it is renovated/rebuilt in the 17th century (1647 and 1651) and in 1761. In 1640, the "Kamer van Charitate" was situated in this part. The "Kamer van Charitate" provided poor people with food and other goods during the 17th century. From 1891 till 1937 a glass atelier was situated in this building part with a glassblower facility in the garden. In 1958 building part 2 was restored. Currently the "Kamer van Charitate" is used as a meeting space and office. The "Schoutenhal" is currently also used for offices and meeting spaces. The first floor is in use as a library. The attic is used for storage.



Figure 23 - Left

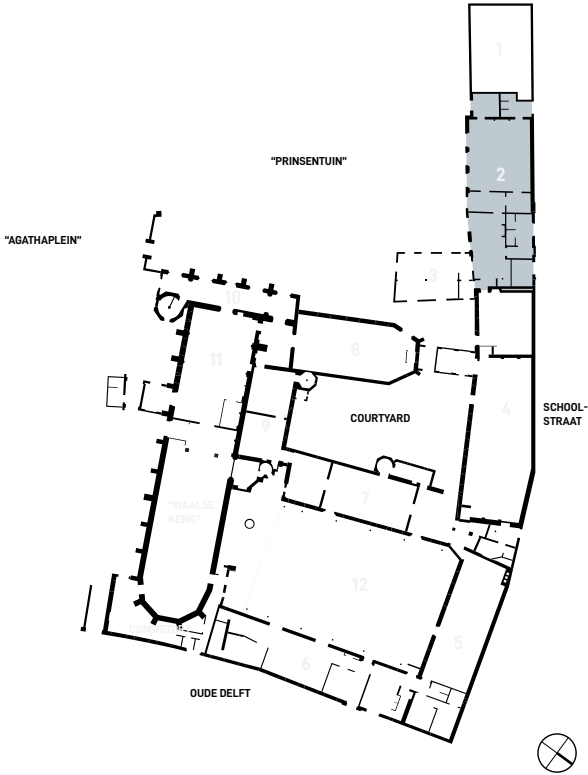


Figure 22 - Plan view with all building parts highlighted, self made (2020)



Figure 24 - Middle



Figure 25 - Right

Images
Left: View on building part 2 from the Schoolstraat
Middle: Former entrance "Kamer van Charitate" viewed from the Schoolstraat
Right: Interior view of the "Kamer van Charitate"
All images are taken from:
Bouwhistorisch Onderzoek Museum Prinsenhof (2018)

Building part 3 is at right angles with building part 2, and only accessible from building part 2. It was constructed mid-17th century and was originally planned as an extension for the "Kamer van Charitate". During the 19th century, building part 3 got well known as the bakery for the "Kamer van Charitate". This part has two floors and an attic below a hipped roof, also it has a single-storey side aisle which was constructed during the large renovations in 1958-60. Currently, building part 3 is in use for office spaces. The wooden roof construction has four A-trusses with ridge style. These trusses may date from the 17th century.



Figure 27 - Left

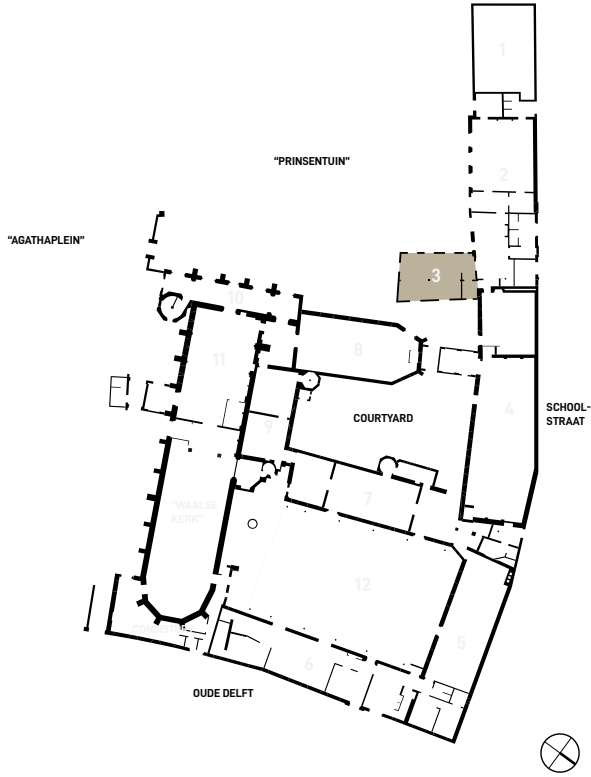


Figure 26 - Plan view with all building parts highlighted, self made (2020)



Figure 28 - Middle



Figure 29 - Right

Images
Left: View on building part 3 from the "Prinsentuin"
Middle: View on building part 3 with the extension from the "Prinsentuin"
Right: Ground floor interior of building part 3
All images are taken from:
Bouwhistorisch Onderzoek Museum Prinsenhof (2018)

Building part 4 is a long stretched rectangular building which has a slight kink following the profile of the Schoolstraat. The building has two floors and an attic underneath a high gable roof. This part is one of the oldest monastery parts dating back to +-1400. This part is most likely rebuilt after the large city fire in 1536. The late gothic profiles and the consoles underneath the nut beams derive from this rebuilt period (1536). In 1572, Willem van Oranje started living in building part 4 and 5. In 1584, building part 4 was part of the monastery again and used for related meetings. After the mid-17th century, two fireplaces with Doric columns were placed in the "Grote Zaal". The mantelpieces and painting of the beam sections of the wooden ceiling were carried out in 1668 by Delft painter; Leonard Bramer.

During the 18th century, the "Grote Zaal" was used for larger meetings and concerts. During the 19th century, building part 4 was part of the military barracks. The "Grote Zaal" situated on the ground floor was restored in 1884 under the supervision of J. van Lokhorst and since then labelled as the "Historische Zaal". The paintings by Kramer were also restored in this period. The second floor was a sleeping floor until 1905, then it was transformed to "Gemeentelijk Museum". During the war, the "Historische Zaal" probably was used as a hospital. These large renovations under the supervision of Lansdorp were finished in 1948. The soup kitchen also was renovated during this period and this was also probably the period where the current concrete floor was poured and the basement vaults were removed.

Images
Left: View on building part 4 from the Schoolstraat
Middle: View on facade building part 4 from the courtyard
Right: Ground floor interior of building part 4
All images are taken from:
Bouwhistorisch Onderzoek Museum Prinsenhof (2018)



Figure 31 - Left

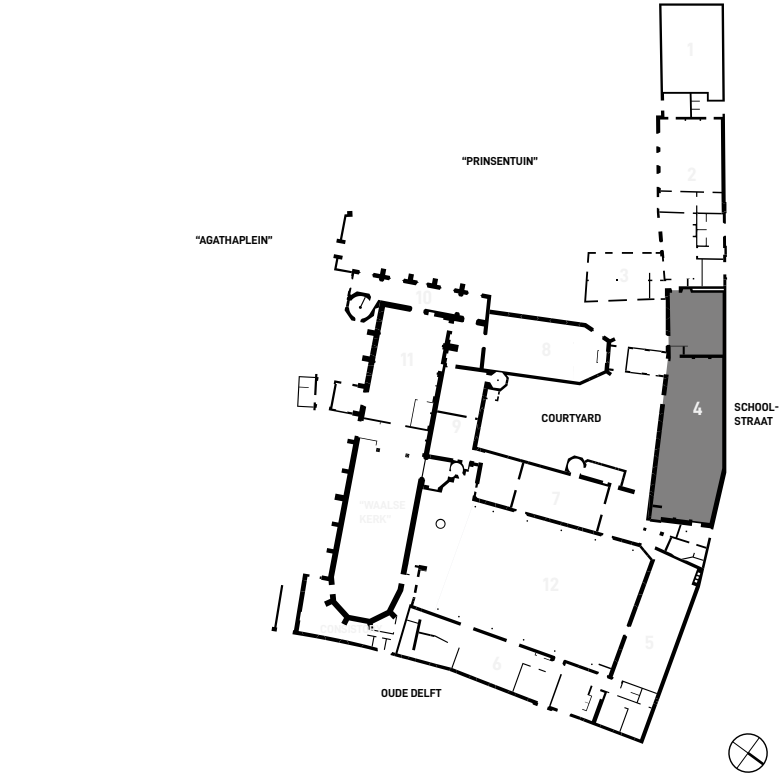


Figure 30 - Plan view with all building parts highlighted, self made (2020)

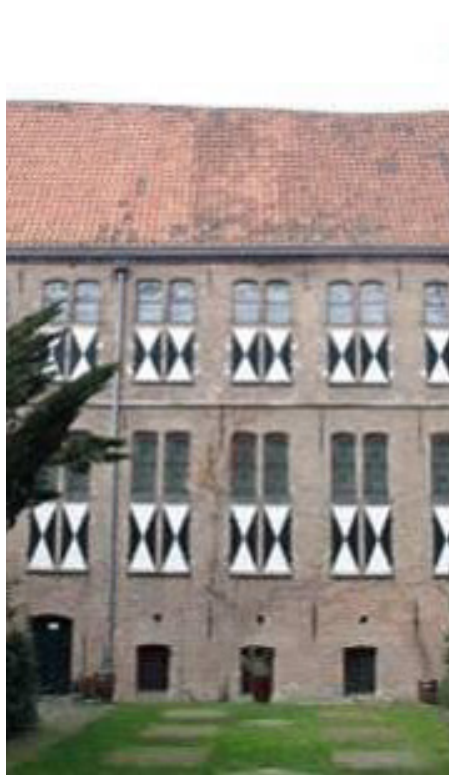


Figure 32 - Middle



Figure 33 - Right

Building part 5 is a rectangular volume situated at the corner of the Schoolstraat and the Oude Delft. This wing was added to building part 4 in 1467-1471 as an extension, this wing was also re-built after the city fire in 1536. Building part 5 is the north wing of the monastery garden (herb garden) which is now covered since 1996 (van de Mandelezaal). Building part consists of a basement, ground floor, first floor and a attic roofed by a gable roof. On the east side a new façade was constructed in 1775 together with a new façade for building part 6 on the Oude Delft side. After the original monastery function, building part 5 was decorated as Willem van Oranje's residence. On the ground floor, a large hall (quest residence) which was accessible from the herb garden. On the first floor, two rooms were situated from which one was Willem van Oranje's bedroom. Currently these rooms are museum rooms. The attic is in use as a furniture depot.



Figure 35 - Left

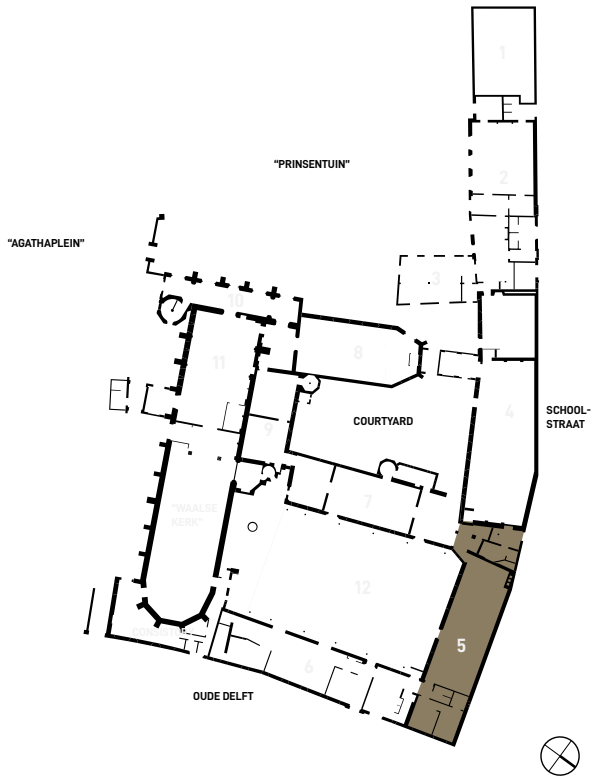


Figure 34 - Plan view with all building parts highlighted, self made (2020)



Figure 36 - Middle



Figure 37 - Right

Images
Left: View on building part 5 from the Oude Delft
Middle: View on former entrance building part 5 viewed from Van der Mandelezaal
Right: Ground floor interior of building part 5
All images are taken from:
Bouwhistorisch Onderzoek Museum Prinsenhof (2018)

Building part 6 is the east wing of the monastery alongside the Oude Delft which is built around 1525. On the west side of this part was the herb garden situated (building part 12) and on the east side the Oude Delft. In 1658, a part of this wing was prepared for the "saai-nering" with "Looikamer" on the first floor. A porch at the east façade alongside the Oude Delft shows a relief representation of the fabrication of sheets with the inscription: "Saai, Greine en Stoffe-hal". In 1775 the part alongside the Oude Delft was occupied by the Latin School. In this period the entire façade at the Oude Delft side was rebuilt and fitted with more modern sliding windows. During these renovations, the porch to the "Saaihal" was also moved and adjusted with new writing and a new keystone above the entrance. The straightforward roof construction dates from the late 19th century. Building part 6 was externally restored in 1948 and internally rebuilt in the 1990's.



Figure 39 - Left

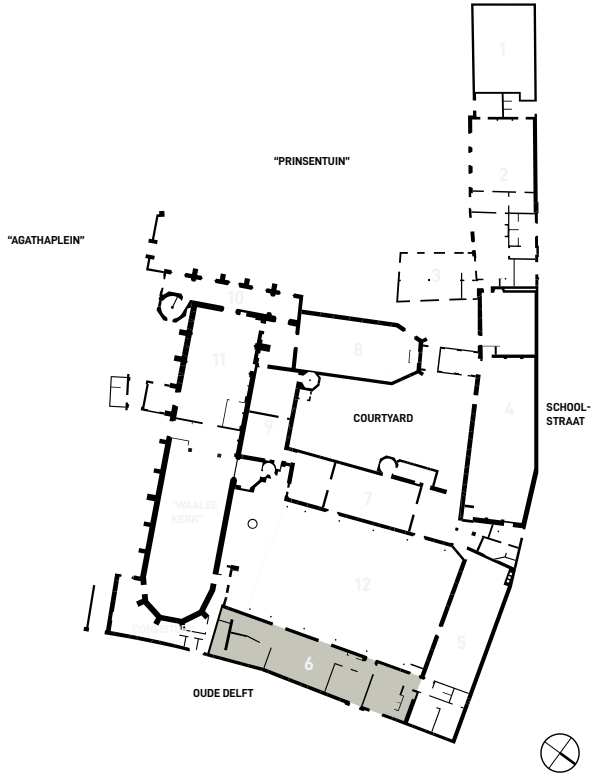


Figure 38 - Plan view with all building parts highlighted, self made (2020)



Figure 40 - Middle



Figure 41 - Right

Images
Left: View on building part 6 from the Oude Delft
Middle: Monumental entrance Oude Delft facade viewed from the Oude Delft
Right: Ground floor interior of building part 6 currently used as storage
All images are taken from:
Bouwhistorisch Onderzoek Museum Prinsenhof (2018)

Building part 7 is the north-south oriented intermediate wing in between both courtyards. This part of the complex was built as the last part round 1550. Only the north part underneath the "Moordhal" has a basement. The building volume has two floors and an attic with a gable roof between gable facades. Building part 7 was restored in 1940-1948. Building part 7 is mostly famous because of the "Moordhal", the place where Willem van Oranje was murdered by Balthasar Gerards in 1584. The bullet holes are still present in the wall. Building part 7 is nowadays used as exposition space.



Figure 43 - Left

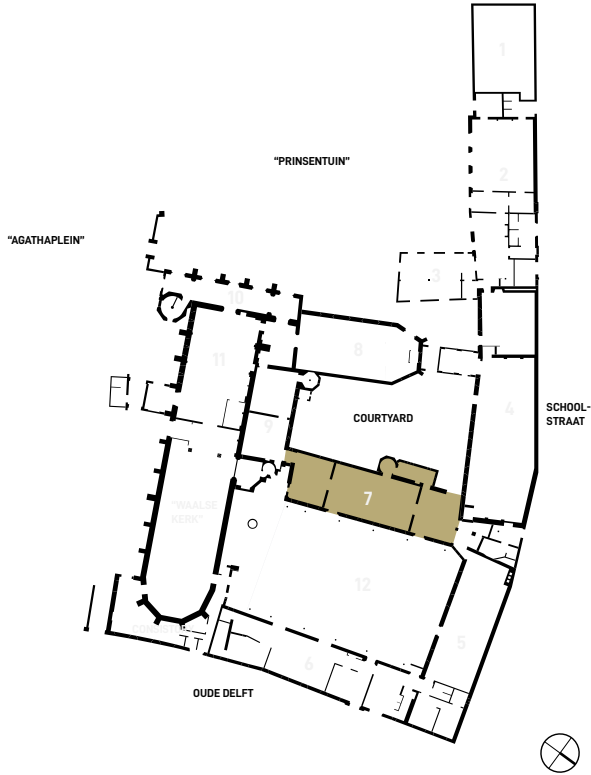


Figure 42 - Plan view with all building parts highlighted, self made (2020)



Figure 44 - Middle



Figure 45 - Right

Images
Left: View on building part 7 from Van der Mandelezaal
Middle: View on facade building part 7 from the small courtyard next to Van der M.zaal
Right: Ground floor interior of building part 7 with wooden spiral staircase
All images are taken from:
Bouwhistorisch Onderzoek Museum Prinsenhof (2018)

Building part 8 is the former "Kapittelzaal" (chapter house) of the monastery and dates from the beginning of the 15th century. In the beginning of the 16th century, building part 8 was widened and enlarged (choir), also it was rebuilt during this period after the city fire in 1536. The building volume consists of a basement, a high ground floor and an attic with a gable roof with three-way closure on the north side. A connecting hallway can be found at the northside, connecting building part 8 with building part 4. Currently the "Kapittelzaal" is used for temporary expositions.



Figure 47 - Left

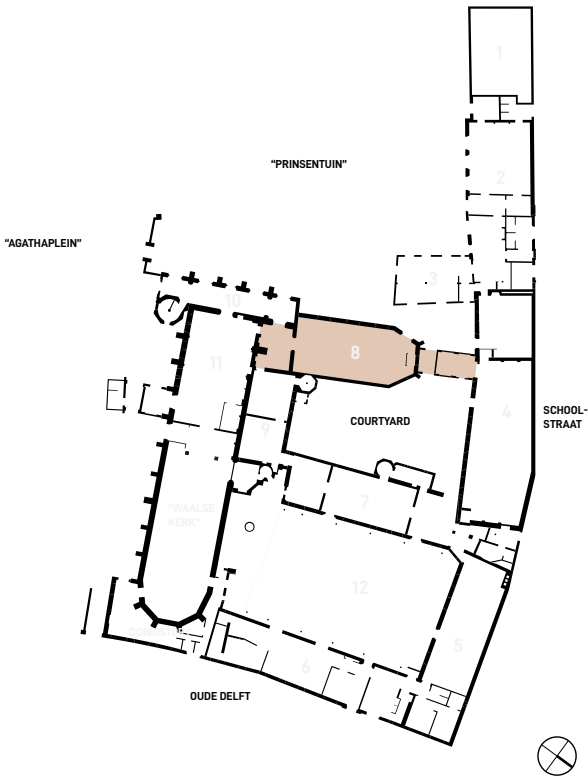


Figure 46 - Plan view with all building parts highlighted, self made (2020)



Figure 48 - Middle



Figure 49 - Right

Images
Left: View on building part 8 from the "Prinsentuin"
Middle: Roof structure in the attic of building part 8
Right: Basement structures of building part 8
All images are taken from:
Bouwhistorisch Onderzoek Museum Prinsenhof (2018)

Apart from it's basement, building part 9 is completely reconstructed and rebuilt. Also the staircase tower is a reconstruction. So apart from the basement, nothing is original. In 1776, the ground floor was decorated as a music room. During the renovations by Lansdorp the ground floor was brought back to the original 16th century situation with two chambers for spinning wheels and two bedrooms on the first floor. For accessibility, the staircase tower was constructed in this period as well. On the east side of building part 9, a 15th century abbess chapel with a walkway on the first floor can be found, which was originally reachable from the church. The roof construction is also a reconstruction from this period. Currently this building part is partly used for expositions but mostly serves for traffic space.



Figure 51 - Left

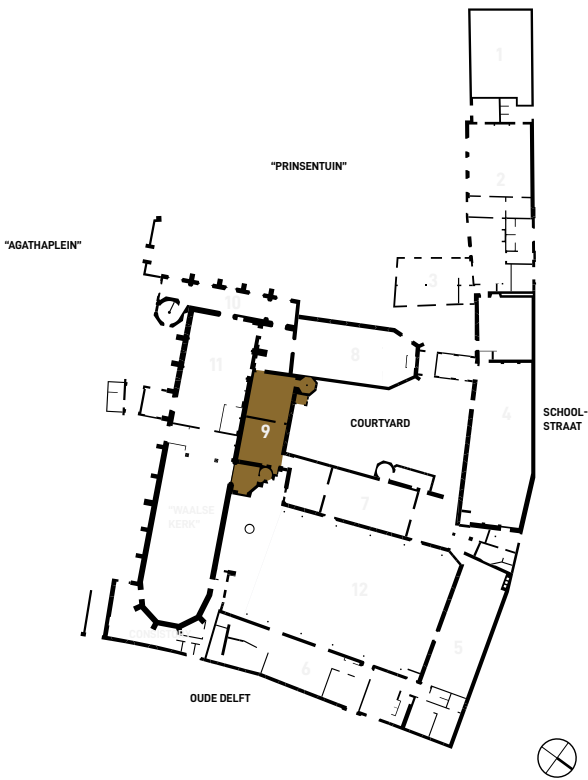


Figure 50 - Plan view with all building parts highlighted, self made (2020)



Figure 52 - Middle



Figure 53 - Right

Images
Left: View on building part 9 from the courtyard
Middle: Ground floor interior with door building part 9
Right: Roof structure of the staircase tower building part 9
All images are taken from:
Bouwhistorisch Onderzoek Museum Prinsenhof (2018)

Both below and at the level of the nun's gallery on the west side, an early 16th century vaulted gallery (three bays wide, with a slightly younger single-storey bay with balcony on the ground floor at the south side) can be found. This whole is referred to as "narthex". During the restorations of this part in 1940-1948, a single-storey bay with roof was added at the north side. During the military period of the building, the front hall's height was increased and another floor was fitted, also the staircase tower was changed in that period. These additions were later removed during the renovations in 1940-1948, the staircase tower at the first floor level was newly bricked up and received a pointed hood.



Figure 55 - Left

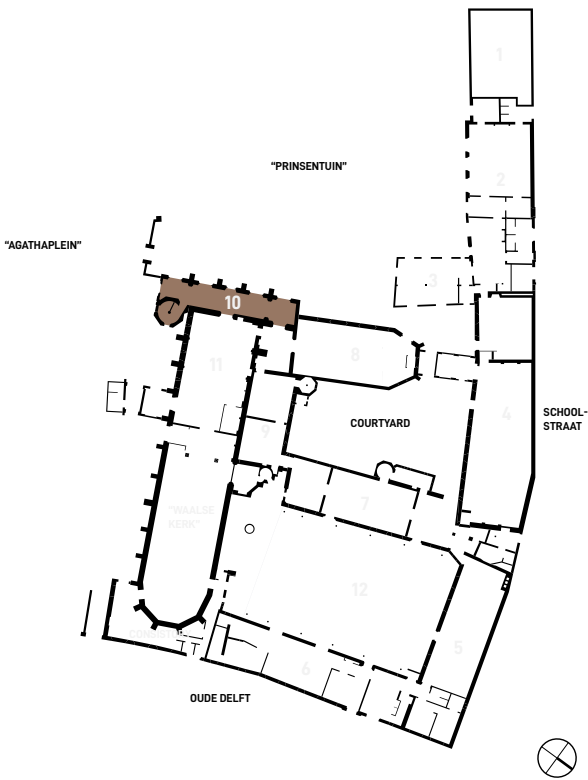


Figure 54 - Plan view with all building parts highlighted, self made (2020)



Figure 56 - Middle



Figure 57 - Right

Images
Left: View on building part 10 from the "Agathaplein"
Middle: Ground floor interior of building part 10
Right: A former entrance building part 10 viewd from the "Prinsentuin"
All images are taken from:
Bouwhistorisch Onderzoek Museum Prinsenhof (2018)

For this building part, the explanation will be combined with the "Waalse Kerk", since these parts are closely related to each other.

The current church was constructed in 1467-1471 and replaced a smaller church which was also located at this location. Short after the city fire in 1536, the chapel received its current hood with barrel vaults and late Gothic carved "schalkbeelden" (apostle figures). On the side of the Oude Delft, an inner sacristy with star vaults rose against the choir closure. In 1585, the eastern part of the elongated single-aisled chapel was separated as the "Waalse Kerk". In the 17th century, possibly somewhere around 1631, a side aisle was added on the north side, which was demolished again in 1961 during the renovation of the church. The clock in the roof rider still dates from this period. The western part of the chapel contained the nun-gallery on the first floor. Part of this was converted into a sexton's house in 1585. The cloth hall (Lakenhal) was built on the ground floor. After the restoration, the former nun's gallery is known as the "Beeldenhal" because of the "schalkbeelden" with apostle figures which were collected there. During the restoration of the "Waalse Kerk" and the removal of the sexton's house, the volumes got its current size. The entrance and museum shop built on ground floor (building part 11). Currently, building part 11 still functions as the entrance area and museum shop. De "Waalse Kerk" still functions as a church, however the last official service was in 2018.



Figure 59 - Left

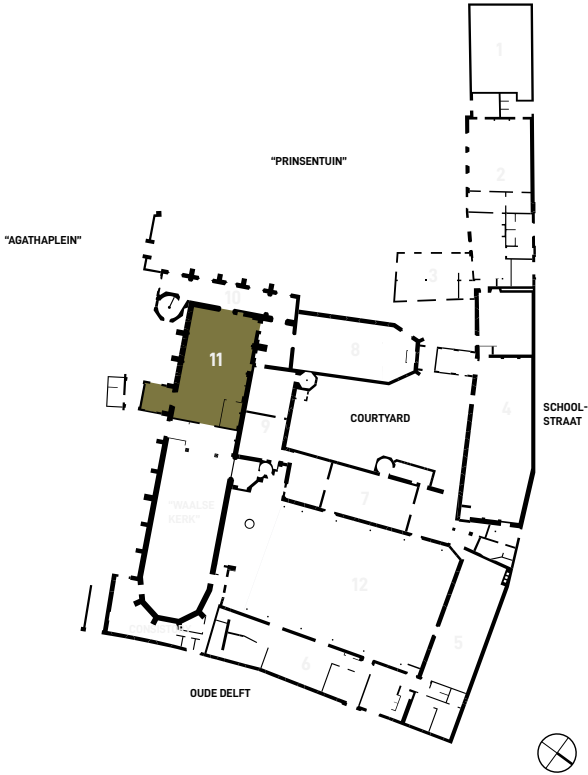


Figure 58 - Plan view with all building parts highlighted, self made (2020)



Figure 60 -Middle



Figure 61 - Right

Images
Left: View on building part 11, museum's entrance, from the "Agathaplein"
Middle: Interior with entrance area building part 11
Right: Interior with garderobe building part 11
All images are taken from:
Bouwhistorisch Onderzoek Museum Prinsenhof (2018)

This building part concerns the covered large courtyard, the previous herb garden of the monastery. This glass structure is currently called the "Van der Mandelezaal", and was taken in use in 1996. The current function is a museum space and a large space for events, the space is also rentable. The capacity of the Van der Mandelezaal is between 250 people (dinner) and 400 people (party or theatre). The glass roof structure and glass wall are designed by Mick Eekhout.



Figure 63 - Left

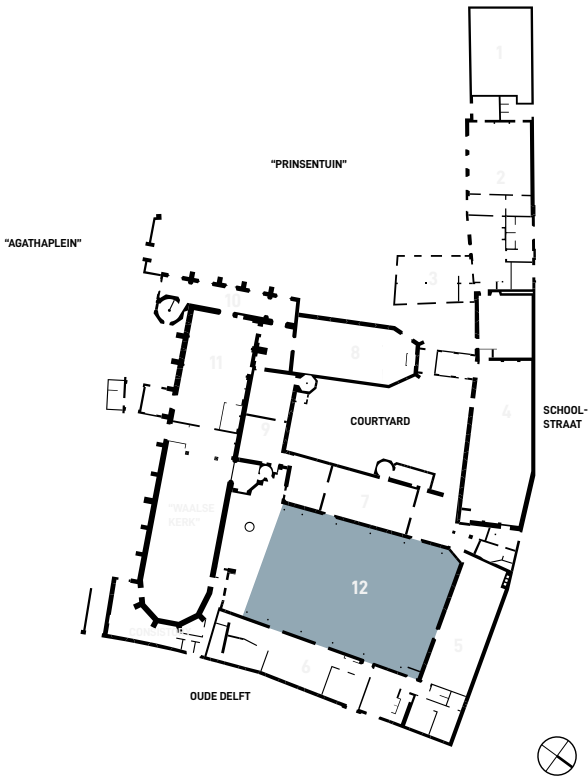


Figure 62 - Plan view with all building parts highlighted, self made (2020)



Figure 64 - Right

Images
Left: View on glass structure building part 12 from Van der Mandelezaal
Right: View on glass structure building part 12 from Van der Mandelezaal with original "Walse Kerk" facade visible behind
All images are taken from:
Bouwhistorisch Onderzoek Museum Prinsenhof (2018)

HISTORY BUILDING PART “CONSISTORY”

MICK BLOEMENDAL
4296281
HERITAGE4ALL

The consistory was constructed round 1525 as a sacristy against the choir of the monastery church. The eastern façade, alongside the Oude Delft, is rebuilt in 1775 and fitted with three new frames with sliding windows. The southern façade is adjacent to the porch which forms the entrance to the entire monastery complex from that side. In the plinth of this façade, access can be found to a narrow underground hallway which leads underneath the Oude Delft and ends up at the canal in front of the Old Church. This hallway probably went on until the widened access porch in the transition to building part 6. Currently, the consistory rooms are not in use.



Figure 66 - Left

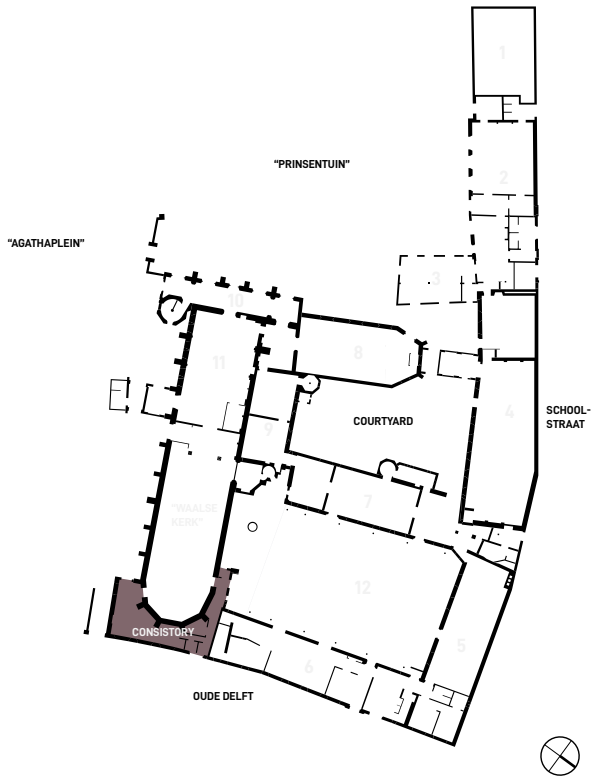


Figure 65 - Plan view with all building parts highlighted, self made (2020)



Figure 67 - Middle



Figure 68 - Right

Images
Left: View on "consistory" from the Oude Delft
Middle: Iconic porch entrance next to "consistory"
Right: Interior view of the "consistory"
All images are taken from:
Bouwhistorisch Onderzoek Museum Prinsenhof (2018)

HISTORY BUILDING PART “WAALSE KERK”

MICK BLOEMENDAL
4296281
HERITAGE4ALL

For this building part, the explanation will be combined with building part 11, since these parts are closely related to each other.

The current church was constructed in 1467-1471 and replaced a smaller church which was also located at this location. Short after the city fire in 1536, the chapel received its current hood with barrel vaults and late Gothic carved “schalkbeelden” (apostle figures). On the side of the Oude Delft, an inner sacristy with star vaults rose against the choir closure. In 1585, the eastern part of the elongated single-aisled chapel was separated as the “Waalse Kerk”. In the 17th century, possibly somewhere around 1631, a side aisle was added on the north side, which was demolished again in 1961 during the renovation of the church. The clock in the roof rider still dates from this period. The western part of the chapel contained the nun-gallery on the first floor. Part of this was converted into a sexton’s house in 1585. The cloth hall (Lakenhal) was built on the ground floor. After the restoration, the former nun’s gallery is known as the “Beeldenhal” because of the “schalkbeelden” with apostle figures which were collected there. During the restoration of the “Waalse Kerk” and the removal of the sexton’s house, the volumes got its current size. The entrance and museum shop built on ground floor (building part 11). Currently, building part 11 still functions as the entrance area and museum shop. De “Waalse Kerk” still functions as a church, however the last official service was in 2018.



Figure 70 - Left

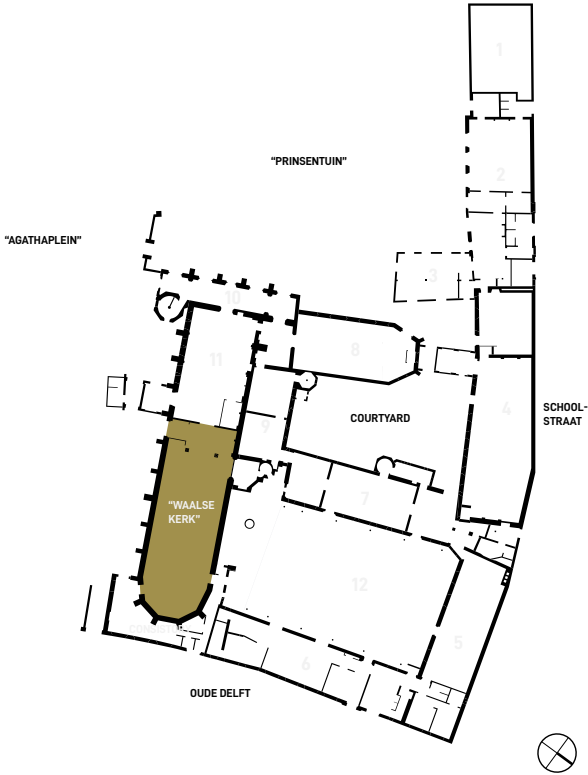


Figure 69 - Plan view with all building parts highlighted, self made (2020)



Figure 71 - Middle



Figure 72 - Right

Images
Left: View on facade “Waalse Kerk” (right facade)
Middle: Interior view “Waalse Kerk” facing the Oude Delft
Right: Interior view “Waalse Kerk” facing “Prinsentuin” with organ visible
All images are taken from:
Bouwhistorisch Onderzoek Museum Prinsenhof (2018)

Delft used to have a city wall with 8 city gates. However nowadays the city wall doesn't exist anymore and most city gates were also demolished 100-200 ago. The only city gate still standing is the Oostpoort (5). The city wall in front of the Prinsenhof ensemble also had a city gate, the Schoolpoort, from which the foundations were found during excavations for the construction of the new underground railway. Interesting to note is the fact that the St-Agathaklooster (Prinsenhof) used to be walled off by the city wall, the monastery garden was facing the former city wall. Nowadays one could say the direction of the building has flipped around, the Phoenixstraat is the main entrance from which most people/tourists arrive at the Prinsenhof. All the former city gates are listed down below:

- 1- Schoolpoort
- 2- Waterslootse poort
- 3- Schiedamse poort
- 4- Rotterdamse poort
- 5- Oostpoort (still standing)
- 6- Koepoort
- 7- Wateringse poort
- 8- Haagpoort



Figure 73 - Former city wall and city gates, self made (2020)

Prior to the 80 year war, Delft had a lot of monasteries / nunneries. Nowadays most of them aren't recognisable as monasteries / nunneries anymore, their purpose has changed. Most of the monasteries / nunneries currently have vague clues relating to their original function. The St-Agathaklooster (Prinsenhof) is one of the best kept monasteries in Delft (Bouwhistorisch Onderzoek Museum Prinsenhof 2018) and still recognisable as a former nunnery. The (former) monasteries / nunneries are listed down below:

- 1- St-Agathaklooster (Prinsenhof)
- 2- St-Hieronymusklooster
- 3- St-Barbaraklooster
- 4- St-Ursulaklooster
- 5- St-Agnesklooster
- 6- Minderbroedersklooster
- 7- Cellebroedersklooster
- 8- St-Maria-Magdalenaklooster
- 9- St-Claraklooster
- 10- St-Anneklooster
- 11- Bagijnhof



Figure 74 - Monastery / nunnery typologies in Delft, self made (2020)

As mentioned briefly in the analysis on the former city wall of Delft, the "direction" of the Prinsenhof has changed overtime. Meaning, when the city wall was still standing the current Phoenixstraat was the backside of the ensemble while nowadays this is the side most people arrive at the Prinsenhof. The small porchway at the Oude Delft is an entrance used mostly by people from the inner city of Delft. Since there're no good parking solutions (car free zone) this side is only used by slow traffic such as pedestrians and cyclists. The Phoenixstraat side however had good parking solutions, underneath the street level a large parking garage is situated, there's also a parking garage closeby on the Phoenixstraat itself. Besides this, the central train station of Delft welcomes a lot of people and tourists every day, this is why the Prinsenhof entrance at the Phoenixstraat nowadays is the most important. Everyone coming from the central station or from other parts of Delft (except the inner city) is best of using the entrance at the Phoenixstraat.



Figure 75 - Urban circulation and arrivals, self made (2020)

This analysis shows the points of interest nearest to the Prinsenhof museum. The nearest parking garages, the central train station and the main inner city areas are shown. Besides these points of interest, the TU Delft campus is also marked since this research also focusses on Univer-cities. All points of interest are easily reachable by foot. The points of interest will be listed down below including walking times:

- | | | |
|-----|------------------------------------|----------|
| 1 - | Parking 'Prinsenhofgarage' | (2 min) |
| 2 - | Parking 'Phoenixgarage' | (2 min) |
| 3 - | Central train station Delft | (7 min) |
| 4 - | The Oude Kerk | (2 min) |
| 5 - | The inner city / shopping district | (5 min) |
| 6 - | The Marketsquare | (7 min) |
| 7 - | TU Delft campus | (20 min) |

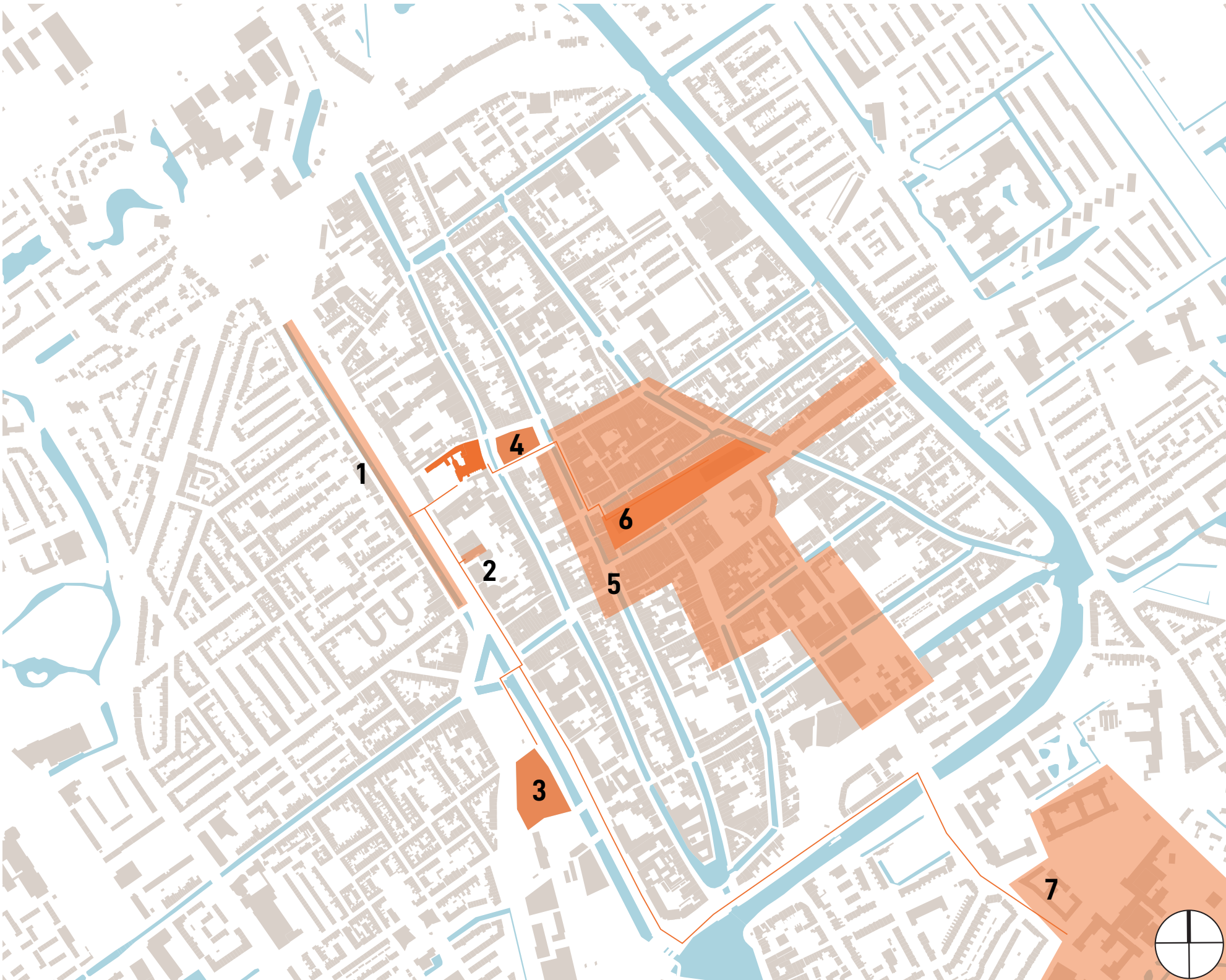


Figure 76 - Surrounding points of interest, self made (2020)

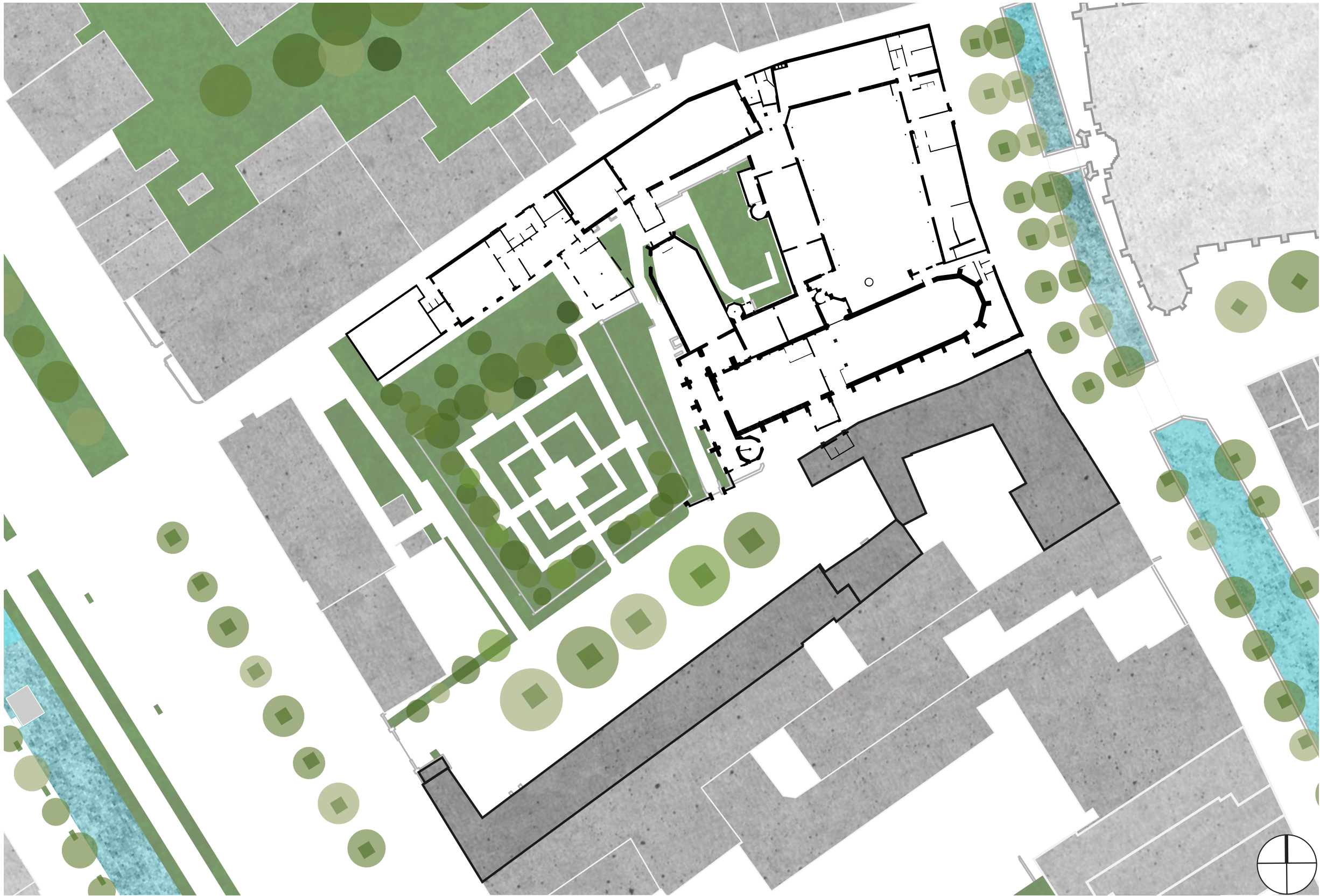


Figure 77 - Masterplan current situation 1:500, self made (2020)

The Prinsenhof ensemble consists of two main routes for people to pass through. One of these routes is the Schoolstraat alleyway, a narrow street which connects the Phoenixstraat and the Oude Delft. The Schoolstraat is accessible for pedestrians and cyclists. The other main runs through the Agathaplein, also connecting the Phoenixstraat and the Oude Delft. On this route only pedestrians are officially allowed (although cyclists use it as well), this route can be seen as the more scenic route following the gates and porches of the Prinsenhof ensemble. These two routes are connected by a small backstreet, this street is in between the monastery garden and the Phoenixstraat buildings.

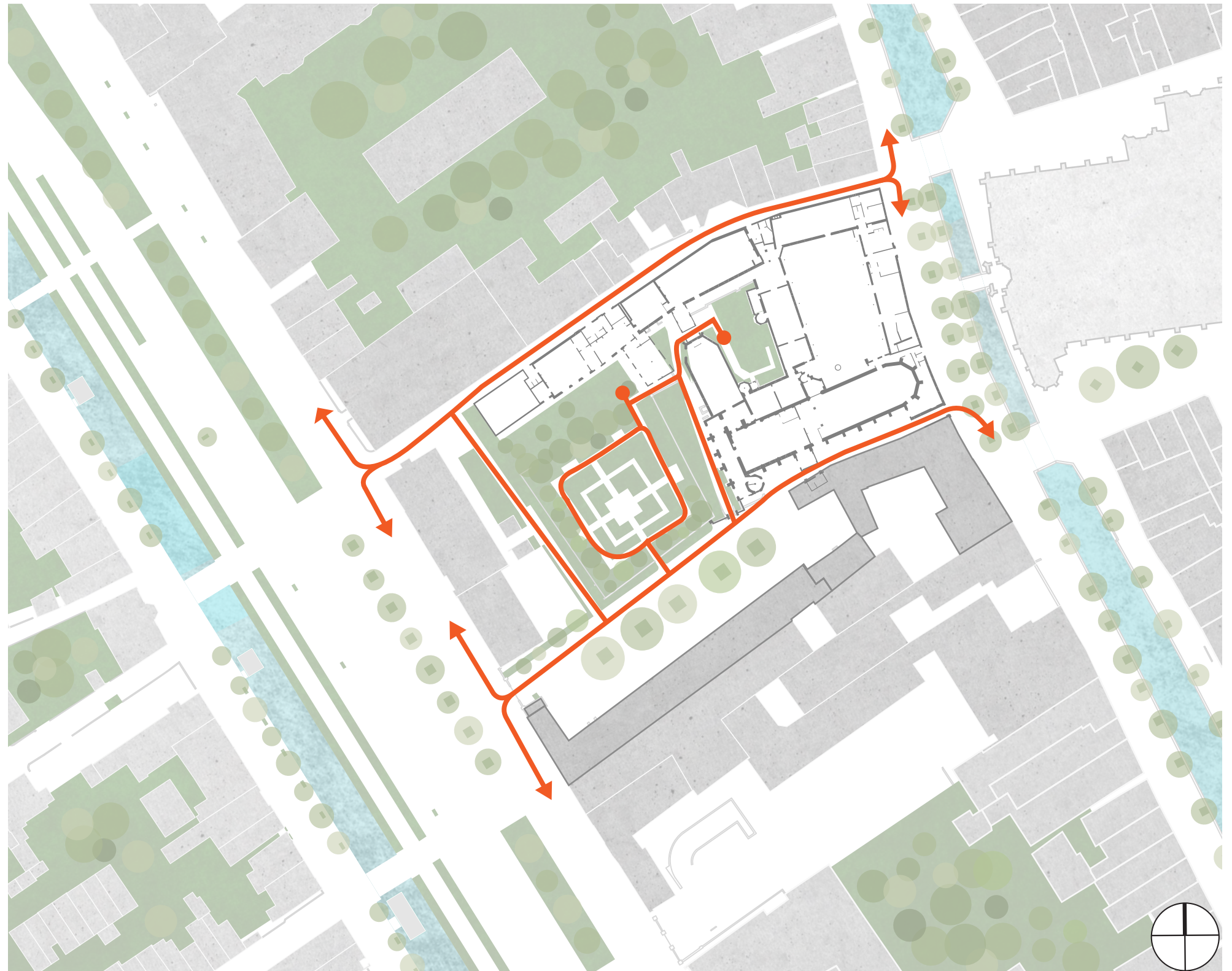


Figure 78 - Current exterior circulation, self made (2020)

GROUND FLOOR

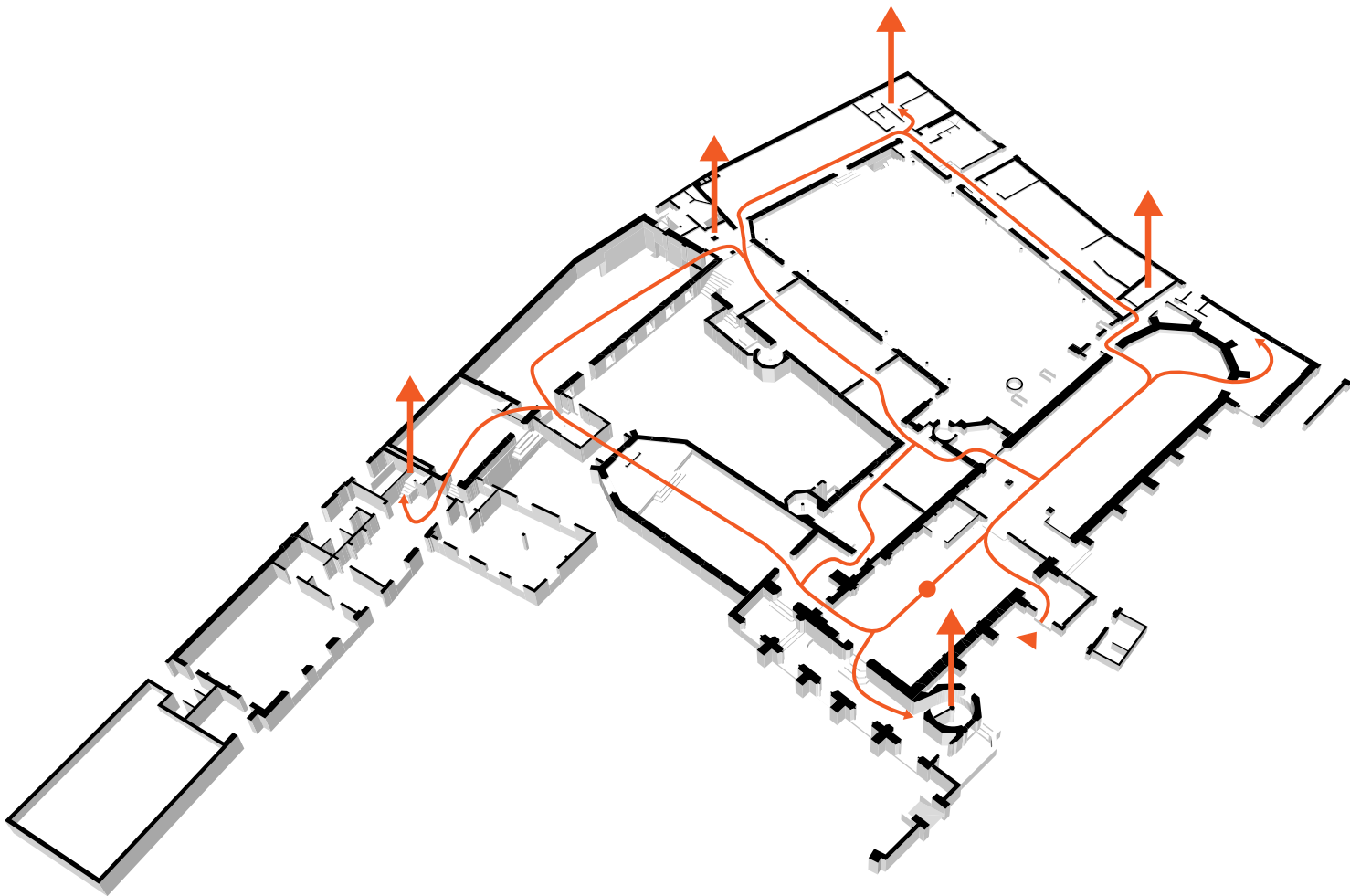


Figure 79 - Current ground floor circulation, self made (2020)

FIRST FLOOR

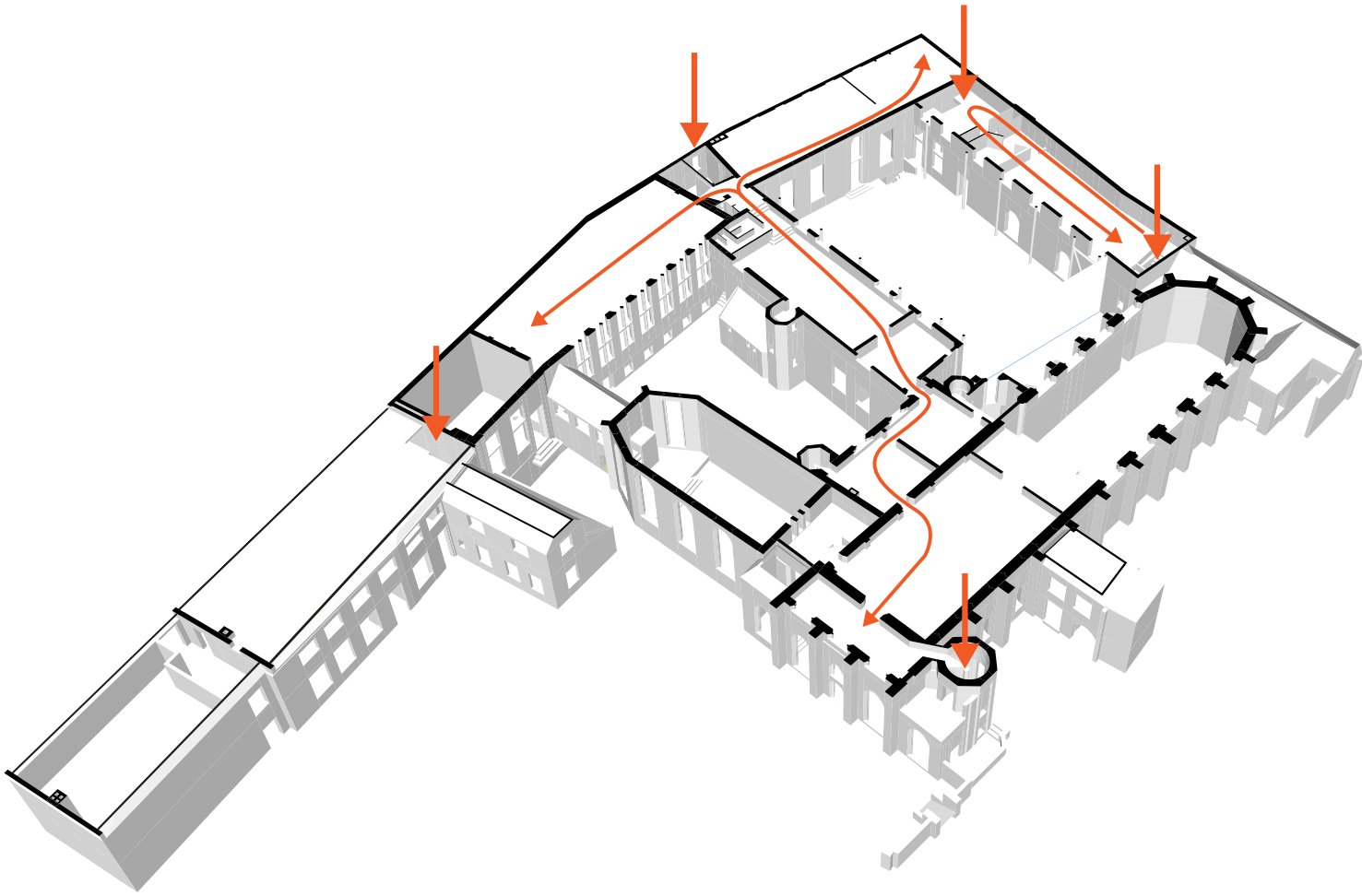


Figure 80 - Current first floor circulation, self made (2020)

This drawing shows the surrounding traffic routes of the Prinsenhof ensemble. The routes are marked with orange arrows, the more weight the line has, the bigger the route. So the hefty lines show the busy roads situated on the Phoenixstraat which are accessible by car and the busy public transport route accessible by tram and bus. The smaller red arrows show slower traffic such as pedestrian pathways and cyclists routes. The interesting part of this analysis is the differentiation between the two sides of the Prinsenhof ensemble, the Phoenixstraat side is busy with lots of different traffic types while the Oude Delft is way less busy with just a shared street profile accessible by cyclists and pedestrians. This is something to keep in mind while redesigning the plot, the Phoenixstraat side of the ensemble is busier and accessible by more traffic types. Later in this chapter, sections can be found which will visualize the exact traffic types more precisely.



Figure 81 - Surrounding traffic flows, self made (2020)

- 1- Waalse Kerk (church)
- 2- Oude Kerk (church)
- 3- Best Western Museumhotel (hotel)
- 4- Greengrocer
- 5- Bar/restaurant area
- 6- Offices
- 7- Winkeltje Kouwenhoven (historic shop)
- 8- Prinsenkwartier (art gallery and creative instances)
- 9- Hoogheemraadschap Delft
- 10- Barbaar (bar / restaurant)
- 11- Social housing
- 12- Offices owned by Fokkema & Partners
- 13- Underground parking pedestrian entrance

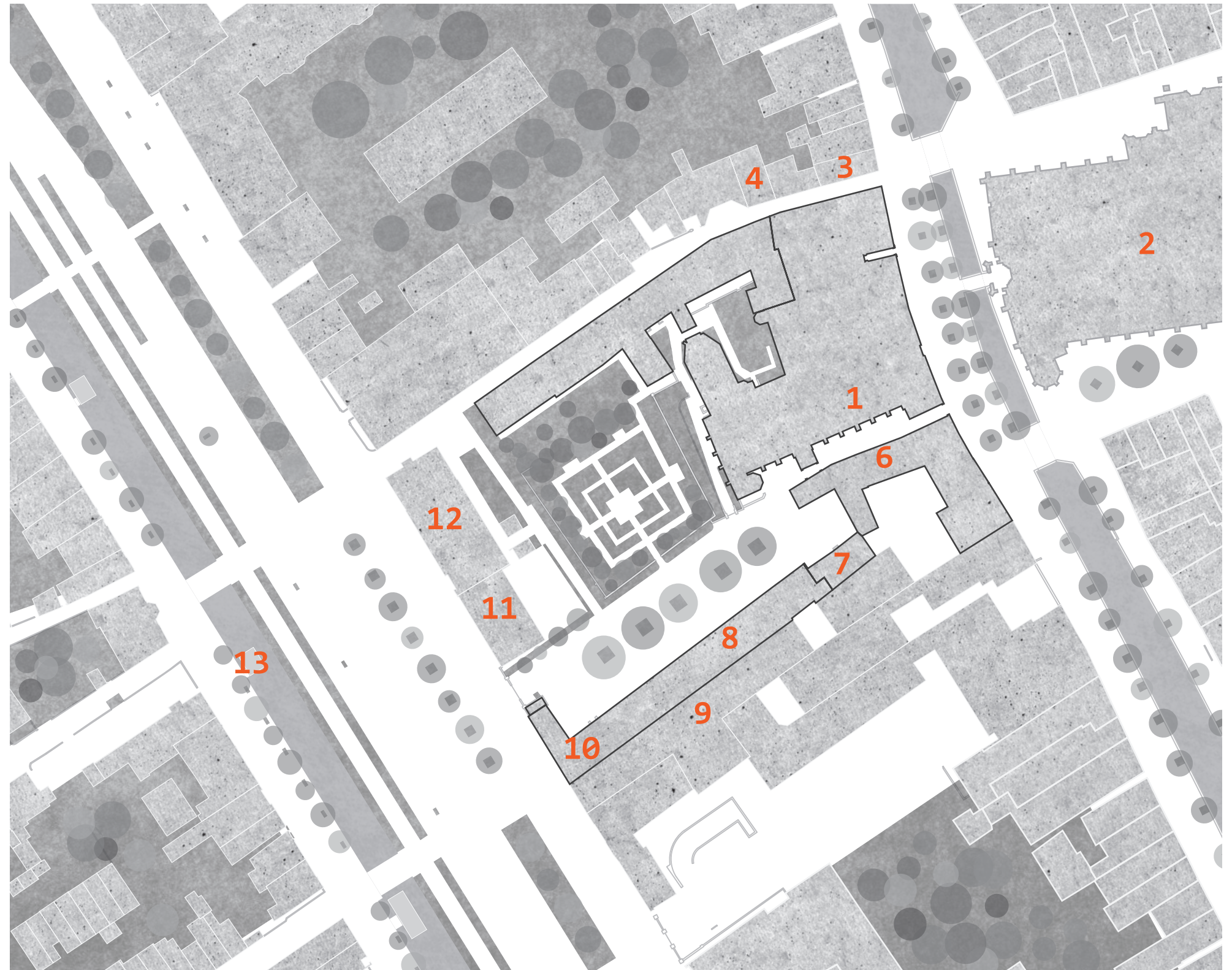


Figure 82 - Surrounding functions, self made (2021)

This drawing overlays the sun path on top of the 3D representation of the current situation at the Prinsenhof ensemble. This is relevant for future interventions since, among other things, determines where the best place is to put the entrance and supporting leisure activities. This drawing clearly shows that the Phoenixstraat side of the plot is more attractive regarding daylight.

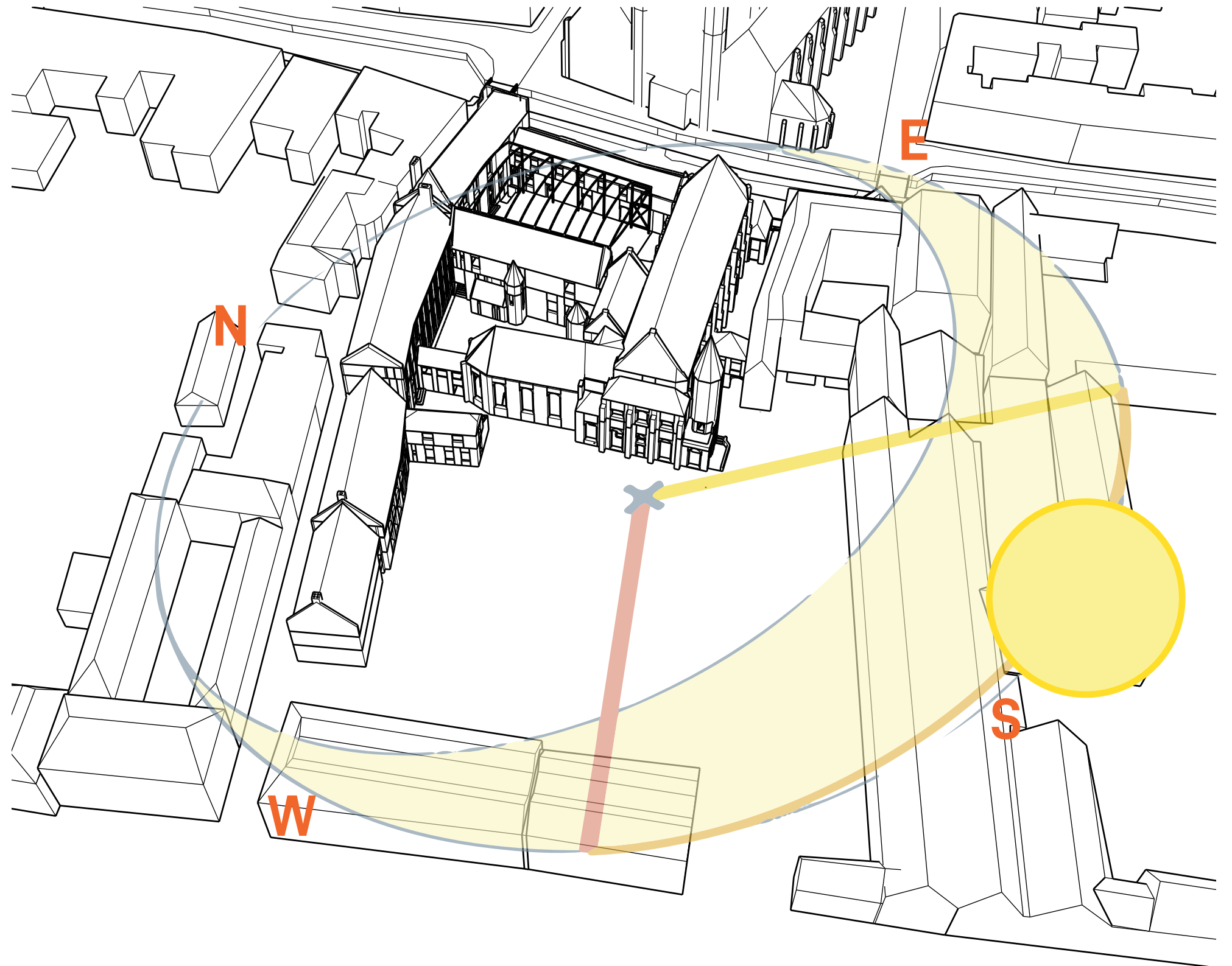


Figure 83 - Sun path, self made (2021)

This drawing shows the relationships between the public and the private areas of the plot. All the buildings which are part of the ensemble are labelled correspondingly. The differentiation in publicness derives from the different functions in the ensemble. Some buildings are privately owned and thus not accessible for public while the museum itself is public but visitors need to pay an entrance fee to get in. The monastery garden together with the inner courtyard are public and free but are closed at night time, the same thing is true for the Prinsenkwartier building. The Van der Mandelezaal and the Kamer van Charitate are located within the Prinsenhof museum, however these spaces are meant for larger events and groups so a rent application has to be arranged first before gaining access to these locations.

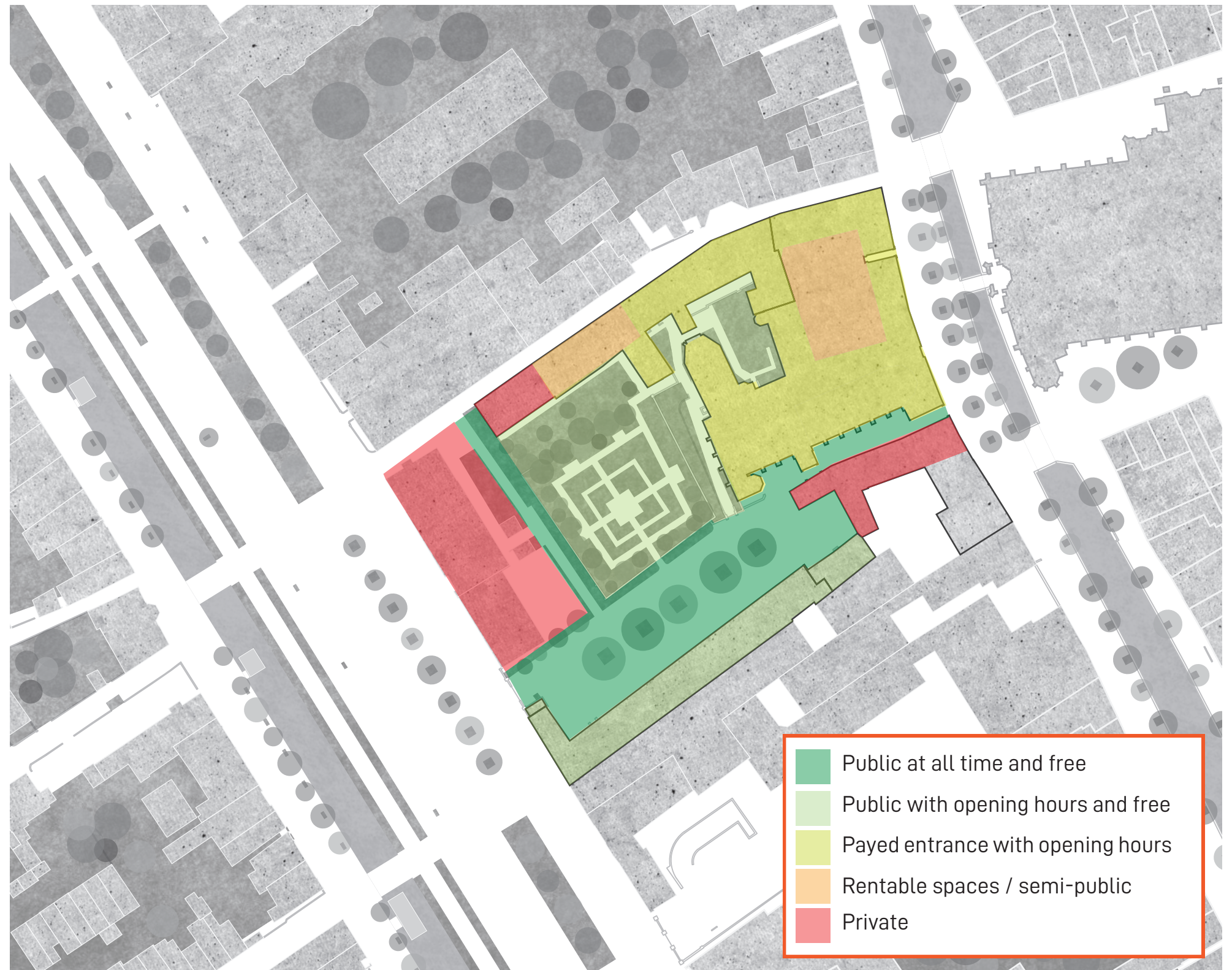


Figure 84 - Public versus private, self made (2021)

To gain a better understanding of the urban morphology of which the Prinsenhof ensemble is part of, it is essential to have a look at the building heights. Interestingly almost all surrounding buildings have roughly the same shade green/yellow, meaning a new intervention should also follow these building heights to blend in properly with the surroundings. The highest building shown on the map is the tower of the 'Oude Kerk'. Besides this the top of the 'Waalse Kerk', situated at the Prinsenhof is also slightly higher than the surrounding buildings, this creates a hierarchy in the urban landscape.

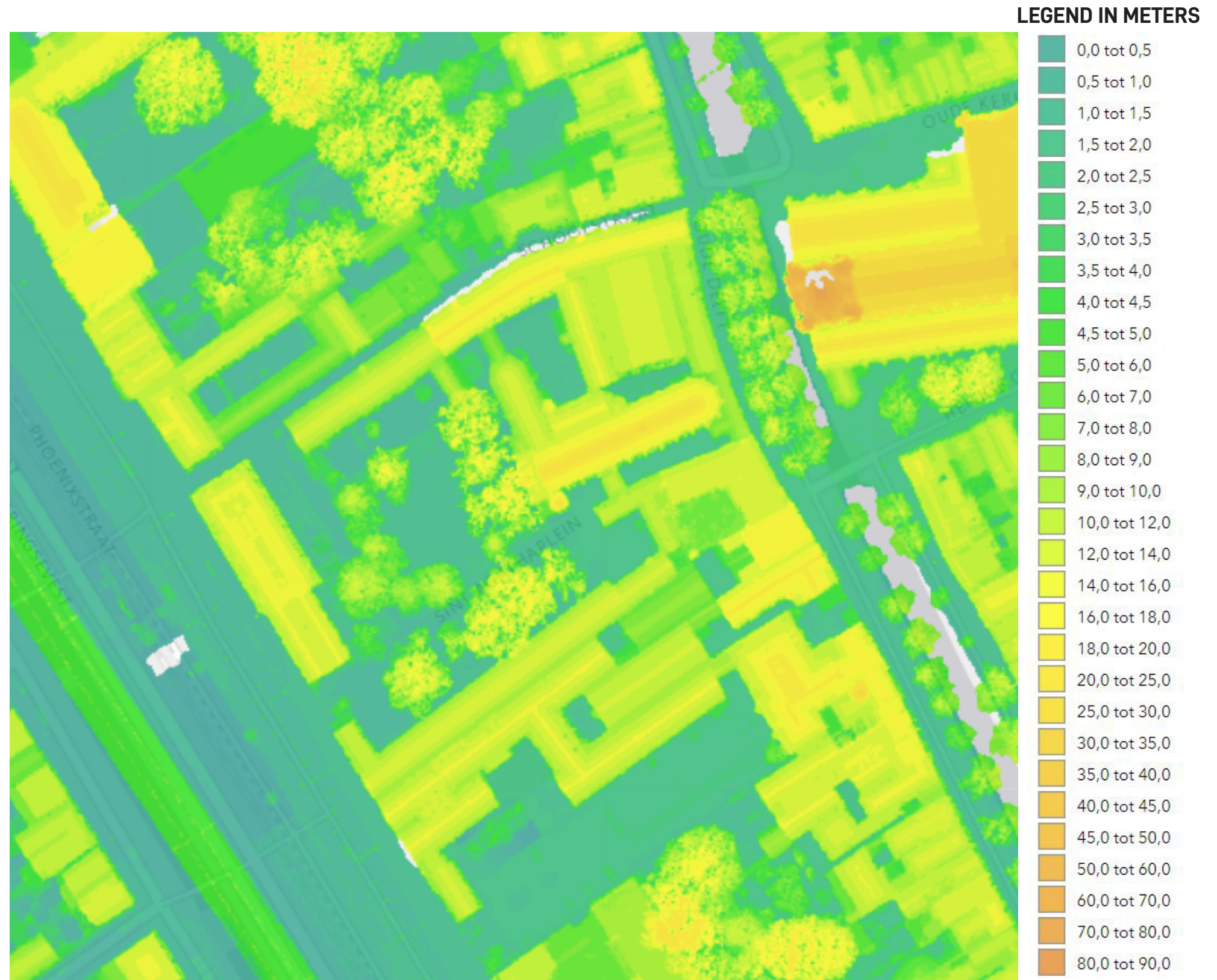


Figure 85 - Building heights, retrieved from: <https://ahn.arcgisonline.nl/ahnviewer/>

SECTION 1:200 PHOENIXSTRAAT 1/2



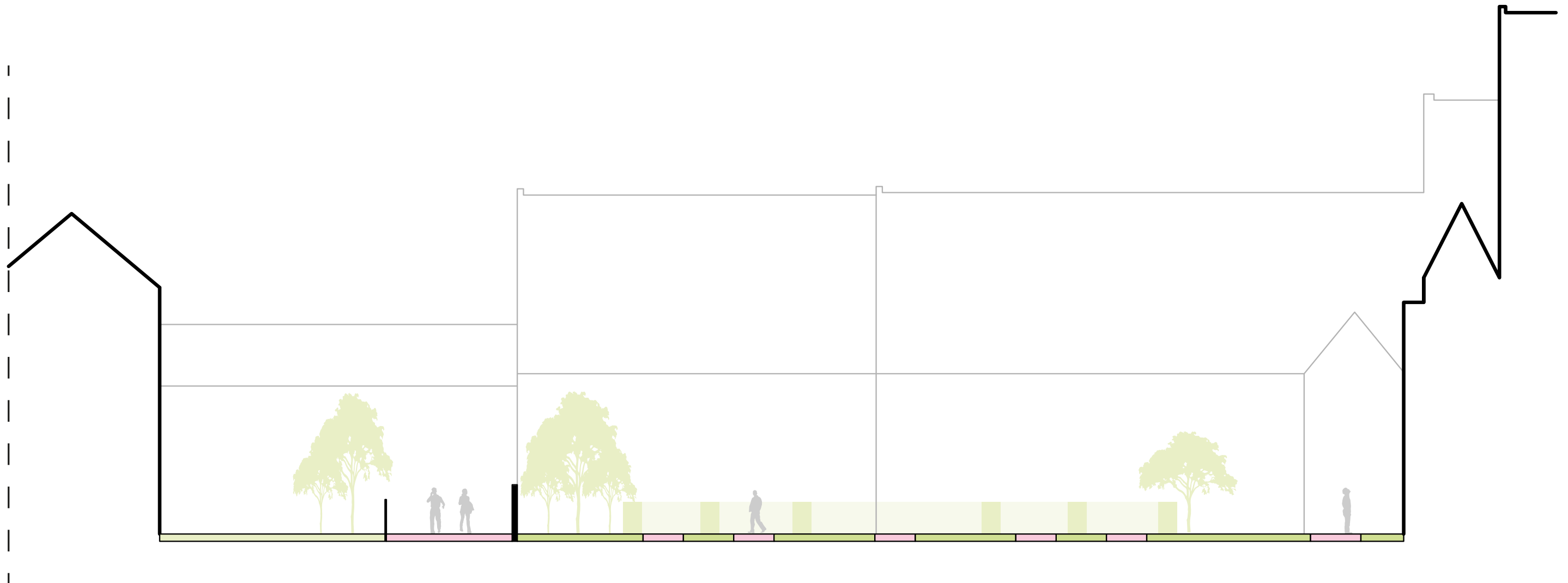
Section location, self made (2020)



The immense street profile of the Phoenixstraat with lots of traffic flows versus the quiet green space of the 'Prinsentuin' at the Prinsenhof.

Figure 86 - Section Phoenixstraat part 1/2 1:200, self made (2020)

SECTION 1:200 PHOENIXSTRAAT 2/2



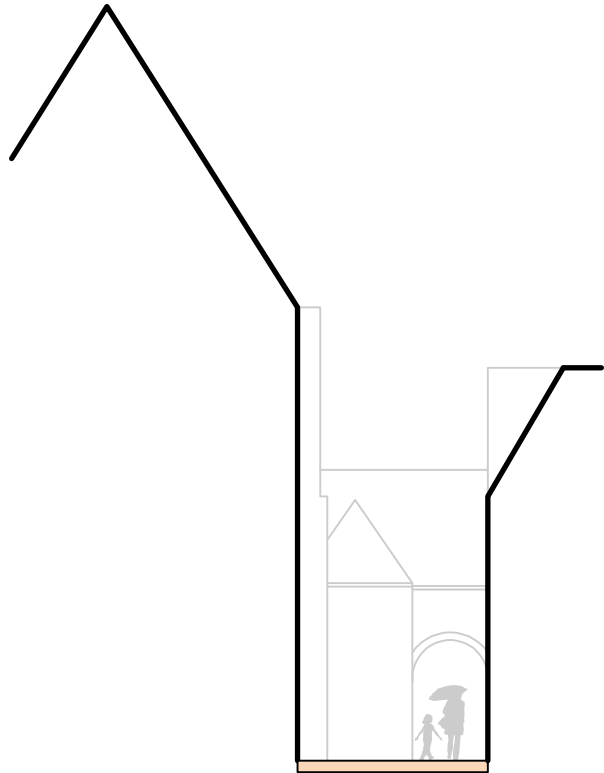
The immense street profile of the Phoenixstraat with lots of traffic flows versus the quiet green space of the 'Prinsentuin' at the Prinsenhof. Here you can also clearly see the difference in heights, cascading from the relatively high building of the Prinsenhof until the buildings at the Schoolstraat and Phoenixstraat.

Figure 86 - Section Phoenixstraat part 2/2 1:200, self made (2020)

SECTION 1:200 ALLEYWAY AGATHAPLEIN



Section location, self made (2020)



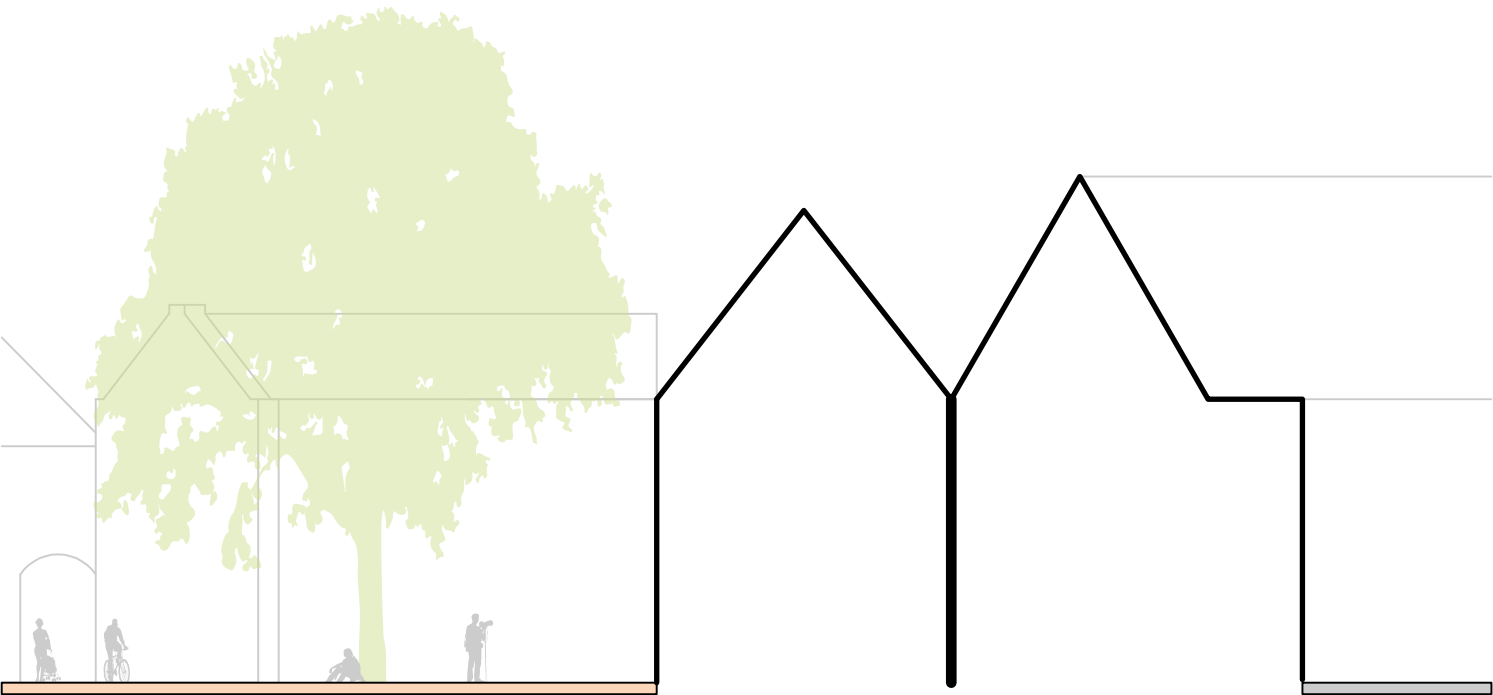
The height of the 'Waalse Kerk' is in contrast with the height of the other building (on the right). This section also shows the narrowness of the porch and corresponding alleyway

Figure 87 - Section alleyway Agathaplein 1:200, self made (2020)

SECTION 1:200 AGATHAPLEIN PRINSENKWARTIER



Section location, self made (2020)



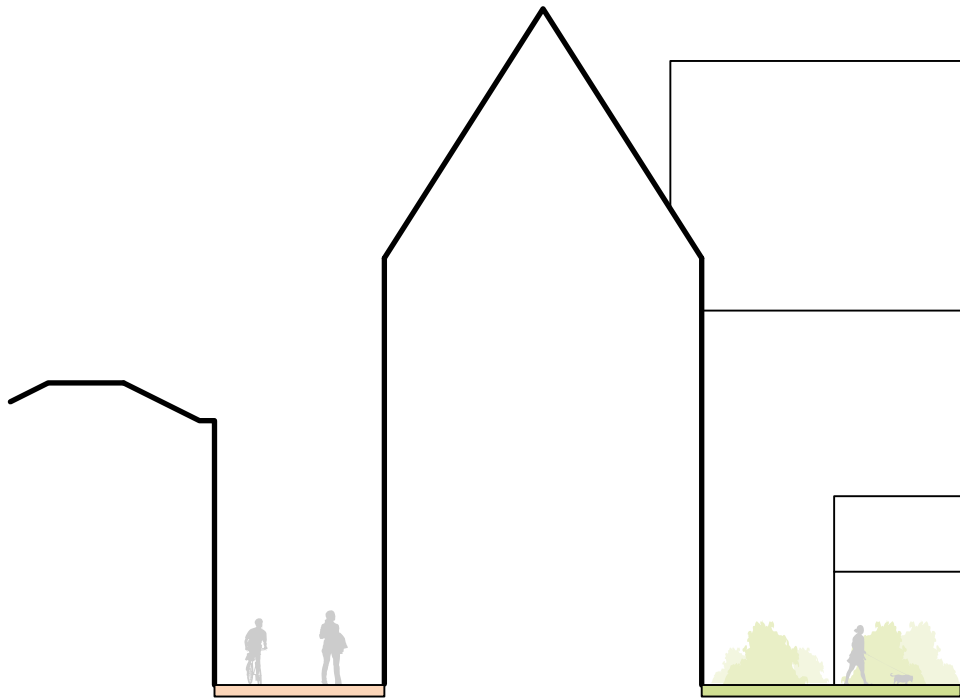
The Prinsenkwartier building effectively has just one side it faces. The 'rear' facade is shared with the 'Hoogheemraadschap'.

Figure 88 - Section Agathaplein - Prinsenkwartier 1:200, self made (2020)

SECTION 1:200 SCHOOLSTRAAT



Section location, self made (2020)



The two different sides of this part of the Prinsenhof building are clearly visible in this section. The narrow and busy Schoolstraat at one side and the quite courtyard at the other side of this building part.

Figure 89 - Section Schoolstraat - Prinsenhof 1:200, self made (2020)

SECTION 1:500 OUDE DELFT



Section location, self made (2020)

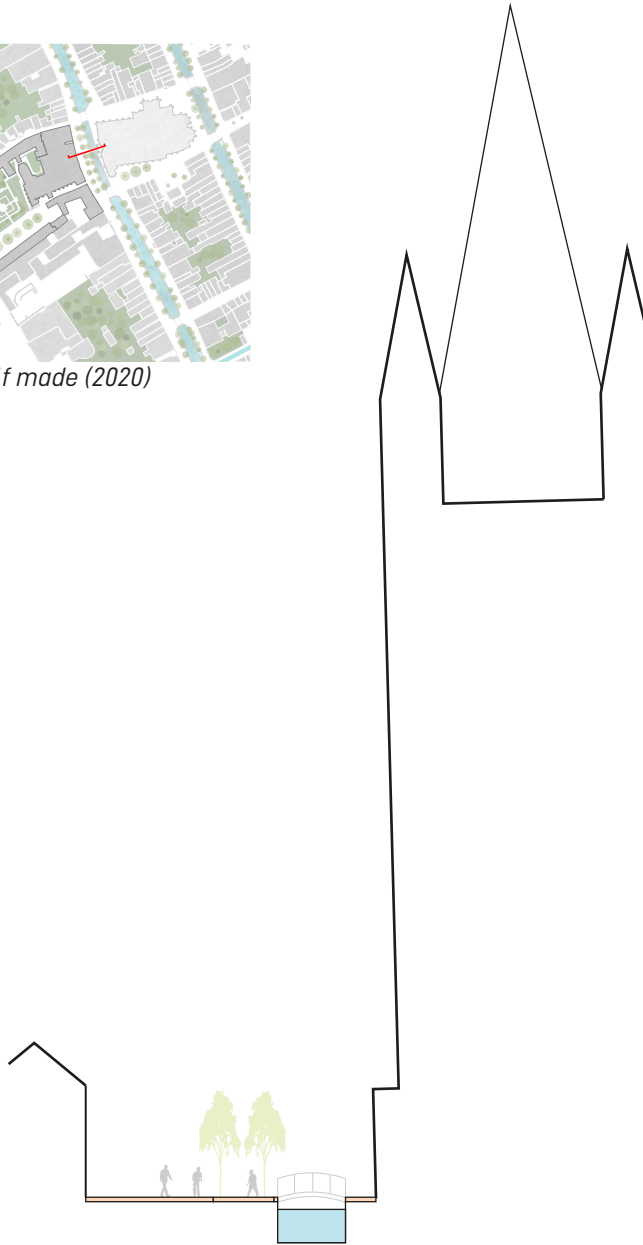


Figure 90 - Section Prinsenhof - Oude Kerk 1:500, self made (2020)



CO-CREATION & DECISION MAKING PROCESS

For this research, Minecraft workshops were conducted to find out what the wishes and needs of the stakeholders were. For this process of conducting workshops to work out smoothly, the team of Heritage4all graduate students (Pien Tol, Diana Ugnat and Mick Bloemendal) under the supervision of the research mentor (Bruno de Andrade) first held trial workshops with Heritage Minor students from the faculty of Architecture, and later a trial workshop with TU Delft students from other faculties. The aim of these trial workshops was to gain experience on how to give and facilitate workshops, but also on how to deal with the decision making process during these workshops. Gaining knowledge by doing. As Armstrong (2002) proved: "Role playing can be used to forecast decisions (pp.1)".

After facilitating these trial workshops, the team was well prepared to host the actual workshops with real stakeholders. The team of graduate students; Pien Tol, Diana Ugnat and Mick Bloemendal all hosted a workshop for their corresponding research locations. The information on all the workshops is listed below:

Minecraft Trial Workshop with Heritage Minor Students from the faculty of Architecture

Date: 11th of November 2020
Method: Zoom with the use of breakout rooms; Minecraft Educational Edition
Virtual Minecraft location: Florence
Stakeholder groups: Developers, Ecologists, Inhabitants/Neighbours, Historians, Municipality
Facilitators: Pien Tol, Diana Ugnat, Mick Bloemendal
Supervisor: Bruno de Andrade

Minecraft Prinsenhof Trial Workshop with TU Delft students

Date: 26th of November 2020
Method: Physical workshop held at the faculty of Architecture; Minecraft 1.12.2
Virtual Minecraft location: Prinsenhof
Stakeholder groups: Heritage student/Historian, Developer, Inhabitant/Neighbour
Facilitators: Pien Tol, Diana Ugnat, Mick Bloemendal
Supervisor: Bruno de Andrade

Minecraft Workshop with Gele Scheikunde Stakeholders

Date: 2nd of December 2020
Method: Physical workshop held at the Faculty of Architecture; Minecraft 1.12.2
Virtual Minecraft location: Gele Scheikunde
Stakeholders: Municipality of Delft, Architect, Delfia Batavorum, Belangenvereniging TU Noord, Student
Facilitator: Diana Ugnat
Assistants: Pien Tol, Mick Bloemendal
Supervisor: Bruno de Andrade

Minecraft Workshop with Prinsenhof Stakeholders

Date: 3rd of December 2020
Method: Physical workshop held at the Faculty of Architecture; Minecraft 1.12.2
Virtual Minecraft location: Prinsenhof
Stakeholders: Prinsenkwartier, Werkgroep Prinsenhof, Freinetshool Delft
Facilitator: Mick Bloemendal
Assistants: Pien Tol, Diana Ugnat
Supervisor: Bruno de Andrade

Minecraft Workshop with Kabelfabriek Stakeholders

Date: 4th of December 2020
Method: Physical workshop held at the Faculty of Architecture; Minecraft 1.12.2
Virtual Minecraft location: Kabelfabriek
Stakeholders: Delfia Batavorum, Neighbour, TU Delft Campus, Architect/Stadsbouwmeester
Facilitator: Pien Tol
Assistants: Diana Ugnat, Mick Bloemendal
Supervisor: Bruno de Andrade

The full methodology and results of these workshops will be explained and visualized on the upcoming pages.

At the start of this exploring phase, the workshop for Heritage Minor students from the Faculty of Architecture was facilitated by the team of graduate students (Pien Tol, Diana Ugnat and Mick Bloemendal) and supported by the research mentor (Bruno de Andrade). This workshop was held online via Zoom on the 11th of November 2020, however the Minor students were located at the faculty of Architecture during the workshop. Each graduate student facilitated the workshop for 10 minor students. Each Minor student had the Minecraft Educational Edition installed beforehand and for this workshop Florence, modelled in Minecraft, was used as the location in which students needed to make their design interventions. Pairs of two Minor students represented one of the following stakeholder groups during these design interventions:

- Developers (represented by Minor student; Sander)
- Ecologists (" "; Margo & Nikita)
- Inhabitants / neighbours (" "; Luc & Nidas)
- Historians (" "; Timon)
- Municipality (" "; Roos & Elbrich)

The schedule of this trial workshop was as following:

13:45-14:00: Workshop explanation

14:00-14:20: Each student explore and play by themselves. Goal: learn how to play.

14:20-14:50: Students work in pairs and are assigned with a stakeholder role (10 students – 5 groups of 2). Pairs work on their design proposal for redesign a building and surrounding.

14:50-15:20: Pairs present their design ideas (3-4 min.) and choose one or more group to work with according to design convergences (5 groups become 2).

15:20-15:40: Final round. Groups keep working on their design proposal. They choose one of the groups files to keep working with. They choose what to rebuild from other groups that merged with them.

15:40-16:10: 8 groups of students (2 from each breakout room) present in the main room (3 min.)

16:10-16:30: Final discussions on 1) potential of Minecraft as a design tool, 2) the role-playing method for consensus-building, and 3) the values-matrix applied to their designs.

As mentioned in the schedule, the students first had time to explore the game themselves before they were assigned with a stakeholder role in the breakout rooms. After each design round, the students needed to present their ideas while keeping the values and attributes of the place in mind; their design needed to be related to these values and attributes. Also the students filled in a values and attributes matrix during the workshop to make sure they overthought their decisions and documented them accordingly.

After each round, the groups of stakeholders needed to decide with which other group of stakeholders they would like to collaborate for the upcoming design round, so 5 groups of stakeholders became 2 groups of stakeholders. However, after the merging, the students still needed to represent their own "original" stakeholder group, the idea was to force the groups into a decision making process and so discuss their interventions between the different stakeholders. The 2 remaining stakeholder groups in the breakout room presented their updated designs to all the students attending the workshop, so everyone left the breakout room and got together via Zoom to see what the other groups had done.

The results of this trial workshop will be explained and visualized on the upcoming page.

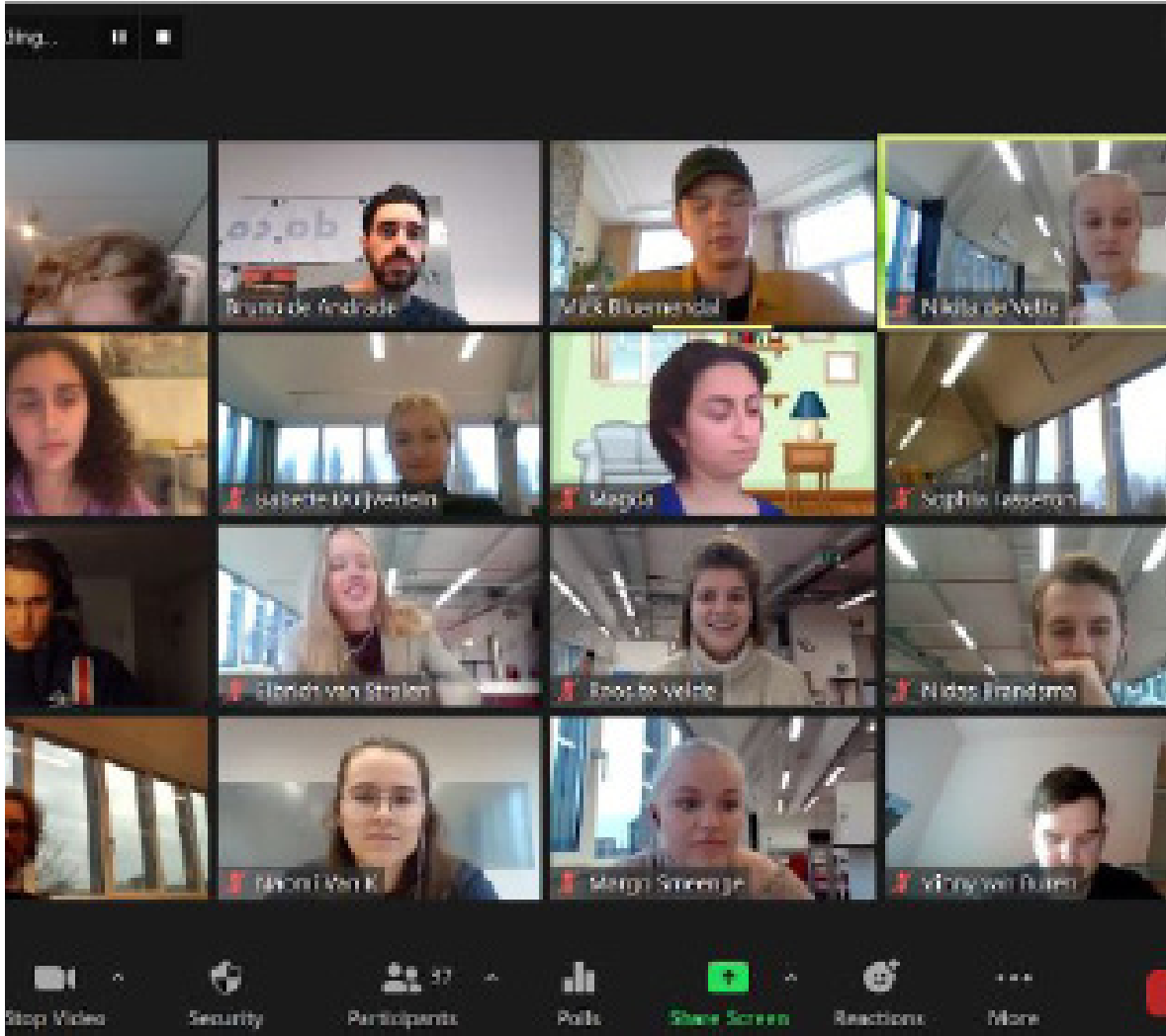


Figure 91 - Trial workshop with minor students dynamics on Zoom, screenshot made by Bruno de Andrade (2020)



Taichen Peter van Vollen
Sustainable group level activities, individual and
level level
Group member: Taver, Mider, Lin, Mider, Rose
Value specific
Building
As given parts and times
It more individuality and helps reduce the level
level level
Goal
As value and individuality plan for creative individuality
It creative building and create and better build
Experiences for individuality + individuality
Benefits
As always
It more money level level of individuality
The design is a balance between the value of the
individuality (more privacy and greenery) and the
value of the level individuality (more individuality to
individuality and value), while not being too much of an
impact to the building.
There is no risk for the film and interesting work
step

Figure 92 - Trial workshop with minor students results and value assessment matrix, handed in assignment by the students (2020)

Students are familiar with the Prinsenhof since they all live and study in Delft. It's also important to mention the fact these participants all have played the game of Minecraft before, either as a child or more recently. The aim of this trial workshop was to mimic the actual workshop with stakeholders but in a boiled down version. This meant the location of Prinsenhof also needed to be virtually modelled into Minecraft. This was done manually with the help of a basic dwg. map which was exported in Minecraft 1.12.2. This export resulted in a 3D environment of Delft but without materials/details applied, just dimensions. After detailing the virtual model so it could be recognized as Prinsenhof, the trial workshop was ready to go. A number of 4 TU Delft students were invited for the trial workshop, the workshop was held at the TU Delft faculty of Architecture and took slightly over an hour.

The participant students were asked to play the role of a stakeholder related to Prinsenhof. Since the aim was to mimic the upcoming co-creation workshop with corresponding stakeholders, the roles the trial workshop participants took were based on the invited stakeholders for this upcoming co-creation workshop. This meant the participants and corresponding stakeholder roles were as following:

Participants:
Student 1 – Bachelor student faculty of Architecture
Student 2 – Bachelor student faculty of Architecture
Student 3 – Bachelor student faculty of Architecture
Student 4 – Bachelor student faculty of Mechanical Engineering

Stakeholder roles:
Heritage student/Historian by Student 3 & Student 4
Developers represented by Student 2
Neighbours represented by Student 1

Workshop facilitator: Mick Bloemendal
Workshop assistants: Pien Tol & Diana Ugnat
Workshop supervisor: Bruno de Andrade

The activities during this trial workshop were:

10min – Welcome and introduction

Welcome the participants at the TU Delft faculty of Architecture. Explaining what Heritage4all stands for and what this research is about.

10 min – Exploration of Minecraft by the participants while making a value assessment

Since the participants already had quite some experience with the game of Minecraft, they immediately started with the value assessment. The way this value assessment was conducted was by using coloured banners in the game (red/orange/green) which the participants could place throughout the virtual location of Prinsenhof in Minecraft. The banners the participants could place were as following:

- Red – demolish (no value)
- Orange – can keep, but needs change (positive value)
- Green – conserve (high value)

30 min – Round 1 of design interventions

The participants were assigned with a stakeholder group and had 30 minutes to make a design interventions in Minecraft related to their corresponding stakeholder role.

5 min – Participants present their design interventions

The trial workshop participants presented their design interventions, also explaining which parts they found valuable and which parts could use improving.

15 min – Combining all stakeholder groups to make a consensus design

After the presentations, the design interventions of all groups were combined into one Minecraft file. This process facilitated a discussion on which elements of the previous design round should be implemented into the final consensus.

10 min – Discussion on the workshop and the use of Minecraft in decision making processes

After the consensus building, a final discussion on the workshop and the use of Minecraft as a tool took place.

The results of this trial workshop will be explained and visualized on the upcoming pages.

Important note: The save files from student 2 (developer) corrupted, so there won't be a page explaining this file unfortunately.



Figure 93 – Trial workshop Prinsenhof dynamics, picture made by Pien Tol (2020)

NEIGHBOURS - STUDENT 1

With the value assessment markers, the neighbour stakeholder group marked the wall surrounding the monastery garden red, meaning it has no value. However, the monastery garden itself was marked green, so marked as high value. For the design of the neighbour stakeholder group, it was decided to open up the plinth of the Prinsenkwartier building more and to remove the wall surrounding the monastery garden. This way a more active square (Agathaplein) was realised. To open up the plinth of the Prinsenkwartier buildings, the neighbour stakeholder group decided to add a new function – a flower shop. Also the monastery garden was redesigned adding more seating and places to stay. Overall the design was aimed towards creating more accessibility, liveliness and opening up the garden more for the public. The images show the Prinsenhof in Minecraft before and after the interventions.



Figure 94 - Original Minecraft file Prinsenhof, self made screenshot (2020)



Figure 95 - Original Minecraft file Prinsenhof, self made screenshot (2020)



Figure 96 - Value assessment labeling student 1, self made screenshot (2020)



Figure 97 - First round design intervention student 1, self made screenshot (2020)



Figure 98 - First round design intervention student 1, self made screenshot (2021)

HERITAGE STUDENT / HISTORIAN - STUDENT 3 & 4

The stakeholder group of student heritage / historian decided to focus their design on the Oude Delft side of the ensemble. With their value assessment they marked the Agathaplein green (high value), the lamp posts red (no value) and the façade and public space in front of the Oude Delft façade orange (needs change). The design intervention they made was to open up the Oude Delft façade, making the building's interior more visible from the street and bringing in more light. Also they redesigned the public space in front of this façade by covering up the canal partly, this way a place for leisure could be created which was linked with the Prinsenhof building. A restaurant/bar function was placed inside the Prinsenhof building with a terrace in front on the newly created square. The images show the Prinsenhof in Minecraft before and after the interventions.



Figure 99 - Original Minecraft file Prinsenhof, self made screenshot (2020)



Figure 100 - Original Minecraft file Prinsenhof, self made screenshot (2020)



Figure 101 - Value assessment labeling student 3&4, self made screenshot (2020)

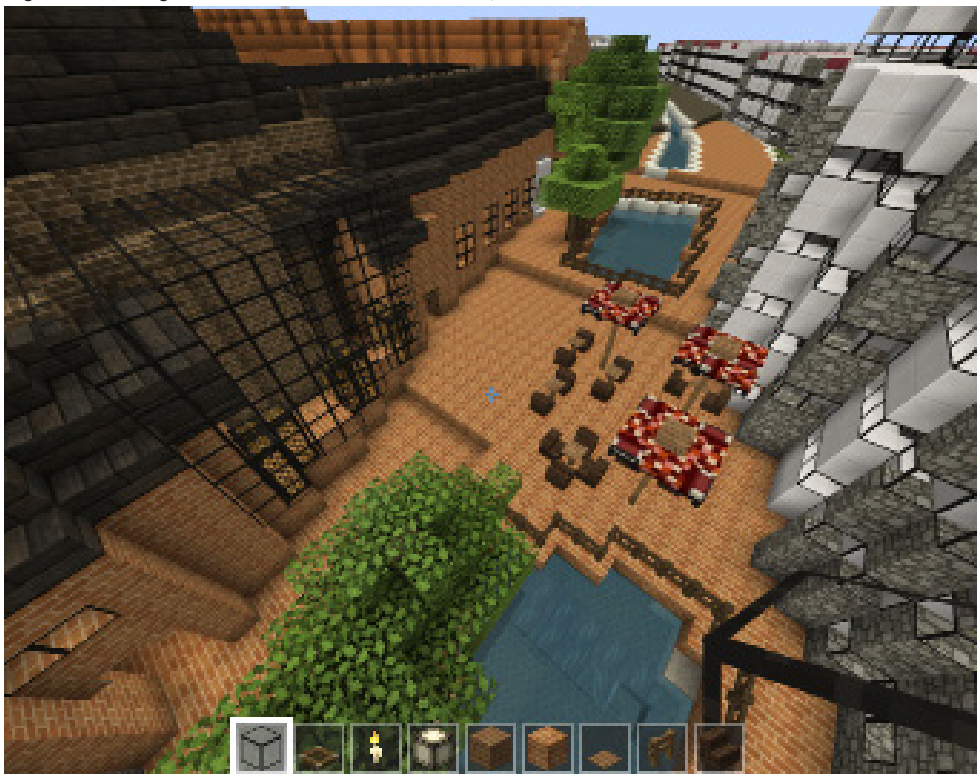


Figure 102 - First round design intervention student 3&4, self made screenshot (2020)



Figure 103 - First round design intervention student 3&4, self made screenshot (2020)

CONSENSUS BUILDING - FINAL DESIGN

During the consensus building discussion it was the aim to combine all the design ideas of the stakeholder groups and thus create a consensus design which every stakeholder was content with. The neighbour stakeholder group's design of the flower store and the removal of the monastery garden wall was accepted immediately by all stakeholders. However, the design of the heritage student / historian stakeholder group sparked a discussion. The question was why as historians you should partly demolish the Oude Delft façade, the answer was to make the Waalse Kerk façade more visible by adding a glass structure. This idea was accepted but the design slightly changed, the roof corresponding to the Oude Delft façade was kept in place, adding a skylight, and opening up the façade itself with glass. The terrace idea on this side was also accepted by all stakeholders. However, the developer wanted to add separate food stall on the newly designed square to create revenue at all time. Also a function was added to the covered inner courtyard (van der Mandelezaal), namely an event space which was publicly accessible at all times from the restaurant/bar area inside the building. The function of this event space could be a place to study or have lunch. The QR codes below show videos of different processes during the workshop. The images show the Prinsenhof in Minecraft before and after the interventions.



Consensus building video, made by Pien Tol (2020)



Workshop discussions video, made by Pien Tol (2020)

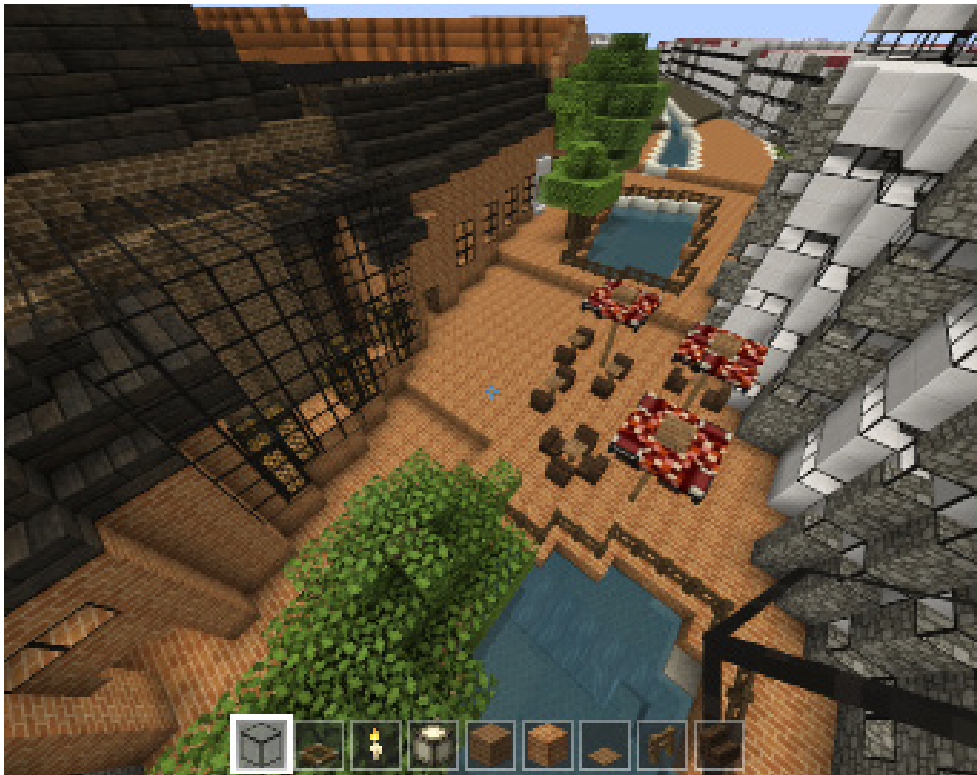


Figure 104 - Original Minecraft file Prinsenhof, self made screenshot (2020)



Figure 106 - Merged final design, self made screenshot (2020)



Figure 105 - Original Minecraft file Prinsenhof, self made screenshot (2021)



Figure 107 - Merged final design, self made screenshot (2021)

The graduation track of Heritage4all is aimed towards involving people from the community so that they are involved in the redevelopment process of their built environment. During this process of redevelopment, it would be ideal to consult every stakeholder; everyone should be heard. However, this also creates a dilemma since all stakeholders have different opinions, wishes and needs. Therefore, different approaches were used to involve and consult stakeholders related to the Prinsenhof museum Delft.

One of the most important ways of involving stakeholders in the redevelopment process for the Prinsenhof museum Delft was to conduct, and record, interviews so the stakeholders could express their wishes. A lot of these interviews were arranged by the research (Bruno de Andrade)- and design mentor (Alexander de Ridder) from the Heritage4all team. Also some interviews were organized by the graduate students from Heritage4all (Pien Tol, Diana Ugnat, Mick Bloemendal). To approach the stakeholders for an interview, often stakeholders were phoned by either the design mentor (Alexander) or by one of the graduate students (Pien, Diana, Mick). Besides calling, e-mails were an important way to quickly get, and stay, in touch with stakeholders, also relevant information and documents were shared this way.

Also, especially during the start phase of this research when COVID-19 wasn't as restricting as it is today, stakeholders were also approached during fieldwork and site visits. In the end, having a face-to-face conversation works the best for stakeholders to express their wishes. That's why the interviews and workshops were such a vital way to gain information. Inviting the stakeholders for the workshops was done during the interviews or by having a phone call. Inviting stakeholders turned out to be difficult via e-mail, that's why more direct ways were conducted. This process of inviting and contacting stakeholders was constantly assisted and supervised by design mentor; Alex-

ander de Ridder, and research mentor; Bruno de Andrade.

The co-creation workshops with stakeholders was one of the most important methods of involving stakeholders during this research. These workshops were held in person at the TU Delft faculty of Architecture. Spending an entire afternoon with different stakeholders related to the Prinsenhof museum turned out to be one of the most efficient ways of truly involving stakeholders for the redevelopment of their built environment. After these interviews and workshops, it was noticeable the participants felt more heard and involved. Furthermore, a lot of stakeholders explicitly said they would love to stay involved and keep updated with this research and the upcoming design for Prinsenhof Delft.

However, due to the COVID-19 regulations it was not possible to have a lot of stakeholders participate in the workshops. For future stakeholder workshops it would be best if more stakeholders could attend.

Concludingly, stakeholders were approached, informed and invited for interviews either by e-mails, phone calls or face to face conversations. For inviting stakeholders for the workshops, stakeholders were called by phone, invited during the interviews or invited during site visits. The methods of collecting and documenting the stakeholders wishes and needs were to arrange and record interviews and to conduct co-creation workshops.

The stakeholders that eventually joined the workshop were:

- A representative from Prinsenkwartier
- A representative from Werkgroep Prinsenhof
- A representative from de Freinetschool

Other attendees were:

- Bruno de Andrade (supervisor)
- Mick Bloemendal (workshop facilitator & assistant)
- Pien Tol (workshop assistant)
- Diana Ugnat (workshop assistant)

The methodology of the workshop will be explained chronologically in this chapter.

13:45 – 14:00 – Introduction and explanation

The workshop participants were asked to collect themselves in front of the information desk situated at the TU Delft Architecture faculty where the workshop assistants welcomed them. After all the workshop participants were collected at the information desk, they were brought upstairs to the prepared workshop space in the atelier at the faculty of Architecture.

When all the attendees and workshop assistants arrived at the workshop space, the attendees were offered something to drink



Figure 108 - workshop space during the workshop, by Pien Tol (2020)

to get them more comfortable. With the COVID-19 guidelines in mind, all the attendees had their own table at the atelier so the distance keeping could be guaranteed. Also the tables, laptops, pens and markers were disinfected beforehand to minimize the contamination risk. The workshop could start.

After the workshop facilitator introduced himself and the assistants, he asked to all the participants to introduce themselves to each other. The participants were:

- A representative of the Prinsenkwartier
- A representative of the Werkgroep Prinsenhof
- A representative of the Freinetschool

After this introduction, the workshop facilitator explained the workshop schedule together with the aims and goals of the workshop. Also the participants watched a video on GeoCraft, a project which is focusing on digitalizing the world into Minecraft, to get familiar with the potential of the game of Minecraft.

14:00 – 14:30 – Explore Minecraft and value the Prinsenhof

In the beginning of the workshop the participants were asked to fill in a values and attributes assessment survey about the Prinsenhof ensemble. The aim of this survey was to explore which attributes of the Prinsenhof are of value according to the expertise of the workshop participants. Also, together with the survey, the participants were encouraged to explore the game of Minecraft. This way the participants could get familiar with the game and also explore Prinsenhof through Minecraft.

14:30 – 15:30 – Design round

After the exploration and value assessment phase, the first round could start. In this round the workshop participants were asked to make design interventions related to their expertise. These interventions were done in the Prinsenhof model, made in the game of Minecraft. Also printed plans, images and tracing

paper could be used to assist their design thinking process. The participants, assisted by the workshop assistants, had 45 minutes to make the design intervention in Minecraft. To finish this round, all the stakeholders were asked to present their designs and decide with which stakeholder they would like to work in the next round.

Representative of the Prinsenkwartier:

Treat the Prinsenhof ensemble as a whole during the development of the area, so not just focus on the museum itself but also on the surrounding buildings. Also make the museum/cloister more visible from the Phoenixstraat (the obvious way of approaching the area). Demolish the buildings situated on the Phoenixstraat and also the brick wall surrounding the cloister garden. Place a new volume/building with other museum spaces at the Phoenixstraat. Room for other exhibitions, not only the current exhibitions in the museum, but also modern/contemporary art and about the history of Delft. Also bring in water to the area.

Representative of the Werkgroep Prinsenhof:

Make a transparent street through the grey building alongside the Phoenixstraat. Improve visibility. Make the garden functional again as vegetable garden. Treat the complex as a whole. Also mentioned that the current inhabitants of the building alongside the Phoenixstraat didn't mind if their building would be replaced by something new, as long as they could stay living there.

Representative of the Freinetschool:

Make the museum more visible from the Phoenixstraat by making an intervention in the current building situated there. Also house more functions in the area for (school-) children. More interactive experiences. Leisure activities, such as a restaurant could be placed at the Phoenixstraat to attract more visitors and make the place more lively.

15:30 – 17:00 – Discussion + consensus building

After the stakeholders presented their design interventions, the aim was to merge the stakeholders into two groups and let these groups make a design. However, since some invited stakeholders didn't showed up in the end and the design interventions of the participant stakeholders were rather similar in ideas we decided to merge all stakeholder together for this round. The aim was to merge all interests, points of view and come to an overall consensus.

For this round, the facilitator took the control over Minecraft trying to transfer the ideas that derived from the discussion between the participants into the Minecraft file. So, the participants had a discussion on which design elements from the previous round should be implemented in the overall consensus design and furthermore which elements to add to the design. The aim of this round was to combine all the wishes and needs from the stakeholders and also get more in detail on how to realize this into a design.

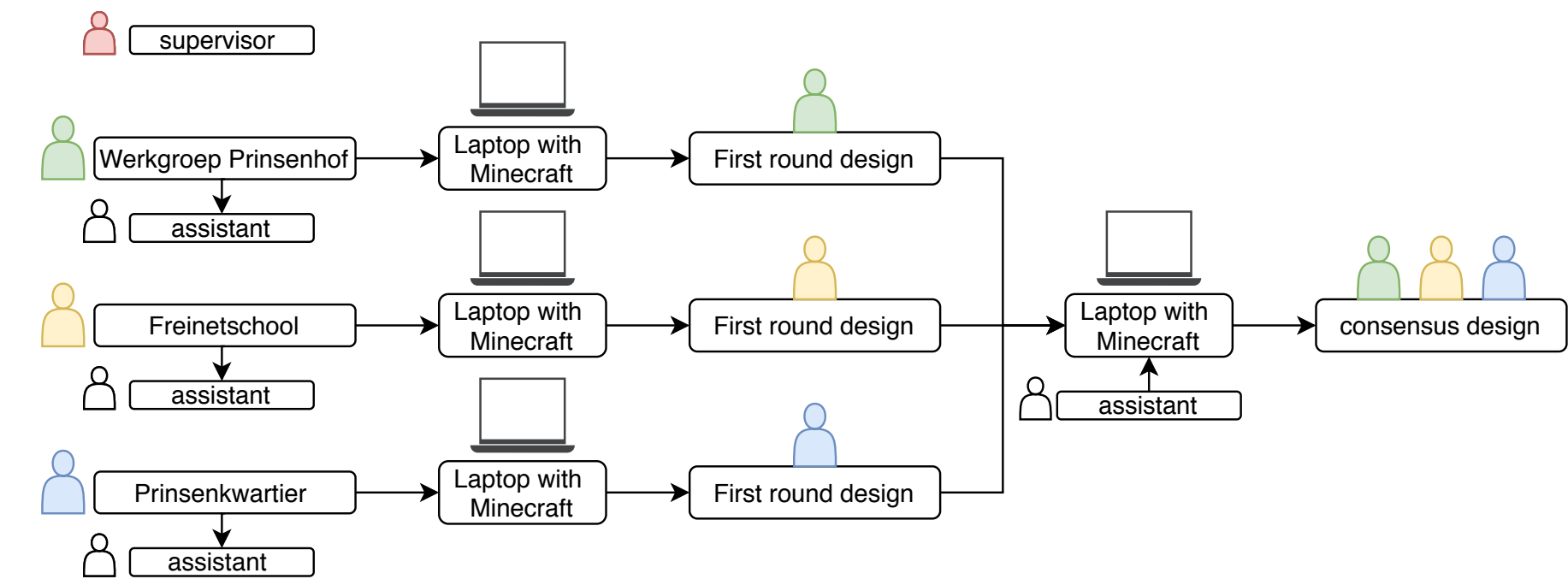


Figure 109 - Workshop structure flow chart, self made (2020)

Since the discussion happened in a quick tempo, it was difficult to instantly transfer these discussion points into Minecraft. Therefore the model has some example design interventions mentioned during the final discussion. All of the design examples and ideas derived from the final discussion and consensus building are summed up on this page.

17:00 End of the workshop / Minecraft survey

After the workshop was finished, the participants were asked to fill in a final survey related to Minecraft. The aim of this survey was to find out in which ways Minecraft can be used as a design- or decision making tool.



Workshop dynamics video, made by Bruno de Andrade (2020)

Value Assessment | Waardestelling
Prinsenhof Delft

3/12/20

Naam :
Organisatie / beroep :

Niet waardevol / mag worden gesloopt
Gemiddeld waardevol / aanpassing of verbetering vereist
Waardevol / moeten worden behouden

Omcirkel uw antwoord, licht toe indien nodig.



Entree via de Phoenixstraat:
Niet waardevol
Waarom:



Gemiddeld waardevol Waardevol



Terras St Agathaplein:
Niet waardevol
Waarom:



Gemiddeld waardevol Waardevol



Prinsenkwartier:
Niet waardevol
Waarom:



Gemiddeld waardevol Waardevol



Kanstambomen:
Niet waardevol
Waarom:



Gemiddeld waardevol Waardevol



Lantaarnpalen:
Niet waardevol
Waarom:



Gemiddeld waardevol Waardevol



Hoftuin:
Niet waardevol
Waarom:



Gemiddeld waardevol Waardevol



Binnentuin:
Niet waardevol
Waarom:



Gemiddeld waardevol Waardevol



Entree van het Museum:
Niet waardevol
Waarom:



Gemiddeld waardevol Waardevol

The workshop participants were asked to fill in this value assessment survey. For all of the pictures in the survey, the participants needed to fill in if that particular place in their eyes is: Valuable (to keep), Moderately valuable (can/should change), Not valuable (demolish).

Figure 110 - The value assessment survey used in the stakeholder workshops, self made (2020)



Van de Mandelazaal:
Niet waardevol
Waarom:



Gemiddeld waardevol

Waardevol



Schoolstraat:
Niet waardevol
Waarom:



Gemiddeld waardevol

Waardevol



Steeg met de poortjes:
Niet waardevol
Waarom:



Gemiddeld waardevol

Waardevol



Fokkema & Partners gebouw Phoenixstraat:
Niet waardevol
Waarom:



Gemiddeld waardevol

Waardevol



Oude Delft aanzicht:
Niet waardevol
Waarom:



Gemiddeld waardevol

Waardevol



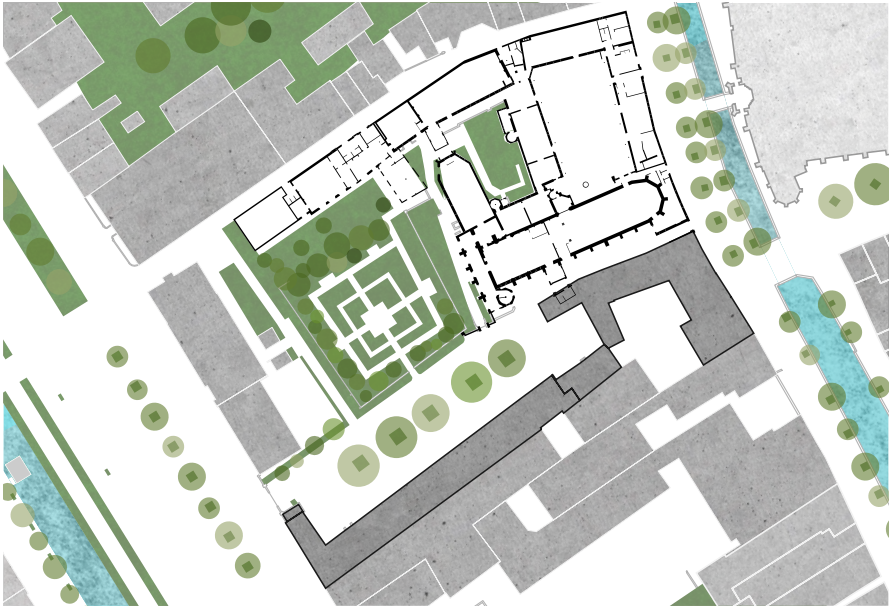
Woningbouw Phoenixstraat:
Niet waardevol
Waarom:



Gemiddeld waardevol

Waardevol

Suppose you need to demolish one building volume, which one? Cross this volume on the map below.



Suppose you must add one new function to the ensemble, which function would this be?

Do you have other suggestions or comments which you think should be taken into account?

Figure 110 - The value assessment survey used in the stakeholder workshops, self made (2020)

The final open questions of the survey are translated above.

FREINETSCHOOL DELFT

The representative of the Freinetschool Delft opted for a design situated at the Phoenixstraat side of the ensemble. The idea was to demolish the building(s) currently standing at this side, so the social housing and the building owned by Fokkema & Partners, and replacing this with a more transparent volume. This transparent volume should make the original Prinsenhof building more visible from in their opinion the main way of approaching. Modern materials such as steel and glass should be used to make a clear distinction between the historic and new buildings, "don't create 'fake' history". Also incorporated in this design is the removal of the wall surrounding the monastery garden since these walls also blocks the view on the original Prinsenhof monastery building. On top of that, the surrounding walls also prevent a good circulation of the public space, currently you can only enter the garden in two places next to each other creating dead ends.

The new modern volume should, according to the Freinetschool representative, house a few new functions. One of the functions this new volume should house is experimental exhibition spaces focussed towards the younger audience, this way children get more engaged with the plot. These new exhibition spaces should also be partly free and public so people have more reason to have a look inside. Besides this, more leisure functions such as a bar or restaurant could be housed here attracting more people in the area. In the eyes of the Freinetschool it is important to create reasons for all kinds of people to stay in the area, not just passing through or visiting the museum once in their lives.



Figure 111 - DESIGN INTERVENTION IN MINECRAFT - EXTERIOR, self made (2021)



Figure 112 - ORIGINAL SITUATION IN MINECRAFT, self made (2021)



Figure 112 - DESIGN INTERVENTION IN MINECRAFT - INTERIOR, self made (2021)

WERKGROEP PRINSENHOF

The Werkgroep Prinsenhof had a similar idea of making an intervention at the Phoenixstraat side of the plot. The building currently owned by Fokkema & Partners was the target for this intervention. The idea was to make a transparent street running through the existing building of Fokkema & Partners. This would improve the visibility on the original Prinsenhof building and make people curious on what lies behind, thus attracting people. "Currently the entrance of the Prinsenhof museum is hidden away in the cityscape, this new intervention should improve this". The new intervention is made mostly out of modern materials such as glass and steel, working together with the already existing building of Fokkema & Partners. Besides that, the Werkgroep Prinsenhof opted for making the garden functional again, bringing them back to their original function of (monastery) vegetable gardens. This was however not implemented into the Minecraft design due to time management.

The function housing this new intervention is a bookshop/library and a museum shop. This will attract more people into the area, not just people visiting the museum or passing through. Quite a realistic and conservative approach.



Figure 113 - DESIGN INTERVENTION IN MINECRAFT - EXTERIOR, self made (2021)



Figure 114 - ORIGINAL SITUATION IN MINECRAFT, self made (2021)



Figure 115 - DESIGN INTERVENTION IN MINECRAFT - INTERIOR, self made (2021)

PRINSENKWARTIER

The most bold design intervention was made by the Prinsenkwartier representative. This intervention opted for a complete demolishing of the buildings situated at the Phoenixstraat, so the social housing and the building owned by Fokkema & Partners. Interestingly, all stakeholders went for a design at the same side of the complex, apparently the side which needs most attention in their eyes. The Prinsenkwartier representative mentioned that the Prinsenhof complex should be dealt with as a whole, so not just the Prinsenhof museum. More so, the museum building itself will cost so much money to bring back to current standards it's better to find a solution somewhere else within the ensemble. The new volume placed instead of the demolished buildings should be again made transparent so the visibility on the Prinsenhof buildings will improve. Also the walls surrounding the monastery garden were demolished for this reason.

This new volume houses new exhibition spaces which aren't necessarily related to the current exhibition at the Prinsenhof. Modern/contemporary exhibition spaces and exhibition spaces focussed on the history of Delft and the technologies of Delft were examples mentioned by the Prinsenkwartier representative. Another design idea, not visualized in Minecraft due to time management, was to bring water into the plot working together with the garden providing a nice place to stay and not just to pass through.



Figure 116 - DESIGN INTERVENTION IN MINECRAFT - BIRDSEYE VIEW, self made (2021)



Figure 117 - ORIGINAL SITUATION IN MINECRAFT, self made (2021)

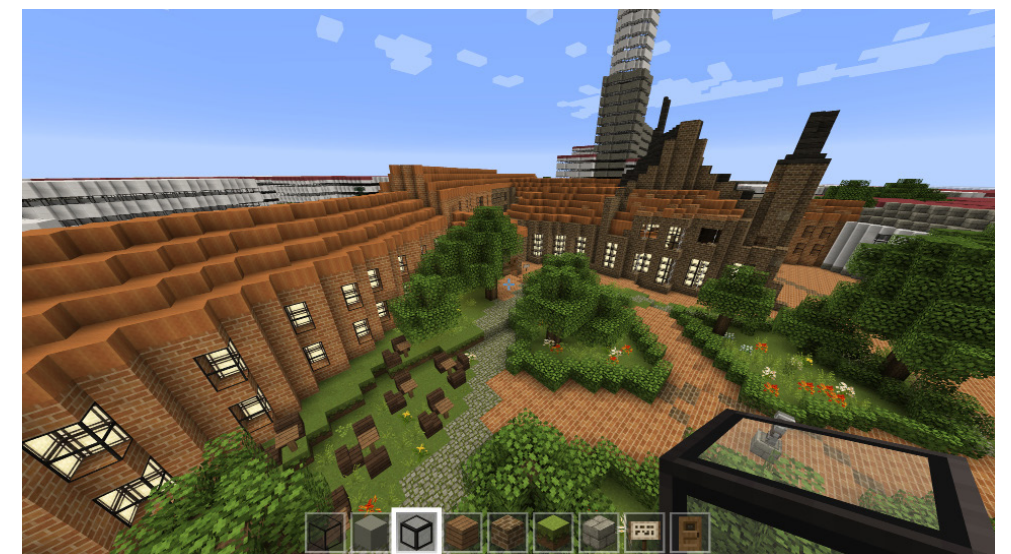


Figure 118 - DESIGN INTERVENTION IN MINECRAFT - GARDEN VIEW, self made (2021)



Figure 119 - Workshop atmosphere, by Pien Tol (2020)

The outcomes of the consensus building discussion summed up in design interventions:

- Treat the complex as a whole while designing, so don't just focus on the museum part.
- Make the complex more accessible, currently lot of space is out of use.
- Make sure the complex is a place to stay and not just to pass by, more liveliness.
- Make the building more visible from the Phoenixstraat.
- Change/demolish the buildings alongside Phoenixstraat.
- Open up the windows at the Oude Delft side.
- Create a square in between the Oude Kerk and the Prinsenhof.
- Van Mandelezaal should be publicly accessible and could be a space for different functions (functions will be mentioned later on).
- Waalse Kerk should be used as a church with room for some mixed use events and functions (no permanent interventions)
- Leisure activities (restaurant/bar/etc.) at the Oude Delft and/or at Phoenixstraat to make the area more lively and attractive.
- Make use of different (smaller) exhibitions with different tickets so people can choose what they would like to visit without paying for the entire museum.
- Stakeholders prefer using modern materials for new interventions that clearly differentiate from the current materials at Prinsenhof
- Bring water into the plot
- New interventions should not take the attention away from the original Prinsenhof
- Keep in mind the accessibility during night time, light the place or close some spaces that aren't suited for night visits (inner garden).

Functions that could fit the Prinsenhof ensemble mentioned by the stakeholders:

- Silent spaces (rentable / free access (for students))
- Library
- Bookshop
- Study rooms (for students / TU Delft)
- Small scale shops
- Coffee corner
- (smaller) Exposition spaces
- Interactive spaces (free access)
- Statue garden
- Leisure (Restaurant/bar/terrace/café)

Answers on the open questions from the value assessment survey:

Suppose you need to demolish one building volume, which one? Cross this volume on the map below.

All stakeholders crossed the buildings alongside the Phoenixstraat (social housing & building owned by Fokkema & Partners).

Suppose you must add one new function to the ensemble, which function would this be?

Freinetschool Delft: "Free / simply accessible exploration spaces for children."

Prinsenkwartier Delft: "Museum spaces aimed at the (technological) history of Delft."

Werkgroep Prinsenhof Delft: "Strengthen the Prinsenhof ensemble as a contemporary debate- and culture centre"

Do you have other suggestions or comments which you think should be taken into account?

Freinetschool Delft: "Keep the historic existing building of the Prinsenhof as it is and create new beautiful architecture at the Phoenixstraat."

Prinsenkwartier Delft: "The new design should be focussed on the entire complex. The Prinsenhof museum should be in a new building at the Phoenixstraat."

Werkgroep Prinsenhof Delft: "Develop the entire area together, also the area's entrance at the Phoenixstraat."

Prinsenhof Value Assessment

Both the results of the value assessment survey and the Minecraft survey are converted here into graphs. The Prinsenhof value assessment graph shows which assets are valued by the stakeholders of Prinsenhof. All the different areas/elements/attributes are either rated; 1- Not valuable (demolish), 2- Moderately valuable (change), 3- Valuable (keep).

What is interesting to see in the Prinsenhof value assessment graph (figure 120) is the fact that both the 'Residential building Phoenixstraat' and 'Fokkema & Partners building' are valued at not valuable (demolish) by all stakeholders. The 'Museum entrance' and the 'Blue lamp posts' are also valued at either 1 (demolish) or 2 (change) by the stakeholders. However, the 'Barbaar terrace area', 'Prinsenkwartier', 'Chestnut trees' and the 'Van der Mandelezaal' were unanimously voted as valuable (keep) by the participant stakeholders. Also the 'Schoolstraat', 'Entrance gate Phoenixstraat', 'Alley with gateways', 'Monastery garden' and 'Inner garden' are either valued at 2 (change) or 3 (keep).

Thus, there is an overall consensus to be seen on the Phoenixstraat buildings, namely demolishing. Also a unanimously consensus was made on the 'Barbaar terrace area', 'Prinsenkwartier', 'Chestnut trees' and the 'Van der Mandelezaal', namely to keep these areas as they are currently. On the other points no real consensus is made but you could say there is a preference leaning towards either keeping or demolishing for each of these points.

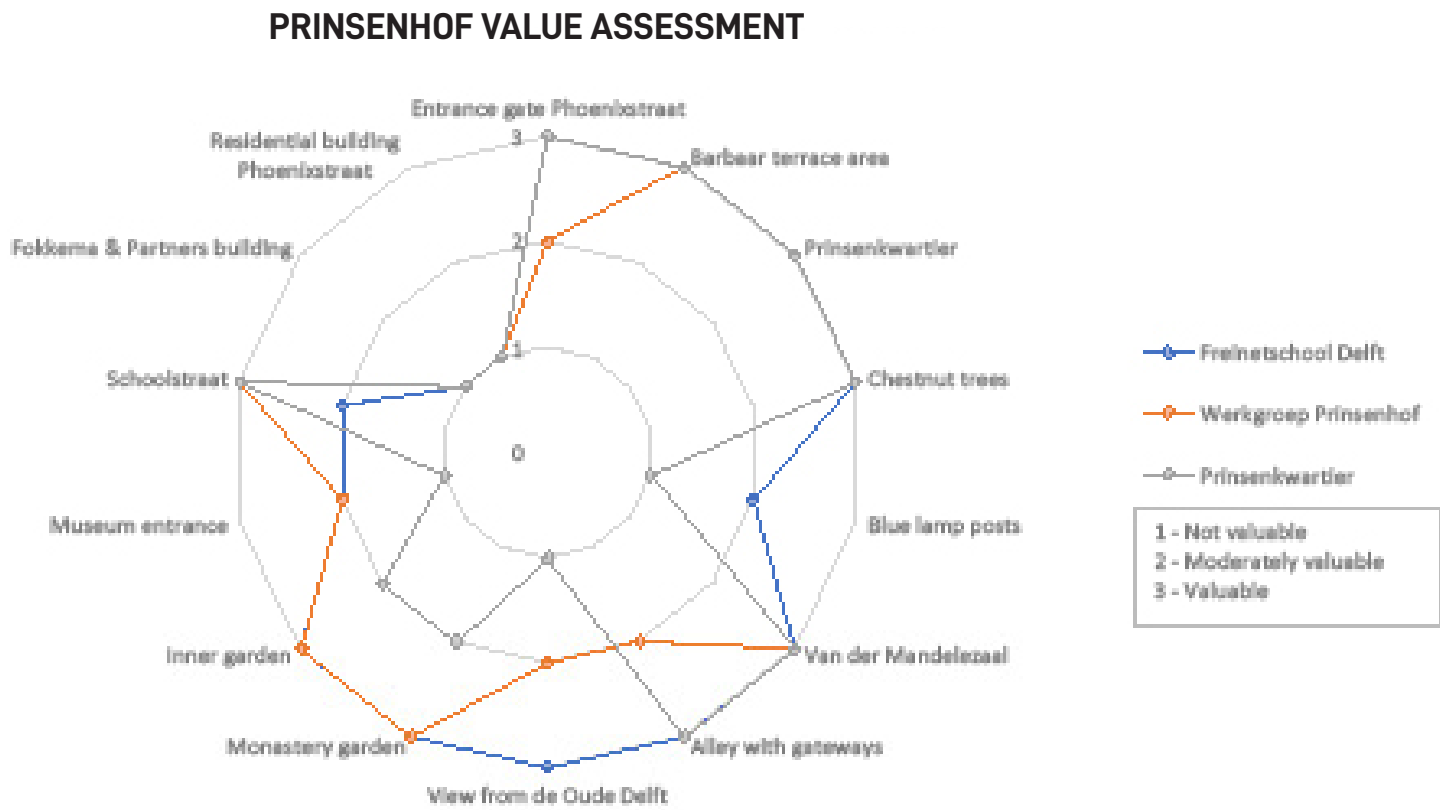


Figure 120 - Radar chart on the value assessment Prinsenhof, self made (2020)

Minecraft Assessment

The Minecraft assessment graph (figure 121) shows that not a single part of area of the game was rated 5 out of 5 by any of the stakeholders. Overall, the workshop participants had some difficulties with the use of the Minecraft game, it took some time to understand the controls and it took them a lot of time to actually built a sizable intervention for the Prinsenhof plot. The Minecraft assessment graph does show that Minecraft is engaging according to most stakeholders. Also the graph shows that the workshop participants think Minecraft is moderately well designed ('Game Design'), the 'Learning outcomes' and the 'Playability' were also moderately rated by the stakeholders. The 'Usability' was rated quite low, this was also noticeable during the workshops, most of the time the participants got assistance.

Since the number of co-creation workshop participants was quite low, it is hard to draw hard conclusions from this survey, more people should attend these co-creation workshops to truly test out the value of Minecraft as a tool during the design process for redeveloping heritage museum buildings like the Prinsenhof. However, during these workshops the team of researchers did keep an eye out on which elements of the game could be improved to be used more effective in the future during these kind of workshops. Mainly the pace of the Minecraft game could use changing, currently it takes too long to build or demolish large areas in the game. A selection tool in combination with a fill or demolish tool would be useful for future workshops. Luckily the game of Minecraft is compatible for all kinds of adjustments and modifications to form the game in a way that suits your purpose. Unfortunately this was not fully explored due to time management and compatibility.

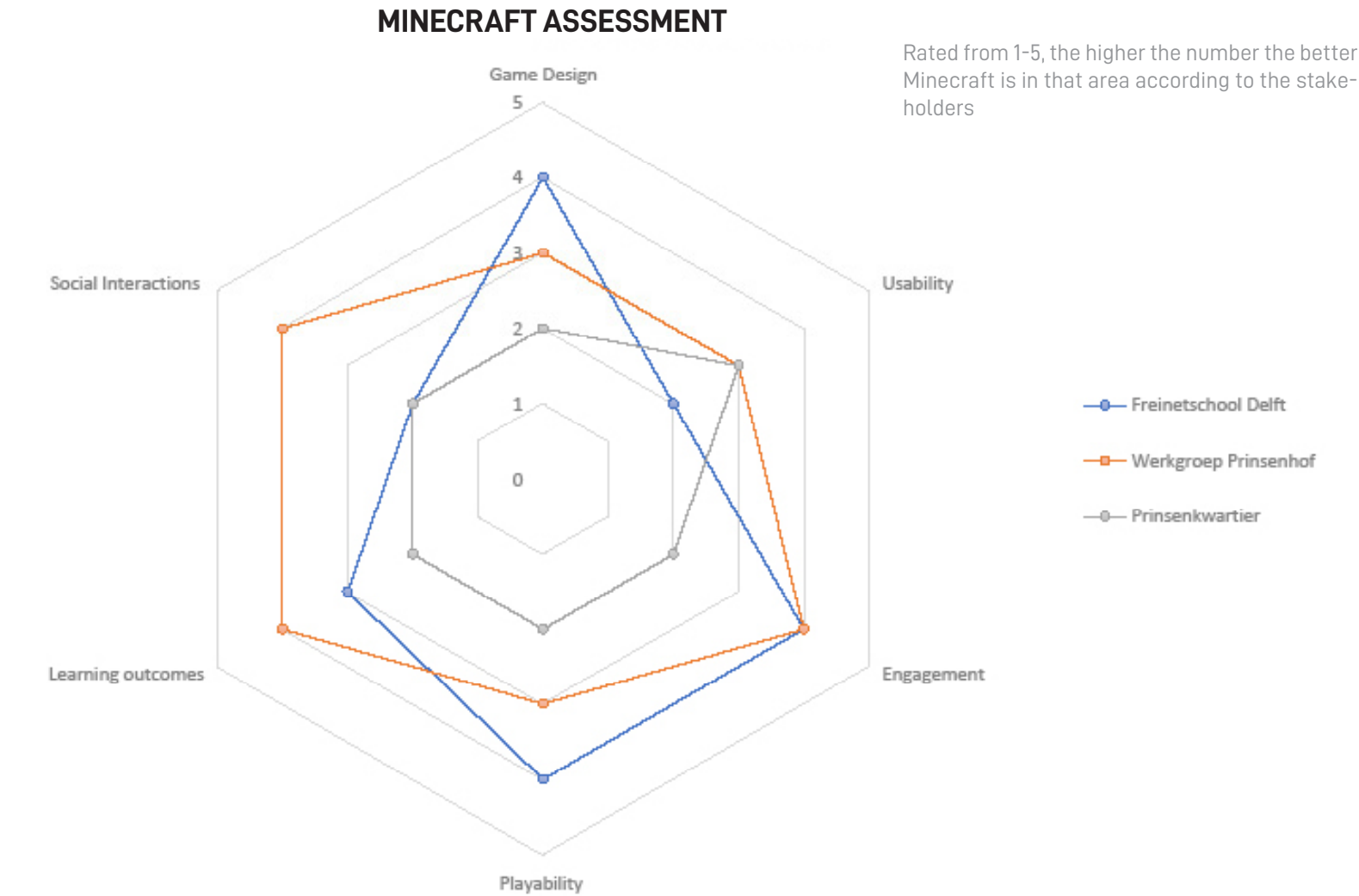


Figure 121 - Radar chart on the assessment of Minecraft as a tool, self made (2020)

The sub-question: *“How to use co-creation (digital games/gaming tools) to involve stakeholders in the redevelopment of heritage museum buildings?”* will be answered below:

During this research, co-creation workshops were conducted with students and stakeholders. This turned out to be a fruitful experience both for the researchers as for the workshop participants. For this workshop the block building game of Minecraft was used, this game makes use of blocks, roughly 1x1x1m, players can place and demolish. These Minecraft blocks have different materials and colours allowing the player to build whatever their imagination is. Besides the overall experience during the co-creation workshops, Minecraft surveys were conducted after the stakeholder workshops. The aim of these surveys was to find out how valuable the tool of the Minecraft game is during the co-creation design process for the redevelopment of heritage museum buildings; in this case the Prinsenhof Delft.

The conducted workshops showed stakeholders can be involved using co-creation tools like Minecraft. Before the workshops with the real stakeholders were conducted, trial workshops were held with students. These trial workshops were essential to explore the workshop dynamics, especially in times of COVID-19 making it near impossible to meet with large groups. This is also why the trial workshops were conducted online using Zoom, this way more students could attend and we could gain as much feedback as possible before starting the co-creation workshops with stakeholders.

The results of the Minecraft survey show that the game of Minecraft is a useful tool for engaging stakeholders in the redevelopment process. However the survey also shows that the usability, especially for these new players, was not optimal. This was also noticed during the workshops, stakeholders were often assisted using Minecraft by the workshop assistants. However, dur-

ing the workshops most participants did mention that the game has lots of potential as a co-creation tool. This means that for future use of the game in the co-creation process it could work better with some adjustments in the usability of the game. By analysing the usage of the game during the workshops, the game of Minecraft could work better with some ways of placing/removing more blocks at the same time. Also the way of engaging could be improved by making use of Virtual Reality (VR) or Augmented Reality (AR). Minecraft in the form it was used during the co-creation workshops is a better visualisation and emerging tool than it is a real co-creation or design tool.

Having said that, the workshop format turned out to spark a lot of conversations which in itself was very useful. One could however question if the use of Minecraft sparked these conversations or if these conversations also would have happened without the use of Minecraft. Overall the game has a lot of potential and with slight modifications could turn out to be a useful tool in the co-creation process for the redevelopment process of heritage museum buildings.

For more effective and efficient co-creation workshops in the future, the use of a shared world, a world where players can work together in the same digital environment, would be helpful. This way only one world needs to be utilized per stakeholder group, making the creation of large design intervention easier since players can work together. Besides this critical note, the workshop process together with the results prove that the game of Minecraft can be used to involve stakeholders in the redevelopment process of heritage museum buildings. However, the game has potential to become even more useful in this process.

Finally, other digital games/gaming tools could be explored during the co-creation process of the redevelopment of heritage museum buildings. However, the workshop atmosphere and the

simple fact that stakeholders sat together and discussed their own made design interventions is more important for the redevelopment process than a (replaceable) tool like the Minecraft game.

To answer the sub-question: *"What will be the advantages and disadvantages of using digital games (Minecraft) for the re-design and decision making process of the Prinsenhof museum?"*, multiple things will be taken into account. The Minecraft assessment will be used, the overall workshop experience, and the researcher's personal experience of using the Minecraft game. Below the advantages and disadvantages are listed based on these experiences:

Advantages:

- Minecraft sparks creativity and playfulness
- Minecraft can be played by all ages
- The Minecraft Educational Edition is free for students
- Large player base, meaning the game will be supported for a while to come
- The game offers countless colours and materials to use in your model
- Relatively simple controls
- Human perspective of the game
- Minecraft can be played on almost all computers; low performance demand
- Minecraft models can be shared and adapted by multiple players
- 'Walking' through the Prinsenhof model in Minecraft is a good way of visualising the environment, better sense of space then by using 2D maps for instance
- 'Walking' through the Prinsenhof model in Minecraft works well as a presentation tool, one can easily show which part of the building they are talking about
- Design ideas and interventions can be instantly translated and created in Minecraft
- Minecraft works like a physical model which players can infinitely adapt

- Minecraft can be modified using so-called mods (modifications) to fit a specific purpose, possibilities are endless
- Minecraft latest editions can use RTX (real time rendering) and VR (virtual reality)
- By making use of the 1x1x1m block mechanic, Minecraft is a good way of abstracting environments to their core morphology, useful early on in the design process
- Minecraft has the option to work in a server, meaning multiple players could work on a project at once
- Minecraft Educational Edition implements lessons (by playing the game) on different subjects, works as an educational tool

Disadvantages:

- Minecraft needs some modifications to work in a fast workshop setting, currently the controls were too slow to make large interventions for instance (can be solved by using mods)
- Although the controls are relatively easy, for the older generations it can still be hard to truly master them in a short period of time
- The abstraction of the game can sometimes lead to un certainties
- It takes a lot of time to model and detail large areas such as the Prinsenhof ensemble, mods could help but the detailing still needs to be done block for block.
- The version used during the workshops (Minecraft 1.12.2) is relatively old and thus didn't support newer modifications, RTX (real time rendering) and VR (virtual reality)
- Minecraft won't be useful later in the design process, the models are too abstract for that



VALUES & ATTRIBUTES ASSESSMENT

Since the aim of this research is to form a values based design strategy, it is important to explore and define the values (what is heritage?) and attributes (why is heritage?) of the Prinsenhof museum. This way a design strategy can be made which is grounded on these determined values and attributes. This chapter will determine these values and attributes. However, to do this, it is crucial to first have a clear definition on what values and attributes are.

Values can be defined in multiple ways. According to the Cambridge Dictionary (2020) values can relate to: the amount of money one might receive for an object, how useful or important something is and it can relate to a number that represents an amount. For this research, the definition of values as a way to express how important something is, will be the leading definition.

On the definition of attributes, Cambridge Dictionary is more clear, namely: a quality or characteristic that someone or something has. However, values can be divided into two categories according to Tarrafa Silva and Pereira Roders (2012): tangible attributes and intangible attributes. Tangible attributes represent something concrete, physical and objective, while intangible attributes represents something more abstract, subjective and non-physical. For example, a buildings roof structure is considered a tangible attribute since it is something physical and concrete. On the other hand, a story or a memory of a building is considered an intangible attribute since this attribute is non-physical and more abstract.

The summarized final value assessment will be related to the entire Prinsenhof ensemble. This will result in a value assessment drawing of the entire complex and a overview of the values and attributes related to the Prinsenhof museum Delft.

To form this concluding value assessment, different approaches will be used. First, the value assessment from the document "Bouwhistorisch Onderzoek Museum Prinsenhof" will be analysed. This document is acknowledged by the Prinsenhof museum itself, the municipality of Delft and the Dutch government and forms the official base for future interventions on the Prinsenhof Delft. The most important statements made in this document will be quoted and highlighted using the value assessment colours set up by Pereira Roders and Taraffa Silva (2012). This will also be done with statements on values made by experts and stakeholders during the expert interviews. Besides that, the value assessment drawings made in the "Bouwhistorisch Onderzoek Museum Prinsenhof" will be shown as these form a realistic foundation for the concluding value assessment drawing.

Furthermore, the personal observations of the researcher will be taken into account together with the value assessments made during the co-creation workshop with stakeholders. This way, the value assessments based on previous research, personal observations and expert- and stakeholder opinions can be compared and boiled down to one summarizing value assessment which forms the base for the design concept for the redevelopment of Prinsenhof Delft.

Important to mention is the fact that the value assessment from the "Bouwhistorisch Onderzoek Museum Prinsenhof" solely focuses on the Prinsenhof museum building. The statements from the expert interviews, personal observations and the value assessment made by stakeholders during the co-creation workshop also involve the direct surroundings like the Prinsenkwartier and the buildings situated alongside the Phoenixstraat for example.

VIEW ON THE ENTRANCE FROM THE AGATHAPLEIN

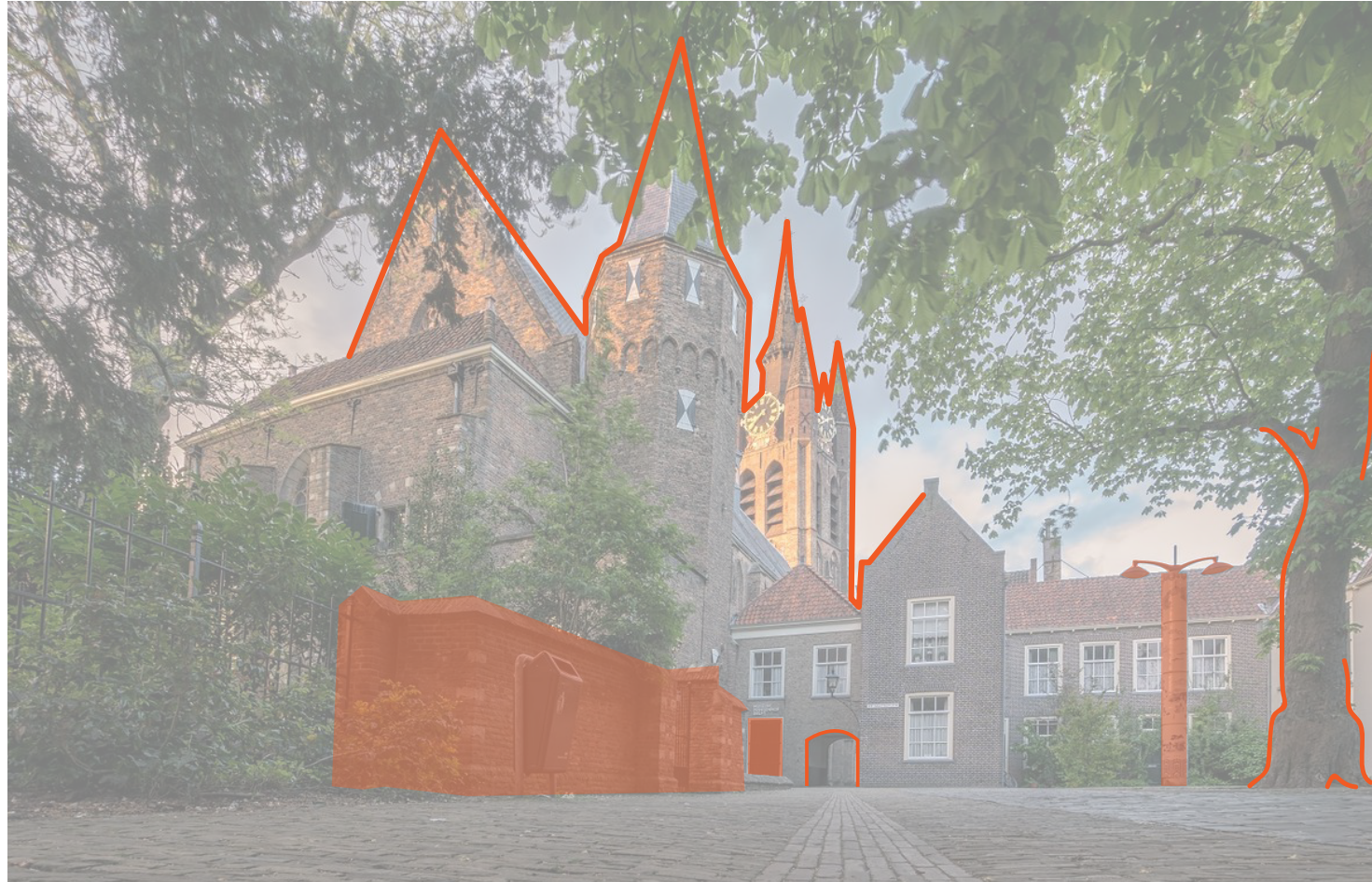


Figure 122 - Personal observation drawing Agathaplein, self made (2020)

Positive value (lined in orange):

- The view on Prinsenhof with the Old Church (Oude Kerk) in the back is an iconic view in Delft. In my opinion one of the most important views in Delft.
- The small porchway to walk through is also iconic, the experience from the transition from the cramped space towards the open square and vice versa is valuable in my opinion.
- The trees on the Agathaplein are of high value, they represent the age of the place and offer shading during summer.

Negative value (transparent orange):

- The wall surrounding the monastery garden (Prinsentuin) blocks the view and feels out of place
- The museum entrance is so small and not monumental, one would almost miss it. It should be more recognisable for such an important museum
- The "Delft Blue" light posts feel out of place and are in high contrast with the rest of the complex

ENTRANCE OF THE COMPLEX FROM THE PHOENIXSTRAAT



Figure 123 - Personal observation drawing Phoenixstraat, self made (2020)

Positive value (lined in orange):

- The gateway to enter the Agathaplein is iconic and has high value in my opinion
- The building of the Prinsenkwartier/Barbaar Delft are of high value and fit the spirit of place
- The seating (on the right) provides people to rest while not disturbing the public space
- The Barbaar terrace (on the left) provide the place with some liveliness, attracting factor

Negative value (transparent orange):

- The buildings highlighted don't fit the style of the Prinsenhof ensemble, they feel dated and out of place. They also block the view on the Prinsenhof itself. A more modern solution would work better here in my opinion.

OUDE DELFT SIDE OF THE COMPLEX



Figure 124 - Personal observation drawing Oude Delft, self made (2020)

Positive value (lined in orange):

- The overall shape of the facade including the porchways are of high value in my opinion. The porchways represent the age of the complex.
- The monumental entrance (white material) fits the monumentality of the Prinsenhof complex

Negative value (transparent orange)

- The windows are blocked of from the inside, so you can't look in at what's happening inside
- The roof structure seems to be added later, also makes this part of the building a bit boring and supports the closed character

THE 'BACKSTREET' INBETWEEN THE GARDEN AND PHOENIXSTRAAT BUILDINGS



Figure 125 - Personal observation drawing backstreet, self made (2020)

Positive value (lined in orange):

- The view on the Prinsenkwartier provides guidance
- The amount of green / trees makes the place feel more like a garden / safe space.

Negative value (transparent orange)

- The wall surrounding the monastery garden blocks the view on the garden and the Prinsenhof building
- The Phoenixstraat buildings including back gardens feel out of place, also there's a fence making this street feel like a back alley you are not supposed to be walking

THE 'HIDDEN' COURTYARD



Figure 126 - Personal observation drawing 'hidden' courtyard, self made (2020)

Positive value (lined in orange):

- The view on monumental facade of Prinsenhof
- The silent space itself, it has a lot of potential

Negative value (transparent orange)

- The materialisation of the courtyard, it currently feels like it is not maintained properly. The pathway doesn't really make sense. The greenery also feels a bit forced and non-natural

Pokémon go is a game that invites people to go outside, to catch Pokémon and visit so called Pokéstops to obtain items. These activities can be done on screen or through augmented reality using your phone's camera. The game is developed by Niantic in collaboration with Nintendo. Players will be rewarded for visiting (new) places and for walking or moving in general. These geogames are a unique kind in the game world, usually gaming is associated with people sitting inside in front of their screen, but geogames forces players to go outside and wonder. The connection with Architecture is easily made since the players are visiting public spaces to play the game. The game creates a reason to discover places you otherwise would probably never visit. The objective of the game is to catch as many Pokémon as you can while exploring the public space. I went out and played the game at Prinsenhof (and surroundings) in Delft, the location I will base my research and design on.

First I will talk about my experience with the game of Pokémon Go, what the game in general offers and what it did offer at my location. Also I will be critical on ways to further improve the game or things that aren't correct in general.

The game of Pokémon Go, I have to say I played it before but for this experience I told myself to act like a new player and try to be critical on the game relating to heritage and architecture but also on urban exploring in general. So the game exists of a map of the world containing points of interest, called Pokéstops or Gyms, and within the map Pokémon appear at different locations for you to find out.

The interesting part of the game from an architectural point of view are the points of interest (Pokéstops & Gyms), these points of interest emerged from an earlier geogame called Ingress. In this game people could make so-called portals at points of interest and if a lot of people did that, a point of interest would be created on the map. Pokémon Go used this data to create the

Pokéstops. At Prinsenhof there were 4 points of interest (2 gym, 2 Pokéstops).

This journey of exploring the city can be related to the theory of the Dérive by Guy Debord, he explained the derive as following: "One of the basic situationist practices is the *dérive* [literally: "drifting"], a technique of rapid passage through varied ambiances. *Dérives* involve playful-constructive behavior and awareness of psychogeographical effects, and are thus quite different from the classic notions of journey or stroll." (Debord, 2020).

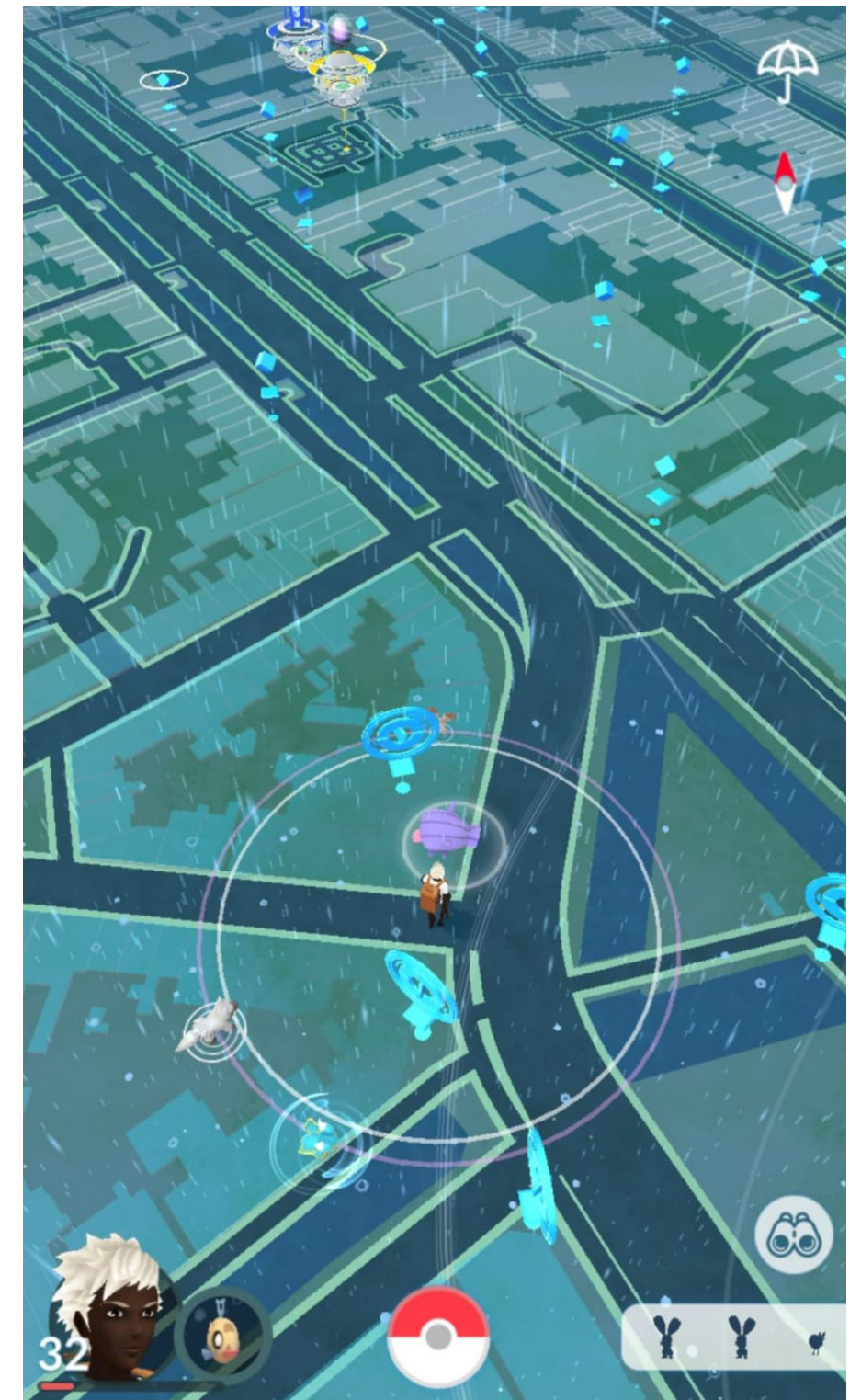


Figure 127 - The interface of Pokémon Go screenshot, self made (2020)

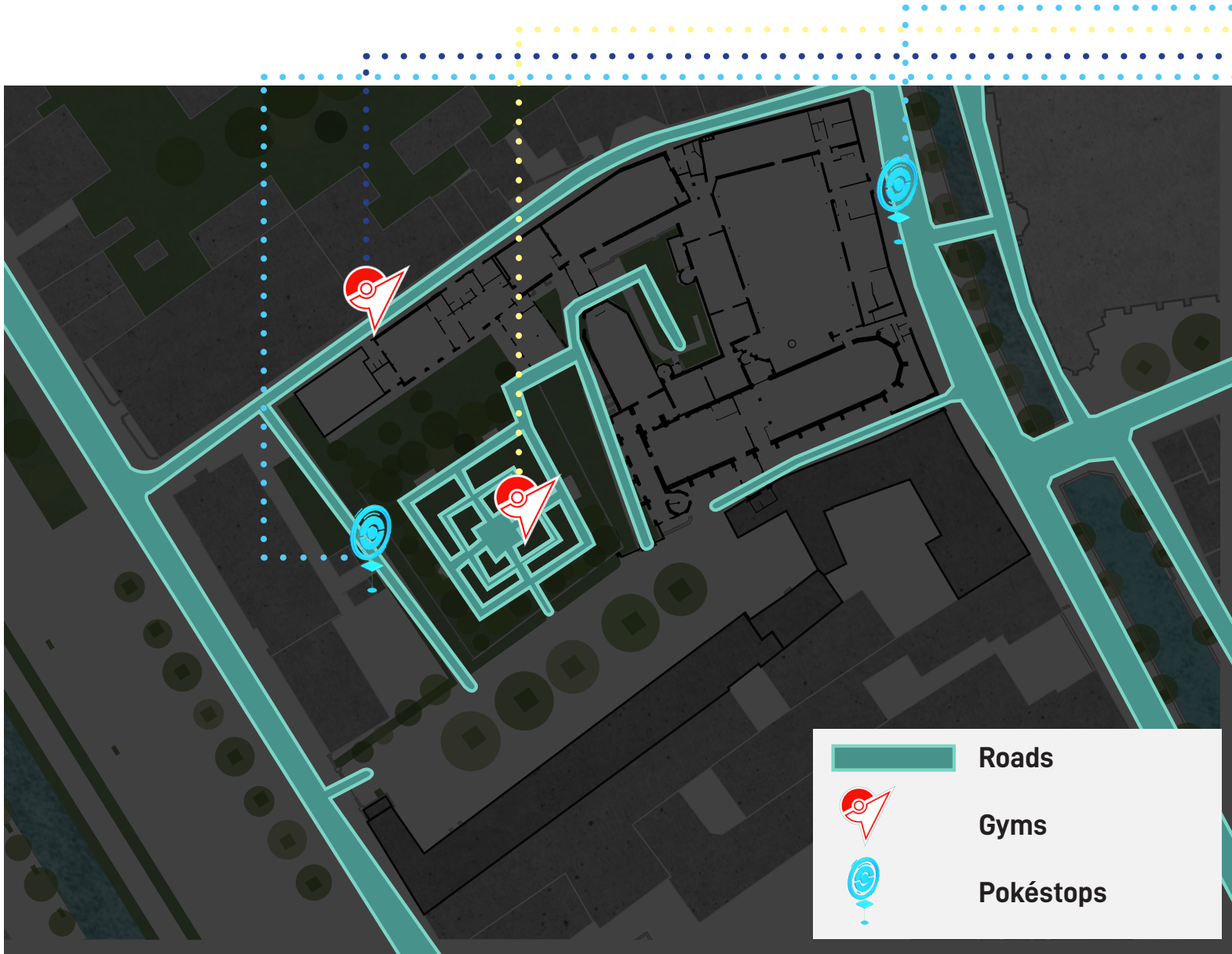


Figure 128 - Representation of the Pokémon Go map in the Prinsenhof area, self made (2020)

The map of Prinsenhof in Pokémon Go is not correct, the Agathaplein is not marked as a street. However, the other accessible areas are visualised on the map. The inner courtyard is visible on the map and I visited it while playing the game, I wasn't aware of this courtyard before.

Interesting to note is the location of the points of interest defined by the game of Pokémon Go. For instance, the Pokéstop named Spiky Triangle is one of the points of interest while a

case could be made that this statue isn't relevant at all considering the surroundings. On top of that, this statue in real life doesn't have a description or anything in that stretch, it feels out of place and definitely not one of the most "important" elements at the Prinsenhof ensemble. The Gym named Willem van Oranje (Willem de Zwijger) is obviously a relevant point of interest. The murder of Willem van Oranje at the Prinsenhof can be considered as the most important thing happened at the site (or even in Delft) so it makes sense Pokémon Go made a point

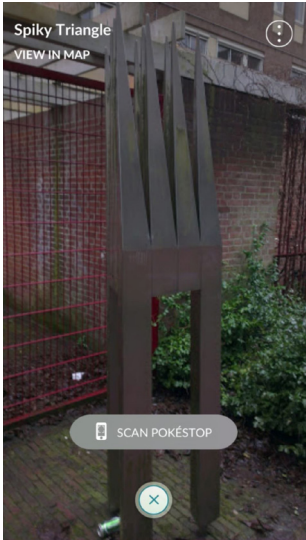
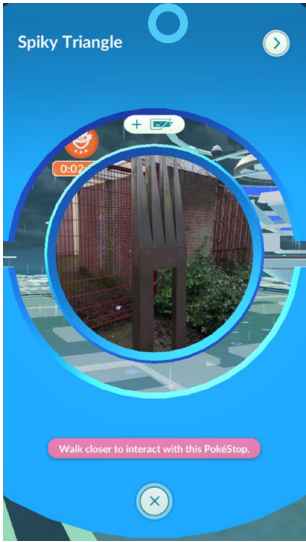


Fig. 129 - Pokéstop - Spiky triangle, self made (2020)

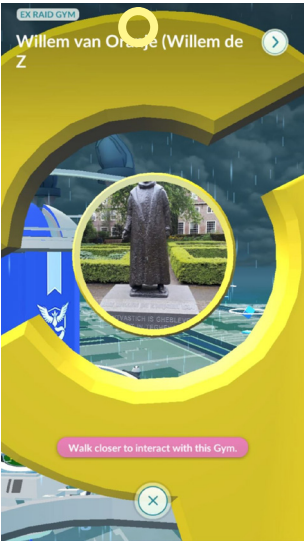


Fig. 130 - Gym - Willem van Oranje, self made (2020)

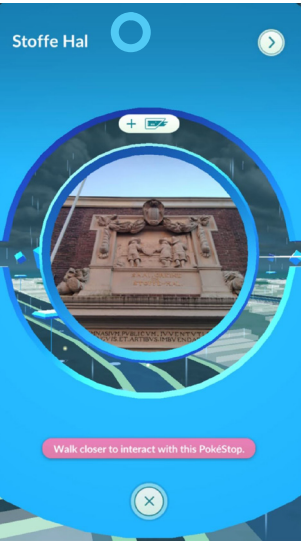


Fig. 131 - Pokéstop - Stoffe hal, self made (2020)



Fig. 132 - Gym - De Kamer van Charilabla, self made (2020)

of interest at his statue in the monastery garden. The Stoffe Hal is also a relevant Pokéstop, it's one of the most eye-catching parts of the quite boring Oude Delft façade. On top of that it tells a story on the previous functions the building used to have. The Gym called De Kamer van Charilabla is a strange one, it's situated at the original entrance of the Kamer van Charitaten but the point of interest (Gym name) is spelled wrong. It does tell a relevant part of the history though.

The document “Bouwhistorisch Onderzoek Museum Prinsenhof” is a leading document for the further development of the Prinsenhof museum Delft. This document is recognized by the museum Prinsenhof itself, the municipality of Delft and the Dutch Empire. For the value assessment of this research, this document will also be one of the leading factors. Besides this document, the value assessment made by the related stakeholders during the co-creation workshops, the values and attributes mentioned during the expert interviews with stakeholders and the personal observations of the researcher, will also be taken into account. The aim for this value assessment is to set guidelines on which the design concept will be based.

The “Bouwhistorisch Onderzoek Museum Prinsenhof” consists of an overview related to history of the Prinsenhof, a value assessment and a overview related to each building part. From the value assessment in this document, the most important sentences will be quoted and highlighted using the value assessment colours set up by Pereira Roders and Tarrafa Silva (2012). This will also be done with statements made on values by experts and stakeholders during the expert interviews.

These outcomes will be combined with the value assessments made by the stakeholders during the co-creation workshops and the researchers personal observations. This way, a consistent value assessment will be created in the form of a value assessment drawing and a value assesment list.

Starting with the most important sentences deriving from the “Bouwhistorisch Onderzoek Museum Prinsenhof”, these sentences will be translated, summed up below and colour coded corresponding to the framework set by Pereira Roders and Tarrafa Silva (2012). For this research, only the Social, Historic, Scientific and Age values will be taken into account (figure 133).

Primary values	Secondary Values	References
Social	Spiritual	beliefs, myths, religions (organized or not), legends, stories, testimonial of past generations;
	Emotional individual	memory and personal life experiences;
	Emotional collective	notions related with cultural identity, motivation and pride, sense of “place attachment” and communal value;
	Allegorical	objects/places representative of some social hierarchy/status;
Historic	Educational	heritage asset as a potential to gain knowledge about the past in the future through;
	Historic-artistic	quality of an object to be part of a few or unique testimonial of historic stylistic or artistic movements, which are now part of the history;
	Historic-conceptual	quality of an object to be part of a few or unique testimonial that retains conceptual signs (architectural, urban planning, etc.), which are now part of history;
	Symbolic	fact that the object has been part/related with an important event in the past;
	Archeaological	connected with Ancient civilizations;
Scientific	Workmanship	original result of human labour, craftsmanship;
	Technological	skillfulness on techniques and materials, representing an outstanding quality of work;
	Conceptual	integral materialization of conceptual intensions (imply a conceptual background);
Age	Workmanship	craftsmanship value oriented towards the production period;
	Maturity	piece of memory, reflecting the passage/lives of past generations;
	Existential	marks of the time passage (patine) presents on the forms, components and materials;

Figure 133 - The relevant cultural values. Self made and inspired by: “Cultural Heritage Management and Heritage (impact) Assessments”, by Tarrafa Silva & Pereira Roders (2012).

Bouwhistorisch Onderzoek Museum Prinsenhof:

General historical values:

“The St.-Agathaklooster together with the Waalse Kerk is of general importance as an example for a rich nunnery ... and as the location where Willem van Oranje was murdered in 1584.”

“As place of memory for an important moment in national history, the complex has important general historic values.”

Values on the ensemble:

“The ensemble shows itself as a green oasis in the city of Delft with the spacious Agathaplein together with monastery garden and the two more private courtyards (from which one is covered)”

“... the choir of the monastery church is visible from the Oude Delft.”

“The recognizable historical growth and largely original building masses have a high monumental value.”

Architectural and building historical values:

“The St.-Agathaklooster with the Waalse Kerk is of great architectural value as being a complete example of a nunnery / women monastery in late gothic style, rebuilt as such after the city fire of 1536.”

“Large parts of the basement and roof construction still date from the rebuilt period shortly after 1536, and represent important architectural and building historical values.”

“... the double chapel of the Waalse Kerk is of great typological importance.”

Flawlessness and rareness:

"The St-Agathaklooster together with the Waalse Kerk are rare as one of the few, but more remarkable as **one the most complete nunneries / women monasteries**."

"A special feature of this complex is the importance of **the various restorations of the complex**, whereby from 1884 onwards a (each time slightly different) **image of the past** was worked towards; a museum monastery complex where one of the most important **historical events** in the Netherlands has taken place."

General value of the interior:

"The **remaining original layout** deriving from the time the building was a **monastery and from the time Willem van Oranje was living there**, have a high monumental value."

"**Historical reconstructed dividing walls** have a high monumental value."

"Walls with historical value from later periods, or walls that are part of the current museum interior, but **which are rebuilt conform the original walls** have a positive monumental value."

Values on the specific building elements

The "Bouwhistorisch Onderzoek Museum Prinsenhof" goes into great detail on the values of all the specific building elements, such as the building volumes, materialisation, construction and interior. These values are summarized in value assessment plan drawings. These drawings show, using different colours, the value of each of these elements. The drawings can be found on the upcoming pages and are translated. The colours used in these value assessment drawings are:

All shades of blue : High monumental / historical value

All shades of green : Positive monumental value

All shades of yellow: Indifferent value

All these quotes above are translated from the document:

"Bouwhistorisch Onderzoek Museum Prinsenhof (2018)" (Building Historical Research) made by: Bureau voor Bouwhistorie en Architectuurgeschiedenis.

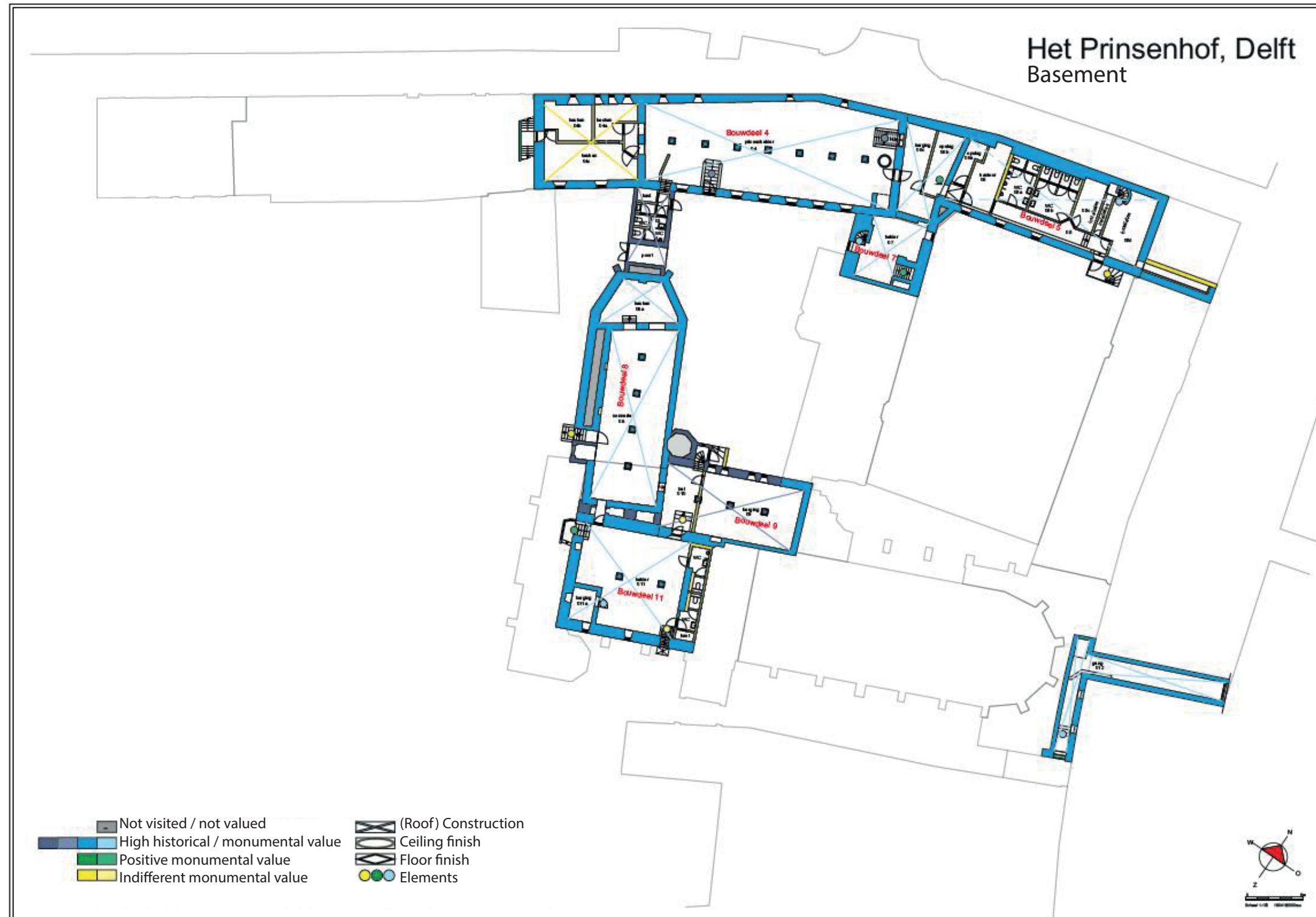


Figure 134 - Value Assessment plan - basement, retrieved from: *Bouwhistorisch Onderzoek Museum Prinsenhof* (2018), translated

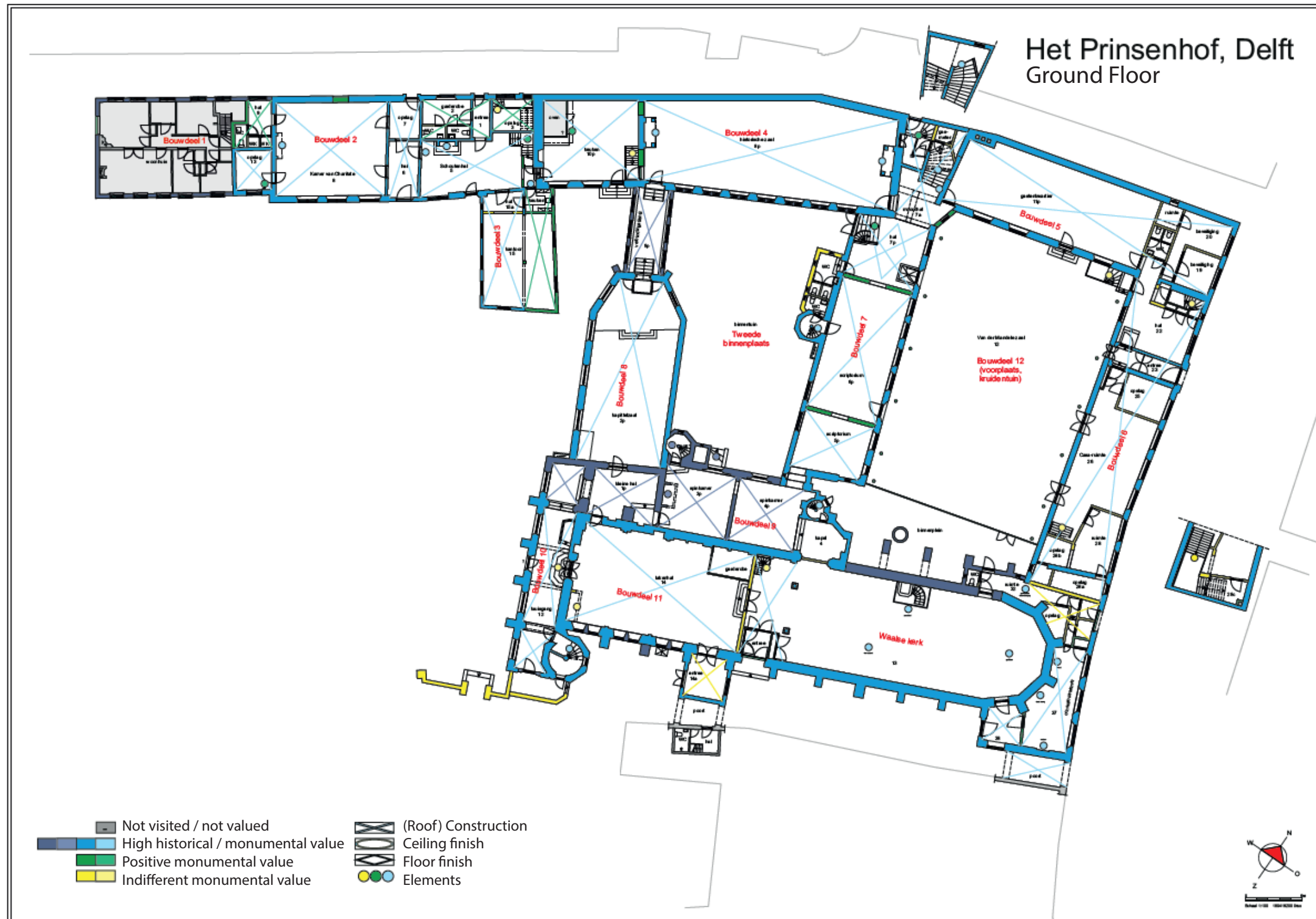


Figure 135 - Value Assessment plan - ground floor, retrieved from: *Bouwhistorisch Onderzoek Museum Prinsenhof* (2018), translated

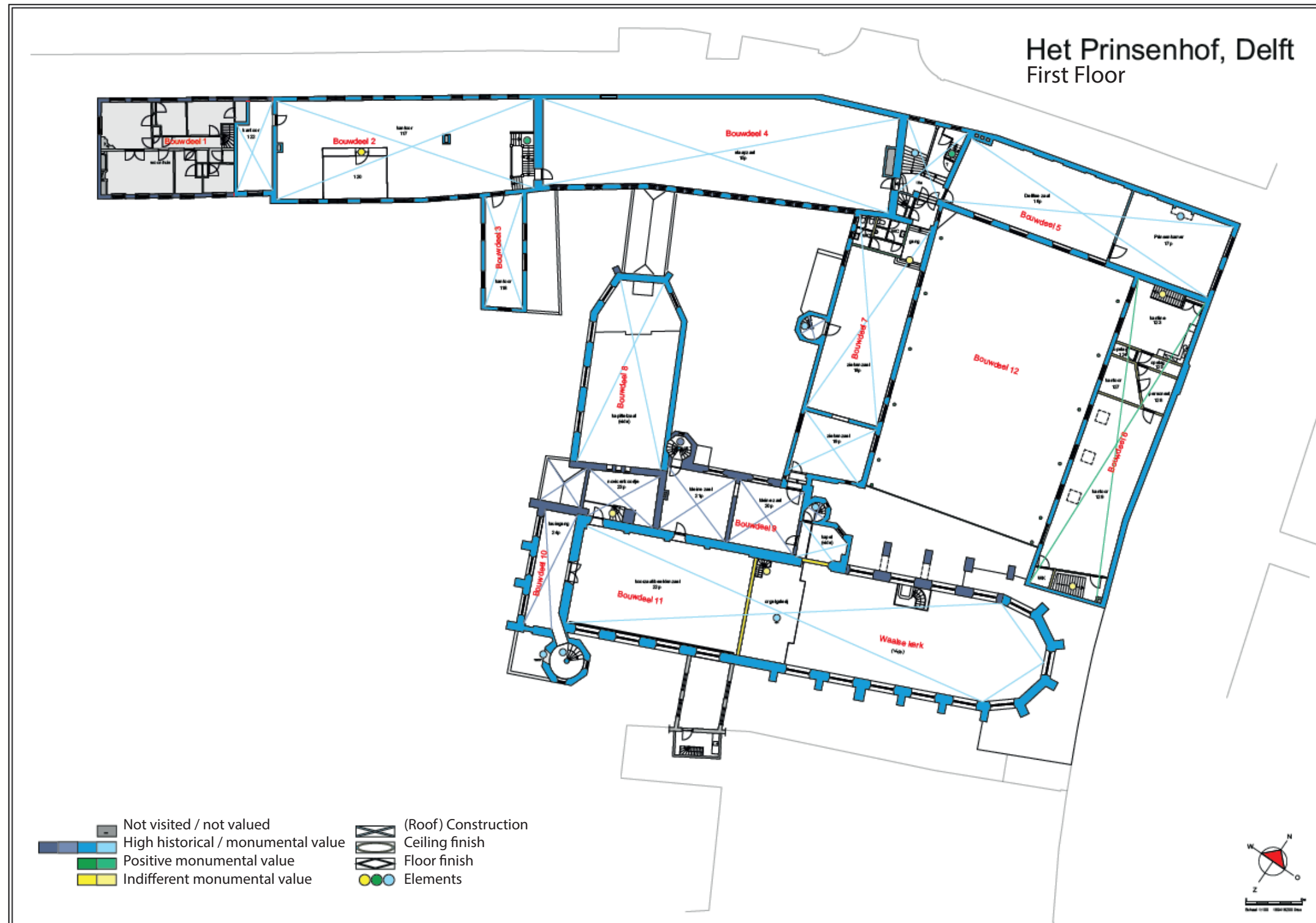


Figure 136 - Value Assessment plan - first floor, retrieved from: Bouwhistorisch Onderzoek Museum Prinsenhof (2018), translated

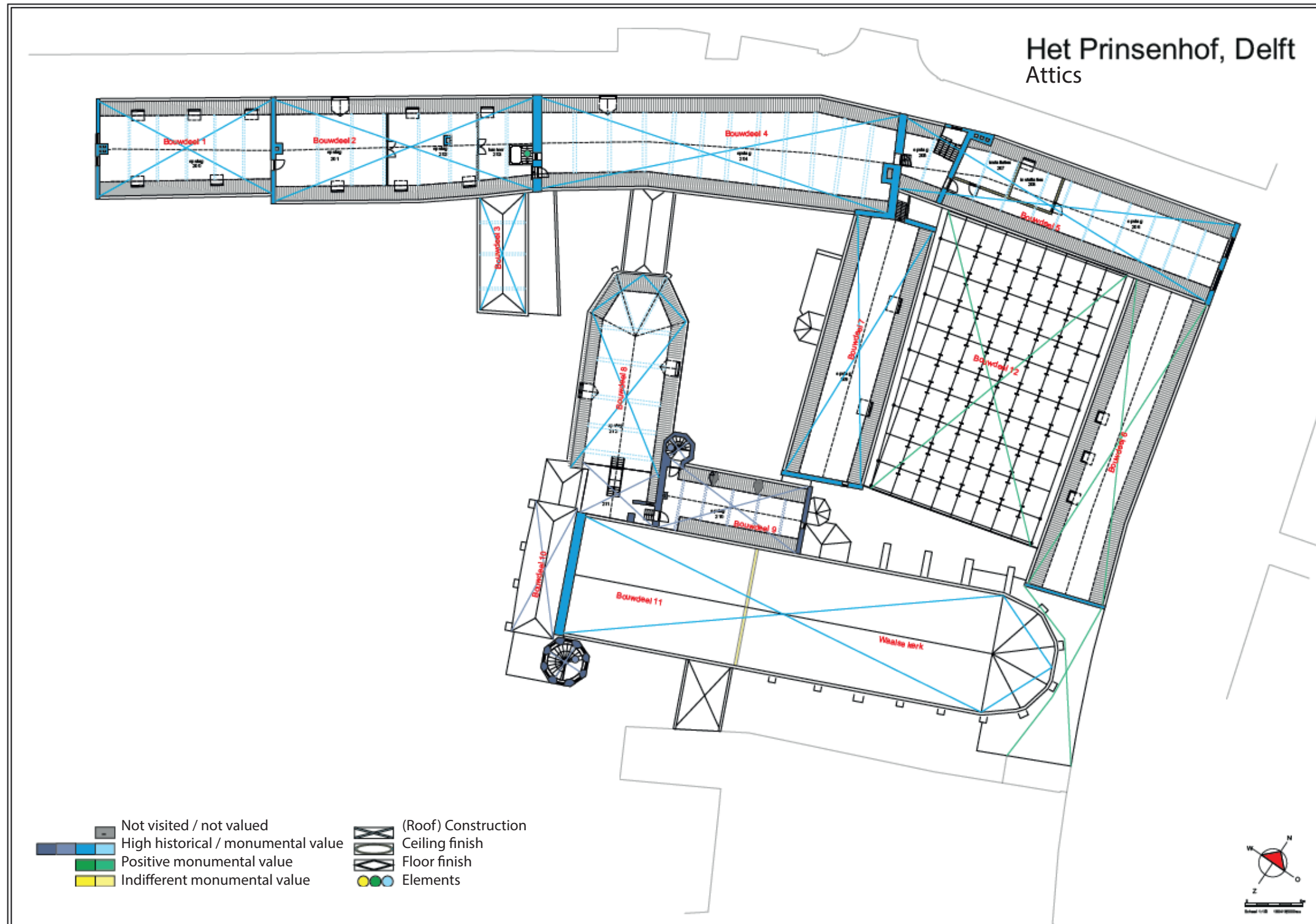


Figure 137 - Value Assessment plan - attics, retrieved from: Bouwhistorisch Onderzoek Museum Prinsenhof (2018), translated

The expert interviews also gave insights on the values and attributes of the Prinsenhof museum Delft. These insights might be more subjective but are nevertheless valuable since these statements were made by experts and stakeholders related to the Prinsenhof ensemble. The statements on values and attributes deriving from the expert interviews will be listed down below and colour coded according the value assessment framework made by Pereira Roders and Tarrafa Silva (2012).

Werkgroep Prinsenhof Delft:

On the monastery garden and square:

"It must **continue to be a square and or a garden**, but then without the fence and wall, **because it blocks the view** on the Prinsenhof very much"

On the walls in front of the tower:

"... you have the little tower and in front of that there's a little wall and a gate, **all this was made in the 40's- 50's**. So that's not very historical."

On the lamp posts at the Agathaplein:

"The delft blue, big ugly lights, **which give also a very hard white light on the square**, which doesn't make things more pretty."

On the current location and discussion on the entrance:

"... where should the entrance be? But the entrance is, of course, **the gates at the Phoenixstraat and the gates, or the small porch, at the Oude Delft, that's where you enter the area and that's where the fun should start.**"

On the (new) location of the entrance:

"... because there is not a lot of daylight alongside the church, **there's more daylight at the side of the garden**. And because of the entrance, it's logical if you put that in a place where you can also make a terrace or somewhere to drink coffee, it's more

likely to do that on a sunny side than on the cold side."

On the private character of the museum:

"The museum is quite closed, like the people who run it, they're keeping the museum **very private and it should be more open for the public.**"

On the Waalse Kerk:

"... you should **open the church for public** and play **the organ** to keep the organ in a good state, but also to give that piece (the Waalse Kerk) to the city and maybe have an exposition where people just can walk in for free."

On the "modern" buildings alongside the Phoenixstraat (referred to as "KvK"):

"They are on a **very important part of the of the ensemble**, because if you're in the area and you look around, everything is beautiful, except if you turn towards KvK, it's really not so pretty anymore."

Delft Design:

On the community at Prinsenhof:

"... we are part of Prinsenkwartier, **let's say a greater community within the Prinsenhof ensemble**, where Delft Design is one of the members of."

On the complex as a whole:

"I think it's a **total complex** so one should treat it like a total complex" and "If it's possible to design it together, then it will be better than then only designing Prinsenhof and the entrance for that."

On the current state of the Agathaplein:

"Now it's more, **let's say, a place to pass**. It's also quite closed and dark especially in the evening. **The closed garden for exam-**

ple I think can be more a place to stay or be."

CE Delft:

On implementing new climate solutions:

"You would have to **rebuild the entire inside and also the inside is quite beautiful**. So you don't want that."

On the Prinsenhof and Old Church building mass:

"... the older large buildings **with the thermal mass** of the Old Church and Prinsenhof, they will remain quite long a nice temperature during winter time."

This final values and attributes drawing is based on research, the value assessments surveys from the workshops, workshop quotes, expert interviews and the author's own experience. Surprisingly there was not a lot of discussion during the workshops on which elements of the Prinsenhof should be considered valuable, most participants agreed to an extent. These values also matched the research, especially the value assessment drawings of 'Bouwhistorisch Onderzoek Museum Prinsenhof (2018)'. In the end, the author's own experience made the final decision on which elements of the building should be considered valuable. This can be seen in the drawing on the right.

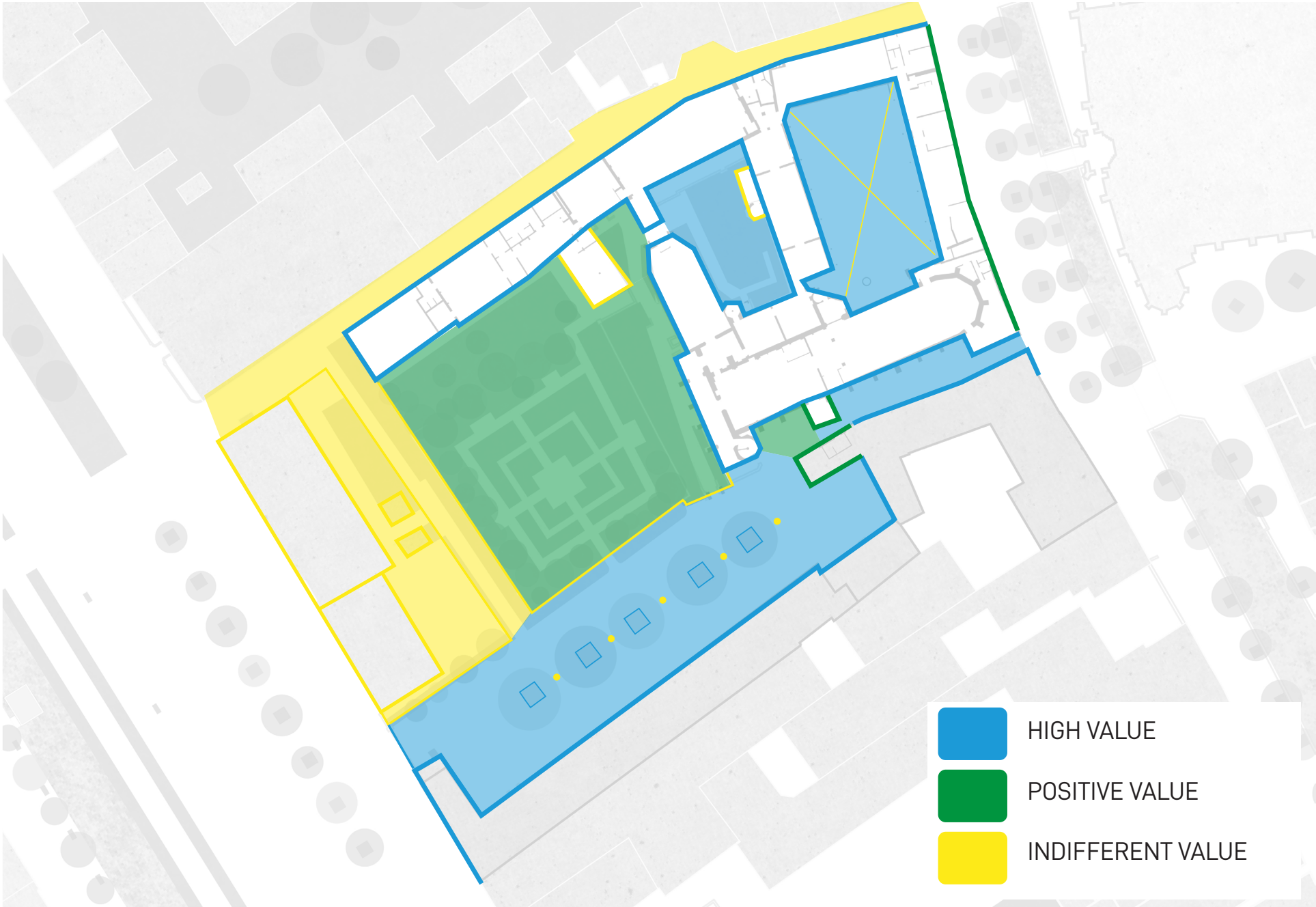


Figure 138 - Final Value Assessment map, self made (2020)

This conclusion will try to answer the sub-question: *"How to raise awareness on citizens about the cultural significance of the Prinsenhof ensemble, in particular Social-, Historic-, Scientific- and Age values?"*

The Prinsenhof ensemble in Delft holds an important place in the history of the Netherlands. The murder on the founder of the Netherlands as we know it today; Willem van Oranje, took place at the Prinsenhof. This event still is one of the main reasons people visit the Prinsenhof museum. However, there is more to discover at the Prinsenhof ensemble than just the bullet holes from the murder on Willem van Oranje. This research showed the important Social-, Historic-, Scientific-, and Age values of the place. To answer this research question, these types of values will be dealt with separately together with design intervention recommendations on how raise citizen's awareness on these particular values.

The social values of the Prinsenhof ensemble discovered during this research are referenced to a (former) spiritual/religious place and a place related to communal value. This became apparent during the expert interviews and the stakeholder workshops. As a representative of Delft Design stated on the community feeling of the Prinsenhof ensemble during an expert interview: "... we are part of Prinsenkwartier, let's say a greater community within the Prinsenhof ensemble [...] it is a total complex and one should treat it like a total complex" (Interview with Delft Design, see Annex). This quote embodies the community feeling apparent in the Prinsenhof ensemble. One of the conclusions of the stakeholder workshops was also that the Prinsenhof complex should be treated as a whole, the focus should not be just on the museum itself. This also shows the importance of the complex, the communal feel felt by the stakeholders. However raising awareness on the cultural identity and communal values is still important according to the stakehold-

ers. Like mentioned before, stakeholders wish that the complex will be treated as a whole and not every separate building part on its own. On top of this, it was mentioned during the workshops that the stakeholders wish that the Prinsenhof museum was more open, more accessible for the public. Currently, public places that improve, facilitate and embody the communal feeling together with the cultural identity are lacking.

The Werkgroep Prinsenhof Delft even originated partly for the fear of this not happening. This action group proves the fear of the community not feeling understood and taken seriously. The workshop attendees said after the co-creation workshops that the method of co-creation together with different stakeholders is a useful way to make stakeholders feel like they are being taken into account, taken seriously.

That the Prinsenhof building is a place of memory related to the cultural identity is also clear, the murder on Willem van Oranje was such a big event in the history of the Netherlands that the main 'attraction' of the museum still is the location of this murder. On top of this, the value assessment made by the stakeholders and the interviews conducted with experts showed the appreciation of the historic value of the Prinsenhof building. The building as it stands today is appreciated by everyone who attended either the workshops or the interviews.

This ties in nicely with the scientific values of the Prinsenhof, the quotes of the interviews and the value assessment made by stakeholders during the co-creation workshops shows that all attendees see the scientific values of the Prinsenhof ensemble. Especially the craftsmanship of the original/remade roof structures, the more modern roof structure of the Van der Mandelezaal, the basement structures and the overall layout of the buildings are valued highly by stakeholders and experts. This can also be said on the Age values of the ensemble. These

Age values overlap with the other Prinsenhof values quite a bit, the building is very old after all. The historical growth, place of memory and the traces of the historical rebuilds over time are example of Age values represented in the Prinsenhof building.

Overall the way to make the citizens of Delft more aware of the Social-, Historic-, Scientific- and Age values will be depending on the design for the redevelopment. Making citizens more aware of a building's values ultimately has to do with the architecture. If people like to visit the building and the surroundings, they will appreciate its values more. The design in the second semester will be considering this and thus will be the answer to this question.



DESIGN STRATEGIES

The program is based on the current program of requirements made by the Prinsenhof museum and the municipality of Delft. This program of requirements (can be found in the annex) is made for the planned renovations and interventions for the museum Prinsenhof. Besides this document, the needs and wishes of the stakeholders expressed during the interviews and workshops will be taken into account together with my personal preferences. Below is a list of the aimed program of requirements on which the design will be based next semester.

Entrance cluster area 486m2

- Entrance space 80
- Museum shop 75
- Shop storage 20
- Museum bar/restaurant 75
- Storage bar/restaurant 15
- Coffee corner 40
- Storage coffee corner 10
- Public library 75
- Garderobe 40
- Sanitation 50
- First Aid space 6

Exhibition spaces 1910m2

- Current permanent collection 1060
- Temporary exhibition spaces 500
- Other smaller exhibitions 100
- Free interactive spaces 100
- Flexible display cabinets 150

Events and Education 1022m2

- Catering 300
- Garderobe 25
- Kitchen cluster 80
- Rentable spaces 20-50 persons 60

- Auditorium 160
- Workshop spaces 125
- Workshop storage 12
- Study rooms 100
- Silent spaces 80
- Group reception area 45
- Event spaces storage 25
- Changing room 10

Working 432m2

- Office space 165
- Reception and wating room 12
- Boardroom 16
- Conference spaces 40
- Private speaking room 20
- Library 30
- Canteen 37
- Archive room administration 25
- Archive collection 30
- Garderobe 8
- Sanitation 17
- Security room 30
- Break room 12
- Changing rooms 8

Art depot and expedition 174m2

- Art unpacking space / photography 25
- Storage art packaging 16
- Storage exhibition materials 35
- Clean workspace for framing etc. 30
- Workspace exhibition builders 40
- Transition depot 28

Facilities 122m2

- Cleaning storage 10
- Storage cabinets 10
- Workbench area 24
- Material and tool storage 20
- Audio-visual and light storage 10
- Bicycle storage (lockable) 48

Technical cluster 274m2

Total functional useful surface area 4420m2

- Horizontal traffic 14.2% 627m2
- Vertical traffic 3,6% 159m2

Total net floor surface area 5206m2

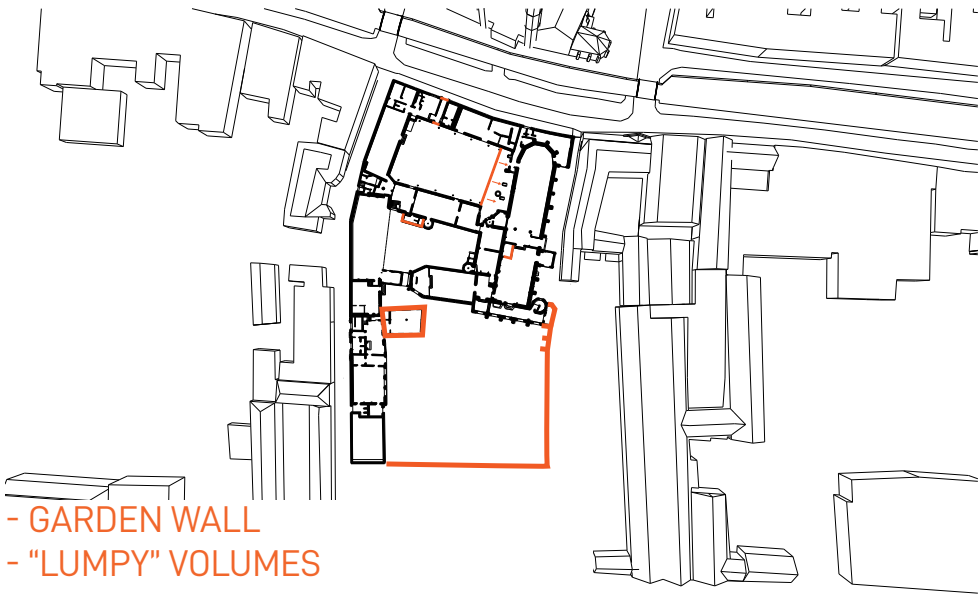
Expert interviews related to the program

Considering the program and its relation to the TU Delft Campus, the interview with Alexandra den Heijer was very useful. She stated that heritage buildings, and specifically heritage buildings in the inner city of Delft, have some unique qualities that the TU Delft campus lacks. These heritage buildings can offer the campus spaces and qualities that will be perfectly suited for formal activities and meetings for instance (Interview transcript Alexandra den Heijer, see annex). This idea was also backed and supplemented during the co-creation workshops with stakeholders. There it became apparent that the Prinsenhof ensemble could use new functions related to the TU Delft campus like study spaces, silent spaces and a library. Finally, the Prinsenhof ensemble can offer the TU Delft campus formal spaces for meetings and study/silent spaces aimed at students combined with a public library. The mutual beneficial relationship can be apparent when these functions will be implemented. The Prinsenhof museum will get more students visiting the site, something what was lacking in the past years (Museum Prinsenhof Delft, 2019) and the TU Delft Campus has more (formal) spaces to use. Something to take into account during the upcoming design semester. This can be considered to be the answer to the sub-questio *"How does the quality of the Prinsenhof ensemble contributes to the needs of the TU Delft campus?"*

On top of this, the expert interview with a representative of CE Delft gave some good insights on the advantages of applying mixed use in the design program from a sustainability point of view. The CE Delft representative mentioned: "By incorporating multiple functions in a building, the building will be 'alive' at all times which is profitable for its energy use. By making the building accessible for different functions at different times, the use of space is better"(CE Delft interview, see annex).

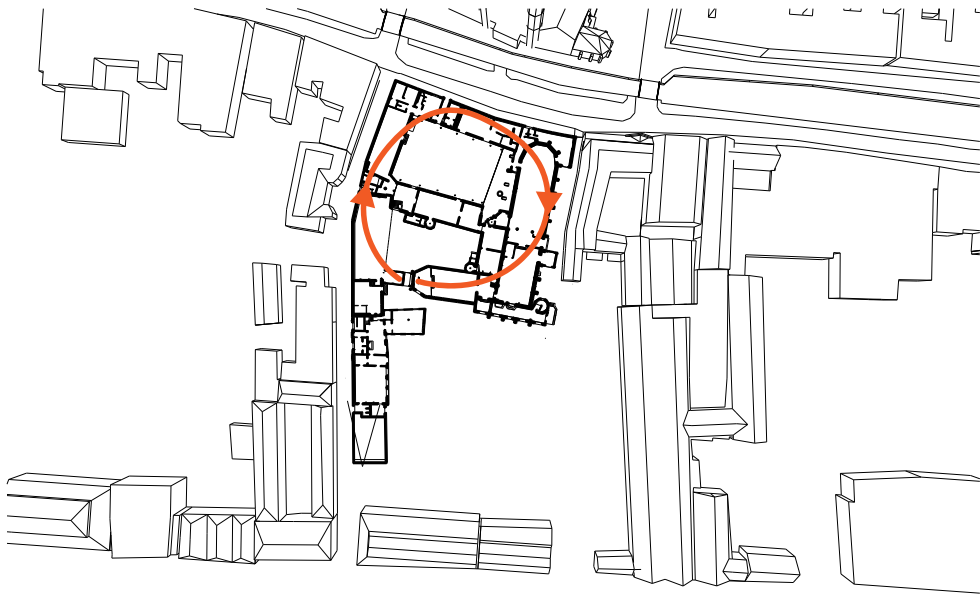
DESIGN POINTS OF ACTION

MICK BLOEMENDAL
4296281
HERITAGE4ALL

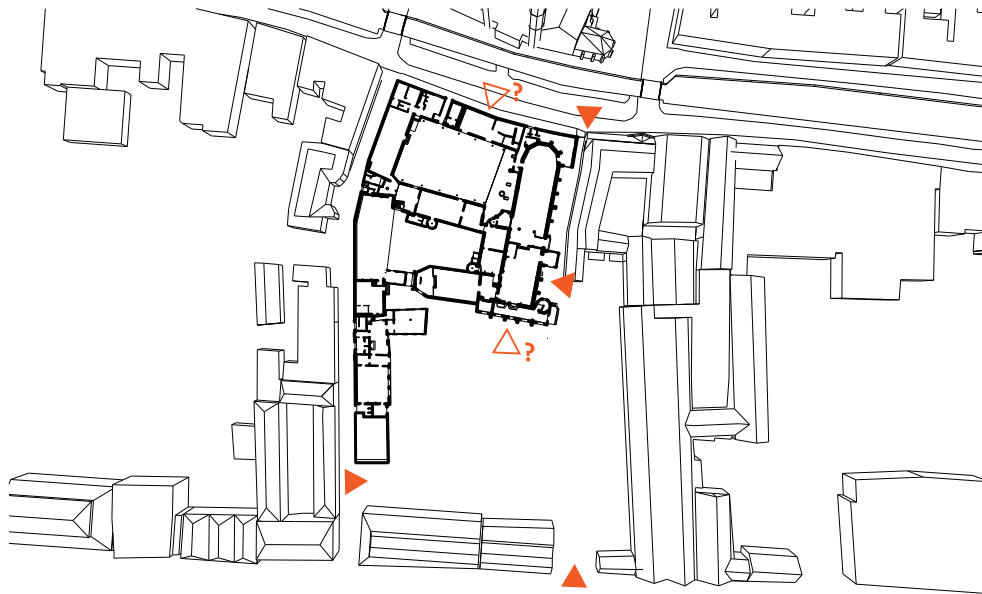


- GARDEN WALL
- "LUMPY" VOLUMES
- MOVE GLASS PLANE COURTYARD

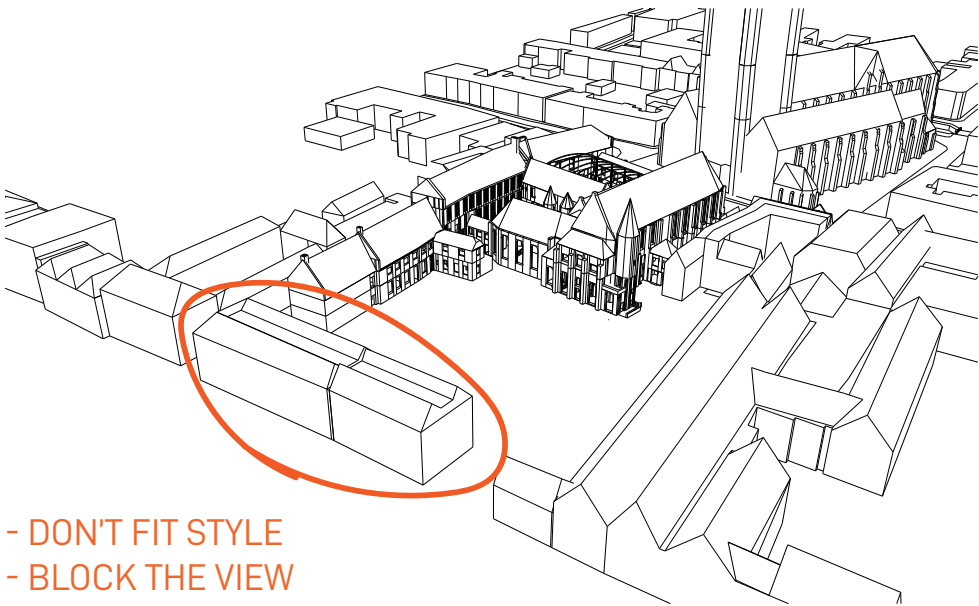
DEMOLISHING / CLEANING UP CURRENT BUILDING



CIRCULATION IN THE BUILDING

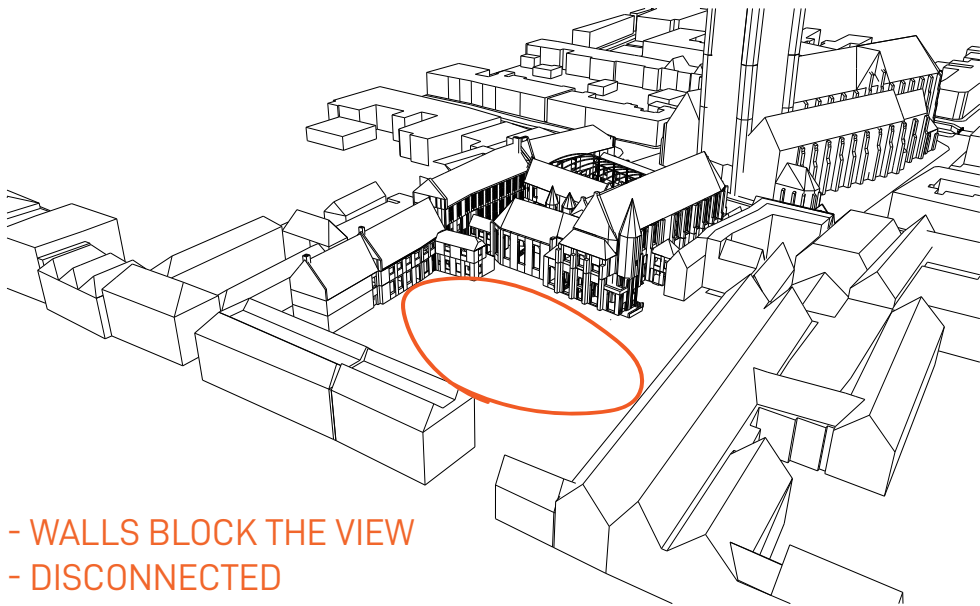


ENTRANCES OF THE AREA AND THE PRINSENHOF BUILDING



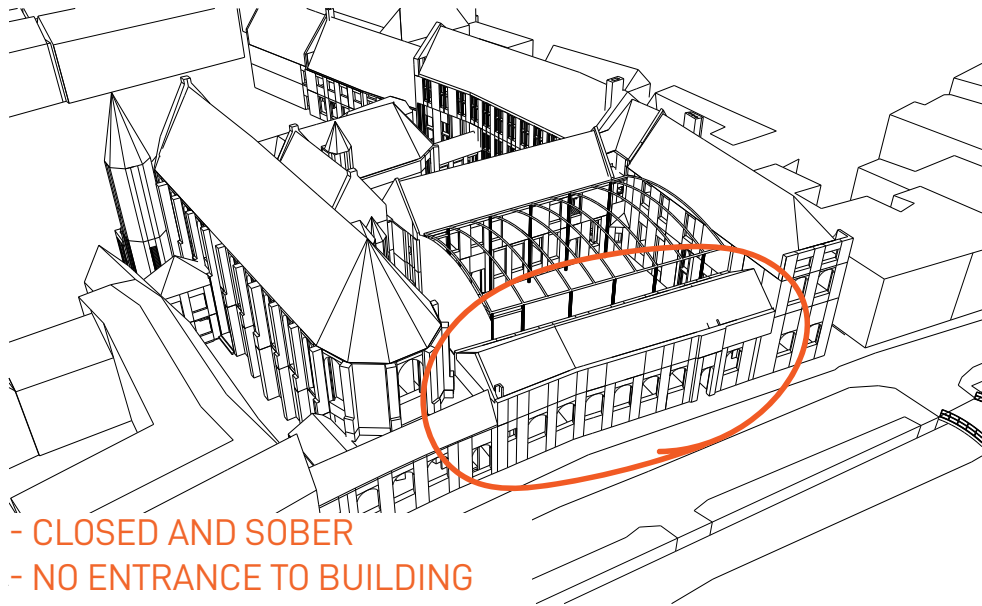
- DON'T FIT STYLE
- BLOCK THE VIEW
- LOW VALUE

BUILDINGS ON THE PHOENIXSTRAAT



- WALLS BLOCK THE VIEW
- DISCONNECTED
- BAD CIRCULATION

THE CURRENT STATE OF THE GARDEN AND SQUARE



- CLOSED AND SOBER
- NO ENTRANCE TO BUILDING
- COURTYARD NOT ACCESSIBLE

THE OUDE DELFT FACADE

Different design strategies for different parts of the Prinsenhof complex are explored to offer solutions for the current problems at the ensemble. A combination of these concepts will lead to the final design concept which will be worked out in the upcoming semester. Some of the points of action mentioned on the previous page need to happen despite which other concepts will be used. The 'cleaning up' of the current ensemble, meaning removing the lumpy low value volumes together with the monastery garden walls and fences, is one of these intervention that will need to happen in all cases. Besides that, the new interior routing concept need to be realised in all cases to solve the internal circulation problems. However, this interior routing concept is somewhat flexible since all the design concepts have a different impact on the interior routing. The added connecting corridors of Phoenixstraat design concept 1 and 2 for example need to be fitted properly to the interior circulation. Also the design concept regarding building a new landmark requires a slightly different approach to the interior routing concept since most of the current museum functions are transferred to the new landmark volume.

In the end, the 'cleaning up' of the complex, the adaptable interior routing concept, a design concept for the Oude Delft side and a design concept for the Phoenixstraat will be combined to form a complete design for the ensemble. Treating the complex as a whole is something almost all stakeholders asked so by combining these design concept hopefully a coherent design will be realised in the upcoming semester.

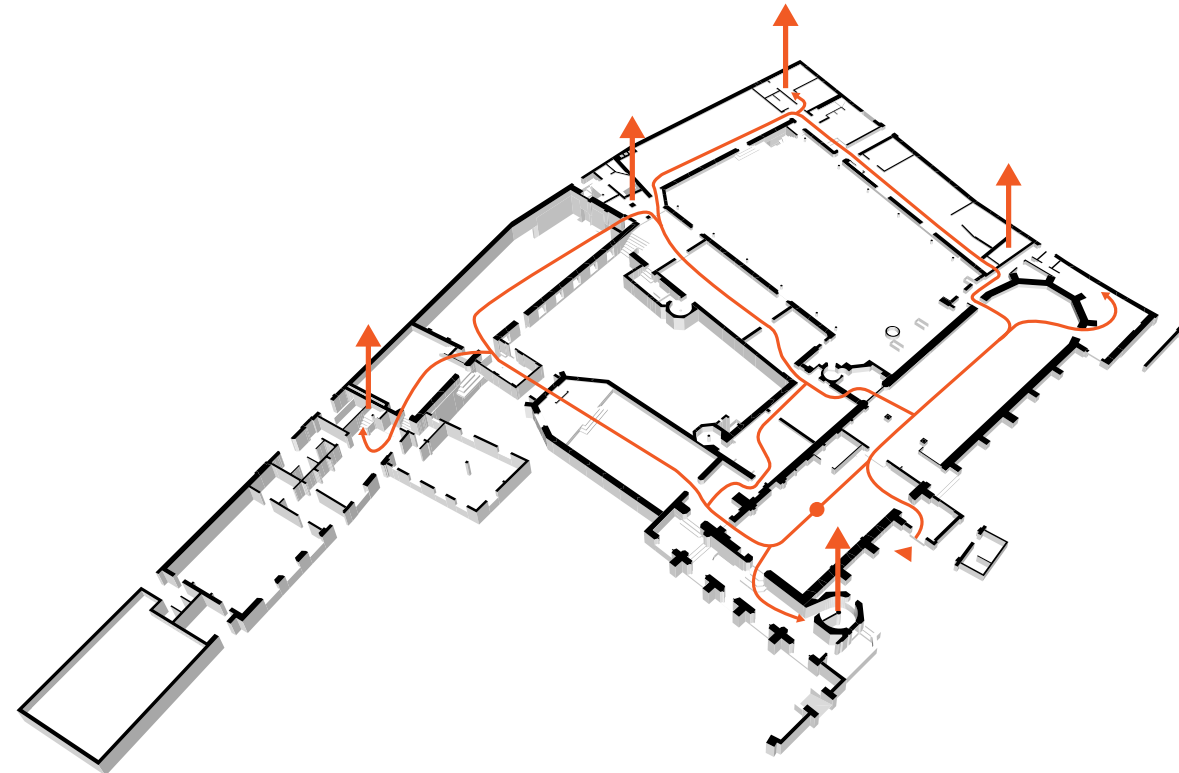
Finally it's important to note that the volumes placed in the design concepts are purely for conceptual purposes, the upcoming semester will tell how exactly these volumes should work and look.

CLEANING UP OF THE CURRENT COMPLEX
+
INTERIOR ROUTING CONCEPT
+
DESIGN CONCEPT OUDE DELFT 1 OR 2
+
DESIGN CONCEPT PHOENIXSTRAAT 1, 2 OR 3
=
COMPLETE DESIGN CONCEPT

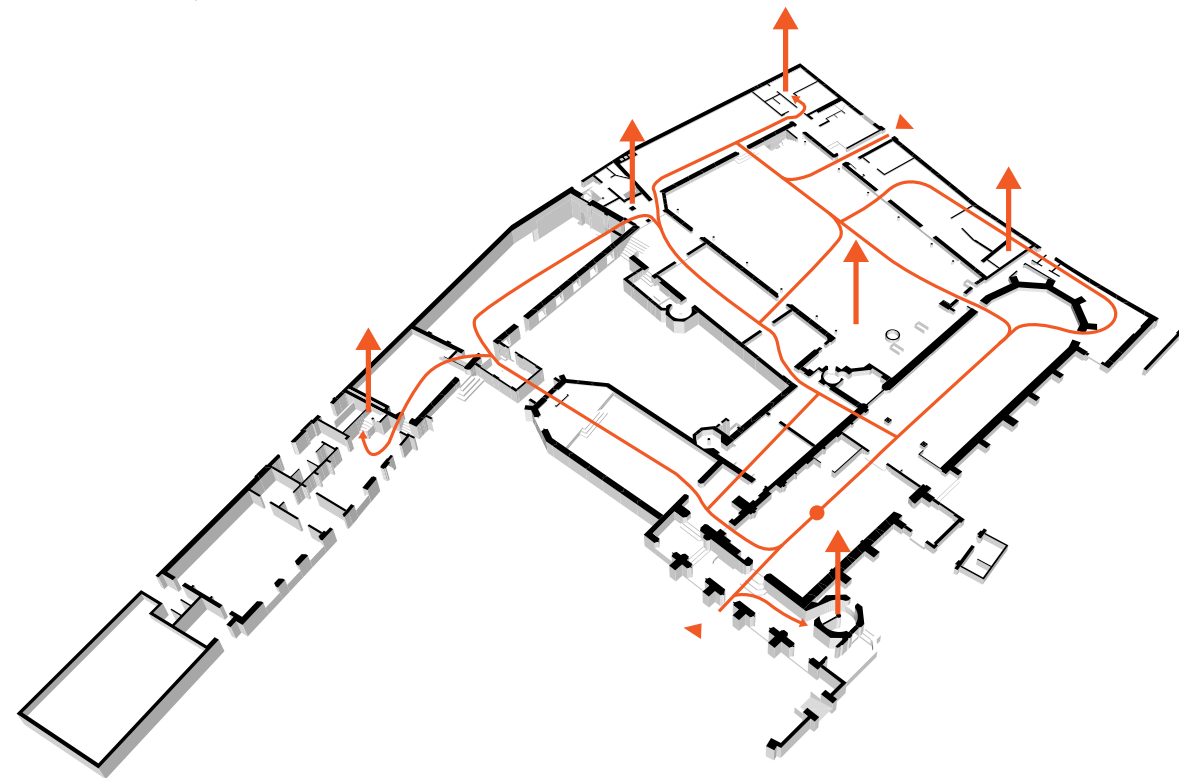
INTERIOR ROUTING CONCEPT

MICK BLOEMENDAL
4296281
HERITAGE4ALL

For the envisioned routing concept on the ground floor, two new entrances have been created. One entrance is situated at the Oude Delft and one entrance is situated at the monastery garden side of the building. By placing the entrances at these locations, the overall routing of the building will be improved and easier to understand. Also a new vertical connection is made by adding an elevator in the current Van der Mandelezaal. This in combination with the new public character of the Van der Mandelezaal allows the routing concept to have more 'loops' and removes as many dead ends as possible.



Current circulation - first floor, self made (2021)



Envisioned circulation - ground floor, self made (2021)



Museo gustavo de maeztu elevator - de Navarra

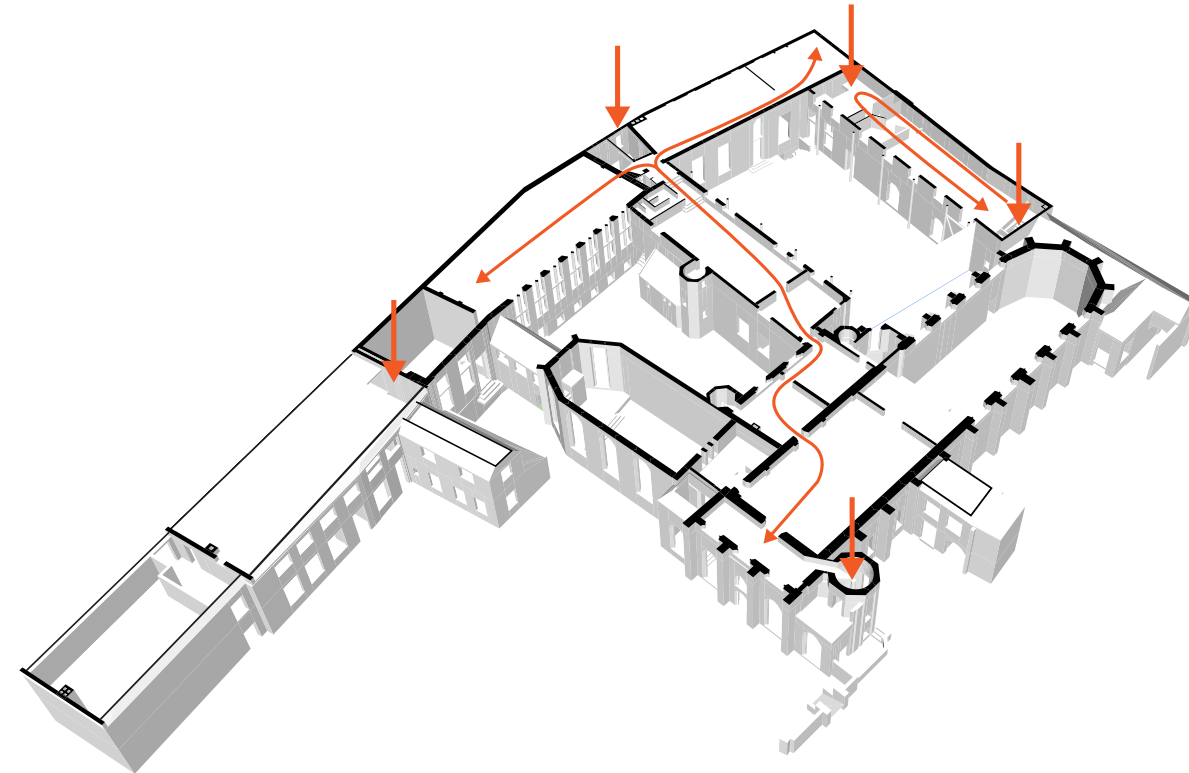


Centraal museum Utrecht - Soda Architecten

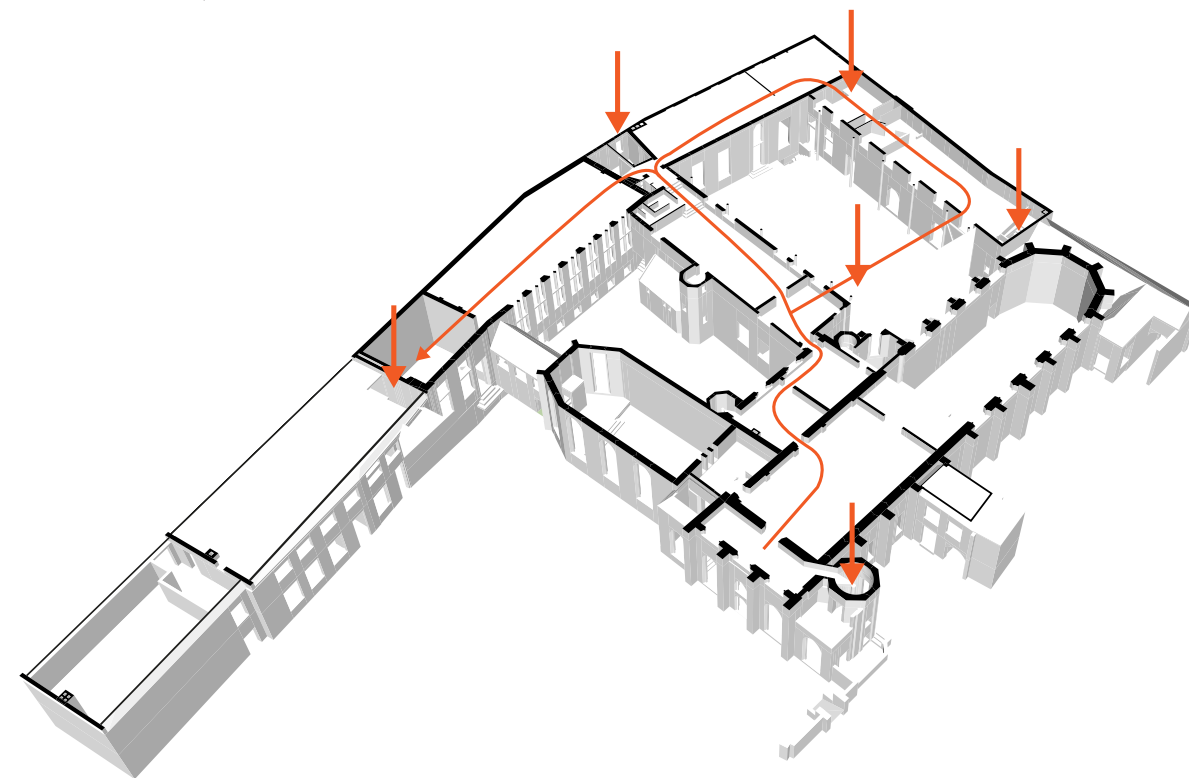
INTERIOR ROUTING CONCEPT

MICK BLOEMENDAL
4296281
HERITAGE4ALL

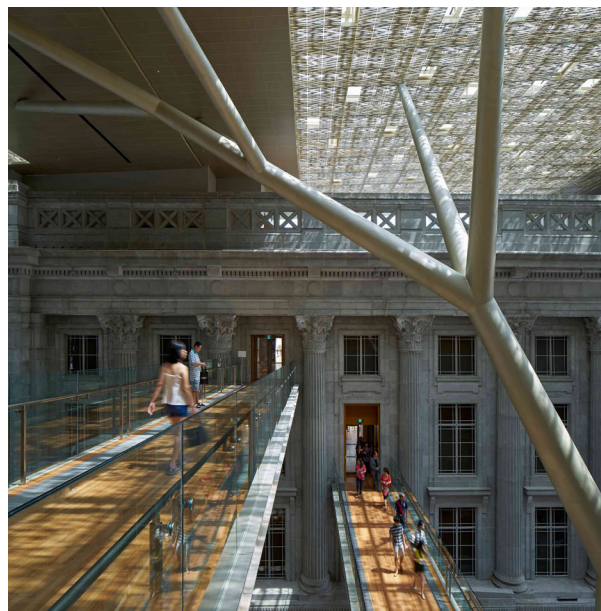
The current routing on the second floor of the Prinsenhof building consists of dead ends and thus lacks the ability for visitors to walk around in loops throughout the building. Therefore a new circulation bridge is envisioned in the Van der Mandelezaal. This new bridge allows visitors to roam around more freely on the second floor.



Current circulation - first floor, self made (2021)



Envisioned circulation - first floor, self made (2021)



Singapore National Gallery - Studio Milou



Centraal museum Utrecht - Soda Architecten

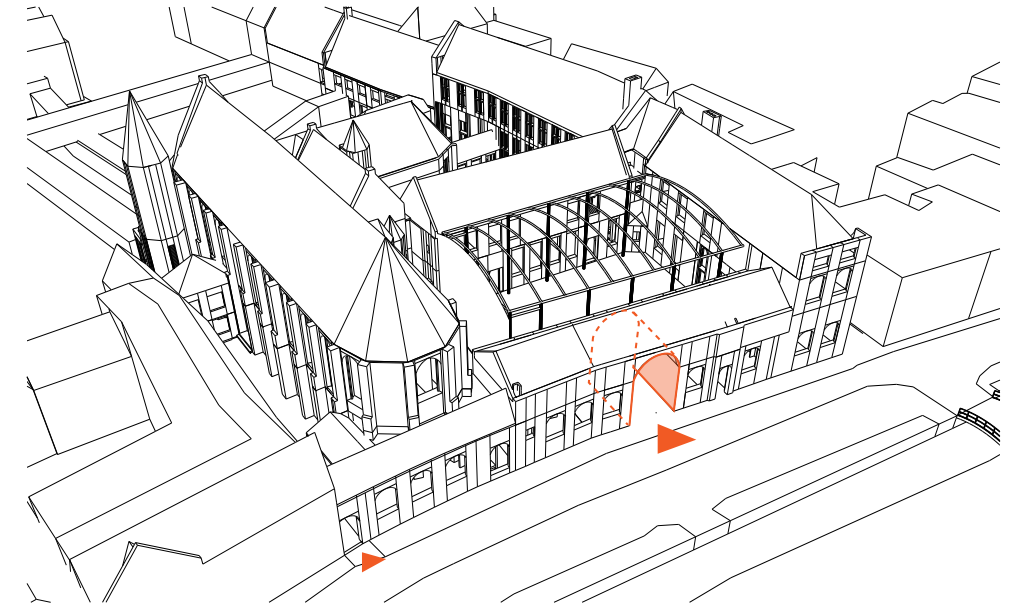
DESIGN CONCEPT OUDE DELFT 1 ARC OPENING WITH A PUBLIC COURTYARD

This is one of the interventions that need to happen at the Oude Delft façade. Currently the façade has a very closed character, the covered courtyard isn't accessible and there's no entrance to the building on this side of the Prinsenhof. This means something needs to happen to make the building more inviting to the public. This design intervention aims to remove a part of the Prinsenhof building part at the Oude Delft side and replacing it with a large open arc connecting the Oude Delft with the inner courtyard. This courtyard is currently not public and used by the museum to host events etc. By opening up the façade, the courtyard can be made public so that the citizens of Delft have a reason to visit the Prinsenhof more often. Also the arc opening could still be closed with a gate if the museum wants to have private events. The function of this garden could be a public herb/vegetable garden (like it used to be during the nunnery times) or simply a green silent space for the citizens of Delft to enjoy. This courtyard can then also function as a entrance for the museum on this side of the building.

Two options could work for this design intervention, either keeping the glass roof structure covering the courtyard or removing this structure. By keeping the structure, the place could be used during all weather conditions which is profitable for the museum. However by removing the structure, the courtyard can be made green again and the view on the original Prinsenhof building will be restored as well.



REMOVAL OF A BUILDING PART TO MAKE SPACE



NEW MONUMENTAL ENTRANCE TO THE PUBLIC COURTYARD



WITH THE COURTYARD COVERED + GREEN SPACES

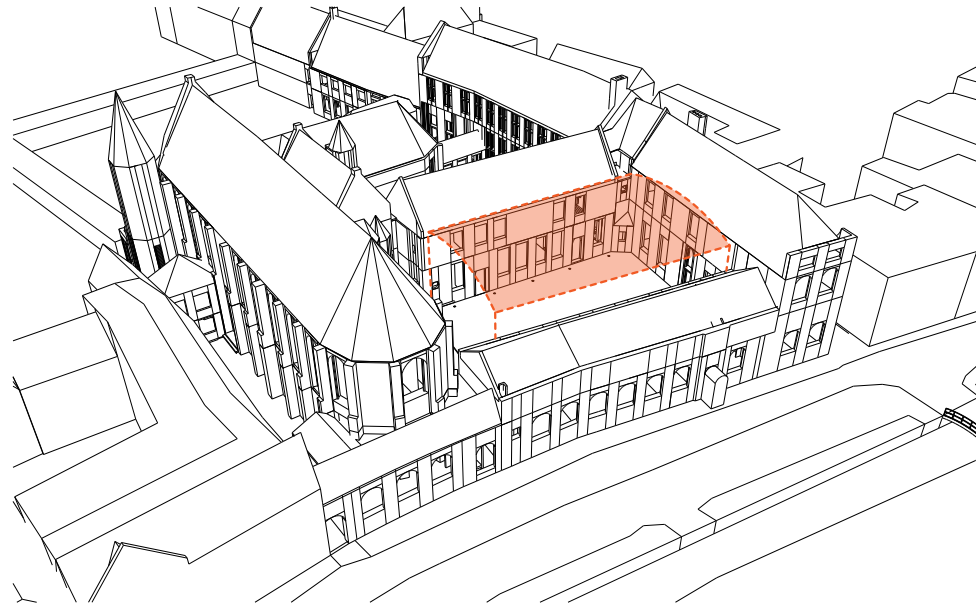


WITHOUT THE COURTYARD COVERED + GREEN SPACES

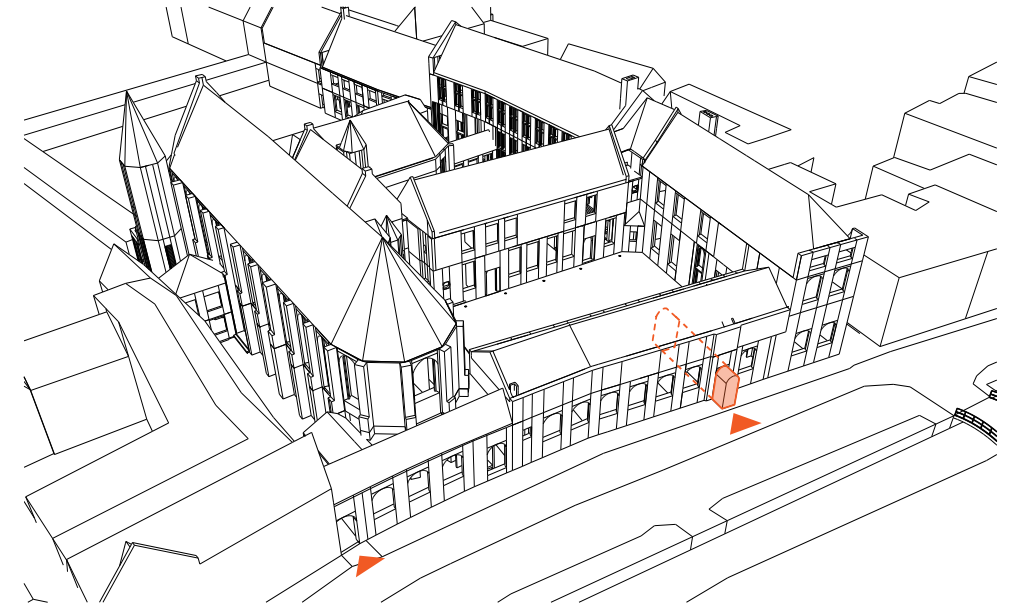
DESIGN CONCEPT OUDE DELFT 1 TRANSPARENT EXTENSION WITH A PUBLIC COURTYARD

Instead of the first design option for the Oude Delft side of the Prinsenhof removing a part of the building, this design option adds a part to the existing structure keeping the façade as original as possible. Since something needs to happen with along the Oude Delft side of the Prinsenhof building, a small addition could be a solution which everyone is content with. The newly added volume will be transparent of nature, preferable made entirely out of glass, keeping the view on the original Prinsenhof façade intact. The additional volume will also act as a glass beacon of interest, people can recognize the entrance to the courtyard immediately, even from far away distances. On the inside changes could be made to improve the circulation of the building. This design intervention aims to make an inner corridor behind the extension connecting the currently covered courtyard directly with the Oude Delft. This way a more public character could be given to the inner courtyard. Also the entrance could be situated in or alongside the courtyard.

Like the previous design option for the Oude Delft façade, two options could work. Either keeping the glass roof structure covering the courtyard or removing this structure. By keeping the structure, the place could be used during all weather conditions which is profitable for the museum and preferable when situating the entrance space inside the courtyard. However by removing the structure, the courtyard can be made green again and the view on the original Prinsenhof building will be restored. Also by removing the structure, the courtyard will have more public character. In the coming semester more study/sketching will need to be conducted to make a good decision for this side of the building.



REMOVAL OF COURTYARD COVERING



TRANSPARENT EXTENSION TO MARK THE NEW ENTRANCE



NEW INTERVENTION + GREEN SPACES

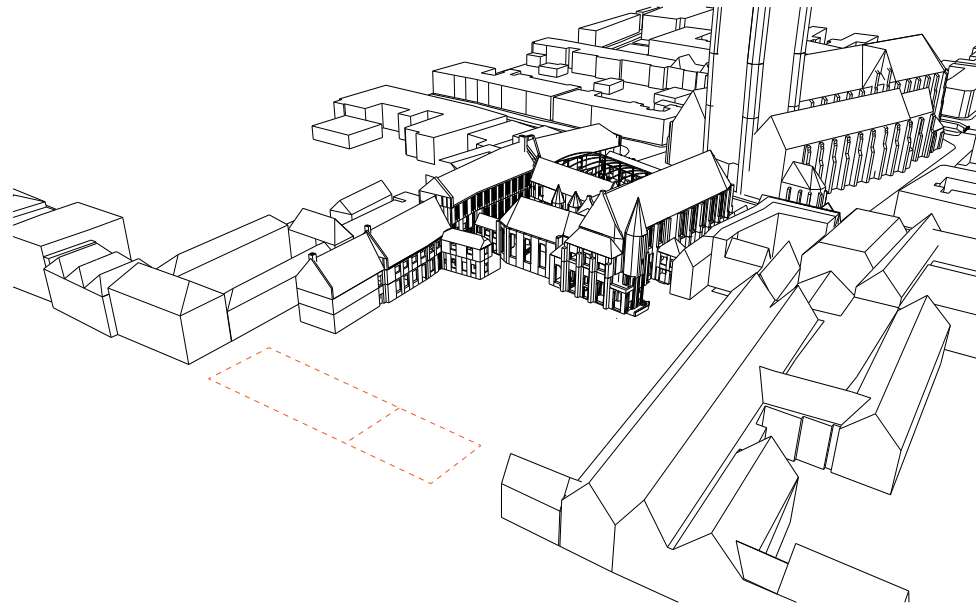


TRANSPARENT EXTENSION FROM STREET LEVEL

DESIGN CONCEPT PHOENIXSTRAAT SIDE 1 NEW VOLUME WITH A TRANSPARENT L-SHAPED CONNECTION

This design concept removes the buildings at the Phoenixstraat to create a better view on the Prinsenhof building, making it more recognizable coming from the central train station of Delft (main arrival point). It replaces the removed buildings with a new volume, this volume extends the Prinsenhof building alongside the Schoolstraat, finishing this alleyway. The volume also extends on the Phoenixstraat to make it even more visible and recognizable. This new volume connects with the Prinsenhof using an L-shaped volume. This L-shaped volume divides the garden into two separate gardens, each with a different character, and the Agathaplein stays roughly as it is. The enclosed garden is a more formal vegetable/fruit garden which is open for public during the opening hours of the museum. The other "open" garden has a public character and is accessible at any moment in time. The L-shaped volume has pass-through's to reach the enclosed garden. The larger volume is partly transparent (orange parts on the drawings) and partly non-transparent. The non-transparent parts can be used for new exhibition spaces while the transparent parts can house more public functions like a museum shop or a restaurant. This design is an addition to the current museum, meaning the circulation will link into the envisioned circulation for the current museum.

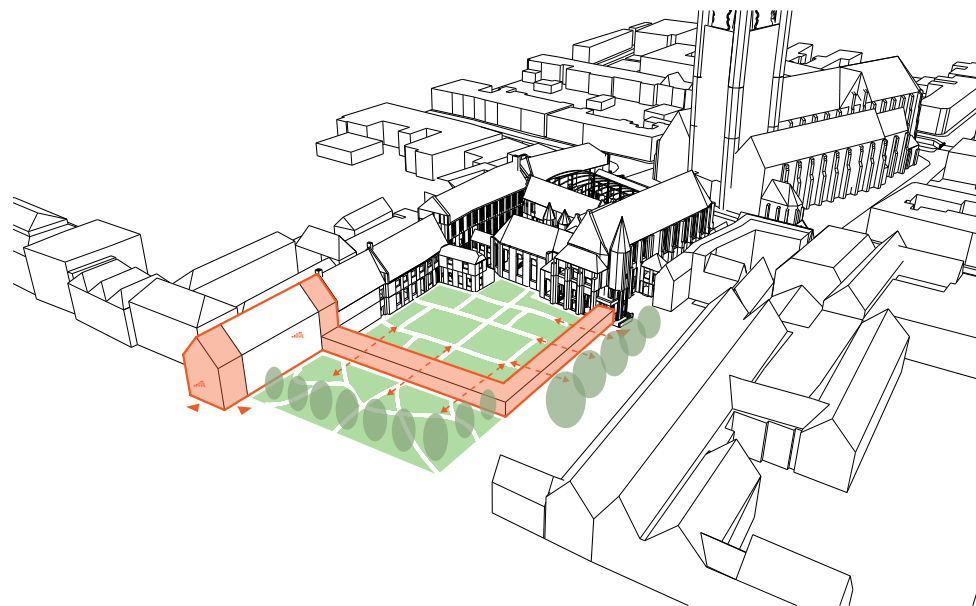
This design solves the circulation inside the building, makes the Prinsenhof visible, offers new spaces for exhibitions and adds different character outdoor spaces. This does mean the buildings alongside the Phoenixstraat need to be demolished but these buildings have a low monumental value and a low value according to the stakeholders.



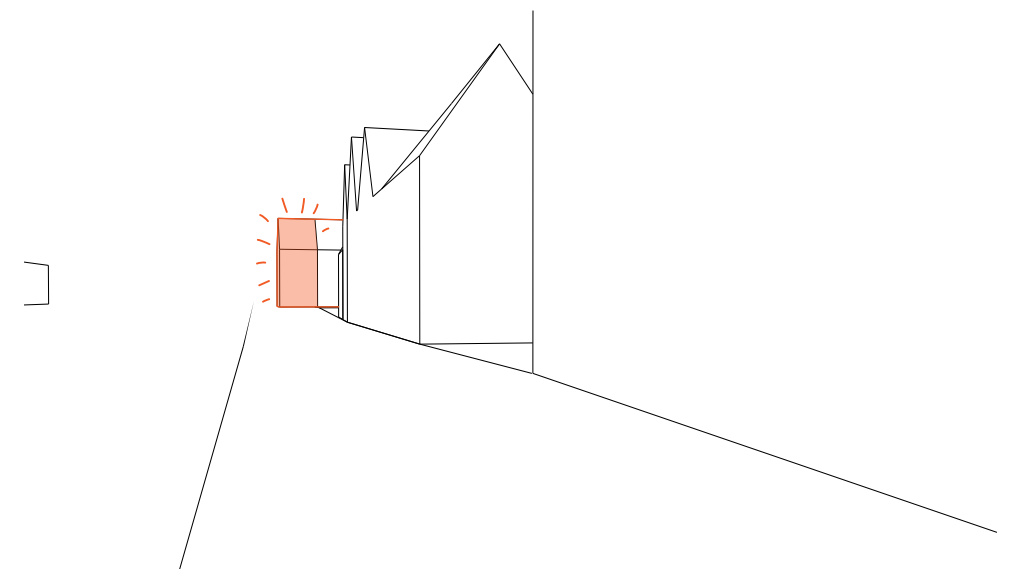
REMOVAL OF THE BUILDINGS AT THE PHOENIXSTRAAT



TRANSPARENCY OF THE NEW VOLUME



ENTRANCES + 2 DIFFERENT GARDENS AND THE SQUARE

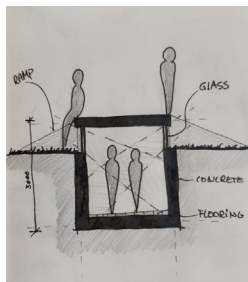


NEW PROUD VOLUME FROM STREET LEVEL

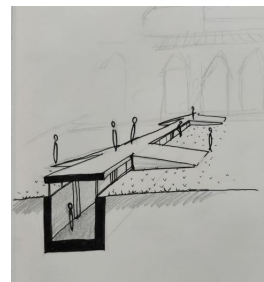
DESIGN CONCEPT PHOENIXSTRAAT SIDE 2 NEW VOLUME WITH PARTLY UNDERGROUND CORRIDORS

For this design concept the housing complex at the Phoenixstraat will be demolished. A new entrance building / pavilion for the museum will replace this building. This new volume will have a transparent character to keep the Prinsenhof building as visible as possible, the new volume will also have one building layer for this reason. The new volume will be connected with the current museum using partly underground corridors. Roughly $\frac{3}{4}$ th of the height of these corridors will be sitting below ground level, the $\frac{1}{4}$ th above ground level will provide the corridors with natural light. The corridors will connect to the museum on two places creating a new circulation loop for the museum. It seems the monastery garden will be split up by these corridors, however the roofs of the corridors will be partly accessible via ramps. This means the garden will still feel like one coherent open space and the view on the original Prinsenhof building will be optimal. The corridors and the new volume will have a transparent character and the museum's entrance will move to the new volume at the Phoenixstraat. This design is an addition to the current museum, meaning the circulation will link into the envisioned circulation for the current museum. A sketch visualizing the essence of these corridors can be found below.

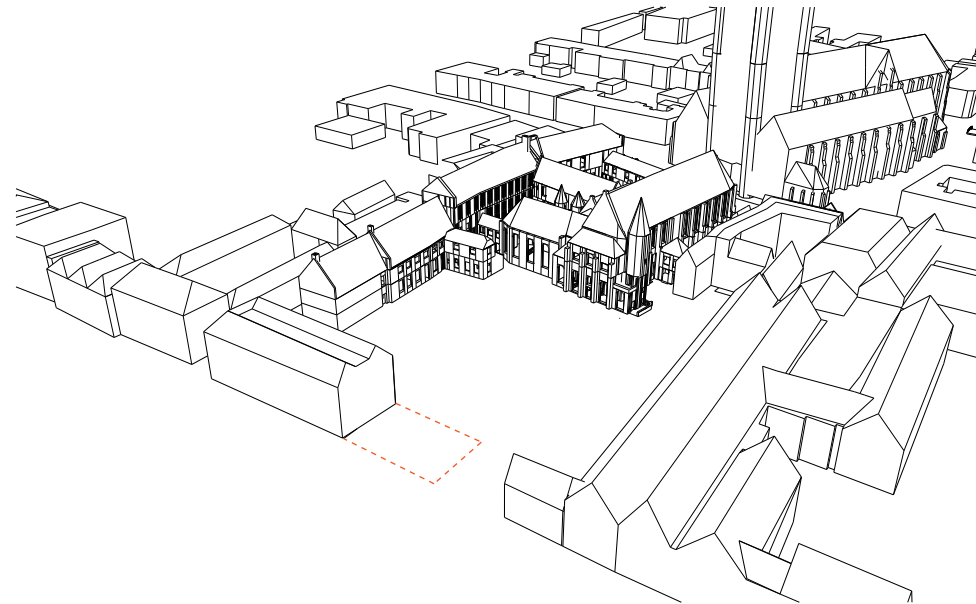
This design concept deals with the circulation problems, keeps the Prinsenhof building visible and makes the monastery garden an open space for roaming and relaxing.



Design sketch, self made (2021)



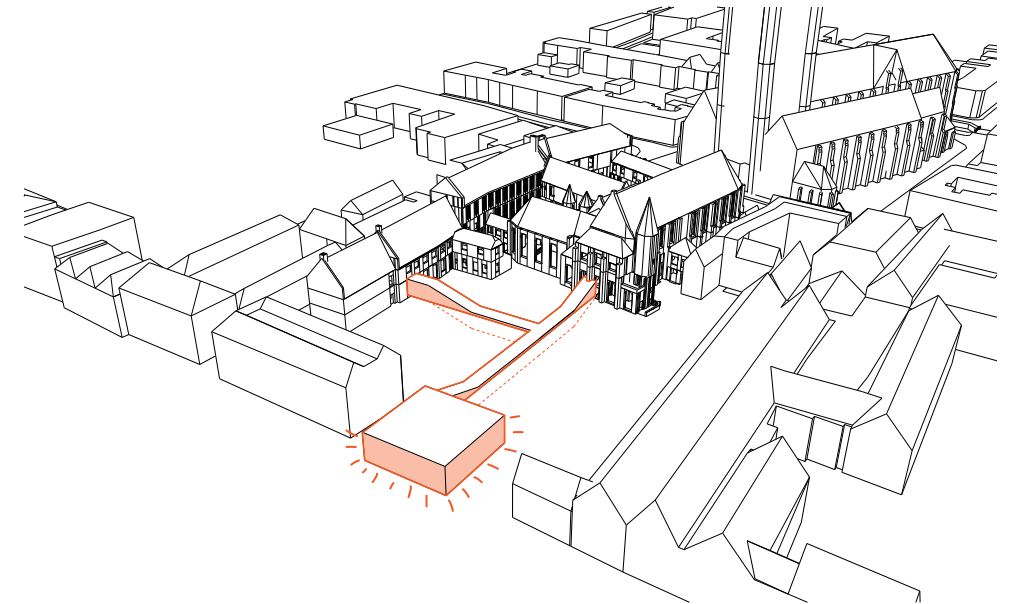
Design sketch, self made (2021)



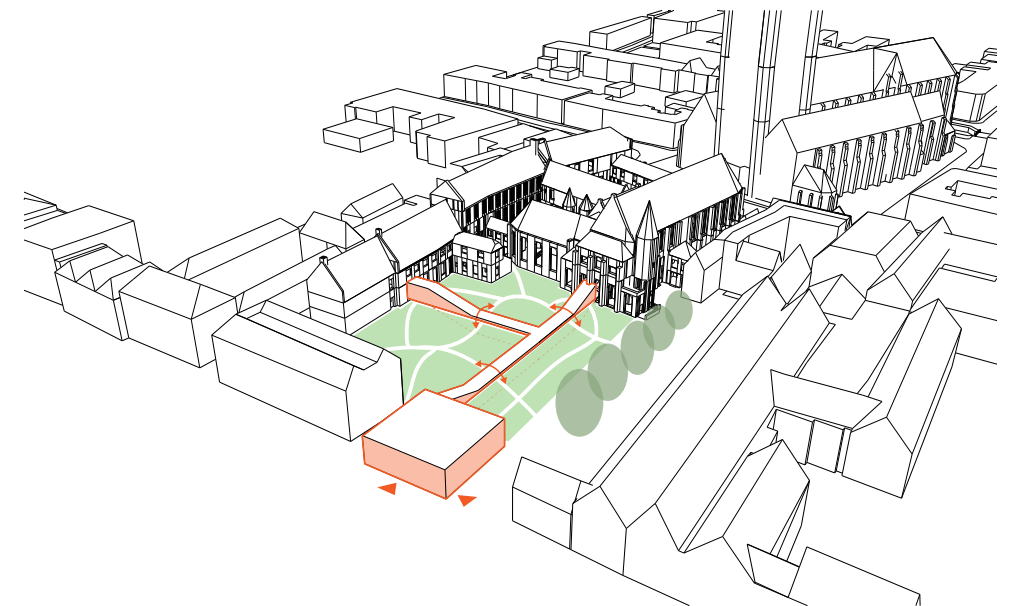
REMOVAL OF HOUSING COMPLEX AT PHOENIXSTRAAT



ONE PUBLIC GARDEN



TRANSPARENCY OF THE NEW VOLUMES WITH PARTLY UNDERGROUND CONNECTIONS

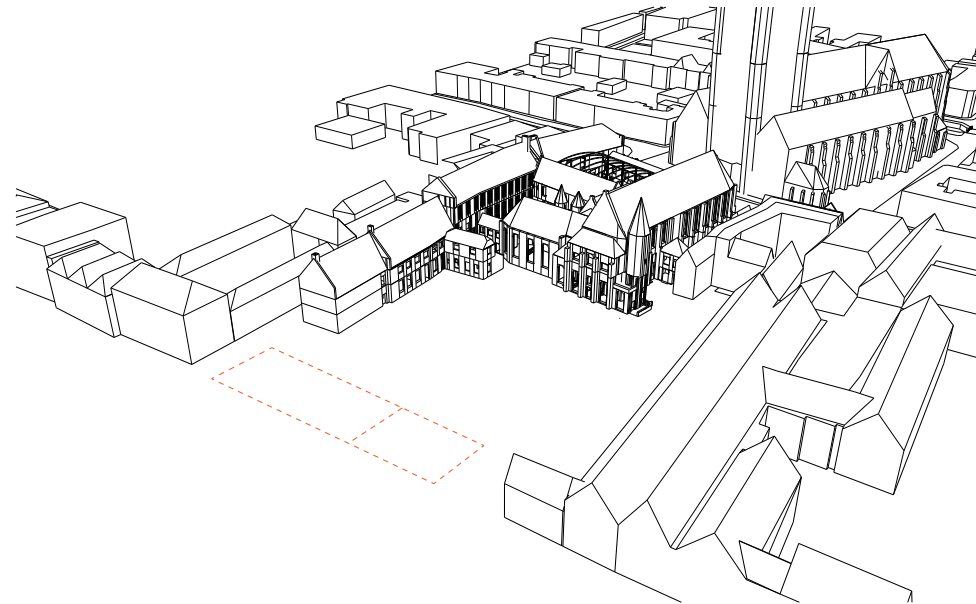


ENTRANCES AND ACCESSIBILITY

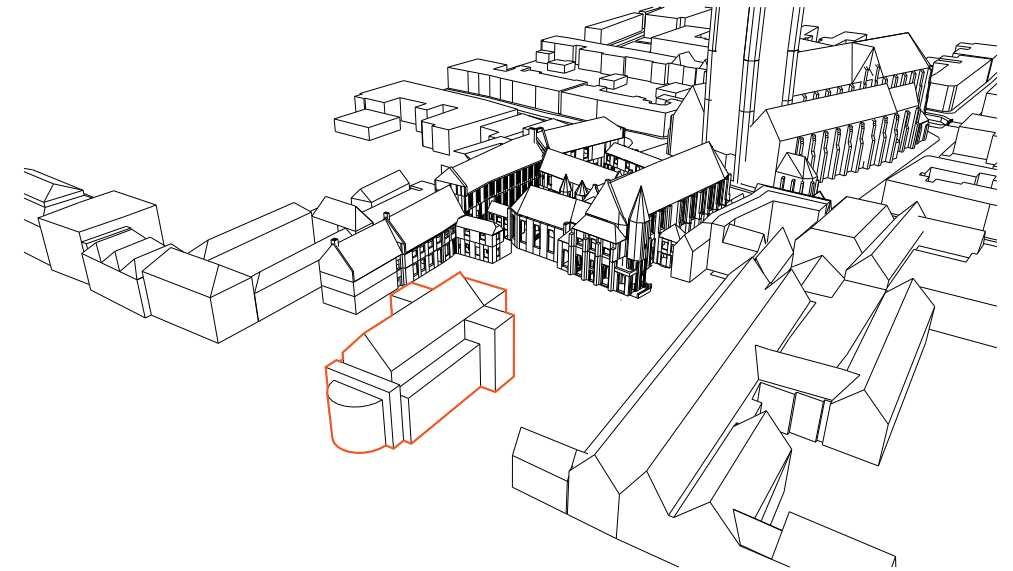
DESIGN CONCEPT PHOENIXSTRAAT SIDE 3 NEW DISCONNECTED LANDMARK

This design concept also aims to demolish the buildings situated at the Phoenixstraat (Fokkema & Partners, social housing complex) and replacing these buildings with a new landmark building. This landmark will house all the museum function currently occupying the original Prinsenhof building. Meaning the original Prinsenhof building will be kept mostly in original state and the function will remain a museum but only focused on the event of the murder of Willem van Oranje. Also the original Prinsenhof building can house other supporting functions such as leisure functions and library / study spaces / silent spaces. The new landmark thus will take over all the current exhibition spaces making it easier to adapt to modern (climate) standards. The shape of this new landmark still needs to be defined but for now a modern interpretation of a church/monastery is opted using mostly transparent materials keeping the original buildings visible. Surrounding this new landmark, a public park could be realised tying the current Agathaplein and Prinsentuin together creating a coherent space to stay in and enjoy the atmosphere.

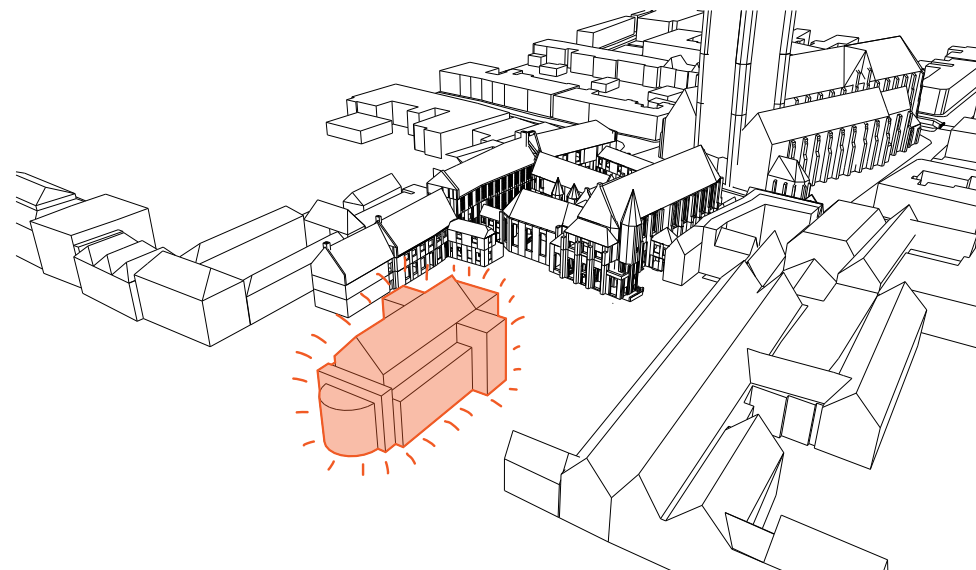
Pro's for this design will be that the climate solutions and the general modern standards will be easily met together with the problems of circulation and recognizability. Cons for this design concept will be the danger of overshadowing the current Prinsenhof building.



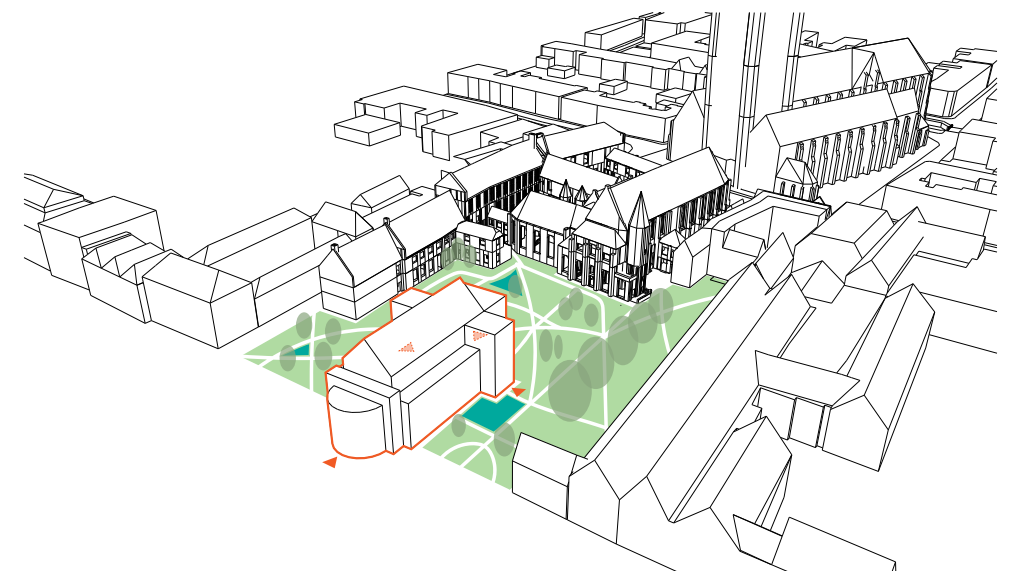
REMOVAL OF THE BUILDINGS AT THE PHOENIXSTRAAT



TRANSPARENCY OF THE NEW VOLUME



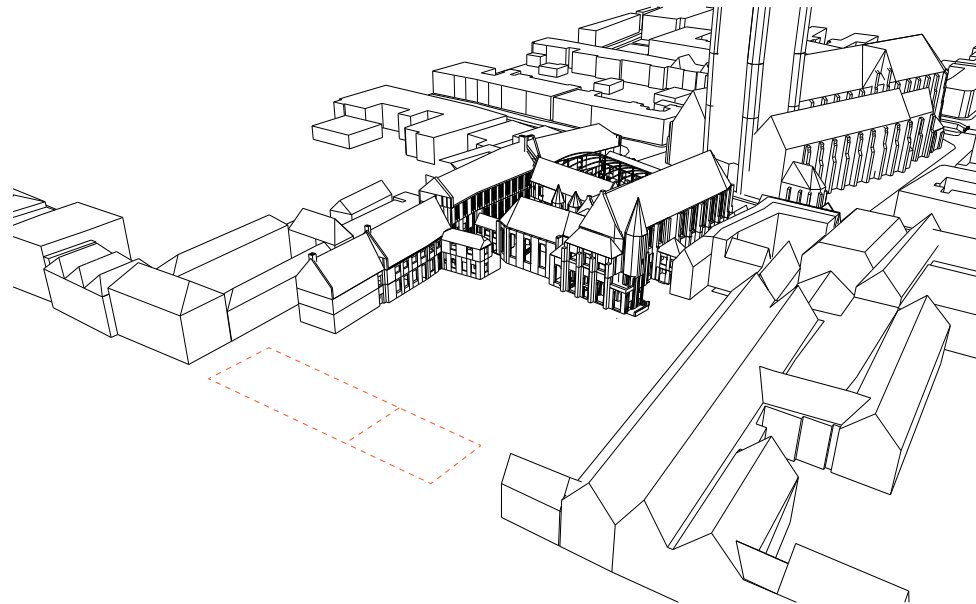
ENTRANCES + 2 DIFFERENT GARDENS AND THE SQUARE



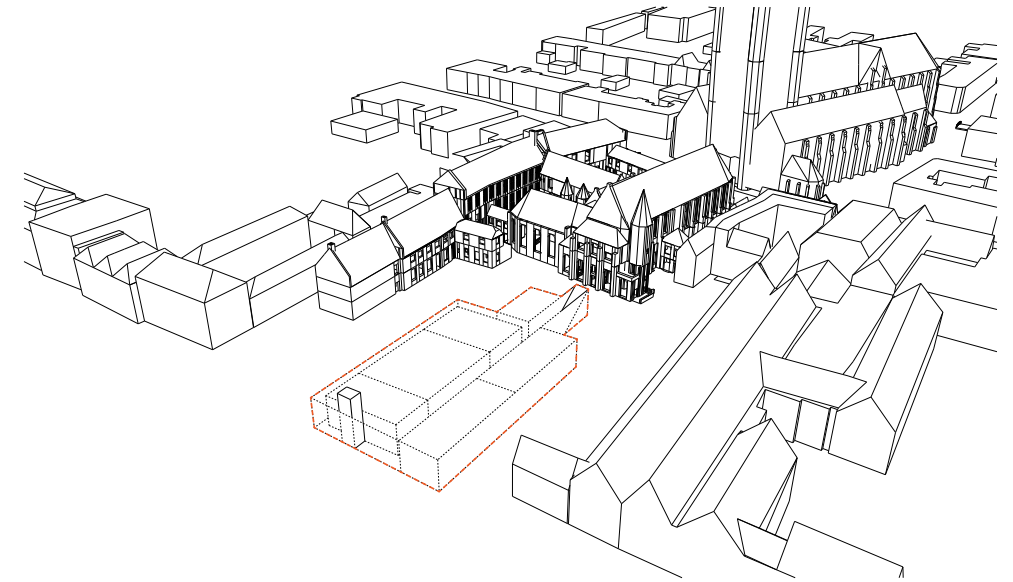
NEW PROUD VOLUME FROM STREET LEVEL

DESIGN CONCEPT PHOENIXSTRAAT SIDE 4 UNDERGROUND VOLUME

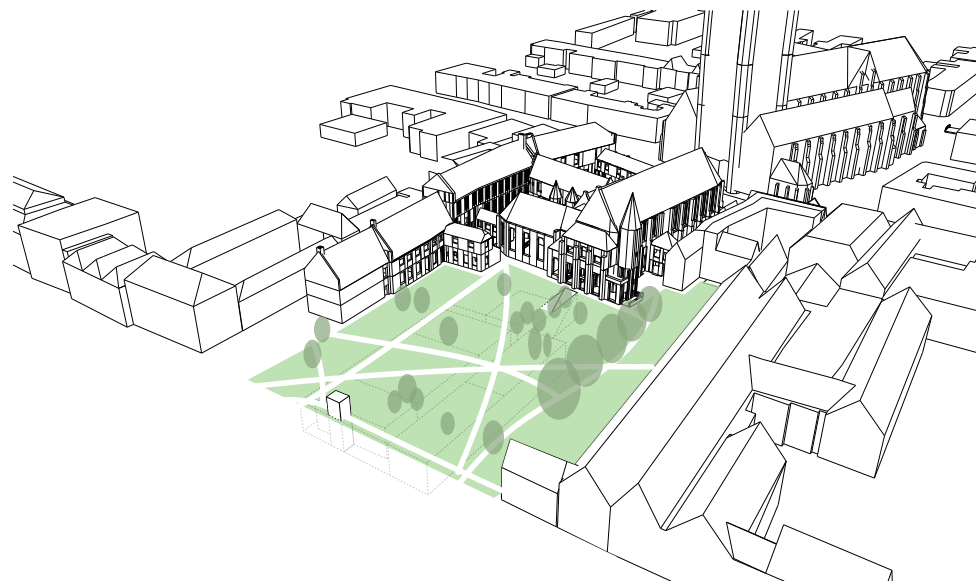
This design concept relies on the demolishing of the buildings alongside the Phoenixstraat. The concept is that the current museum functions will be housed inside a new underground volume beneath the current monastery garden. Only a small volume will be visible from street level, this volume will be the entrance for the new museum. By doing this, the entire St-Agathaplein and current monastery garden will be open space aimed at the citizens of Delft. This space could function as a green oasis in the city with multiple smaller scale pavilions containing leisure activities such as bars or restaurants. The new underground museum volume will be connected however with the current Prinsenhof building, this way a link can be made between the collection/exhibitions and historic place where Willem van Oranje was murdered.



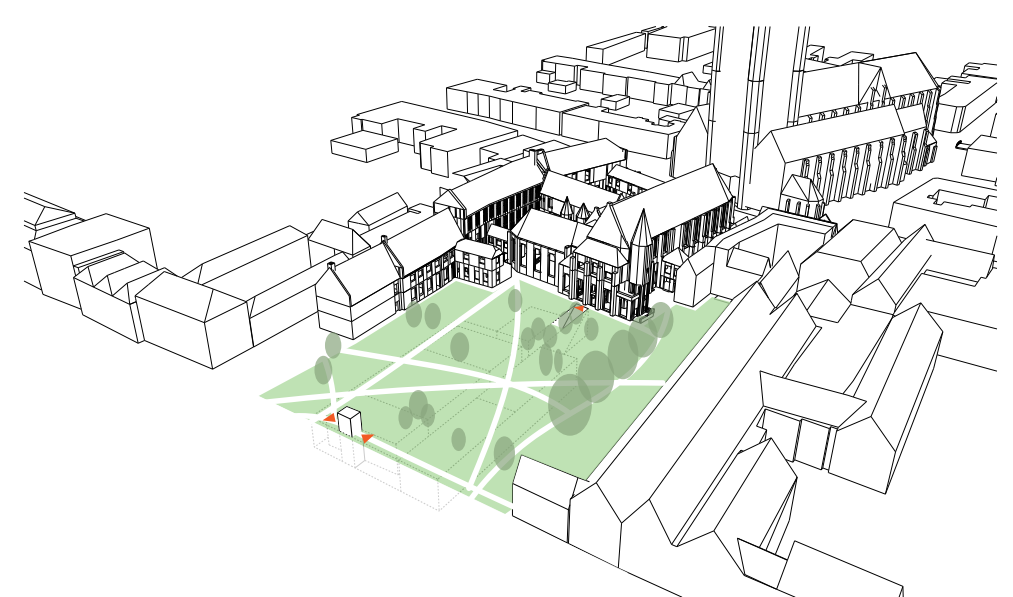
REMOVAL OF THE BUILDINGS AT THE PHOENIXSTRAAT



UNDERGROUND VOLUME



PUBLIC GREEN SPACE ABOVE NEW VOLUME



ENTRANCES AT STREET LEVEL



CONCLUSIONS

This concluding part of the this research booklet will contain the answers on the main research question and the sub-questions. Some of these conclusions have already been made earlier in this booklet but they will be repeated to have a clear overview of all the questions plus the answers. After all the sub-questions are answered, the main research questions will be answered. Finally, newly emerged questions will be presented together with recommendations.

The sub-question: *"How to use co-creation (digital games/gaming tools) to involve stakeholders in the redevelopment of heritage museum buildings?"* will be answered below:

During this research, co-creation workshops were conducted with students and stakeholders. This turned out to be a fruitful experience both for the researchers as for the workshop participants. For this workshop the block building game of Minecraft was used, this game makes use of blocks, roughly 1x1x1m, players can place and demolish. These Minecraft blocks have different materials and colours allowing the player to build whatever their imagination is. Besides the overall experience during the co-creation workshops, Minecraft surveys were conducted after the stakeholder workshops. The aim of these surveys was to find out how valuable the tool of the Minecraft game is during the co-creation design process for the redevelopment of heritage museum buildings; in this case the Prinsenhof Delft.

The conducted workshops showed stakeholders can be involved using co-creation tools like Minecraft. Before the workshops with the real stakeholders were conducted, trial workshops were held with students. These trial workshops were essential to explore the workshop dynamics, especially in times of COVID-19 making it near impossible to meet with large groups. This is also why the trial workshops were conducted online using Zoom, this way more students could attend and we could gain

as much feedback as possible before starting the co-creation workshops with stakeholders.

The results of the Minecraft survey show that the game of Minecraft is a useful tool for engaging stakeholders in the redevelopment process. However the survey also shows that the usability, especially for these new players, was not optimal. This was also noticed during the workshops, stakeholders were often assisted using Minecraft by the workshop assistants. However, during the workshops most participants did mention that the game has lots of potential as a co-creation tool. This means that for future use of the game in the co-creation process it could work better with some adjustments in the usability of the game. By analysing the usage of the game during the workshops, the game of Minecraft could work better with some ways of placing/removing more blocks at the same time. Also the way of engaging could be improved by making use of Virtual Reality (VR) or Augmented Reality (AR). Minecraft in the form it was used during the co-creation workshops is a better visualisation and emerging tool than it is a real co-creation or design tool.

Having said that, the workshop format turned out to spark a lot of conversations which in itself was very useful. One could however question if the use of Minecraft sparked these conversations or if these conversations also would have happened without the use of Minecraft. Overall the game has a lot of potential and with slight modifications could turn out to be a useful tool in the co-creation process for the redevelopment process of heritage museum buildings.

For more effective and efficient co-creation workshops in the future, the use of a shared world, a world where players can work together in the same digital environment, would be helpful. This way only one world needs to be utilized per stakeholder group, making the creation of large design intervention easier since

players can work together. Besides this critical note, the workshop process together with the results prove that the game of Minecraft can be used to involve stakeholders in the redevelopment process of heritage museum buildings. However, the game has potential to become even more useful in this process.

Finally, other digital games/gaming tools could be explored during the co-creation process of the redevelopment of heritage museum buildings. However, the workshop atmosphere and the simple fact that stakeholders sat together and discussed their own made design interventions is more important for the redevelopment process than a (replaceable) tool like the Minecraft game.

To answer the sub-question: *"What will be the advantages and disadvantages of using digital games (Minecraft) for the redesign and decision making process of the Prinsenhof museum?"*, multiple things were taken into account. The Minecraft assessment was used, the overall workshop experience, and the researcher's personal experience of using the Minecraft game. Below the advantages and disadvantages are listed based on these experiences:

Advantages:

- Minecraft sparks creativity and playfulness
- Minecraft can be played by all ages
- The Minecraft Educational Edition is free for students
- Large player base, meaning the game will be supported for a while to come
- The game offers countless colours and materials to use in your model
- Relatively simple controls
- Human perspective of the game
- Minecraft can be played on almost all computers; low performance demand

- Minecraft models can be shared and adapted by multiple players
- 'Walking' through the Prinsenhof model in Minecraft is a good way of visualising the environment, better sense of space then by using 2D maps for instance
- 'Walking' through the Prinsenhof model in Minecraft works well as a presentation tool, one can easily show which part of the building they are talking about
- Design ideas and interventions can be instantly translated and created in Minecraft
- Minecraft works like a physical model which players can infinitely adapt
- Minecraft can be modified using so-called mods (modifications) to fit a specific purpose, possibilities are endless
- Minecraft latest editions can use RTX (real time rendering) and VR (virtual reality)
- By making use of the 1x1x1m block mechanic, Minecraft is a good way of abstracting environments to their core morphology, useful early on in the design process
- Minecraft has the option to work in a server, meaning multiple players could work on a project at once
- Minecraft Educational Edition implements lessons (by playing the game) on different subjects, works as an educational tool

Disadvantages:

- Minecraft needs some modifications to work in a fast workshop setting, currently the controls were too slow to make large interventions for instance (can be solved by using mods)
- Although the controls are relatively easy, for the older generations it can still be hard to truly master them in a short period of time
- The abstraction of the game can sometimes lead to un-

certainities

- It takes a lot of time to model and detail large areas such as the Prinsenhof ensemble, mods could help but the detailing still needs to be done block for block.
- The version used during the workshops (Minecraft 1.12.2) is relatively old and thus didn't support newer modifications, RTX (real time rendering) and VR (virtual reality)
- Minecraft won't be useful later in the design process, the models are too abstract for that

This conclusion will try to answer the sub-question: *"How to raise awareness on citizens about the cultural significance of the Prinsenhof ensemble, in particular Social-, Historic-, Scientific- and Age values?"*

The Prinsenhof ensemble in Delft holds an important place in the history of the Netherlands. The murder on the founder of the Netherlands as we know it today; Willem van Oranje, took place at the Prinsenhof. This event still is one of the main reasons people visit the Prinsenhof museum. However, there is more to discover at the Prinsenhof ensemble than just the bullet holes from the murder on Willem van Oranje. This research showed the important Social-, Historic-, Scientific-, and Age values of the place. To answer this research question, these types of values will be dealt with separately together with design intervention recommendations on how raise citizen's awareness on these particular values.

The social values of the Prinsenhof ensemble discovered during this research are referenced to a (former) spiritual/religious place and a place related to communal value. This became apparent during the expert interviews and the stakeholder workshops. As a representative of Delft Design stated on the community feeling of the Prinsenhof ensemble during an expert

interview: "... we are part of Prinsenkwartier, let's say a greater community within the Prinsenhof ensemble [...] it is a total complex and one should treat it like a total complex" (Interview with Delft Design, see Annex). This quote embodies the community feeling apparent in the Prinsenhof ensemble. One of the conclusions of the stakeholder workshops was also that the Prinsenhof complex should be treated as a whole, the focus should not be just on the museum itself. This also shows the importance of the complex, the communal feel felt by the stakeholders. However raising awareness on the cultural identity and communal values is still important according to the stakeholders. Like mentioned before, stakeholders wish that the complex will be treated as a whole and not every separate building part on its own. On top of this, it was mentioned during the workshops that the stakeholders wish that the Prinsenhof museum was more open, more accessible for the public. Currently, public places that improve, facilitate and embody the communal feeling together with the cultural identity are lacking.

The Werkgroep Prinsenhof Delft even originated partly for the fear of this not happening. This action group proves the fear of the community not feeling understood and taken seriously. The workshop attendees said after the co-creation workshops that the method of co-creation together with different stakeholders is a useful way to make stakeholders feel like they are being taken into account, taken seriously.

That the Prinsenhof building is a place of memory related to the cultural identity is also clear, the murder on Willem van Oranje was such a big event in the history of the Netherlands that the main 'attraction' of the museum still is the location of this murder. On top of this, the value assessment made by the stakeholders and the interviews conducted with experts showed the appreciation of the historic value of the Prinsenhof building. The building as it stands today is appreciated by everyone who at-

tended either the workshops or the interviews.

This ties in nicely with the scientific values of the Prinsenhof, the quotes of the interviews and the value assessment made by stakeholders during the co-creation workshops shows that all attendees see the scientific values of the Prinsenhof ensemble. Especially the craftsmanship of the original/remade roof structures, the more modern roof structure of the Van der Mandelezaal, the basement structures and the overall lay-out of the buildings are valued highly by stakeholders and experts. This can also be said on the Age values of the ensemble. These Age values overlap with the other Prinsenhof values quite a bit, the building is very old after all. The historical growth, place of memory and the traces of the historical rebuilds over time are example of Age values represented in the Prinsenhof building.

Overall the way to make the citizens of Delft more aware of the Social-, Historic-, Scientific- and Age values will be depending on the design for the redevelopment. Making citizens more aware of a building's values ultimately has to do with the architecture. If people like to visit the building and the surroundings, they will appreciate its values more. The design in the second semester will be considering this and thus will be the answer to this question.

The answer on the sub-question: *"How does the quality of the Prinsenhof ensemble contribute to the needs of the TU Delft campus?"* will be explained below.

One of the first interviews for this research was the interview with Alexandra den Heijer. She stated that heritage buildings, and specifically heritage buildings in the inner city of Delft, have some unique qualities that the TU Delft campus lacks. These heritage buildings can offer the campus spaces and qualities that will be perfectly suited for formal activities and meetings for instance (Interview transcript Alexandra den Heijer, see an-

nex). This idea was also backed and supplemented during the co-creation workshops with stakeholders. There it became apparent that the Prinsenhof ensemble could use new functions related to the TU Delft campus like study spaces, silent spaces and a library. Finally, the Prinsenhof ensemble can offer the TU Delft campus formal spaces for meetings and study/silent spaces aimed at students combined with a public library. The mutual beneficial relationship can be apparent when these functions will be implemented. The Prinsenhof museum will get more students visiting the site, something what was lacking in the past years (Museum Prinsenhof Delft, 2019) and the TU Delft Campus has more (formal) spaces to use. Something to take into account during the upcoming design semester.

The answer on the sub-question: *"How to engage museum visitors by applying new technologies and mixed use in the design program?"* will be explained below.

Unfortunately, applying new technologies was not investigated for this research due to time management and setting priorities. Due to the sheer amount of time it took to prepare and conduct the workshops, there was time left to find experts in this field of work. During the workshops there also weren't ideas focussing on applying new technologies. However, mixed use is strategy which will be used during the upcoming design semester.

Mixed use was mentioned countless times during the co-creation workshops with stakeholders. Stakeholders named several other functions that would, in their eyes, work well in combination with the current museum functions. One could conclude that mixed use will attract and engage more visitors to the Prinsenhof museum. On top of this, the expert interview with a representative of CE Delft gave some good insights on the advantages of applying mixed use in the design program from a sustainability point of view. The CE Delft representative men-

tioned: "By incorporating multiple functions in a building, the building will be 'alive' at all times which is profitable for its energy use. By making the building accessible for different functions at different times, the use of space is better"(CE Delft interview, see annex).

Main research question

Below, one can find the concluding answer on the main research question: *"How to involve citizens into the adaptive design process of heritage museum buildings?"*.

Concludingly, the main research question can be answered based on the sub-questions. Involving citizens in the adaptive design process of heritage museum buildings can be done by conducting co-creation workshops with the corresponding stakeholders. This was the method used for this research and turned out to be a fruitful way of involving citizens. Also expert interviews, or interviews in general are a good way of involving citizens in this process. Overall it can be stated that including citizens is an essential part of creating a coherent design strategy. The action group "Slag om Prinsenhof" is the living proof of what happens when someone makes a design without contacting the stakeholders. It turned out that the most important thing is to actually include stakeholders in the adaptive design process of heritage museum buildings, the method used to include the citizens is less relevant. Using the tool Minecraft had its advantages and disadvantages, more research could be conducted on implementing other digital games into the co-creation process with stakeholders. The upcoming design semester will result in a values and research based design, based on the results deriving from this research. In the end, the new design for the Prinsenhof museum will be made for its users so it is crucial to include them into this process.

Emerged questions

Which digital game would complement co-creation workshops with stakeholders during the adaptive design process for heritage buildings the best?

Which other functions, from a sustainability point of view, could be merged with heritage museum buildings?

Which functions could be added to the game of Minecraft to make it perfectly suited for co-creation workshops with stakeholders during the adaptive design process for heritage museum buildings?

How to redevelop a heritage museum building (Prinsenhof) in such a way it complies with modern energy standards?

How to make a financially feasible design for the redevelopment of heritage museum buildings without adding new volumes?



REFERENCES

Armstrong, J. S. (2001). Role Playing: A Method to Forecast Decisions. In J. S. Armstrong, Principles of Forecasting (pp. 15-30). Boston.

BBA - Bureau voor Bouwhistorie en Architectuurgeschiedenis. (2018). Bouwhistorisch Onderzoek Museum Prinsenhof. Delft.

Claisse, C., Ciolfi, L., & Petrelli, D. (2017). Containers of Stories: using co-design and digital augmentation to empower the museum community and create novel experiences of heritage at a house museum. The Design Journal. Cosović, M., & Brkic, B. R. (2019). Game-Based Learning in Museums - Cultural Heritage Applications. Information, 11, 22.

de Andrade, B., Poplin, A., & Sousa de Sena, Í. (2020). Minecraft as a Tool for Engaging Children in Urban Planning: A Case Study in Tirol Town, Brazil. ISPRS International Journal of Geo-Information: Special Issue "Gaming and Geospatial Information".

Debord, G. (1958). Theory of the Derive (Debord). Retrieved from <http://www.bopsecrets.org/SI/2.derive.htm>

Falk, J., & Diekring, L. (2005). Lessons without limit: How free-choice learning is transforming science and technology education. Suplemento v.12, 145-160.

Groat, L., & Wang, D. (2013). Architectural Research Methods. Hoboken, New Jersey: John Wiley & Sons inc. Hooff, H. v. (2012). UNESCO - Culture & Development: Museums and Heritage, 2012, p. 3.

ICCROM. (2020, 10 13). inSIGHT: A participary game for enhancing risk governance. Retrieved from [iccrom.org: https://www.iccrom.org/news/insight-participatory-game-enhancing-disaster-risk-governance](https://www.iccrom.org/news/insight-participatory-game-enhancing-disaster-risk-governance)

ICOM. (2007). ICOM Statutes . Vienna.

Kences. (2019). Landelijke Monitor Studentenhuisvestign 2019. Delft: ABF Research.

Laurel, B. (2003). Design Reserach: Methods and perpectives. MIT press.

Moerman, J. (2017, april). Een plan voor de toekomst 2017-2022. Retrieved from Museum Prinsenhof Delft: <https://prinsenhof-delft.nl/ruimtelijke-ontwikkelvisie>

Museum Prinsenhof Delft. (2019). Jaarverslag 2019. Delft.

O'hern, M. S., & Rindfleish, A. (2010). Customer co-creation. Review of Marketing Research, 84-106.

Petrelli, D. (2016). Do it together: the effect of curators, designers, and technologists sharing the making of new interactive visitors' experiences. Museum and the web 2016, 1-13.

Petrelli, D., Ciolfi, L., van Dijk, D., Hornecker, E., Not, E., & Schmidt, A. (2013). Integrating Material and Digital: A New Way for Cultural Heritage . Interactions: new visions of human-computer interaction .

Petrelli, D., Not, E., Damala, A., van Dijk, D., & Lechner, M. (2014). EuroMed. meSch - Material Encounters with Digital Cultural Heritage (pp. 536-545). Springer International Publishing Switzerland.

Pisanu, M., & Sanjust, P. (2018). REHABEND. a user-centered immersive expierence for heritage exploration. Cácares, Spain.

Ran, W., & Han, F. (2018). Indicators for Assessing the Sustainability of Built Heritage Attraction: An Anglo-Chinese Study.

Tarrafa Silva, A., & Pereira Roders, A. (2012). Conference paper. Cultural Heritage Management and Heritage (Impact) Assessments (p. 6). Eindhoven: Eindhoven University of Technology .

Teo, A. S. (2015). Univer-Cities: Strategic View Of The Future From Berkeley And Cambridge To Singapore And Rising Asia, Volume II. Singapore: World Scientific Publishing .

Teo, A. S. (2018). Univer-Cities: Strategic Dilemmas Of Medical Origins And Selected Modalities: Water, Quantum Leap & New Models - Volume III . Singapore: World Scientific Publishing.

TU Delft. (2020, 08 18). AR3AH105 Graduation Studio Adapting 20th Century Heritage (2020/21 Q1). Retrieved from [brightspace.tudelft.nl: https://brightspace.tudelft.nl/d2l/le/content/278720/viewContent/1958065/View](https://brightspace.tudelft.nl/d2l/le/content/278720/viewContent/1958065/View)

UNESCO. (2009). Charter on the Preservation of the Digital Heritage . Paris: UNESCO.

UNESCO. (n.d.). concept of digital heritage. Retrieved from [unesco.org: https://en.unesco.org/themes/information-preservation/digital-heritage/concept-digital-heritage](https://en.unesco.org/themes/information-preservation/digital-heritage/concept-digital-heritage)



ANNEX

Interview with a representative of the “Werkgroep Prinsenhof Delft” and “Slag om Prinsenhof”

Attendees:

Mick Bloemendal – graduate student

Alexander de Ridder, Bruno de Andrade – graduation teachers

Representative of “Werkgroep Prinsenhof Delft” and organized the action group “Slag om Prinsenhof” referred to as “SoP”

Mick: First of all, thank you for being here. Be very nice that you're here. Maybe it's good to start by you telling something about what you do, what the “slag om Prinsenhof” is. How do you take position in today's developments on the Prinsenhof?

SoP: Well, I'm just a citizen of Delft. I've lived here all my life. And when two years ago in 2018 and there were developments around the Prinsenhof, I was very concerned because during the presentation it seemed the Merx study was already set to go and we weren't really informed. So it was a kind of panicking situation and we started a protest to have a conversation with Delft, to see what the plans really were. But it was really nice that the councillor of the municipality of Delft took the protest very seriously and he stopped all the plans and we started to join a group of people who could think about what we should do with the complex. So that was a really nice suggestion of the municipality. That's what we did and we gathered all the stakeholders: Prinsenkwartier, the museum, people who live on the in the area. And there are a lot of architects, designers, people are really interested in the location to help us make a report

Mick: Yeah, I read that report “Prinsenhofgebied advieswerkgroep”. How did that report formed itself, you just had a discussion with a group like with the action group or list with all stakeholders, you get around the table and discuss the problems and formed like a vision on the on the future of the of the Prinsenhof?

SoP: Well, we did a lot of research first because there are a lot of documents that you need to know. So we were really good informed by the council and we were working on that for almost a year. And we also went to other places to see what happened there in developing certain areas so we could learn from that as well. And yeah, we had a lot of discussions and made a really nice vision on the plan. But then the report had to be really abstract again, because otherwise it would be too detailed as a report. But I'm really, really happy because now. For the museum, there is a Program

of Requirements and they really took our report as the really big issue on the on the program. So that's really nice.

Mick: Yeah, that's great, that's great. Uh, at first, because I heard from multiple stakeholders the story of Merx architecture, that the plan was dropped like a bomb on the citizens. And a lot of people had the feeling that they weren't involved in the plan. So do you have the feeling that now that's changing and the discussion is more open to everyone?

SoP: Yes, because when we started to form a group to think about this, everybody could join that group. It wasn't like a kind of elite. And we also organized meetings in the Waalse Kerk for instance, to talk with people about it, and yes, I think a lot of people could see what we were doing and it was more transparent. And also now we finished the report and we've fallen apart as a as a group. But certain experts from the group are still in the following steps. So [...] , for instance, he was a member of a group, but he is still now involved with the choice of architect. And he has our vision, of course.

Mick: Yeah, that's great, because the report you sent me, the two page document, are there also like, designs or a plan or like a master plan or some visual representations?

SoP: The most important thing was, because it's a historic environment and there happened a lot of things, there were soldiers there and there was, of course, Willem van Oranje. But for the longest time, Prinsenhof was a monastery and that's where we laid the most weight. So we think you have to see the whole area as one piece. So Prinsenkwartier, museum Prinsenhof. And then there's always where's the entrance, where should the entrance be? But the entrance is, of course, the gates at the Phoenixstraat and the gates or the small porch on the Oude Delft, that's where you enter the area and that's where the fun should start.

Mick: Do you think that that's a good entrance? Because I don't know. In the report, there was also a part on the entrance. The sentence: “Vanuit de Prinsentuin zie je in een oogopslag de allure die het complex eigenlijk heeft, daarom wil de werkgroep hier de entree situeren. You guys also think that the entrance to the museum should be then or this is the best place?

SoP: Yeah, but not the entrance where Merx wanted to break in the build-

ing because it's a very important piece of the building. But we of we are still very charmed about the site. If you're on the Fokkema building (former KvK building), there you have the best view of the Prinsenhof.

Mick: But is it because I also heard some people made a case on maybe destroying that building and make an entrance there or maybe have a new museum and just leave the old building as it is and just have the new functions of the museum in a new building, how would you as a group look at those kind of ideas or because I imagine the building of KvK, that's it isn't really part of the history of the of the place,

SoP: No, but it's on a very important part of the of the ensemble, because if you're in the area and you look around, everything is beautiful, except if you turn towards KvK, it's really not so pretty anymore. So it would be a good idea. And I think a lot of people from Delft would be, very, very happy if the ugly building is made prettier or better in the area.

Mick: Yeah, I believe there used to be a church there as well on the corner.

SoP: Yeah, the church was called de Armekerk. Yeah, all right. But then again, when the church was there, you can look straight if it's very open to you can you could look towards the Prinsenhof.

Mick: And now you almost don't have an idea Prinsenhof is there, you know?

SoP: Yeah, and what we really appreciate is, well, if the square and the garden will be more open. It must continue to be a square and or a place and a garden, but then without the fence, because it blocks the view very much. And also the wall and the strange alley behind it. You can do a lot if you just clean the place up. Without doing big interventions.

Mick: Also the circulation of the place, it's a bit weird, like the small alleyway that's in front of the KvK building where you cannot enter the garden really, it's also blocked off. But that's also a private area, I believe

SoP: Yeah. You have to back garden. But between that and the wall, there's a pretty big space. An idea of us, what we couldn't put in the report because to detailed, was to put a little building there for a ticket and museum shop and that you go there and then you go through the garden to the museum.

Mick: Yeah. right. I'm wondering a bit on the research that you guys have

done, what kind of sources did you use and did you use that research to value the place or the attributes or the buildings. How did you made in, let's say, a hierarchy in what's valued the most and what valued the least?

SoP: Well there are Bouwhistorische Rapporten, for instance, but also Bouwfysisch rapport. So we had a lot a lot of documents. A lot of experts working at the council we've spoken with, and they because of the. You have in front of the post which they wanted to break down, you have the little tower and in front of that there's a little wall and a gate, all that was made in the 40's- 50's. So that's not very historical. And some things that were also not really historical, only in the porch itself. That's a very old piece of the 15th century, I think. So that's what the main issue was, that they should leave that.

Mick: That's always a nice discussion of the renovation in the 30s, I believe it was the 30s, like with things like the walls and the extra building that for inflected the porch. And some could also say that the whole building, nothing is original. So you might be burned down during the big city fires. Not much known, I think, but everything at some point is rebuilt. And those added things, there are almost a hundred years old. You can also claim those are maybe historic or part of the history right now. So it's always hard to draw a line, here it's historical and everything after is not. .

Bruno: So adding to this, 'SoP' do you think that in this specific case of the porch, the emotional values related to the social, which the community would be then more important than the historic values. Let's say what's the oldest structure versus what people feel that it's already in their everyday lives. They have these scenic transitions and pathways in the city that creates different sensations in their perception so that there are the emotional and spiritual values. So think that in this case, the report and the disorganization people would be against demolishing the porch because of these emotional values.

SoP: Yes, but also because it's historical. So that's two things. And I think what also counts is that the council of Delft has made many poor decisions on the way Delft looks. So also the lamp posts. The delft blue, big ugly lights, which give also a very hard white light on the square, which doesn't make things more pretty. A lot of people, they don't like it. And it was just overnight it was there. And so I think that also made the people a bit angry, you know, for this. Yeah. And emotionally, because they have seen a lot of things change in Delft and it didn't make things better, or prettier.

Mick: Yeah, those light posts are ugly I think as well, but I'm wondering, like, what's the activity that you as a group or because you said the group is a bit of falling apart and some experts are still involved in the current process. But are there still like talks between you and the and the group or do you have a new focus point, a new building?

SoP: Yes. We had an assignment. We did the assignment in the form of the report. And then and we were not officially active, but then, of course, we as a group, the people who are still involved are still having meetings. It's nice from the council that they still let us join the conversation. So we're still participating as individuals. And then after we also talk about that, of course, we're still active.

Mick: That's good to hear. I can tell you something about what we are planning to do, because at the beginning of December, we want to host a workshop together with stakeholders. And as mentioned before the game of Minecraft will be used. I don't know if you're familiar with that.

SoP: And I've never played it.

Mick: It's just basically a block building game where you just can build stuff or everything you want, basically. And the blocks are roughly like one by one by one meter. So you simplify the scale of everything to one by one by one meter. And when we made the whole Prinsenhof in the game and then we want to use that model together with stakeholders to have a workshop to very quickly find out what they would change or what their wishes are, or maybe they are walking through the model and see oh this opening should be bigger or here should be some seating. Just a tool to transfer their ideas to something you can truly see or feel or so. So that's a bit of the goal of the workshop. And after that, we want to value those decisions and incorporate them as much as possible into the design that we will make the next semester. So I will for sure invite you if you want. You can also maybe share it with the group and maybe some other people who are interested to participate. And maybe if you're not able to go to maybe someone else could that would be perfect.

SoP: Yes. And who are you going to invite?

[...] practical and private information

Mick: It would be nice. I don't know if someone else has some questions. I think it's pretty clear for me.

Alexander: I have a few questions, first of all, about the relation with the director of the museum. So how was the contact with the museum and how do they participate or they keep you on distance?

SoP: Now, we were gathered. That's really funny because it was always tensioned, but we were all part of the group. And it was not the director, the woman itself, but two of her employees who joined our group. And of course, they had their own vision. And sometimes there was a clash, but we worked it out and put that in the report. But it was because of the museum that we couldn't be very detailed about some things because they wanted to have the room for their own vision.

Alexander: So would you recommend maybe a name, a person who was working for the museum that make and contacts?

[...] private information

Alexander: And another question would be, how is the contact with the municipality? Is there also a contact person? So if you would like to continue with the conversation or workshop, who do you phone at the municipality?

SoP: [...] personal information

Alexander: Which dilemmas that you had in your work group, what were the really big difference in opinions, or visions on how to design a new museum or how to transform the area?

SoP: Oh, not really, because everybody the same boundaries they walked against, because you have a building and you can't make any more meters inside. So the only thing you can do is to make the levels equal, like the cellars and the floors. So it would be more comfortable to walk around in. The only big issue was, of course, the entrance. There were two strong men during the discussions and one really wanted the entrance at the at the site of the old church and the other one really wanted the entrance in the garden.

Alexander: And then you voted, which decision did you make then?

SoP: It was decided because of the sun, because there is not a lot of daylight at the side of the church and there's more daylight at the side of the garden. And because of the entrances, it's logical if you put that in a place where you can always also make a terrace or somewhere to drink coffee, it's more likely to do that on a sunny side than on the cold side.

Alexander: That's a fantastic argument. We didn't discussed that yet.

Mick: Then maybe also a question on what do you think about the glass roof over the inner courtyard, did you discuss that in the group?

Bruno: I want to add something to that question, so it's already super interesting, but already it was a public space because it was open to the city at a moment in time and now it's more closed and private. So adding to the question of being related to the glass structure, also the public private relationship on that.

SoP: The museum is quite closed, like the people who run it, they're really private and it should be more open, I think. But there were also, of course, in the group. And for them, it's very important area to rent out. So they are really dependent on the on the space for changing exhibitions and for renting it to other groups. So actually, there was no discussion about that. But there was a big discussion about that for the church, because we all said you should open the church for public and play the organ to keep the organ in a good state, but also to give that piece to the city and also maybe have an exposition where people just can walk in for free. With the organ at the background and make it more like a public place, but then on that side, because they're not depending on the church for expositions, not yet.

Bruno: See Mick and Alexander, this was an example of how the economic value got a higher importance than the public private relationship of these spaces.

SoP: Yeah, and the museums should be in balance with that.

Alexander: So the List of requirements, do you have one from the municipality or did you decide together with the group, did you come with a proposal? And can you share it with mick? maybe it's already in the report, which I did not read, I have no idea.

SoP: Yeah, there was a List of requirements and they have rewritten it and

three members of our group can discuss about it. And it was very similar to the existing List of requirements. So we made some adjustments.

Alexander: Who is the expert in your group on the list of requirements?

SoP: We are with three, so it's me, [...] personal information

Alexander: Ok, from the Delfia Batavorum. So you created a List of requirements?

SoP: No, the museum wrote a list of requirements. And we could read it and give our opinion about it and what we thought was realistic and what we thought was a bit stupid. But there were very specific things in the list of requirements like they wanted an elevator with chrome handles and a mirror in the back. And they also said we need a window clean installation with gondels... I don't think that's a really nice idea. For on the oldest building in Delft almost to put gondels on.

Alexander: But I'm sorry, I did not understand. The list of requirements is public?

SoP: It's rewritten at the moment and it's probably in constant progress. But I think it must be public by a now. But have a look if I can share it with you.

Alexander: It would be nice because we need a program of requirements for Mick

Alexander: That's only what I said. You know that we have at least an idea what the program would be. Yeah, at least people from the municipality. Yeah, because if I was a director, I would say we buy the building at the Phoenixstraat and we create a new museum there and keep the existing complex the way it is. And don't bother with the interventions to make it state of the art, climate, installation, etc, etc.

SoP: It's much more expensive to make that old building climate proof because it's not doable

Alexander: But OK, we will see what Mick makes from it . Yeah.

Mick: Yeah. I will keep you updated if you like.

SoP: Yes, very nice.

Mick: Ok, I think that's it, Bruno do you have a last question?

Bruno: I have just one last question related to the group. So the group was formed exclusively to work on, on this report as a way to react to the Merx project. But then the group now you mentioned that is falling apart in a way, but it's somehow part of them keeps going and observing what's going on. So is this like an organization that it's bigger than the museum right now, which keeps the museum as a main object in a way to to keep observing and reacting and making sure that the community that this new project is aligned with the community values?

SoP: I think because we made the report, it was difficult to say for them. OK, thank you for your input and now you're history. And I think it is very, very nice that they asked them to join them in their further project and also to give a message to the community like. Yeah, we're still a part of the ongoing project.

Bruno: So the group keep keeps meeting in a specific place, location and the like, once a month. What what's the currency of these meetings? And every could if we could join one of these sessions, for instance.

SoP: The group that was really active, was a group of thirty five people and now we're still with maybe 15 or 18 people who we still think with us and participate.

Mick: Yeah, but I can imagine the people from the six hundred, let's say if they have input they can just tell their wishes.

SoP: That's very, very funny, but a lot of people say yeah, yeah. And, and they're very concerned. And if they see me on the street they ask, is it still safe? That something is going to change but not the way as they were planned at first.

Bruno: It's one last question, then, what about the involvement of young people, were they involved in this 35 group of people or more in this wider 600? How do you see the interest in younger generations in this project?

SoP: Well, we put the group together and almost all people are older and

living in the inner city. So at the end of the forming of the group, we asked in the newspaper for people to join who are under the age of 30 and not living in the centre of town. And there were two people who joined, but we really have had to bring them in.

Bruno: This worries me a little bit because we see that younger generations here in Delft, they seem not that involved in decision making and mainly the city will be for them in some years now. So we need to find a way to help them. That's what I was discussing also with Delfia Batavorum. And they are worried on how to communicate history and heritage to younger generations, they seem not to be that interested in that, but it's their city. So this is critical for me.

Alexander: If I might connect with this, all the primary school children of the surrounding of Delft, they come to the Prinsenhof museum where Willem van Oranje was killed. So I would say that that that you could look for contact with primary school directors and say, OK, they come every year with the classes to visit the museum. So you would expect that they have some wishes or desires for the museum design. But that's what could be an idea for Mick. I already suggested to you I tried once, but the contacts didn't react. But still, maybe we must phone just the director of the of the Primary Schools of Delft and talk about your project and ask if maybe a teacher can come with students, with pupils who have a workshop.

SoP: [...] I think they will be enthusiastic for things like that. And there is a contact person named [...], and she's the head of the Freinet Primary School in Delft.

Mick: Thank you so much for your time 'SoP', we will keep in touch

Alexander: Thank you so much 'SoP', we need this kind of information.

Bruno: Thank you 'SoP'

SoP: That would be great

End of the interview

Interview with a representative of CE Delft

Attendees:

Mick Bloemendal – graduate student

Diana Ugnat – graduate student

Pien Tol – graduate student

Alexander de Ridder, Bruno de Andrade – graduation teachers

Representative from CE Delft

Bruno de Andrade : Okay, great. Maybe Diana and Mick have a question for CE Delft?

Mick: I do, I'm focusing on the Prinsenhof museum. And since that is a listed building a listed monument, I guess the strategy is different than for a non-listed building. So you said, For a non-listed building, you have to meet all the regulations and the BENG, which on the one hand, makes it hard, but also you can use like all techniques, basically, for the Kabelfactory, for instance, but what would be a more suitable strategy for a listed building or for a very old monumental building? Or would you say, don't do anything at all and build a new building?

CE Delft: Prinsenhof is of course, very unique, a unique building, a special building for the Netherlands and Delft. So I would say don't touch it. But eventually, every building needs to be a heated without natural gas. The Prinsenhof is way too expensive to convert it to a low temperature system. You would have to rebuild the entire inside and also the inside is quite beautiful. So you don't want that. And so, the only thing that is left is an a high temperature solution, and there are quite a lot of high temperature solutions. Most likely there will be an opportunity to have high temperature heat pumps, and just replace the existing natural gas boilers with electrical heat pumps. But then you have to think about where do you get your heat from? Is it from the outside, are there air heat pumps or is it from the underground and because of its high temperature, I think it will be the outside. So then you have like the really large aircon units that you need to put somewhere, somewhere where they don't interfere, they will produce a lot of noise. And so there's not a lot of room nearby the Prinsenhof, so it's quite difficult to try to make them disappear. On the other hand, the Prinsenhof is not the only building of course, the church in front of it also needs to be heated. So normally we say that for the monumental old cities, you use the little amount of green gas, bio gas that we have, and actually use it for the old monumental cities, because it's way too expensive to make and run on electricity. And it's the easiest way to just replace natural gas with bio gas, green gas.

Mick: Also does the churches and the Prinsenhof, a monastery, it has a lot

of mass so a lot of thermal mass. Could you use that maybe? Or for instance, the old church, I don't think it needs to be heated that often right? It's just a church always has to stable climate or most of the time I think.

CE Delft: They do have heating and they can get cold. But that's also of course a problem. What do you expect? Will you expect very stringent winters with a lot of freezing days? Or will we think that all the canals won't freeze over anymore. All plans at the moment say well the winter won't be that hard anymore. So the older large buildings with like the thermal mass of the old church and Prinsenhof they will remain quite long a nice temperature during winter time. But the church has a lot of stained glass, which is double straight glass. So the heat loss through that is quite big. But eventually, the big master plan for the old city centre of Delft will be probably a high temperature one. If there is enough green gas, then it will probably be green gas. It's one of the reasons, the old city centres that have a lot of councillors who hope that hydrogen gas will be available. But that's a large gamble. Because it isn't available at the moment. It might not be available in 2050. When we can't use natural gas anymore, so if you gamble on the hydrogen gas then you might lose, and the chance is big that you lose. But you can also heat the Prinsenhof with the same, the "Warmterotonde", the large district heating grid, which will pass straight to Delft, you can use it as well, you just have to replace the current heating boilers with heat exchangers and you can heat it. The most feasible one probably and especially also regarding its position within a Delft is most likely the high temperature district heating grid. And otherwise, you have to gamble on green gas or hydrogen gas. Besides this, applying mixed use in the future design can help in making the building more sustainable. By incorporating multiple functions in a building, the building will be 'alive' at all times which is profitable for its energy use. By making the building accessible for different functions at different times, the use of space is better. There is, for example, no need to build an extra event space in the Prinsenhof area which will be heated etc. each day, when there is a space in the Prinsenhof already which can be used for this function. There are countless smart solutions of mixed use in architecture that have proven to be sustainable.

Mick: Okay, thank you. Maybe Diana has one last question?

End of the interview

Interview with representative from Delft Design and Prinsenkwartier

Attendees:
Mick Bloemendal – graduate student
Diana Ugnat – graduate student
Pien Tol – graduate student
Representative of Delft Design and part of Prinsenkwartier

Mick Bloemendal: Hello, welcome! thank you for joining.

Diana Ugnat: Thank you for joining our mentors cannot be present so you have only three students.

Delft Design: Okay, okay, that's fine. Yeah, I got a message from Alexander that he had another meeting or something like that

Diana Ugnat: Do you mind if we record the meeting?

Delft Design: No, no, it's fine.

Mick Bloemendal: Great.

Pien Tol: Maybe it's nice if we give a first a general introduction about what we do. So, um, we all three have a different project or site. So I work on the Kabelfabriek (Cablefactory) in Delft, and Mick on Prinsenhof in the city centre and Diana on Gele Scheikunde. And the main theme of our studio is co creation so that we, together with stakeholders, come to new design. And so that's why we interview a lot of people who are related to our project.

Delft Design: Okay.

Pien Tol: Mick, do you want to start with your questions, or what should we do?

Mick Bloemendal: Yeah, sure. I can start. Maybe first it's also interesting to explain a bit on what you guys do as Delft Design?

Delft Design: Yeah, okay. Delft Design is, let's say a designer's community of let's say, I think 140 people. And, yeah, I'm the chairman of Delft Design. And what we do is we arrange discussions, presentations, about a lot of things in the city. Last year's, it was a lot of architecture and urbanism. But we now are making, let's say, also shift to other design disciplines. And

also to, to merge them together more. So that's what we do. And especially Prinsenhof and Kabel district. Yeah, that are, let's say, some difficult projects in the city. I think, you know, all the, let's say, history of the last year and maybe Prinsenhof, there was a lot of discussion, and also one of our board members was also involved. And yeah, let's say in the discussion in the Wijkgroepen how they call it. So yeah, we know, what's happening in the city and also the Kabel district. We arranged together with TOP Delft the Stadsgesprek, and that's, yeah, there was. There was a lot of rumour after the presentation of the of the architect. Yeah, it was more, it was more about Schieoevers, so it's a Marco Broekman from Bura urbanism, but it was also about, let's say, the Kabel district. And yeah, a lot of people saw high rise and yeah, they were not that happy with those pictures. But yeah, I think in the end, it's yes set up the discussion and also the municipality took some things from that discussion and developed it further. So yeah, in that sense, we, let's say know, what's happening in the city. And Gele Scheikunde, we didn't have a presentation about that, but who knows, maybe in the future. So we arranged discussions and also workshops, and we also work together with Taco Postma, the Stadsbouwmeester. So, yeah, and yeah, also in the city, we know a lot of people who are involved in this project. So maybe that's also interesting for you.

Mick Bloemendal: Definitely. And you also, then are in contact with the municipality directly or via the Taco link, I would say then?

Delft Design: Yeah, Taco is, I think the most important link, but we also have connections with the people at the municipality. So yeah.

Mick Bloemendal: That's great. Oh, then I'm wondering, should I think in September, I believe you are the day on the future of the Prinsenhof, like a discussion on the subject. And since you as Delft Design are also situated at the Agathaplein as well. So you are also a stakeholder. So what's your vision as Delft Design on the future of the Prinsenhof? So what are your wishes?

Delft Design: That's a nice one, we are part of Prinsenkwartier, let's say a greater community, where Delft Design is one of the members of and what we didn't like about the first plans from I think Merx. Was that the Prinsenkwartier wasn't involved in the design, and also the Agathaplein not. So I think we try to get more in touch with with Prinsenhof and also with the municipality to get some money from the municipality, because our building, the Prinsenkwartier, it's totally messed up. But that didn't happen. So

now they are only doing the competition/tender for Prinsenhof museum.

Mick Bloemendal: Your building is not in the tender as of right now, then? and that's a wish?

Delft Design: Yeah. It's a wish, let's say I think it's a total complex so one should treat it like a total complex, then. And that's a little bit difficult. In terms of also money, they will spend, let's say 30 million or something like that for the Prinsenhof museum and they don't have money for our building. I think the situation in the building is quite bad. There are cracks in the wall and the floors. Also, let's say in terms of ventilation and energy consumption, it's bad. So we would like to get more involved in all those plans. And unfortunately, they didn't take that decision. So maybe you we are let's say in a couple of years or maybe earlier, we will also get some money for our renovation. But yeah, also in relation to the to the Agathaplein, and yeah, the Prinsenhof and Prinsenkwartier. If it's possible to design it together, then it will be better than then only designing Prinsenhof and the entrance for that.

Mick Bloemendal: Are you in touch with the current group of architects that are working for the tender? So there are five architects, I think, for the new, new assignment, but is there like communication with stakeholders already?

Delft Design: No, not at the moment. It may be with our board Prinsenkwartier, but I don't think so. Because I didn't hear something about it. So probably not.

Mick Bloemendal: But then what would you say on the Prinsenhof museum; is there is a need for a better circulation or a better entrance? Maybe even new building? So how would you approach that problem? Because some say just just leave the church or cloister building as it is, and build a new building alongside it for the museum and just have the old building as a sort of monument? I guess some stakeholders would also say, let's not do that. What would you your position be in the in that?

Delft Design: Yeah, I think both is possible. But the old building, is that old that you have to do a lot that in terms on how to design it for the future and make it even better. I think one of the most important things, in my opinion, and I think also, in terms of Prinsenkwartier, is that the Agathaplein could be much more than it is right now. So starting from urbanism scale, to the

museum, and back. I think that's one of the most important things to take into account.

Mick Bloemendal: But for the potential of the Agathaplein, do you have new functions in mind? The Barbaar for example, that's one of the only, like restaurant functions or bar functions in the area. Do you think that the Agathaplein could host more different functions? Or what kind of functions or what would be the potential then?

Delft Design: Now it's more, let's say, a place to pass. It's also quite closed and dark especially in the evening. The closed garden for example I think can be more a place to stay or be. I don't know if it does need more functions. Maybe it's a square to sit and to hang out to chill. So and maybe for that, to make it a little bit more liveable, and maybe you need some functions at ground floor to have more activity, more noise, let's say.

Mick Bloemendal: Okay. And then I read on your site, that you guys also host workshops. And how do you do that? So how do you approach stakeholders? How do you host the workshops or what are the activities of the workshop? Or is it just a talk? Or do I have other ways of communicating with each other?

Delft Design: Usually, before Corona, there were, let's say, some physical workshops and we just sat at different tables with different people and mix them around during the time there. And sometimes there is a presentation to give a sort of guidance to the team. And, yeah, I think it's also good to have a good moderator in terms to get everything together and to also point out some important insights during the day or in the morning, or what else. So yeah, there are different kind of options to do this. But I think, we have a lot of people who are quite good at arranging those things.

Mick Bloemendal: How do I see that on the workshop? Because you mix people together? You give them like, like tracing paper? Or is it just talks? Or just writing or?

Delft Design: Yeah, that depends. Maybe you give them let's say, a plan and tracing paper and just write ideas down. Or maybe a flip over with some important things? Most of the time it works like this.

Mick Bloemendal: Because we also got to have a workshop, and then we are planning to use the game of Minecraft, I don't know if you've heard from

it. And then we are building our locations in Minecraft. And then together with stakeholders in a sort of a playful way, we want to discover what their wishes are. So they can very quickly do some design assignments in the game and say, well, I might want this opening to be a bit larger, or I want to have a seating here or stuff like that. So that that's our goal.

Delft Design: Yeah, it's quite nice to do it, let's say in those virtual worlds. And I also do that a lot of with my clients that we just open SketchUp. Also, this time with only online meetings and stuff to communicate with people and that's easier in a virtual world than on 2D or something like that. So it sounds great. If it works.

Mick Bloemendal: Yeah we will see how it will work during the workshop.

Delft Design: Where do you want to arrange those workshops?

Mick Bloemendal: Probably at the faculty of Architecture. We have a lot of space. Let's say the entire top floor and large tables. So I think that's easiest. For now. It's not sure yet.

Delft Design: Yeah, but there's also always space at the Prinsenkwartier. We have also a lot of space. But in this time, it's quite hard to arrange some of the workshops physically at the Prinsenkwartier. Also the ventilation, they are working on it, but it's not that good at the moment. But who knows? If you need some space or something, let me know.

Mick Bloemendal: For sure, thank you. I think it will be great to be at the location itself as well.

Delft Design: For sure, unfortunately, it's winter, but otherwise, you could do it at the Agathaplein.

Mick Bloemendal: Yeah, that would have been perfect. Okay, thank you. I don't know if Diana or Pien, do you have questions? Go ahead, please.

End of the interview