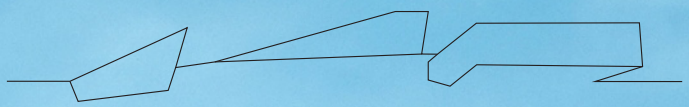
ESCAPING TO THE NORTH



Zoe Hemel 5330599
AR4AP120 Public Building Studio
Main mentor: Henk Bultstra
Second mentor: Sien van Dam
2025-2026 TU Delft

ABSTRACT

Since 1959, the province of Groningen has been colored by its gas field. The extraction of gas was initially a welcomed source of income for the Dutch government. However, the extraction was not an stand-alone procedure: earthquakes appeared as a consequence. They left both physical damage to the built environment, and mental damage to its citizens. In 2024 the gas extraction stopped and the Dutch Government initiated the Nij Begun Project to revitalize the province.

The Public Building Studio builds on this by investigating what the role of architecture could be in socially and economically regenerating the province. The studio will depart from the perspective of sustainable tourism as a way to favor cultural identification, social cohesion and opportunities for employment. Not only will the studio explore different forms of hospitality, but also how tourism can lead to new public facilities that fit the needs of the local community. The main research question of the studio will be: 'How can public buildings, through typological innovation and programmatic experimentation, affect the everyday life of the local communities by promoting social cohesion and participation?' The Studio provided the assignment to design an activity hub of 2000-2500 m^2 in the village of Winsum to investigate the question.

This graduation project proposes that the feature of Groningen as being isolated and far away can be used as its main re-branding, and can become a magnet for a new type of tourists: *escape tourists*. Attracting tourists will not only have economical advantages for Groningen's local community, as both locals and escape tourists also share a common theme: a need to focus on well-being. By integrating space and program through the concepts of hybridity and multiplicity, this graduation project will make a design that benefits both groups and adds to the Nij Begun goals. It will do so by investigating the role of architecture in designing for well-being through neuro-architectural design strategies. The final design will fit the context and serve its goal as attractive activity hub that promotes social cohesion and participation.

KEYWORDS: GRONINGEN – TOURISM – ESCAPE TOURISM - WELL-BEING – NEURO-ARCHITECTURE

TABLE OF CONTENTS

INTRODUCTION **3**

PROBLEM STATEMENT 3

RELEVANCE 4

OBJECTIVE AND MOTIVATION 5

RESEARCH/DESIGN QUESTION 5

SCOPE 5

APPROACH **6**

METHODS 6

PLANNING 7

THEORETICAL FRAMEWORK 8

WELL-BEING 8

ESCAPE TOURISM 9

NEURO-ARCHITECTURE 10

RESULTS **12**

LITERATURE REVIEW & SITE VISIT 12

PATTERN LANGUAGE 16

DESIGN EXPLORATION 19

CONCLUSION **27**

CONCLUSIONS & DISCUSSIONS 27

RECOMMENDATIONS 28

OBSTACLES & REFLECTIONS 28

BIBLIOGRAPHY **31**

APPENDIX **33**

INTRODUCTION
PROBLEM STATEMENT

This is a story about Groningen, one of the twelve provinces in the Netherlands. In the northest part of the country, close to the German border, one will find an outstretched land facing the North Sea, and its 600 thousand inhabitants[1]. In 1959, the NAM detected an underground gas field in the area of Slochteren[2], in the center of Groningen, which incited a national energy transition from coal to gas. The gas extraction meant national welfare with a total profit of €363,7 billion for the Dutch State since its discovery[3]. The Groningen gas field turned out be the biggest in Europe, making Groningen one of the richest regions of the world.
However, at second Christmas day in 1986 the ground started to shake near Eleveld[4]. This was the first of many earthquakes that came to follow and tortured the inhabitants of Groningen to this day on. It was only in 1993 that the NAM acknowledged the relationship between the gas extraction and the earthquakes. Since, it has led to 400 thousand claims of damage to houses, 880 demolished houses[5], and 90% of national monuments that are broken. But the effect was not limited to the physical world, it hurt the inhabitants economically and socially. Not only the earthquakes itself, but also the combat between the Groningen community and the Dutch Government for proper compensation led to an increase in health issues. Especially the young generation has suffered from anxiety and depression of the ongoing stress[6].

In 2024 the gas extraction stopped, with still earthquakes remaining. To revitalize the province the Dutch Government started the Nij Begun Project, which will dedicate focus to restoration and insulation of buildings, and budget for a social and economical agenda.

The Public Building Studio has seen the Nij Begun Project as an opportunity to tag along, by investigating what the role of architecture could be in socially and economically regenerating the province of Groningen. The studio will depart from the perspective of sustainable tourism as a way to favor cultural identification, social cohesion and opportunities for employment[7]. Not only will the studio explore different forms of hospitality, but also how tourism can lead to new public facilities that fit the needs of the local community. The main research question of the studio will be: ‘How can public buildings, through typological innovation and programmatic experimentation, affect the everyday life of the local communities by promoting social cohesion and participation?’

The spatial challenge of attracting a sustainable type of tourist to Groningen asks for a reflection on the characteristics and qualities of Groningen. With its distant location from the Randstad, its down-to-earth citizens[8] and economical history it has proven to be hard to attract tourists to the region: Groningen structurally has the least number of guests compared to other provinces

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[1] AlleCijfers.nl. (2025). Statistieken provincie Groningen. Retrieved December 17, 2025, from https://allecijfers.nl/provincie/groningen/
[2] NAM. (n.d.). Historie van aardgas en aardolie. Retrieved December 17, 2025, from https://www.nam.nl/gas-en-olie/aardgas/historie-van-aardgas-en-olie.html
[3] Financieel Dagblad. (2022). Dagkoers: Groningen leverde €20 mln per dag op. Retrieved December 17, 2025, from https://fd.nl/politiek/1450708/dagkoers-groningen-leverde-20-mln-per-dag-op-ifi2cauh6TmJ
[4] RTV Noord. (2023). Zestig jaar gas winnen in Groningen: van miljardenschat naar gevaar voor veiligheid. Retrieved December 17, https://nos.nl/regio/groningen/artikel/438259-zestig-jaar-gas-winnen-in-groningen-van-miljardenschat-naar-gevaar-voor-veiligheid
[5] Groninger Bodem Beweging. (n.d.). Feiten & Cijfers. Retrieved December 17, 2025, from https://groninger-bodem-beweging.nl/nieuws/feiten-en-cijfers/
[6] Meesters, Y. & Schoevers, R. A. (n.d.). Naschokken; over de psychische gevolgen van de gaswinning in Groningen. Retrieved December 17, 2025, from https://www.tijdschriftvoorpsychiatrie.nl/nl/artikelen/article/50-13301_Naschokken-over-de-psychische-gevolgen-van-de-gaswinning-in-Groningen
[7] Public Building Studio. (2025). *Re-Start the North*. [Unpublished manuscript].
[8] Minnema, E. (2019). Groningse mentaliteit: om trots op te zijn én je voor te schamen? Retrieved December 19, 2025, from https://www.rtvnoord.nl/nieuws/205668/groningse-mentaliteit-om-trots-op-te-zijn-en-je-voor-te-schamen

(883.000 compared to >16 million in Noord Holland in 2024)[9]. However, what if the feature of Groningen as being isolated and far away can be used as its main re-branding. What if the land far-far-away can become part of a mystical fairytale that will change the image of the province. This renewed identity can become a magnet for a new type of tourists, one that will blend with the existing quietness and modesty of the Groningen landscape and people. The region could become a peaceful haven for: *escape tourists*. Escapers travel to escape from the mental and physical pressures of daily life to an isolated destination, either geographically, psychologically or creatively[10]. They are not averse to put time, effort and money in planning and preparing the journey, to clear their minds and focus on well-being in a remote place.

RELEVANCE

On top of the studio assignment and spatial challenge, a more discipline-broad perspective can be added: mental health. The deterioration of our mental state is a nationwide trend. Not only young people are coping with psychological disorders[11], also 1 in 5 employees is suffering from burn-out health complaints[12]. Precisely in Groningen, citizens are coping with mental health issues resulting from the gas extraction and the following compensation conflict. Not only the local community can benefit from care for mental health, as well as a specific tourist group: the aforementioned escape tourists. The well-being theme would be the perfect link to unite both and create a space that can relief their stress. Therefore, this graduation project proposes a second layer of investigation that will specifically dedicate attention to well-being, and raise awareness of the effect that architecture has on mental health and well-being.

The upcoming discipline of neuro-architecture explores how design elements are used to influence our mental state, mood and overall health. With upcoming techniques such as: brain imaging, eye tracking, galvanic skin response and heart rate monitors, it becomes possible to measure the effect of the built environment on its users and inform and guide the architectural principles that underpin it. It is important to acknowledge this relationship in our time, since not merely our lifestyle and political situations affect our mental state, but the environment in which we live does just as much. Architecture can take the responsibility to use its design capabilities to improve well-being, either by altering the appearance of the built environment and indirectly the emotions it evokes, or by changing the behavior it induces.

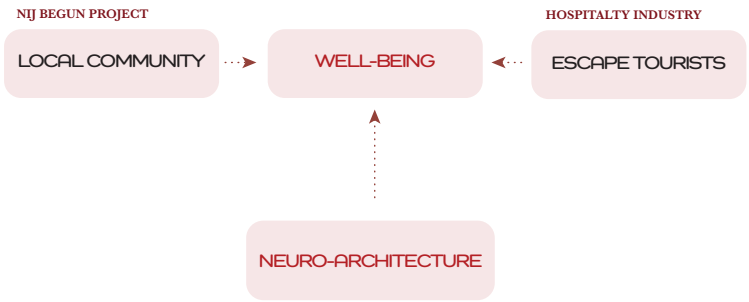

Figure 1. Diagram of important theme relations in this graduation project. [Diagram made by author, January 20, 2026]

[9] CBS. (2025). Logiesaccommodaties; gasten, nachten, woonland, logiesvorm, regio. Retrieved December 17, 2025, from https://opendata.cbs.nl/#/CBS/nl/dataset/82059NED/line?ts=1765967888388

[10] Chylińska, D. (2022). Escape? But where? About 'escape tourism'. *Tourists Studies, 22(3),* 262-289. https://doi.org/10.1177/14687976221092220

[11] Haanstra, B. (2025). Verslechtering mentale gezondheid zet door, vooral zorgen over jongeren. Retrieved December 17, 2025, from https://nos.nl/artikel/2593794-verslechtering-mentale-gezondheid-zet-door-vooral-zorgen-over-jongeren

[12] RIVM. (2024). Burn-out klachten. Retrieved December 17, 2025, from https://www.rivm.nl/mentale-gezondheid/monitor/werkenden/burn-out-klachten

OBJECTIVE AND MOTIVATION

Architecture should not just be seen as a field of designing and constructing our built environment. Architecture is not designing for functionality, efficiency and shelter. The discipline reaches beyond its own tools. It influences the way a human being experiences their world and even alters behavior[13]. As philosopher Alain de Botton explains in his book The Architecture of Happiness, a building tells us something about what we deem important[14]. It shows us the values we wish to have. In addition, recent research shows that art or architecture has an influence on our health as well[15]. Besides nutrition, sleep, exercise and nature, the form of a building influences well-being just so.
This graduation project will try to explore how architecture can affect us psychologically through the case study of sustainable tourism in Groningen. It aims to develop spaces that are focused on well-being, taking into account the needs of both tourists and locals.

Besides a programmatic vision, the project seeks to promote both psychological sustainability, as well as technical sustainability. By investigating local resources and materials, the final design seeks to blend with the environment and minimize its energetic footprint.

RESEARCH QUESTION

The design of the project will answer the main research question: 'How can public buildings, through typological innovation and programmatic experimentation, affect the everyday life of the local communities by promoting social cohesion and participation?'

On top of this, a personal research question will be added: 'How could an activity hub address well-being, for both locals and tourists, through escape tourism, by applying neuro-architectural design strategies?'
To build up the answer, several sub-questions will be investigated:

- What is well-being?
- Who are escape tourists?
- What does well-being mean for escape tourists? And for locals?
- What is neuro-architecture?
- What are neuro-architectural design strategies?
- How do neuro-architectural design strategies apply to tourism?
- How does escape tourism apply to architecture?

SCOPE

To implement a new type of tourists and regenerate Groningen, the village of Winsum will be used as subject of investigation. Winsum with its 7500 inhabitants has been promoted as 'prettiest village in the Netherlands'[16], but is still dealing with a lack of facilities and economical opportunities to keep their young generation from leaving[17].

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[13] Eberhard, J. P. (2009). Brain Landscape. *The Coexistance of Neuroscience and Architecture.* Oxford University Press.
[14] De Botton, A. (2006). *The Architecture of Happiness.* Vintage Books.
[15] Fancourt, D. (2026). *Kunst als Medicijn.* VBK|Media
[16] ANWB. (2020). Winsum allermooiste dorp van Nederland. Retrieved December 17, 2025, from https://www.anwb.nl/over-anwb/nieuws/2020/augustus/winsum-allermooiste-dorp-van-nederland
[17] [Interview with owner of Marenland and two policy advisors of municipality Het Hogeland]

The specific site in Winsum is at the Marenland, a multi-function leisure location with a campsite, hotel, restaurant and boat rental. On this site an activity hub of 2000-2500 m^2 will be added, which will consist of a listed set of functions as proposed by the Studio: a.o. activity spaces, guest accommodation, a shop, a restaurant, and boat and bicycle rental.

Part of the design is to reflect on Winsum's touristic role in the region. Besides an architectural end result, the design should investigate the urbanistic connection between the hub and the village center and railway station. The Studio suggests a 'subtle and sensitive intervention' in the marina and describes the hub as an overnight stop on a long hike or a base camp for day-time activities in the region. It would be interesting to critically question this, since forming a narrative based on research-by-design can lead to an unexpected opposing vision for this place.



Figure 2. The site of Marenland. [Image taken by author, November 27, 2025]

APPROACH

METHODS

To achieve the final design, different strategies will be applied, consisting of a: literature review & site visit, pattern language and design exploration.

The literature phase will start off with an analysis of Winsum and Groningen. It will concern both historic, geographic, urbanistic and architectural details and drawings. A case-study collection and analysis of existing public buildings that amplify social cohesion and participation (through tourism) will be conducted. Subsequently, a literature review on existing research on neuro-architecture will be done. Lastly, Groningen - and Winsum culture in specific - will be evaluated to specify what constitutes the community's sense of belonging.

Based on the literature reviews a pattern language will be created to inform the design, concerning different possible typologies and ways to organize the program. The categories in which to divide the typologies and program will be based on the brief. Every space of the program listed in the brief will be assigned a specific purpose in the form of a term (e.g.

creativity for a workshop space). This term will help to demarcate the main goal of the space and thus which typologies or principles to focus on. Especially in relation to the broad topic of neuro-architecture that could easily remain to generic, a more targeted approach can guide the design process and provide valid knowledge (e.g. if the aim of the workshop space is to enhance creativity, a framework can be created on creativity in neuro-architecture in specific).

The last phase will focus on informed design exploration. By taking into account the investigated typologies and programmatic combinations, multiple design variants will be proposed with the characteristics of the context in mind. These speculations will then be tested from a neuro-architectural perspective, by applying accessible measuring tools such as eye-tracking.

It is important to mention that even though the phases are now summed up as sequential separated components, it does not mean that the phases cannot interact, remain adaptable and develop simultaneously. The design process itself can jump from the literature phase to design speculations and back. This up-and-down approach will keep the design and designer open for improvement and personal development, and is even necessary for reflection and evaluation.

The final aim is to propose an informed design that fits the context, serves its goal as attractive activity hub that promotes social cohesion and participation, and is informed by neuro-architectural research.

PLANNING

PERIOD TO A1	LITERATURE PHASE: ANALYSIS GRONINGEN + WINSUM CASE-STUDY COLLECTION REVIEW NEURO-ARCHITECTURE START PATTERN LANGUAGE
PERIOD TO A2	PATTERN LANGUAGE: TYPOLOGIES PROGRAM FORMATIONS RELATING PROGRAM + TYPOLOGIES TO NEURO-ARCHITECTURE
PERIOD TO A3	DESIGN EXPLORATION: DESIGN ITERATIONS EVALUATION FROM NEURO-ARCHITECTURAL PERSPECTIVE

THEORETICAL FRAMEWORK

As theoretical background, the Public Building Studio adheres to two concepts: hybridity and multiplicity. Hybridity involves merging different activities and design strategies into one coherent architectural composition. Multiplicity refers to the interconnectedness of aesthetic, programmatic, constructive and technological elements in the design. Besides these guidelines, the Studio promotes research-by-design, which considers design speculation as a form of research in itself. Unlike the traditional order of analysis followed by synthesis, the Studio believes analysis and imagination are both needed in a non-linear interacting way throughout the design process.

WELL-BEING

Parallel to the theoretical studio's concepts, the assignment for the activity hub should be seen in the perspective of our societal situation. As national mental health is deteriorating, attention for well-being is needed. However, the definition of the term varies widely. As the World Health Organization explains, well-being encompasses 'quality of life and the ability of people and societies to contribute to the world with a sense of meaning and purpose' (WHO, 2021)[18]. This can be measured in both an objective and subjective way[19]. While objective well-being *measures* dimensions of a good life, subjective well-being relates to the *individual evaluation* of the degree to which these needs for a good life are satisfied. Objective well-being is assessed on: health, job opportunities, socioeconomic development, environment, safety and politics. Subjective well-being encompasses the dimensions: role of human genes, universal needs (basic and psychological), social environment (education and health), economic environment (income) and political environment (democracy and political freedom). As the definition is broad, there is a range of connection points for the activity hub to address well-being, especially psychological needs, education, health and income. The design challenge is to find out what subtle intervention can provide well-being directly or indirectly, for both tourists and locals. This asks for an exploration of the tools that architecture has: typological innovation and programmatic experimentation.

As to elaborate on why well-being is important for this assignment: for decades Groningen citizens has suffered from earthquakes and the following mental burden. The resulting Nij Begun Agenda is asking "to foster health, improve quality of life, provide opportunities for young generations, and encourage economic development"[20]. This can all be subsumed under the umbrella term of well-being.
Just as much as the hurt locals need it, all tourists seek to find rest on their vacation. Therefore, the hospitality industry can take a lead in addressing well-being: a holiday is an opportunity to be open to new experiences and insights, which can be incorporated into the lifestyle as a new healthy habit[21]. The activity hub has a chance to contribute, as it can provide relaxing and healthy experiences which can add to the quality of life for both locals and tourists on the long-term, provide job opportunities and thus indirectly improve the economical and social environment of the province.

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[18] World Health Organization. (2021). *Health Promotion Glossary of Terms 2021*. World Health Organization. https://www.who.int/publications/i/item/9789240038349

[19] Voukelatou, V., Gabrielli, L., Miliou, I., Cresci, S., Sharma, R., Tesconi, M. & Pappalardo, L. (2021). Measuring objective and subjective well-being: dimensions and data sources. *International Journal of Data Science and Analytics, 11*, 279-309. https://doi.org/10.1007/s41060-020-00224-2

[20] Nij Begun. (2024). *Doelen sociale agenda*. https://www.nijbegun.nl/wp-content/uploads/2024/06/Doelen-sociale-agenda-Nij-Begun-2.pdf

[21] Kawakubo, A. & Oguchi, T. (2022). What Promotes the Happiness of Vacationers? A Focus on Vacation Experiences for Japanese People During Winter Vacation. Front Sports Act Living, 26(872084). https://doi.org/10.3389/fspor.2022.872084

ESCAPE TOURISM

This graduation project will focus on escape tourists in specific. To understand this target group, the definition can be explored in more depth.

ESCAPE BY EXPERIENCE

As earlier described, escape tourism is about escaping from the mental and physical pressures of everyday life. Escaping does not necessarily refer to a 'spatially' isolated destination. Escaping is also related to immersive experiences, which provide 'psychological' isolation from daily reality. In psychology[22], this is being referred to as 'escapism', in which one is prone to divert the mind from the problem at hand to imagination or distracting activities. This can be both a positive or a negative mechanism to cope with stress, depending on the chosen activity. For example, immersive tasks such as reading, dancing or gardening can foster relaxation. In this sense, psychological escaping is very much related to well-being.
Activities that serve as flight from reality do not have be bound to the individual, but can be organized on a bigger scale as well: think of music events, sport tournaments or national holidays. Thus, facilitating group escaping can have a positive influence on societal mental well-being, by organizing a common alternative world, in which all escapers can decompress together.

ESCAPE BY LEARNING

The term 'escaping' implies as if one is stuck in a routine and needs to move away from it. Moving away could mean to change place, but also activity. Instead of a common routine of working or going to school, escapers seek to do something else: sports, creative exploration, travelling or meeting friends. All of these activities are by definition not part of the structure of normal life – as that would mean escaping from it - but they provide ways to develop skills outside of the familiar domain. Therefore, escaping would also envelop activities that relate to learning, as in stepping outside one's comfort zone.

ESCAPE BY MOVING

Lastly, escaping can be interpreted in a very literal sense: getting away. This would involve actual moving, which can be a physical get-away or physical exercise. As psychology has coined with the term mind-body connection, physical movement and well-being are related[23]. With rhythmic, repetitive activities such as walking, jogging or cycling, the stress response (the release of stress hormones) is replaced by relaxation (the release of endorphins, serotonin and dopamine).

With Winsum's unique location and program, these three forms of escape tourism can all be accommodated in its activity hub. Figure 3 shows how this graduation project aims to relate Escape by experience, Escape by learning and Escape by moving to the program. The activities are carefully selected to serve both locals and tourists, and alternate throughout the year, depending on the then present visitor of the activity hub.

[22] Wikipedia. (2026). Escapism. Retrieved January 14, 2026, from https://en.wikipedia.org/wiki/Escapism

[23] Harvard Health Publishing. (2025). How to reduce stress and anxiety through movement and mindfulness. Retrieved January 14, 2026, from https://www.health.harvard.edu/mind-and-mood/how-to-reduce-stress-and-anxiety-through-movement-and-mindfulness

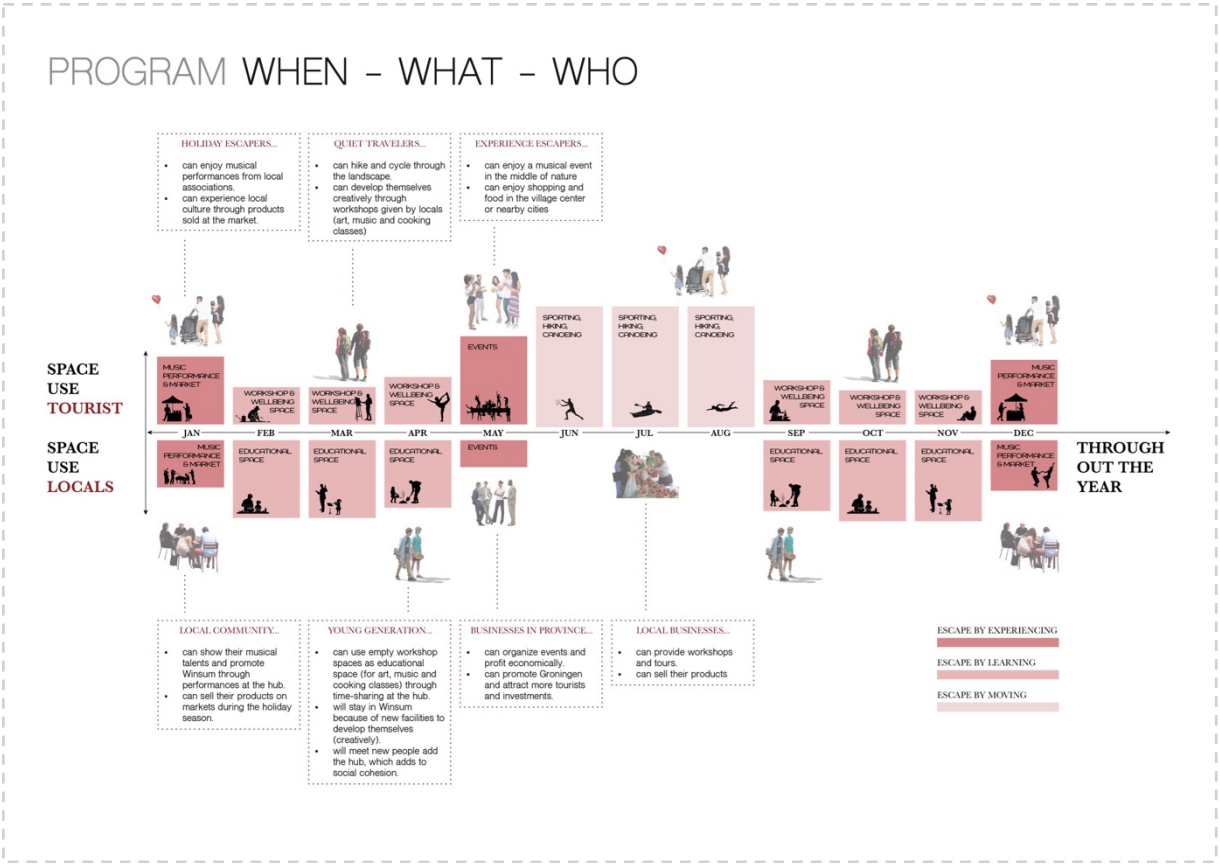

Figure 3. Diagram of Escape tourism types and their relationship with the program, seasons, locals and tourists. [Diagram made by author, December 10, 2025]

NEUROARCHITECTURE

As the aim of this graduation project is to improve well-being for escape tourists and locals, the question arises as to how architecture can contribute. As the subjective part of well-being is closely related to psychology and the human brain, a link can be made to architecture: neuro-architecture. This upcoming discipline uses knowledge about perception, attention, memory and emotions to investigate how design elements (lighting, color, volume, scale, spatial organization and materials) in our built environment affect well-being and human behavior[24]. The purpose of neuro-architecture is to create calming and healing environments that reduce anxiety and stress. The range of research on the topic is still limited, yet expanding. A (preliminary) overview with existing findings from literature on the psychological impact of architecture can be found in figure 4. Interestingly, there are rarely any architectural projects that have put these findings into practice. Hence, this graduation project may contribute to research on the implementation of neuro-architectural design strategies: by creating a framework of existing research, through designing with neuro-architectural principles in mind, and by evaluating the design iterations on the framework.

[24] George, J. (2024). Exploring the Influence of Neuroarchitecture on Human Behavior and Well-being. *International Journal of Scientific Research in Engineering and Management, 8(3).* https://doi.org/10.1177/14687976221092220

GOAL	REQUIREMENTS
EDUCATION / ATTENTION / CONCENTRATION	SPACES: - Diversity: places with a variety of shape, color, light, size - Interior: rich and stimulating colors and textures - Ceiling: lower ceilings for focused oriented tasks - Width: narrow classrooms for improved attention and memory - Shape: simple linear shapes improve performance while learning, curved contours are relaxing - Colors: purple leads to higher attention and problem-solving, white with bright highlights encourage better performance in learning, green causes comfort and satisfaction PROGRAM: - Availability of: break-out spaces - Availability of: places for self-identification and personalization, including opportunities to express territorial behaviors SENSES: - Vision: motion is automatically distracting - Vision: performance of basic visual tasks will deteriorate throughout the day, unless a small change is introduced which can reboot performance: e.g. increase of daylight - Audition: noise and high reverberation times cause distress, while sounds of nature or music reduce stress and blood pressure
CREATIVITY	SPACES: - Ceiling: high ceiling height arouses greater creativity PROGRAM: - Encourage learning new skills to train brain health, improve well-being and creativity and build social relationships SENSES: - Vision: ensure perception richness in shapes, materials and light to stimulate imagination and cognitive efficiency
ACCOMODATION	SPACES: - Space: provide moving furniture to create sense of ownership SENSES: - Vision: view on vegetation lowers stress - Olfaction: spaces with scented plants add to human comfort - Vision and tactition: natural materials decrease heart rate: e.g. wood. Unnatural materials lead to better attention: e.g. steel, concrete, glass - Vision: natural lighting reduces stress, and are correlated with better brain abilities for writing
PROMOTION / ACTIVITY	PROGRAM: - Emotion: create unique experience and/or scarcity that results in increase of traction SENSES: - Vision and tactition: objects that attract attention, can be explored and moved
ORIENTATION	SPACES: - Ceilings: high ceilings that evoke sense of freedom and spatial understanding - Hierarchies: use clear spatial hierarchies

Figure 4. Overview of initial findings about neuro-architectural design principles. The topics have been selected based on their relevance for the design assignment. Sources in bibliography. [Table made by author, January, 19, 2026]

RESULTS

To create the design for the activity hub, three different research approaches were selected: a literature review & site visit, pattern language and design exploration. Even though they are referred to as different methods, in practice they turned out to be applied simultaneously, supporting one another. The next paragraphs will elaborate on how each method played a role in achieving the preliminary design.

LITERATURE REVIEW & SITE VISIT

WINSUM & GRONINGEN

The literature phase expanded on the analysis of Winsum and Groningen by using open-source data (maps, historic videos and texts) and visiting the site itself. This research shed light on the history, geography, urbanism and architecture of the region. All analyses were approached from the perspective of tourism. Even though Groningen structurally has the least number of guests compared to other provinces (with a dip during winter), Winsum itself is not unknown to the sportive visitor: it is a destination on the Pieterpad and several canoe and cycling paths run through the village. Right now, Winsum is seen as a stop on the route that tourists take from Groningen to the sea. However, it could be proposed that Winsum and the villages around will become (escape) hubs of their own: all with their own unique program, changing throughout the season. Figures 6, 7 and 8 show an overview of some of the research findings.

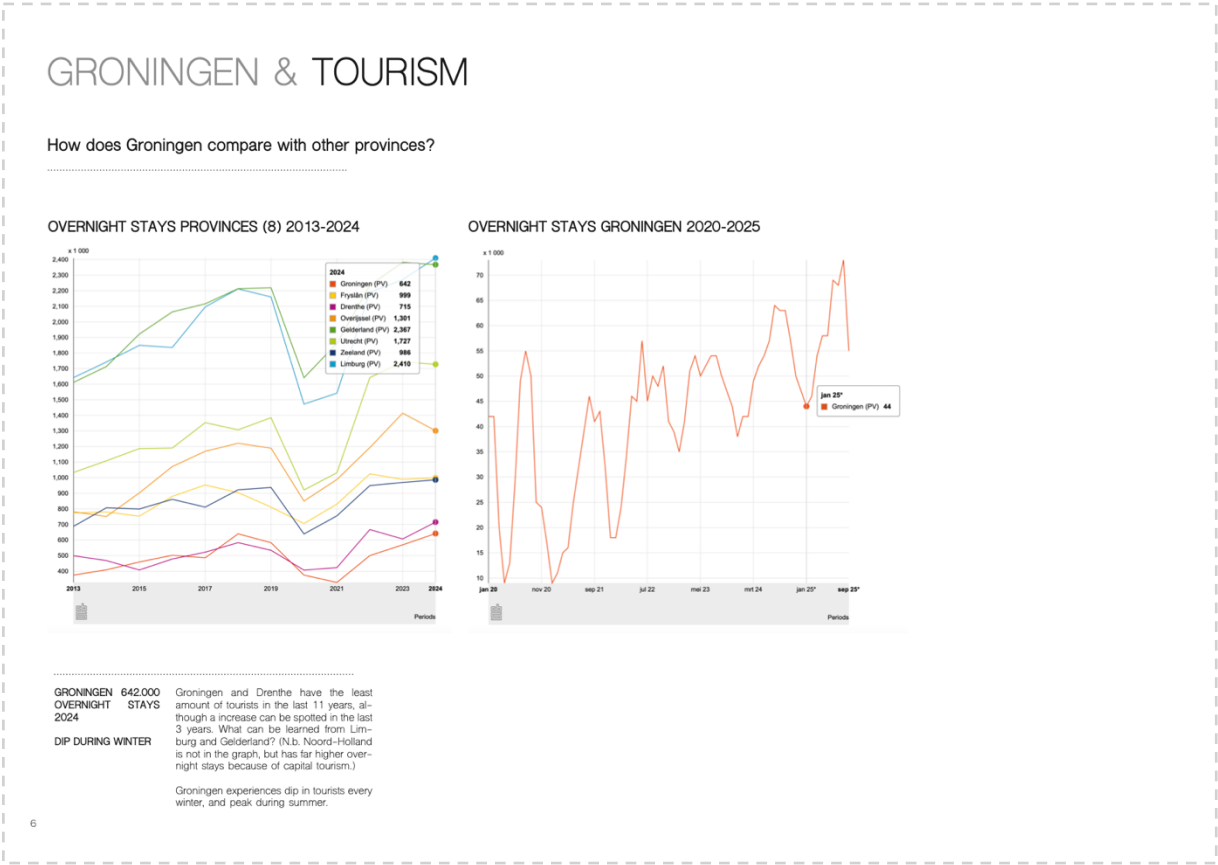

Figure 5. Data on tourism in Groningen. [Source CBR]

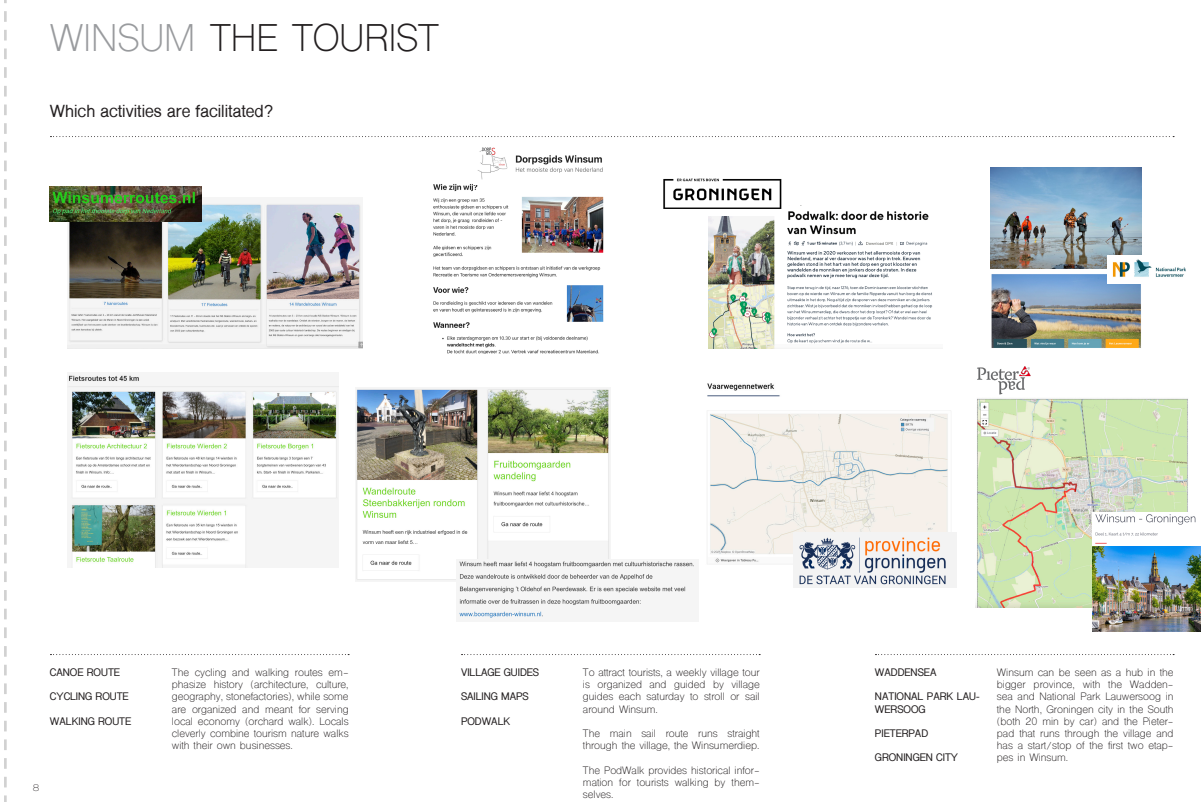

Figure 6. Research on tourism in Winsum and surroundings.



Figure 7. Analysis of site visit in Winsum. [Diagram made by author, November, 2025]

The site visit gave insight into the urban, architectural and programmatic qualities of the area around our site. The visit revealed that a walking boulevard leads from under the bridge along our site, however with a dead-end on the Marenland. Besides, the Pieterpad signs were very hidden, and the tourist information point was not open in the morning.

TOURISM

Besides expanding the knowledge about Winsum in specific, a broader look was taken on the design brief by researching how tourism demonstrates itself in general. A collection of case-studies was selected about: activities that attract tourists to other popular Dutch villages, forms of experience tourism and their typologies in international examples, and the role of architecture in tourism. These analyses helped to define strategies on how to attract tourists, for example by introducing a recurring event/tradition, a new route, or creating a space to experience local culture. An overview of some of the case studies is shown in figures 8, 9 and 10.



Figure 8. Analysis of tourism in other Dutch villages. [Overview made by author, December, 2025]

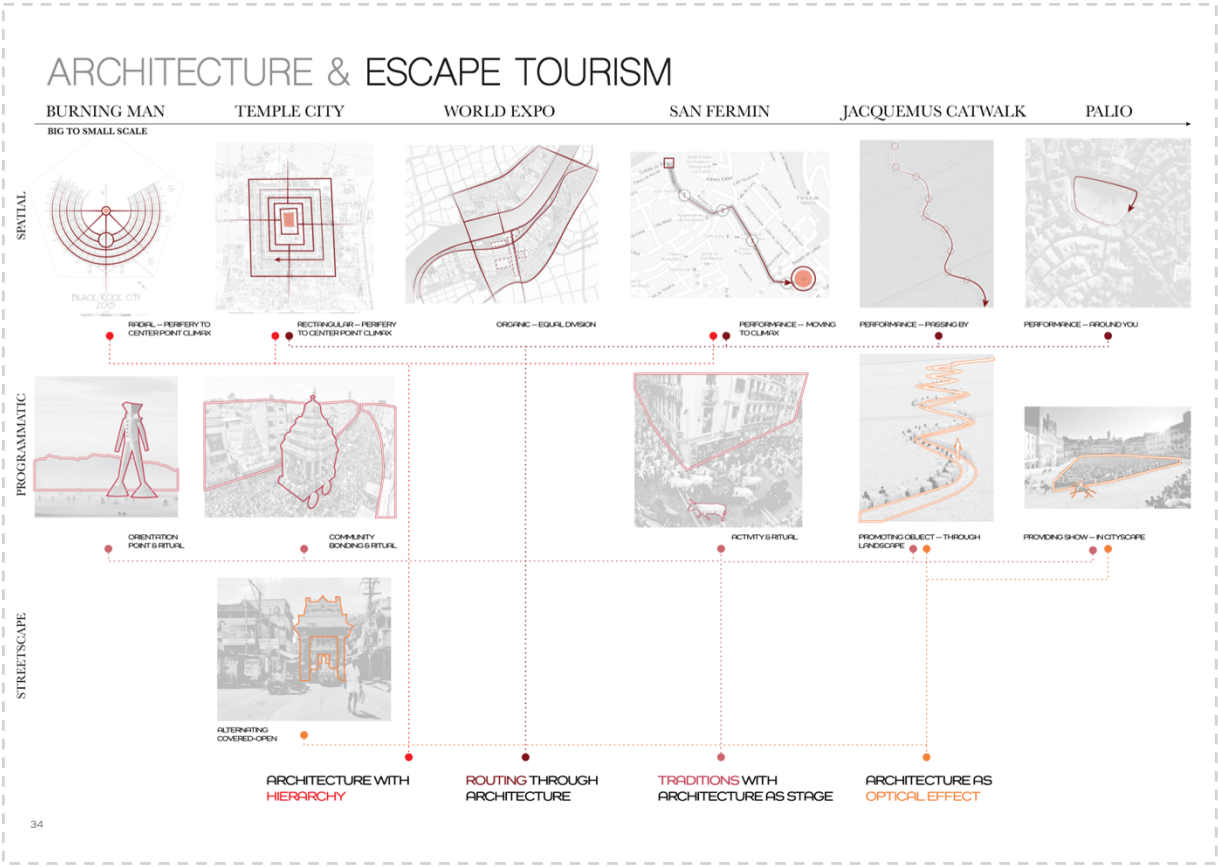

Figure 9. Analysis of experience tourism and its typologies in major international destinations. [Overview made by author, January, 2026]



Figure 10. Analysis of architecture's role in tourism. [Overview made by author, November, 2025]

PATTERN LANGUAGE

REFERENCES -> PROGRAMMATIC PATTERN LANGUAGE

The phase of creating a pattern language was strongly related to the analysis of references. The design brief was categorized in programmatic groups (e.g. restaurant, guest house, workshop etc.). For each program different case-studies were selected, both based on their relatable design aspects (sloped roofs, geometric shapes) as well as for conceptual relevance (building with wood, spans, braces). The references were translated into simple typological diagrams, which would then be further developed in the design exploration phase. Figures 11, 12 and 13 show some examples of selected references and distillated typologies.

PATTERN LANGUAGE GOALS -> DESIGN

However, the pattern language did not only intertwine with the literature review, as well as with designing itself. Every space of the program listed in the brief was assigned a specific purpose in the form of a term (e.g. ‘education’ and ‘creativity’ for a workshop space, or ‘promotion’ for the water stage, or ‘sails’ for the buildings). This term defined the ambience of the space and thus helped deciding - not only which typologies to focus on, but also - what activities, materials and shapes could be applied. An example of this is shown in figure 14, which explains how the well-being goals are translated into activities, or figure 20 which shows how the Nautic concept was translated into themes that further defined the materials.

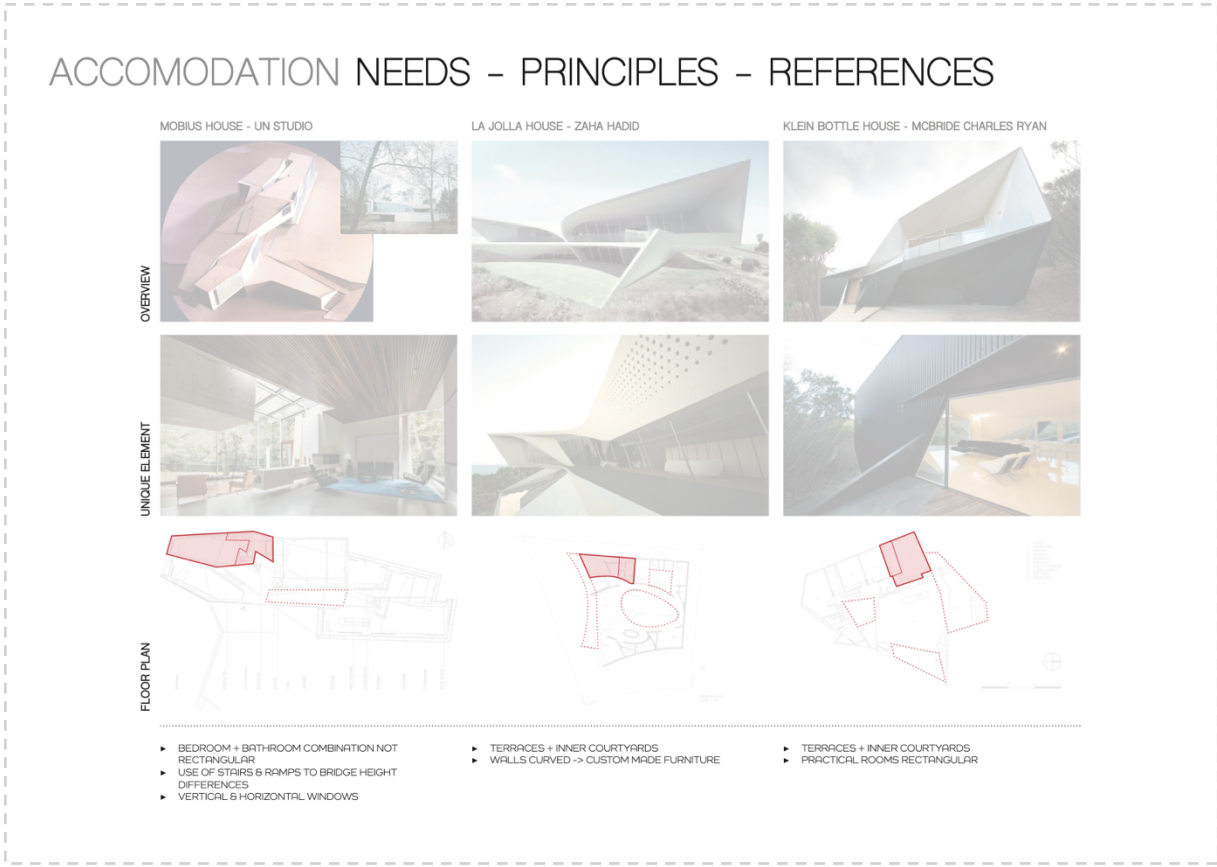

Figure 11. Case-study selection of guest houses with complex geometrical shapes. [Overview made by author, January, 2026]

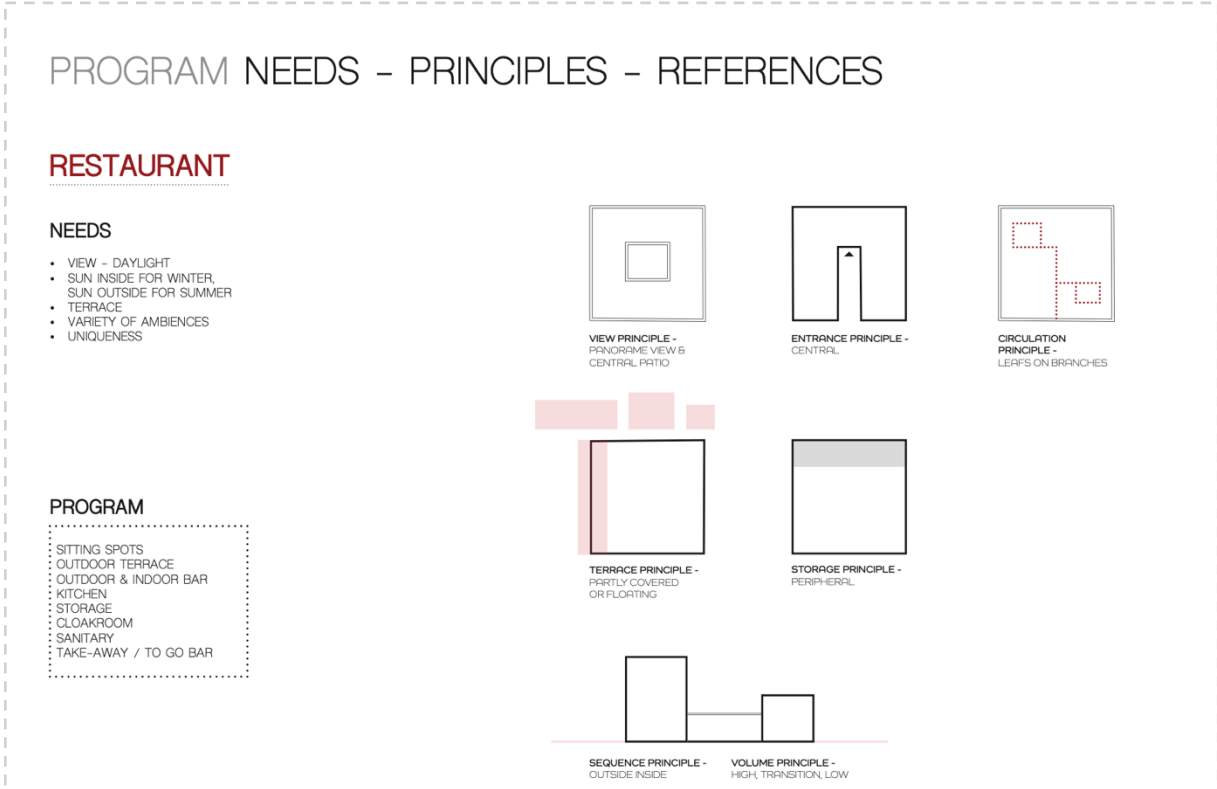

Figure 12. Design principles for the restaurant based on case-study analyses. [Diagram made by author, January, 2026]

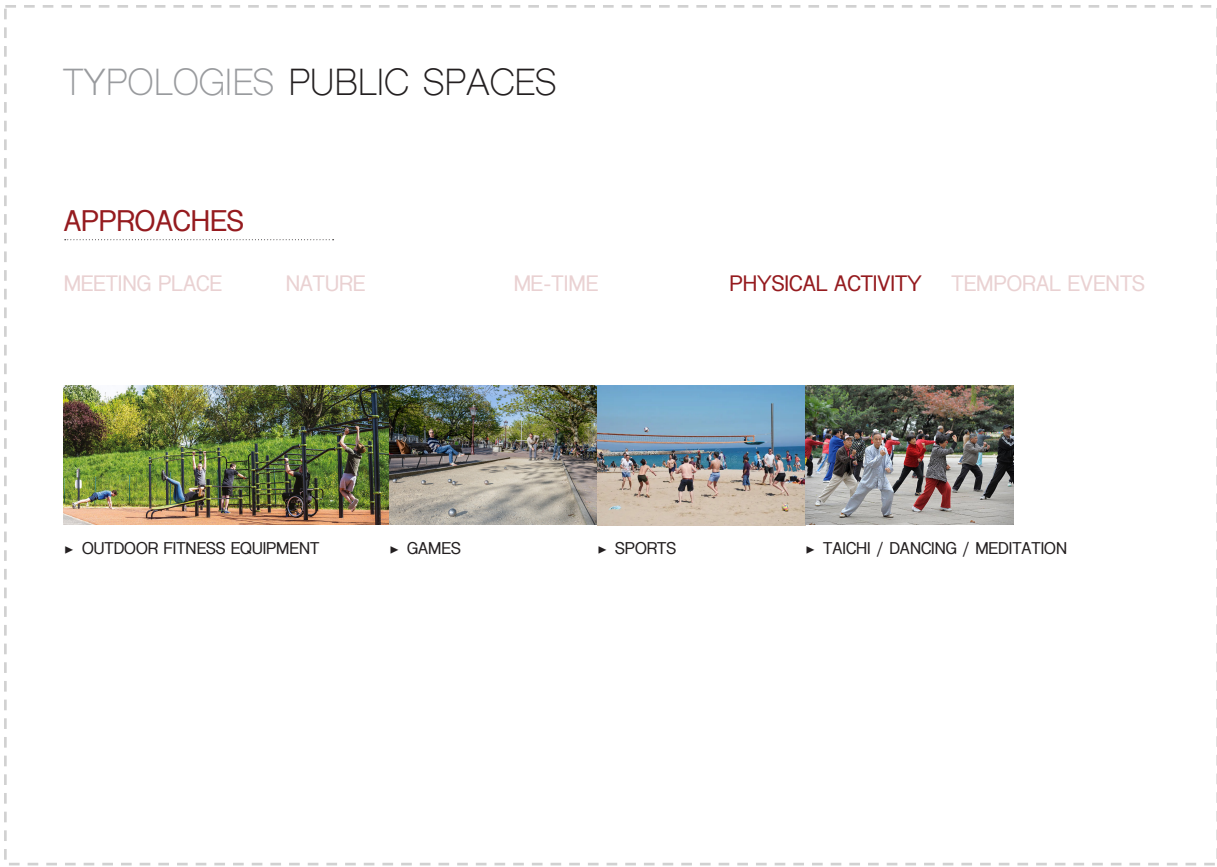

Figure 13. Typologies for public spaces based on case-study analyses. [Diagram made by author, January, 2026]

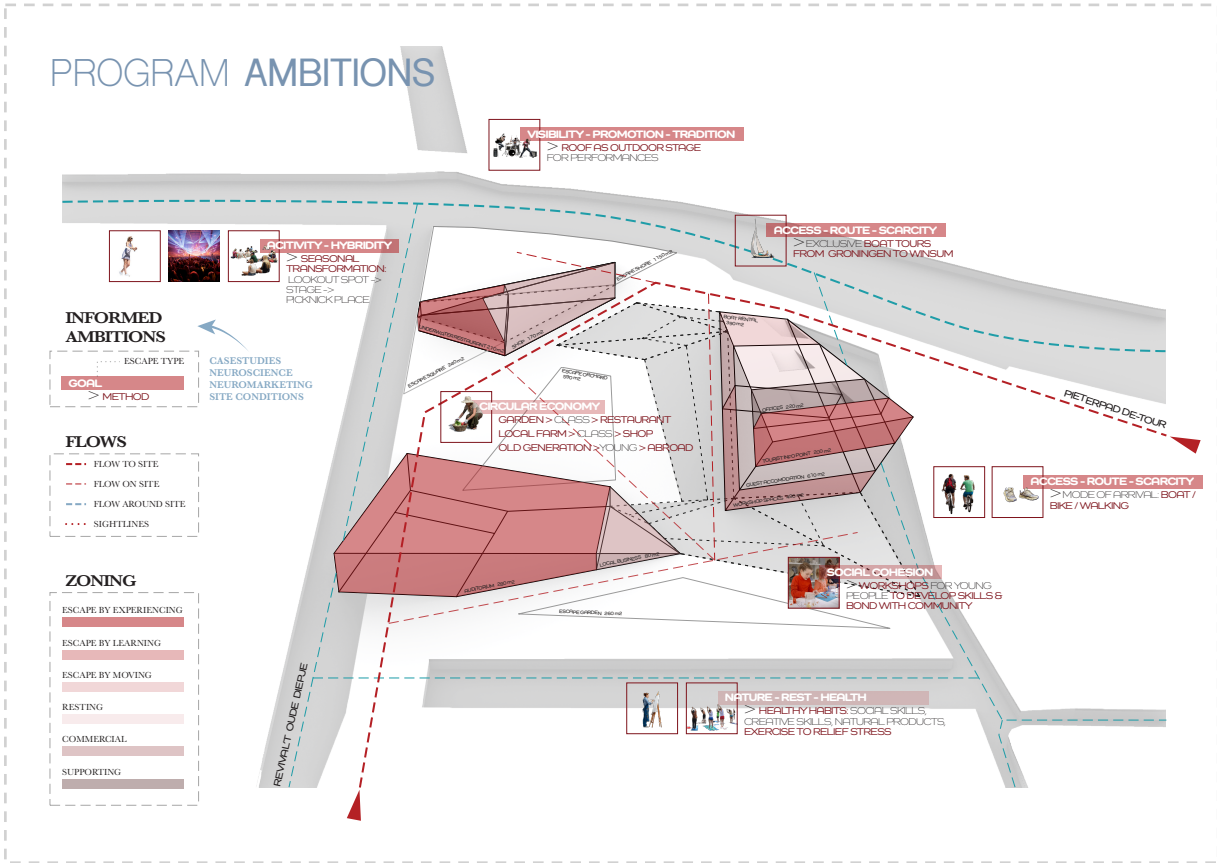

Figure 14. Program ambitions for the site related to well-being. [Diagram made by author, January, 2026]

DESIGN EXPLORATION

During the design exploration, the focus was on how to translate 'escape tourism' into a physical design, by using the previous research. The activity hub should address well-being, for both locals and tourists, through neuro-architectural design strategies.

SHAPE: FLOWS, SIGHTLINES, IMMERSION

The site was chosen on the west side of the Marenland, as it provides possibilities next to the water, it has an open view on the agricultural land and would not conflict with the existing facilities of the Marenland. Important walking paths – de Pieterpad and the walking boulevard next to the Marenland – that would maximize influx were identified. To attract tourists, a de-tour from the Pieterpad will be created: tourists would walk the Pieterpad on the other side of the Winsumerdiep, they see all the coziness on our side of the river and decide to take a detour to visit the hub and have their picknick, or do a workshop (figure 15).

Besides the walking paths, important sightlines were defined as initial guiding: either by letting them shape the site (create see-throughs), or making them hit the site (create eyecatchers). Both the paths and view lines helped to define the shape of the buildings. The design principles are shown in figure 16: the flows of the walking path and the water demarcated the escape hub. The sightlines were responded to by positioning the volumes right here for maximum visibility. Then, cuts through the volumes emphasized certain connections and determined what would be building or landscape. Finally, this created inverse spaces with all their own characteristic.

Multiple typologies were tested to find out if the buildings should be focused outwards, create a pass-through, or a patio-like inner space. And it was explored what the role of the landscape could be: either raising it, removing it or extracting it and see what new types of flows would be created (figure 17). The hill version was further developed, as this option had most possibilities for look-out points over the village and a variety of inner spaces. In all versions of the design, the escape hub will have a contrasting design language compared to the surrounding buildings - an island in the water - to make clear that this activity hub is a place for isolation; a place to immerse yourself in a different world.

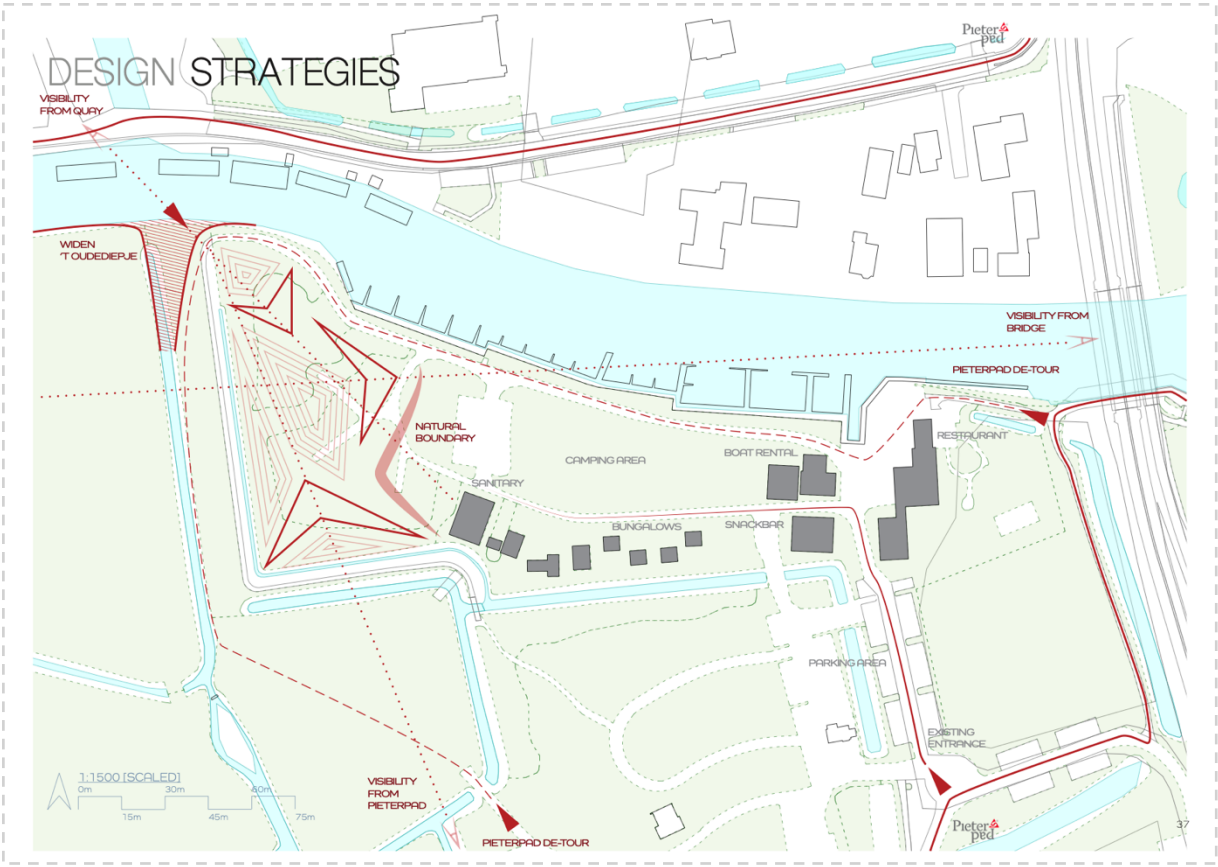

Figure 15. Design strategies for the site based on walking paths and sightlines. [Diagram made by author, January, 2026]

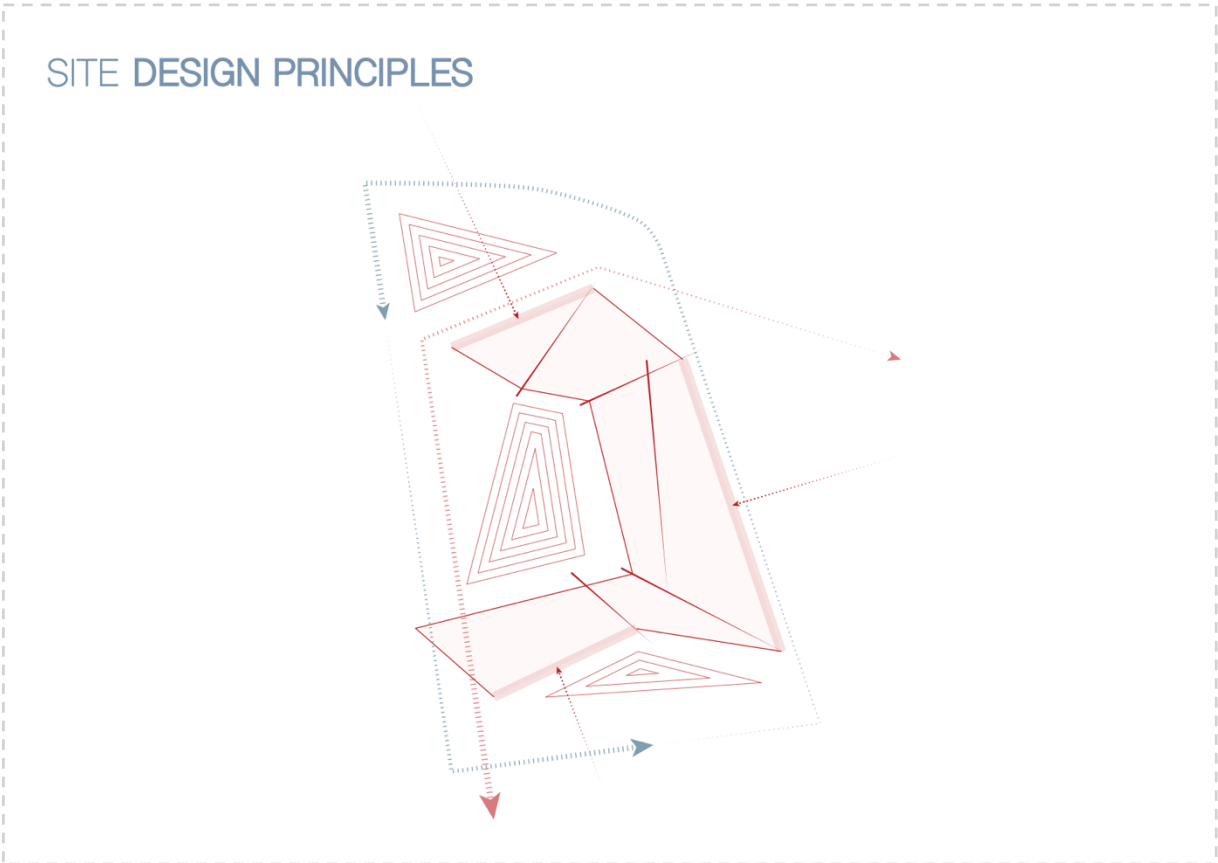

Figure 16. Design principles for the site based on flows, sightlines and connections. [Diagram made by author, January, 2026]

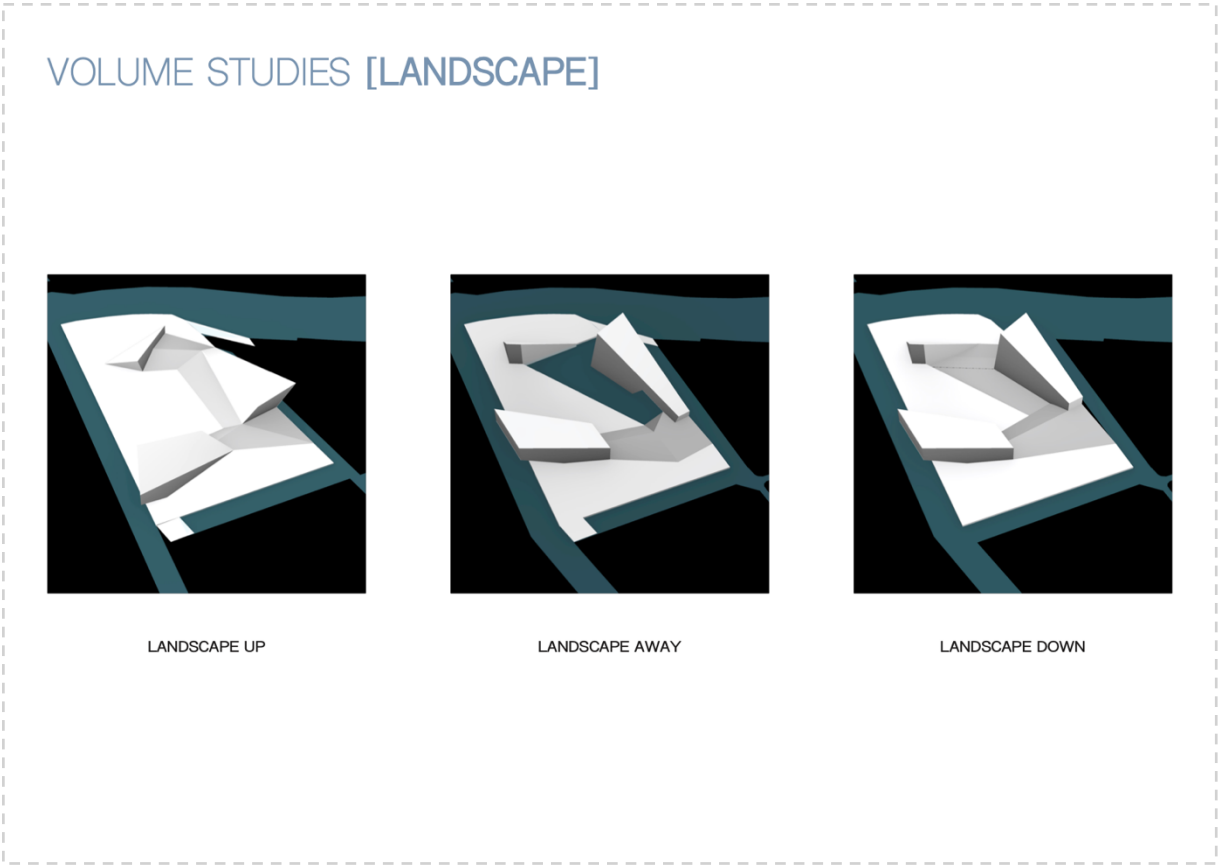

Figure 17. Volume studies on the landscape. [Trials done by author, January, 2026]

PROGRAM: ESCAPISMS, HYBRIDITY & WELL-BEING

The aforementioned three types of escaping - escape by experience, escape by learning and escape by moving – will all have their own type of space and activities. The theme and according activities will change throughout the year, depending on the attending target group and qualities of the season. And more importantly, all of the spaces can be used both tourists as well as locals. Escape by learning will be represented by multiple types of workshops spaces (creative, cooking and gardening activities) to attract tourists, but which can also be used by local associations during valley season. Escape by experience will stand out by recurring seasonal events, such as a water performance or market place to try and buy local cuisine and culture (figure 18). And, escape by moving is made clear with a gym, swimming pool, and large swimming dock.

As the studio introduced 'hybridity', so is this applied to the program. This is especially visible with the use of the water which has double functions (figure 19): e.g. the swimming dock can be a bathing area during summer, but also serve as bleachers during a water performance event, with the water as extra audience space. Or for example: the undeep water on the eastern part of the site, that can perform as ice rink during winter. The same goes for the 'hybrid roofs', which also serve as entrance (workshop roof), lounging space (restaurant roof) or swimming pool (guest house roof).

When experimenting with the program, a reflection was asked for on the initial goals that this project was trying to achieve: which is a call for well-being. Therefore, not only the program should support this by introducing e.g. sleeping hubs or a self-picking garden, but also the modes of transport and arrival. The activity hub can only be reached by foot, bike or boat (with an exception for logistical trucks and disabled people). This way the visitor will be immersed into an isolated 'mars-like' world to really take rest, and be pushed to become physically active and sustainably aware.

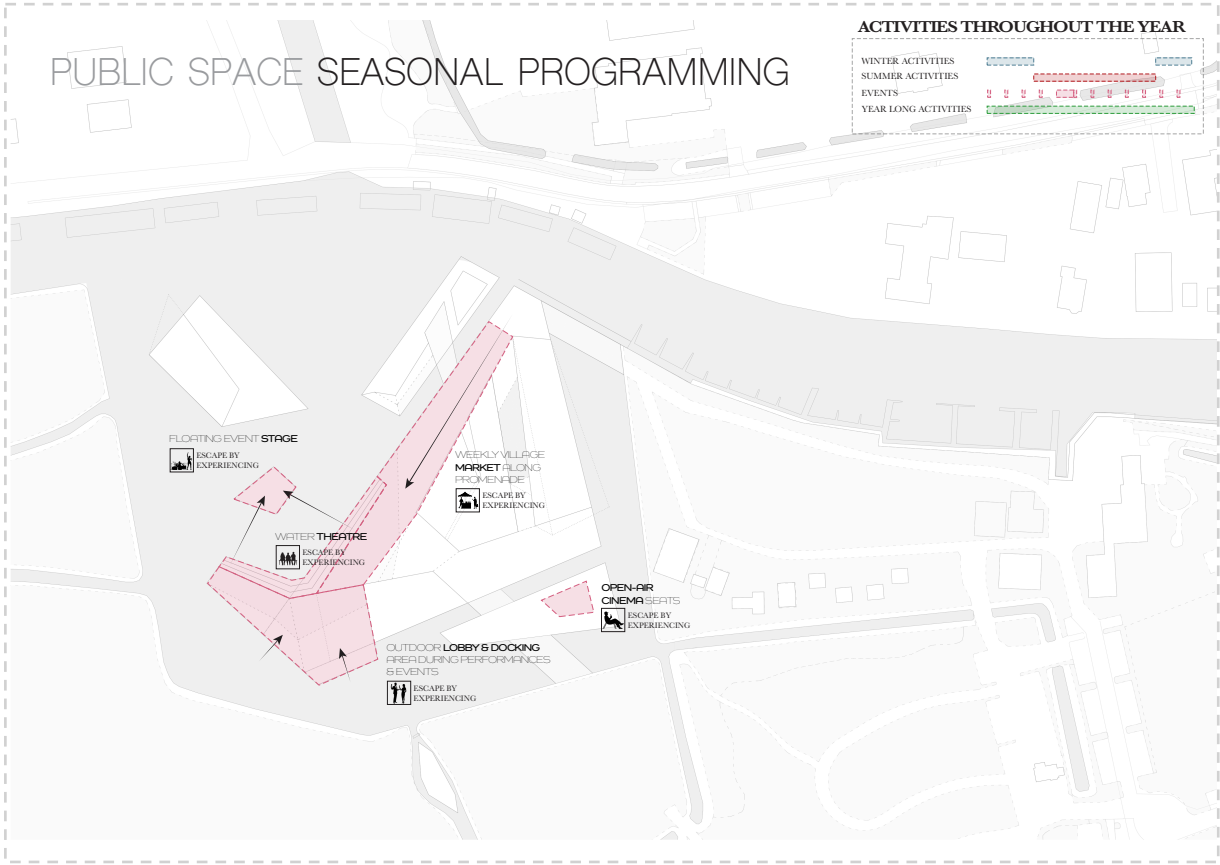

Figure 18. One of the diagrams on seasonal programming. [Diagram made by author, February, 2026]

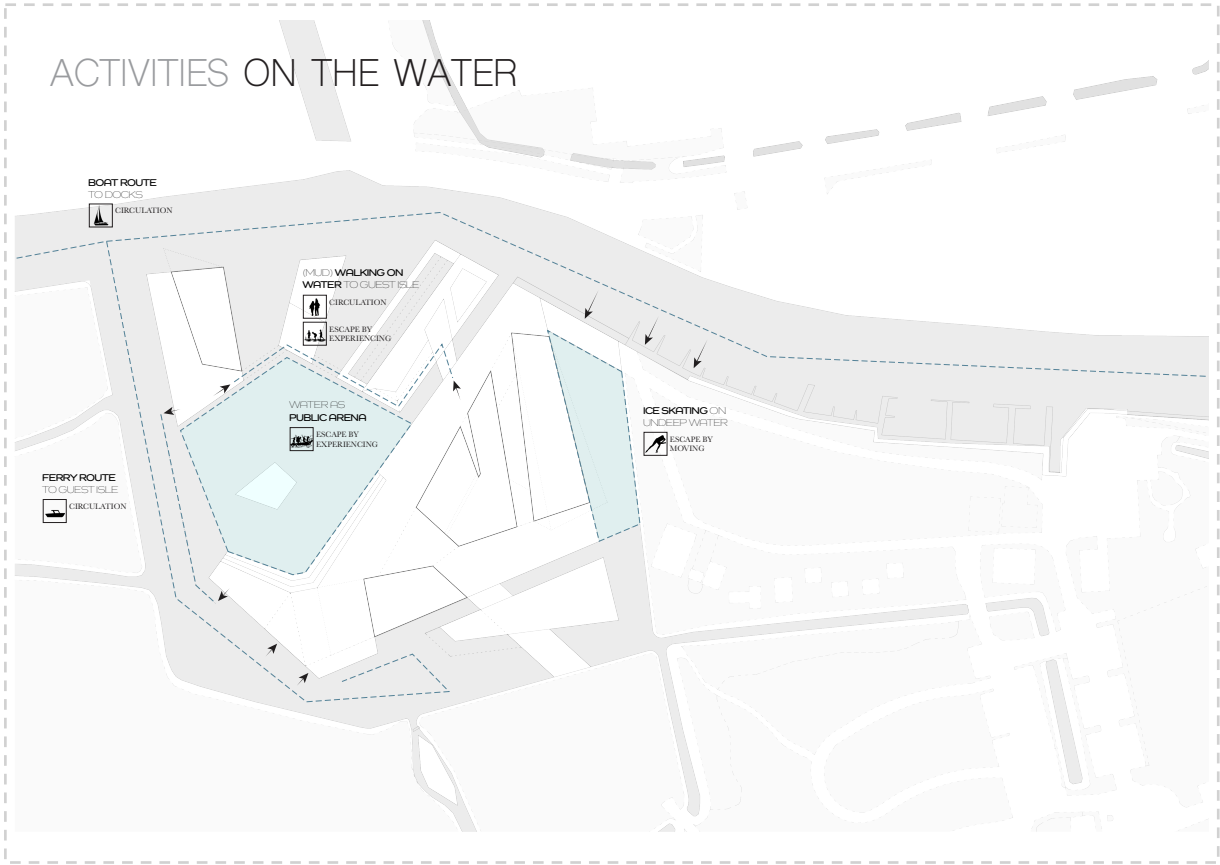

Figure 19. One of the diagrams on water programming. [Diagram made by author, February, 2026]

MATERIALS

In the further development of the building, the idea of an 'alien like' contrasting world was further emphasized in materialization. While doing design iterations on the shape, I figured that I treated the buildings as protrusions, sticking out of the landscape: they could be walked on, around and under. However, still the three volumes remained distinguishable. They were not one with the landscape, neither stood free from it. It was as if they got stuck on this rock in the water and had now grown together, like an old stranded ship. And so, I further extended my concept with a 'Nautic dimension'. The idea of sailing away and hitting the rocks did not only unconsciously affect the geometry and program of the design project, but would also help in reinforcing this feeling in the materialization. To explore this, an ambience map was made that identified four types of ambiences (sails, dunes, land and cliffs) with matching material types, as shown in figure 20. Depending on the surface the ambience was applied to, I could vary in the type of material that would add to this ambience. The buildings would be treated as sails either made from white textile or biocomposites to keep them abstract, while some of the landscape would merge around it, combining sand, rocks and green vibes.

This variation in materials – and also shapes and program – was explicitly done from a neuro-architectural point of view. By providing very different atmospheres matching different program types, a visitor has the option to choose the space best for the mood. Since we are changing persons, with a diverse range of emotions and behaviors, so does our built environment should support these with a diverse range of shapes, views and ambiences.

The materials are also affected by sustainability choices: e.g. light-weight carbon-low CLT, low-maintenance insulating textile or biocomposites from renewable resources. The roofs will either be covered in green, sand or pv-panels and the cuts in the shapes will be efficiently used to collect water.

With the selection for CLT as construction material, multiple structure options were tested as shown in figure 21: ranging from a column structure with wind braces, to spans to achieve an open floor plan, or trusses to create overhangs. Each building volume asked for a different construction type depending on its shape.

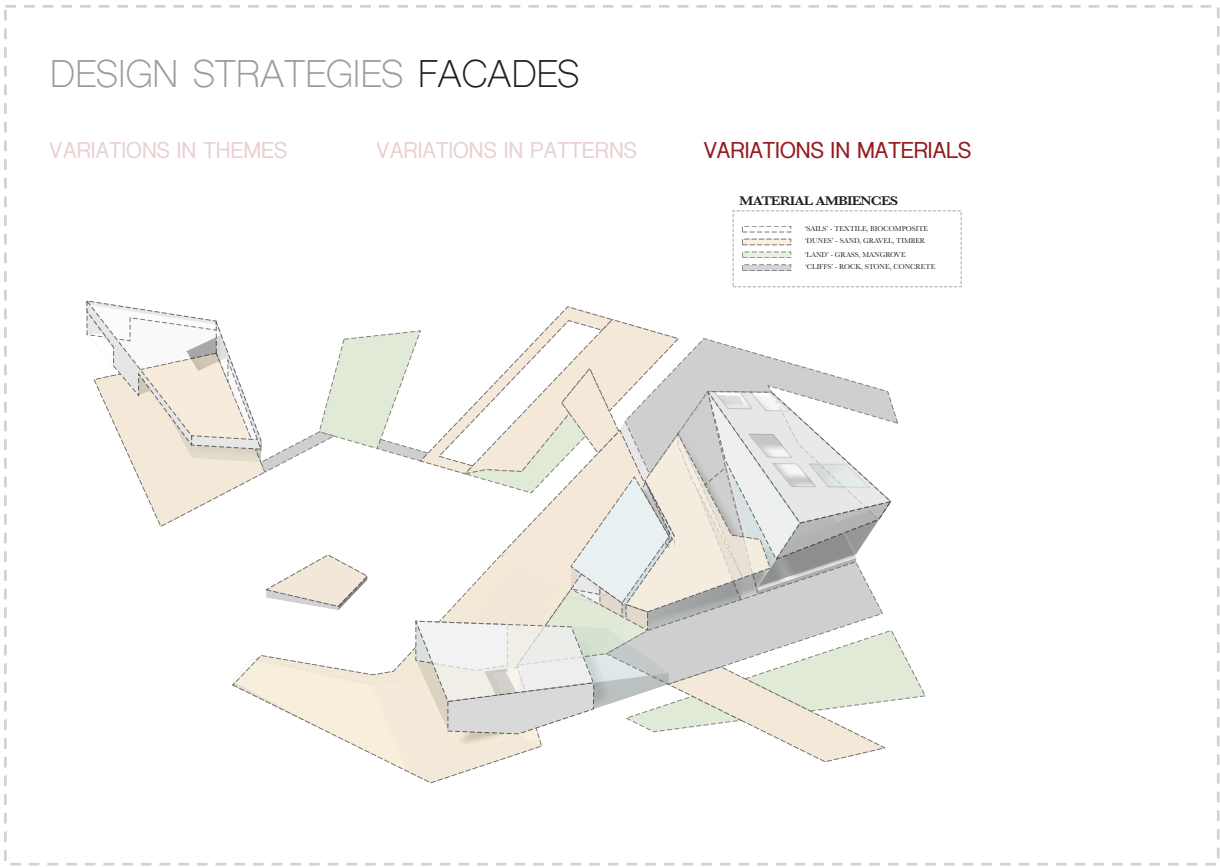

Figure 20. Diagram on material ambiences. [Diagram made by author, March, 2026]

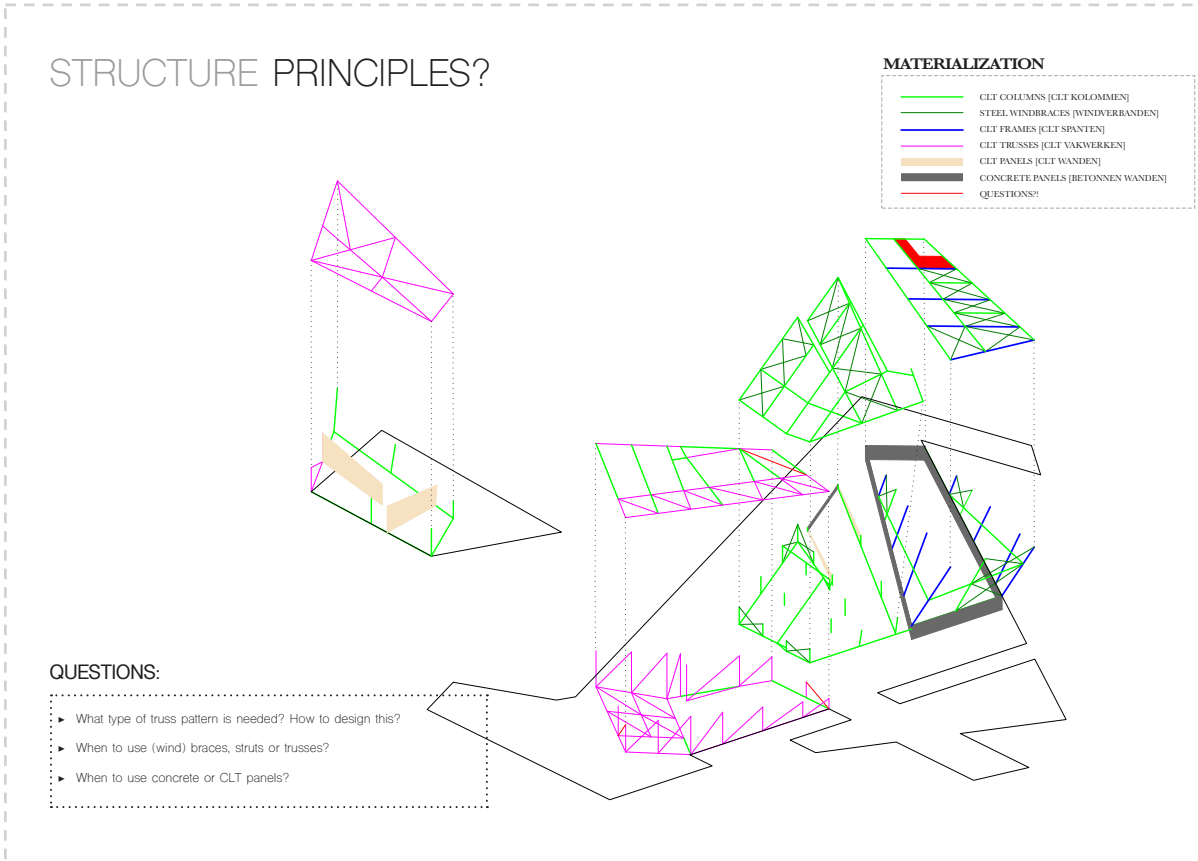

Figure 21. Diagram on the exploration of structural principles. [Diagram made by author, March, 2026]



Figure 22. Overview of eye-tracking experiments. [Overview made by author, March, 2026]

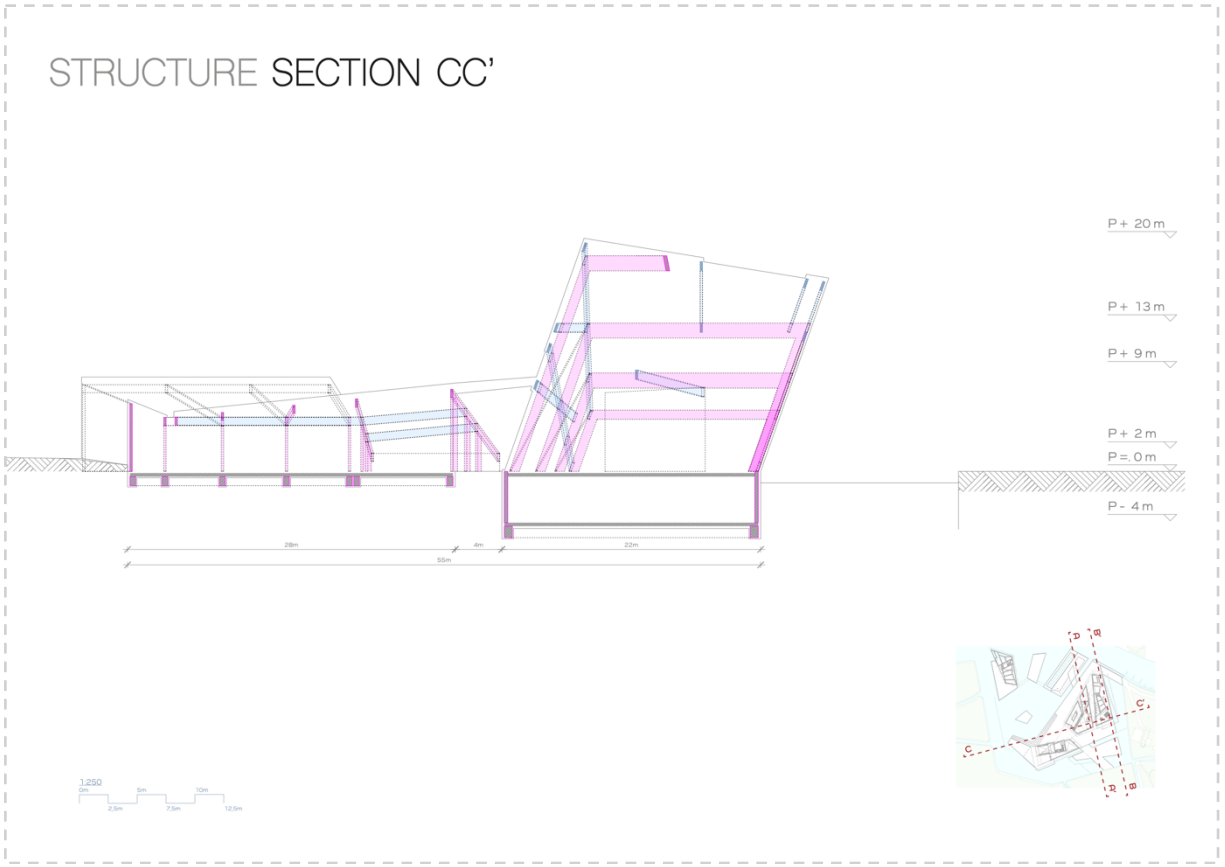

Figure 23. Section with structure. [Drawing made by author, May, 2026]

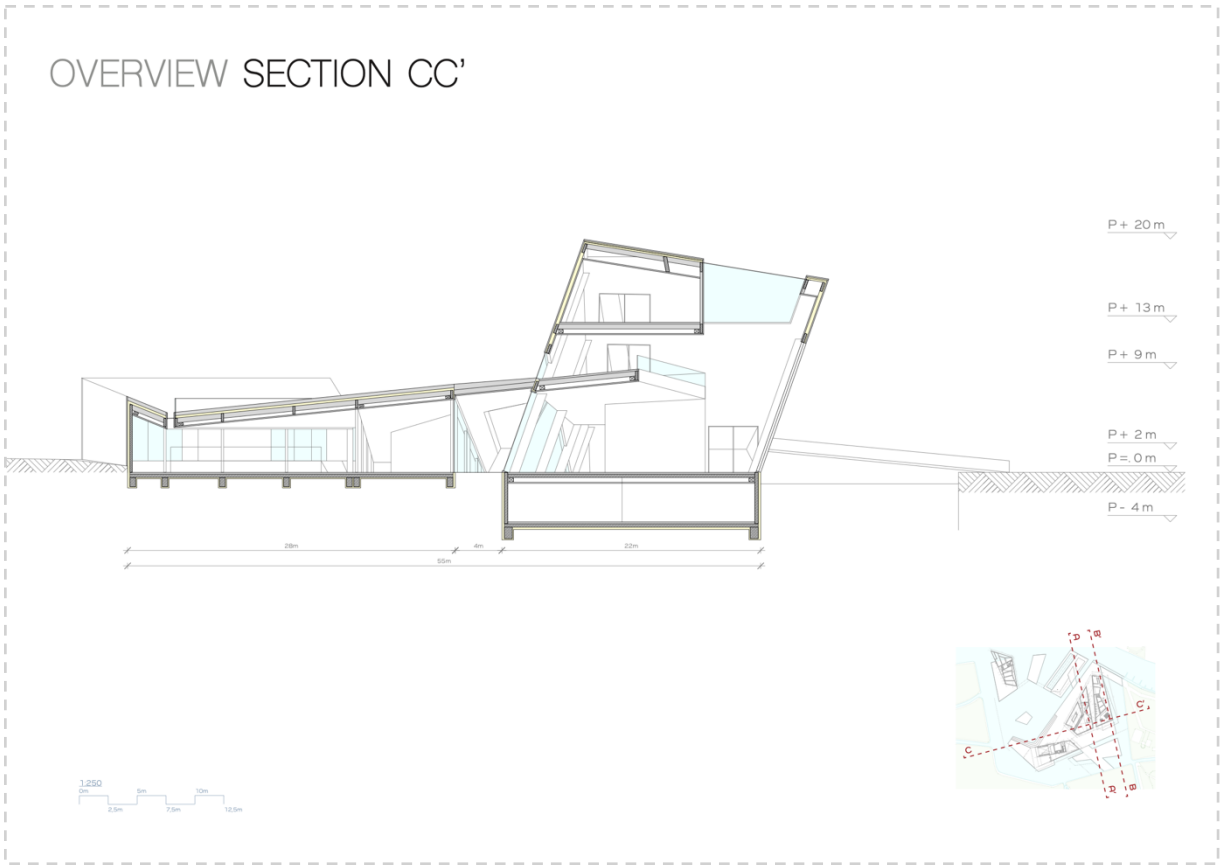

Figure 24. Section with wall and floor build-up. [Drawing made by author, May, 2026]

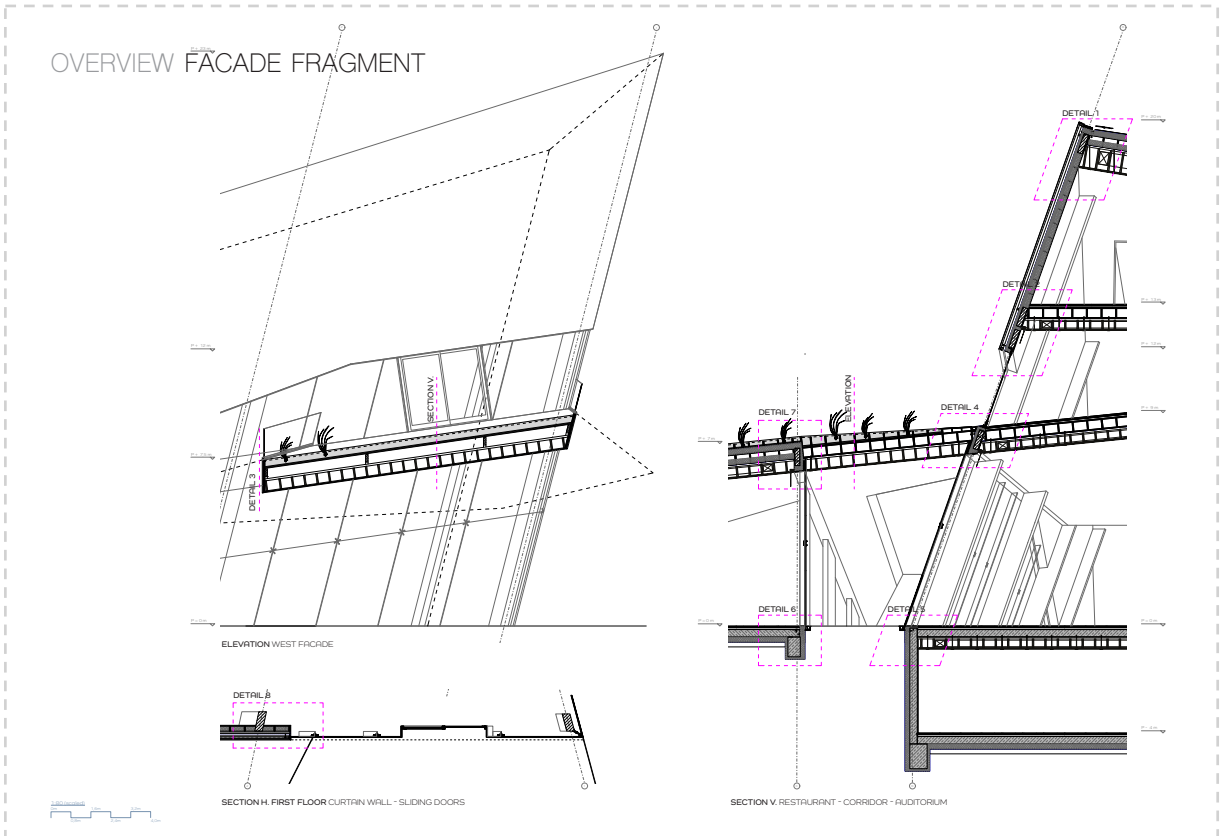

Figure 25. Façade fragment. [Drawing made by author, May, 2026]

CONCLUSION

This design project aimed to contribute to regenerating the province of Groningen as part of the Public Building Studio and in favor of the Nij Begun initiative. The studio took the perspective of sustainable tourism to frame how to approach the design task.
Behind the intent to attract tourist to Groningen lie two questions that had to be answered on the route to creating the final design. The studio asked to investigate: 'How can public buildings, through typological innovation and programmatic experimentation, affect the everyday life of the local communities by promoting social cohesion and participation?'
In addition, a personal research question was added that connected general trends in society with the role of architecture: 'How could an activity hub address well-being, for both locals and tourists, through escape tourism, by applying neuro-architectural design strategies?'

CONCLUSIONS & DISCUSSIONS

The studio's question was approached by concentrating on the effect on 'local life' first. A public building is an openly accessible destination, thus building one can lead to a new source of visitors to the village. Since the aim of Nij Begun is to promote Groningen and Winsum in specific, the goal of this design project was to make the public building an eyecatcher for the region. But to understand what an eyecatcher envelops for its citizens, a designer should put oneself inside of the shoes of the local. In general, architectural design is attached to its context, which it should somehow understand to be able to respond on it. Creating spaces is not the aim, but creating spaces that fit activities for the expected users should be. In the case of Winsum, besides promoting social cohesion and participation, the building had to support locals in promoting their village. To propagate the village, the design proposed to re-brand Winsum as an escape hub for psychological and creative isolation. This hub is located on the border of the village, thus not directly interfering with the existing peaceful ambience of Winsum itself. It should be seen as a satellite center with a variety of new functions – extra to the existing village center – and also open to the local community.
Further, 'social cohesion' was interpreted as the bonding between locals themselves, but also between locals and tourists. Most of the spaces were made publicly accessible for any target group that will visit the terrain: local associations, Pieterpad hikers and boat passengers, solo travelers and families, the art lover and the green fingers. This translated into a variety of indoor and outdoor program, all intended to be actively shared or done together: workshops, swimming docks, a vegetable garden, gym and marketplace. Because, as mentioned before, 'escaping' can, but does not have to be solo.
Last, the design tries to stimulate 'participation' from locals through entrepreneurship: hosting the restaurant or shop on the site, organizing the marketplace or boat tours. This proposal was underpinned by the Nij Begun Delegation who reflected on our studio's concepts: bottum-up entrepreneurial pioneers can create a springboard for integration with and support from the village.

The second step of answering the question was to find out how the effect on local life could be translated into architecture through 'typological innovation and programmatic experimentation'. The creation of the program for the escape hub considered the need for both locals and tourists to use the building. Since the current situation shows that tourists mostly visit in summer and lack during winter, the program proposed to time-share spaces between local associations and visiting tourists (figure 3). The vision on what this program should consist of and which typologies to apply, required experimentation for both the indoor and outdoor areas. This strongly correlated with the second question on how to implement well-being into the design.

Namely, to design a program and typology that considers ‘well-being ‘in favor of promoting social cohesion and participation, one must define what factors play a role. There is a range of connection points for the activity hub to address well-being, especially psychological needs, education, health and income. With the use of case study research a range of typologies related to well-being were defined (figure 13), which were then tested on the assignment -– e.g. workshops and a swimming pool to provide classes for both locals and tourists, walkable roofs and sleeping hubs to promote both exercise and rest, or a vegetable garden to create awareness on healthy food. The perspective of escape tourism was chosen, since this term covers best the target group of well-being-conscious tourists. Furthermore, the program interacted with the typological investigations: each activity asked for decisions on shape, material, size, public/private and loud/quiet. This experimentation was a constant weighing on how to balance program and typology, with both affecting the other. A surprising insight was that well-being is not something that is only expressed in an activity itself, but just as well in the composition of the space. As supported by research, art or architecture has an influence on our mindset. Besides, nutrition, sleep, exercise and nature, the form of the building influences well-being just so.

This leads to the last component on the implementation of ‘neuro-architectural design strategies’. On the one hand, literature research helped defining a set of principles which were then applied onto the design, such as conditions for lighting, height and color. On the other hand, eye-tracking was applied to gain more project specific data. Previous research has also examined neuro-architecture with a.o. the use of eye-tracking techniques, albeit only in an urbanistic context. The application of eye-tracking in architecture is still overlooked. Therefore, this new method was also adopted in this design project. However, to draw concrete conclusions more research is needed on what eye-tracking measurements (duration, frequency) mean for the assessed quality of the space. This project has only achieved to define what salient features of a visual attract attention, but not how this is valued by the user.

RECOMMENDATIONS

The aim of this graduation research has been to find a design-based response for the regeneration of the province of Groningen through sustainable tourism. Of course, the actual success of the design remains an open question until made physical. Nonetheless, lessons can be drawn from this research, because it tries to find out what tools architecture has to promote the region. The methods reach from programmatic and typological try-outs - proposing a new target group or a network of multiple hubs - to upcoming neuro-architectural techniques. In that sense, architectural designing is used to find strategies to revive a village and region, which can be informative for any similar architectural context.

On a smaller scale, the final building design itself is an exploration, per se. The consciously chosen tilted composition would be a technical challenge to build; as shown by the details (figure 25). The ambition to create a wooden structure was deemed necessary to achieve a lower carbon footprint on the climate. Adding up, the point to consider is if a complex geometrical shape is economically worth it for Groningen or architecture in general. Considering the value of art in our environment and the value of a challenging immersive world that can provide creative escaping, this project beliefs that it is worthwhile to create architectural structures that are explicitly not like nature. Not only being creatively active, but also a provoking creative environment will impact well-being. This building design can be a first try-out to open this discussion.

OBSTACLES & REFLECTION

Our studio did research on the province of Groningen and its citizens with site visit and interviews. Besides, the weekly discussions with fellow students and critical feedback of tutors stimulated an ongoing iteration. Also, the input from external people was helpful, such as the visit of a delegation from the Nij Begun project who could apply and tests the fit of our concepts for their beloved Groningen.

Not only research and discussions helped formulating an answer, but especially architectural designing itself. Every architectural decision asked for a contemplation on goals, target groups, appearance, motivation, environment, climate. Indeed, architectural designing which often takes places as a visual-motoric exercise can be both the method and answer to a question. For instance, reflection already starts when deciding on where to build on the plot: is the project allowed to build on the Wierde (a protected natural landscape that is 'legally' not supposed to be built on), will the project compete with the existing business on the Marenland or else use its buildings? But also more regional-ethical questions: how many tourists does Groningen want to receive? Especially for a little village like Winsum, an overflow of escape tourists might harm local culture and let the concept of 'escaping' drown. Or even society broad questions: in what ways can and must architecture address well-being? These questions can have an effect on the level of the program to the psychological influence of the composition and materials itself. In later phases architectural designing also asked for reflection on technical trade-offs in material choices, their effect on the carbon footprint, and if the design of a complex geometrical tilted building is worth it in terms of economical, promotional and psychological outcome. The point to make is that architectural designing in itself can be a form of studying, ànd that the architectural outcome can be read as the informed response to the questions. A building design is not just a set of drawings, but a visually translated, compressed collection of considerations.

As was expected, the design process was not a spotless route from A to B. During the A2 phase both design questions and methodological issues came to the surface. The design questions involved topics relating to the morphology and program: how to draw in program (in the complex geometrical volumes) without losing feeling of the overall shape? Or: what strategies can be applied to make the landscape more dynamic? On the other hand, I questioned how to involve neuro-architectural research, since the data was limited and the methods not well accessible or defined.

To start with the first reflective question on fitting in the program. I approached this issue by both looking up references with similar complex geometries, and by trial-on-error designing. Studying the Mobius house gave insight into how different levels can intertwine and be connected with ramps, while also using the angled walls for stability purposes. My first floorplans set-up shows a pragmatic way of filling space by placing in blocks inside of the complex shell, because I tried to put more attention on the in-between space. The critique was the loss of quality and relationship with the outspoken geometric language of the outer shell. The process of improvement was ongoing, keeping a balance between functionality and expressivity.

In the first design versions, the landscape around the buildings showed little change in height. To make the landscape more dynamic, I tried different strategies. Firstly, the tutoring sessions opened my eyes to include the water as designed space as well. By seeing the water as an integral element on, near and with which to design, the site got a new dimension. By moving the buildings from the land into the water, an island was created which also emphasized the idea of escapism. The variation of materials added to this, to create spaces with all their own character. And then by including the roofs into walkable space and changing site and building heights based on this, the whole design became a unity.

The topic of neuro-architecture was hardest to investigate, since the research was fragmented and not aligned. Figure 4 shows an overview of the current state of research on how certain spatial and programmatic requirements affect our senses. However, the question is if this list is sufficient to fully demarcate and guarantee a design for well-being. For example: the literature does not address how the complexity of geometric shapes, a combination of materials, and activities interact, and how this affects the experience. Besides, to this point the literature on neuro-architecture applied eye-tracking techniques only on urbanistic plinths, but does this method work the same for architectural spaces? Thus, I had to experiment and refine my own definition of neuro-architecture. I explored eye-tracking with renders of my outdoor space and identified certain focus point that my eye was attracted to (figure 22). These points might be interesting to put more attention to in materiality and program. On the other hand, based on discussions with my tutors I came to the insight that we have changing behaviors and moods, which does not fit into one space. A variety of atmospheres would answer this issue, on the condition that the atmosphere should match with the activity of the space.

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APPENDIX

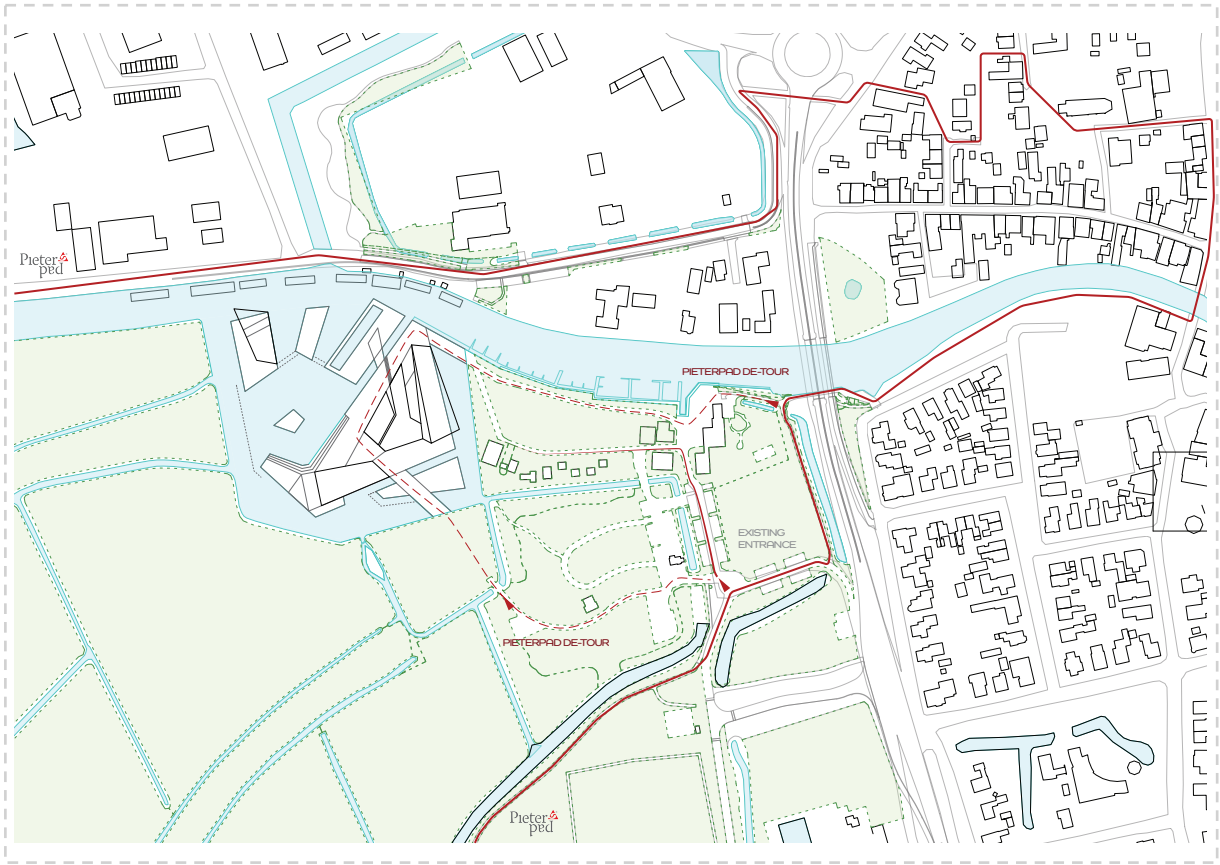

Figure 26. Embedding in urban context. [Drawing made by author, March, 2026]

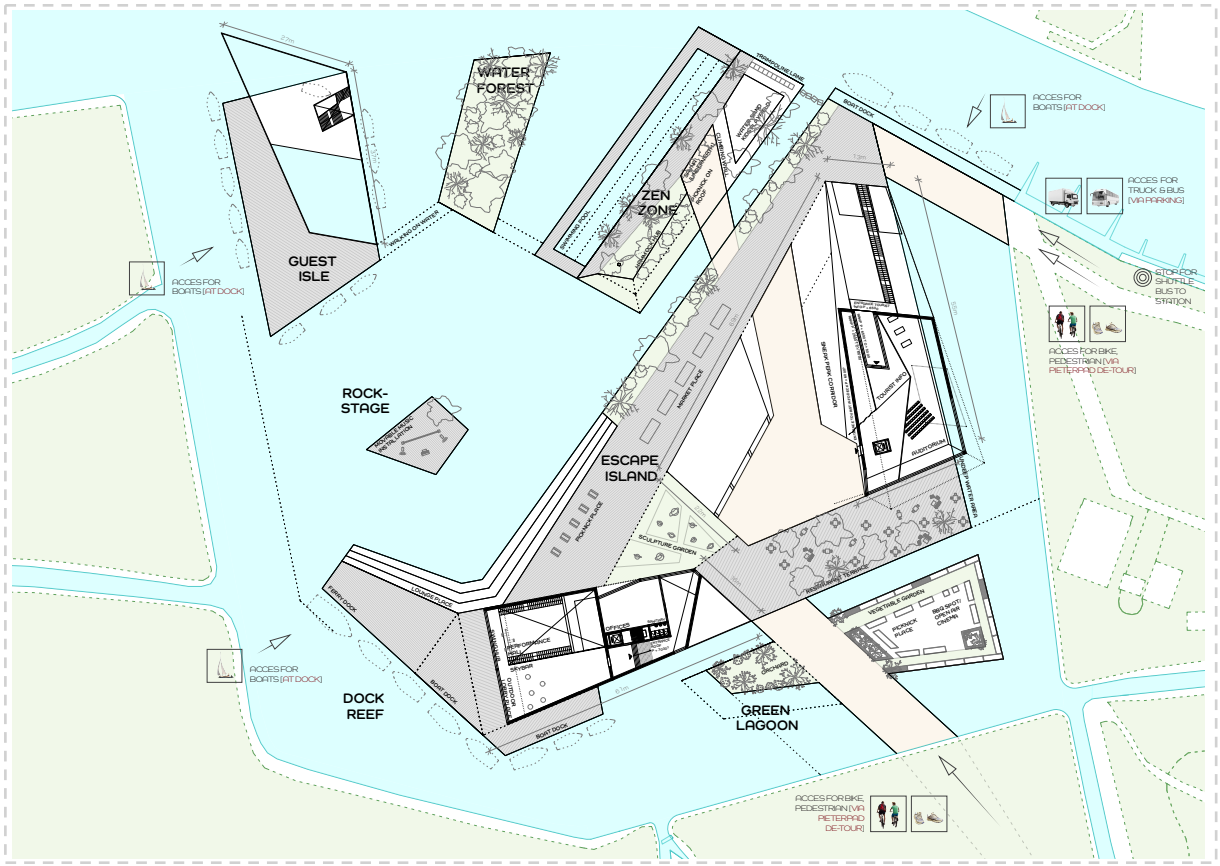

Figure 27. Site plan with first floor. [Drawing made by author, March, 2026]

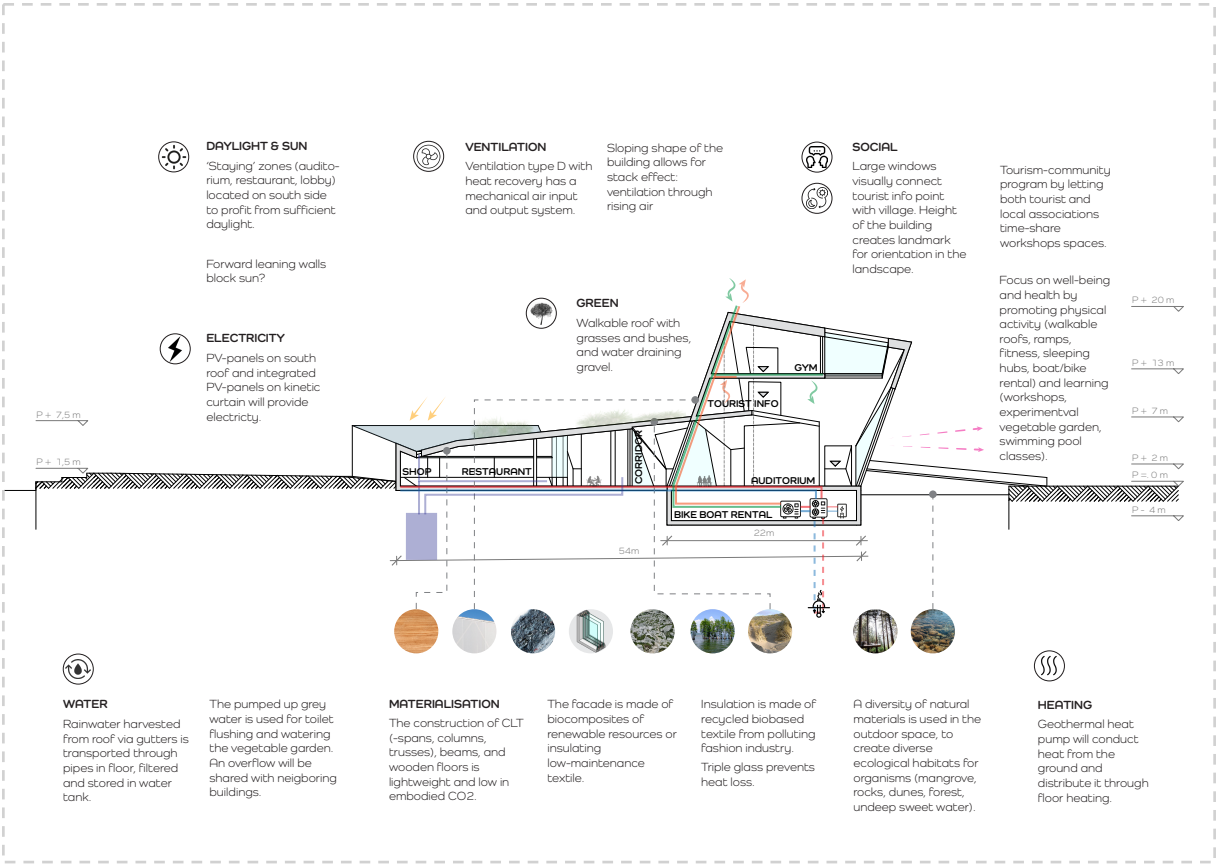

Figure 28. Sustainability diagram. [Drawing made by author, March, 2026]

OVERVIEW **DETAILS**

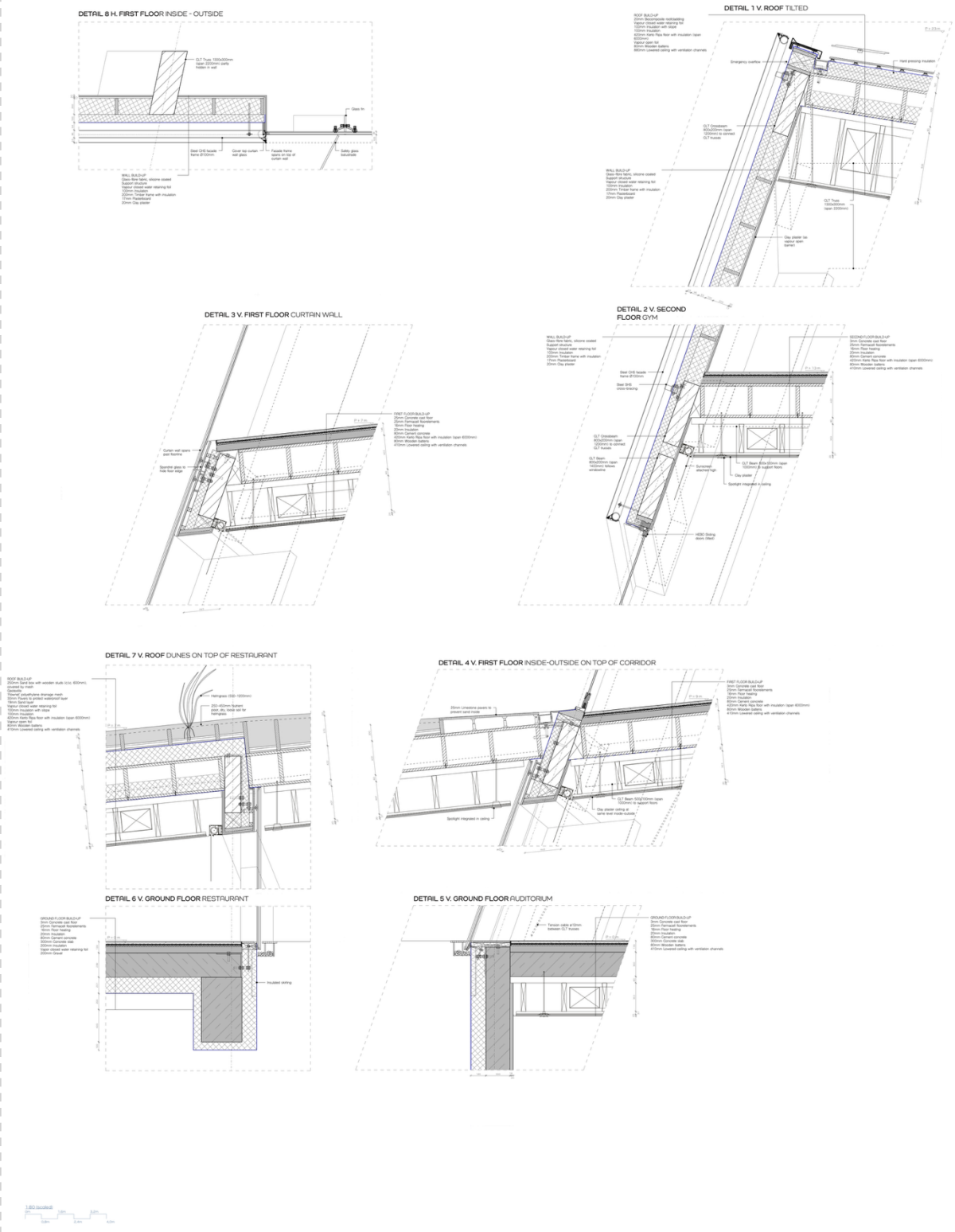

Figure 29. Details. [Drawing made by author, May, 2026]