ARCHITECTURE AND/IN PLACE

STUDYING THE PHYSICAL AND CONTEXTUAL CONNECTION BETWEEN BUILDINGS AND LANDSCAPE

STUDENT JOHANNES KOK
SUPERVISOR ALTA STEENKAMP

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TITLE & DECLARATION

DISSERTATION TITLE : Architecture and/in place
Studying the physical and contextual connection between buildings and landscape

STUDENT NAME : Johannes Kok

SUPERVISOR NAME : Alta Steenkamp

This dissertation is presented as part fulfilment of the degree of Master of Architecture (Professional) in the School of Architecture, Planning and Geomatics, University of Cape Town.

Date: 8 December 2022

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Your Ethics pre-screening questionnaire (PSQ) has been evaluated by your departmental ethics representative. Based on the information supplied in your PSQ, it has been determined that you do not need to make a full ethics application for the research project in question.

You may proceed with your research project titled:

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ABSTRACT

This dissertation explores the relationship between people, architecture, and landscape. The theoretical research studies the relationship between people, their culture, and landscape as defining elements of place and how it informs architectural design. The aim of this is to relate the character and structure of place as defined by landscape and culture to create in-place buildings. This theory is then applied to the design of a museum for the San hunter-gatherers that dwelled in Elands Bay in the Western Cape thousands of years ago.

The early history of the San hunter-gatherers mainly exists in university collections and museums outside Elands Bay. This contrasts with the surrounding landscape having numerous archaeological sites showing the rich history of the San living there. This includes the Elands Bay caves and campsites discovered to the north of the town. There is currently no place in Elands Bay where this history can be portrayed. To give further credibility to the development of a museum, the Department of Art and Culture released a report in 2013 setting out the development of a National Khoisan Heritage Route in which Elands Bay is included.

The design places the museum as a threshold between the natural- and man-made landscapes in Elands Bay. This allows the design to explore a connection between the building, the town, and the natural landscape. The building is located along the main road leading into the town to create a sense of arrival and place while a public park leading to the museum uplifts a dead zone along the road. The building form developed by framing views and extending the building into the landscape, ultimately forming a route linking the museum to the historic sites mentioned earlier. In doing so, the design considers what in-place architecture could be by incorporating culture and landscape.

1. INTRODUCTION

I believe architecture should be inspired by the connection between buildings and their surroundings. This stems from my early architectural teachings of the spirit of place by Christian Norberg-Schulz and his writings about landscape and settlement as generators of architecture. Landscape and settlement create the physical world in which people live. Combining the physical world with the human experience thereof creates place. Place is both a natural and human construct that has over time been shaped, admired and engaged with in scientific and phenomenological terms. This dissertation studies the relationship between architecture and place. Attention will be given to the physical and contextual structure of landscape and the way these inform architectural form and space. The title Architecture and/in place was chosen to show there are multiple links between architecture and place. Architecture in place points to the fact that architecture and place are co-dependent. Place directly influences architectural design; without it, architecture

Figure 1.1: Place touchstone photographs made by author. Source: author.

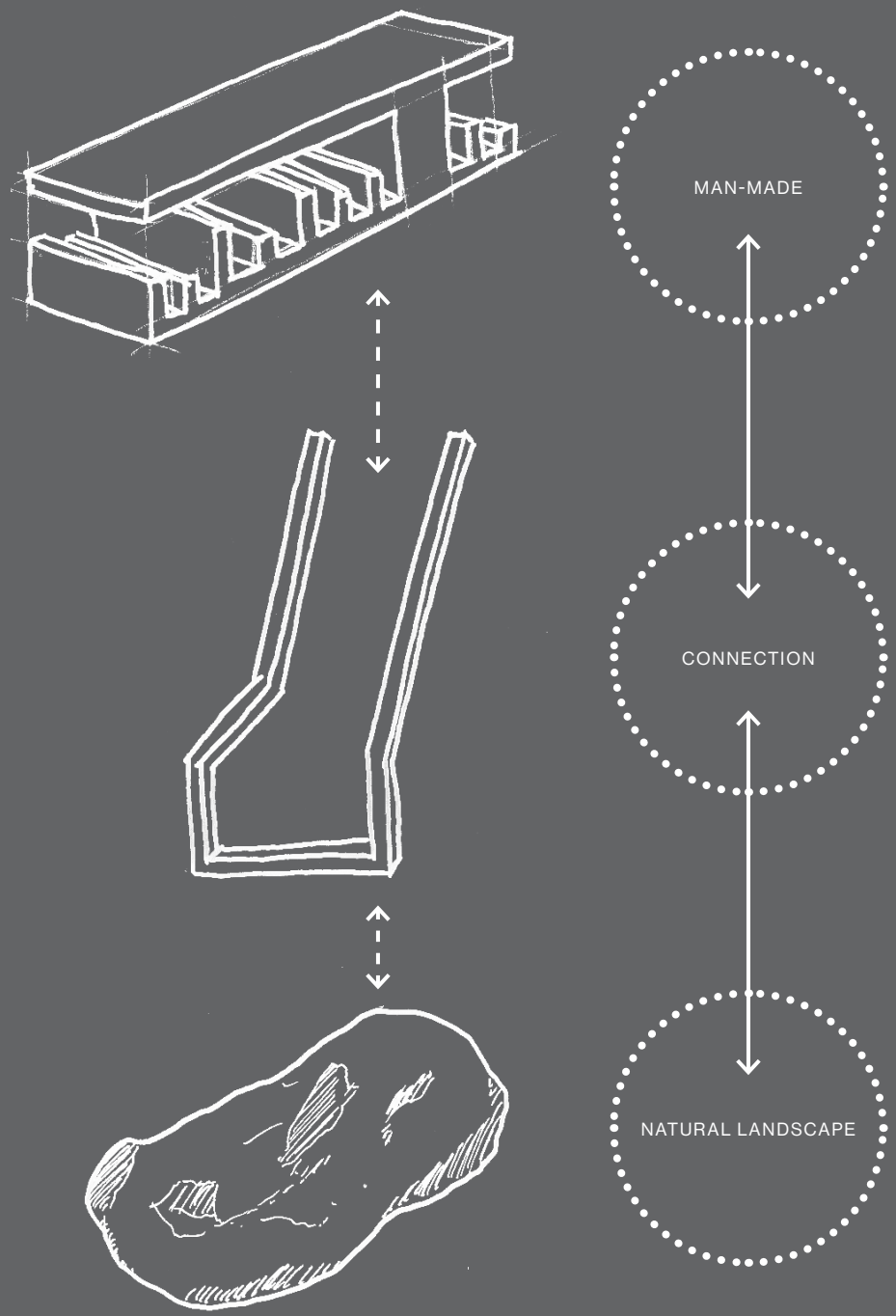


Figure 1.2: Concept and analysis of the place touchstone photographs made by author. Source: author.

cannot exist. Conversely, architecture transforms place and changes it. This mutual co-dependent relationship is of particular significance in the creation of buildings.

The place touchstone I made (figures 1.1 and 1.2) shows this relationship and was used as an initial exploration into this relationship. The concrete superstructure depicts the man-made elements and the stone the natural landscape.

1.1 SITE AND PROGRAM

The site selected for the project is in Elands Bay (see figure 1.3 on the next page). Elands Bay and the surrounding Cederberg landscape are rich in archaeological history from the early people who dwelled there. The aim of the project is to develop a museum showing the rich history found in the surrounding landscape and Elands Bay itself. The aim is for the museum to bring these artefacts and history to the people living in and visiting the landscape to tell the story currently contained in university storage, academic articles, and museums located in other parts of South Africa.

1.2 RESEARCH AND DESIGN QUESTIONS

This paper will consider the following research questions:

1. What defines landscape and place?
2. What is the relationship between architecture, experience and landscape?
3. How can architecture connect to landscape as place-making?
4. Is there a material connection between architecture, landscape and experience?
5. When can architecture be considered as in place?
6. How can architecture define spaces within a complex landscape where historical artefacts can be displayed?
7. Can architecture serve as an agent connecting the people of a community and the history of their surroundings?

These questions are important to my exploration in architectural design and the making of place. I believe that buildings serve as a primary connection between people and the environment around them. Architectural design should be informed by people's needs beyond the physical structure of a building. There is a connection between people, place, landscape and culture that inspires a meaningful existence of people in place.

Figure 1.3:
View from the site towards the south. The natural hill protruding is a visual beacon. Source: author.

2. PLACE, LANDSCAPE AND ARCHITECTURE

The landscape is of primary concern in creating architecture. It is composed of the ground and will have to support the intended building. In this section, landscape is studied as an elementary component and influence in the design of a building. The means by which the landscape is studied is not limited to its physical structure and composition alone, but also in terms of the experience and qualitative associations people have towards it. All this links to the spatial qualities within a landscape that can provide clues to place buildings in the landscape and the creation of place.

Landscape is generally thought of as a physical entity composed out of topography, fauna, flora, climate and any human intervention that has shaped it over time. There is, however, another side to landscape which is often neglected from study. Meinig (1976:47-54) reflects on the different interpretations of landscape in his essay, *The beholding eye*, which can roughly be placed into two categories: systems and ideals.

Systems are logical analysis and empirical observations made about a landscape. It is used to investigate the concrete and historical observations of a place to formulate interventions based on human needs. These needs can be scientific, economic, social or political. Ideals include experiences, desires and aspirations for the engagement with landscape. Norberg-Schulz (1979:8-11) writes that the engagement with landscape and settlement are key to generating architecture that connects people to place and provide meaning to their daily existence. For this reason, it is important that landscape is not treated purely as an empirical entity on which to place a building, but also in terms of the human experience the placement will have. The emphasis of architectural design should not invalidate one of these categories but examine both as generators of architecture.

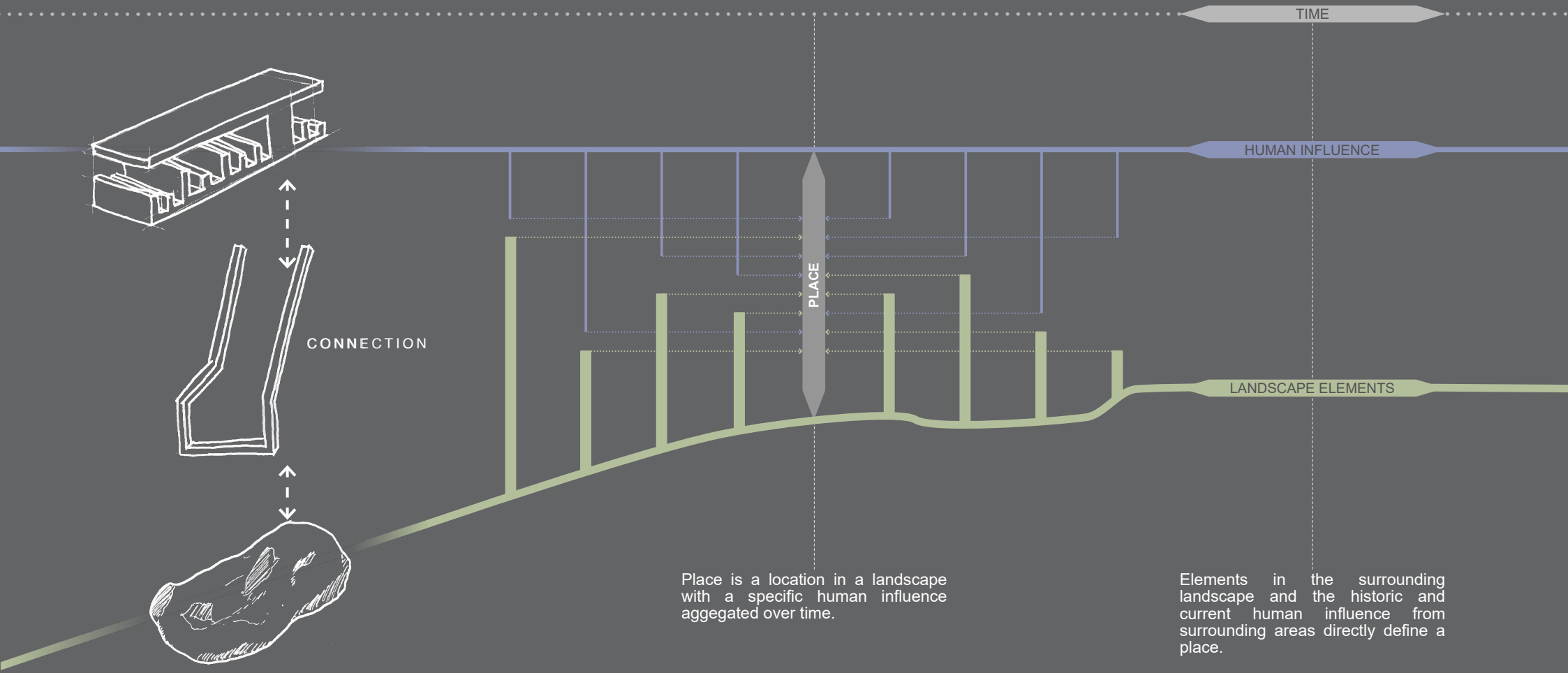


Figure 2.1: Diagram depicting the difference between landscape and place. Place is a location in a landscape and defined by existing natural elements and features of human existence. Source: author.

2.1 DEFINING LANDSCAPE AND PLACE

Landscape and place are related terms. It is important to differentiate between the two to further the discussion between place, landscape and architecture. Landscape has its roots in Dutch stemming from the root words *'land-'*, meaning region, and *'-scap'* meaning condition (Etymology Online Dictionary n.d.a). This roughly translates into the condition of the land, or region and implies that landscape refers to the physical elements a region is composed of.

Place has its roots in Latin stemming from the word *platea* which translates into *courtyard* or *avenue* (Etymology Online Dictionary n.d.b). The French root refers to a particular spot. This implies that place refers to a particular location where human intervention has taken place. Since a courtyard and avenue relates to human activities taking place, place indicates some kind of human intervention and activity in the world.

Norberg-Schulz (1979:6) refers to place having its roots in taking place which links human activity to a specific location. Therefore, place refers to a landscape with human existence, activity and meaning attached. Meinig (1976) describes place as a location in a landscape with meaning where present and historical events are linked to the people inhabiting it and therefore also derive meaning in their existence from place. Place can not exist without landscape and the dependence betweens landscape, culture and human activity are key to the creation of place (Spirn 1989:92)

In terms of architecture place is therefore of particular importance. It directly links the human experience and intervention to landscape. There is a systematic and idealistic

link that exists when people occupy a landscape and transform it into place.

2.2 THE STRUCTURE AND MEANING OF LANDSCAPE

Landscape has structure. It is composed out of physical elements that describe it and give it an identity (Norberg-Schulz 1979:32). People's sensory exploration of a landscape is the basis of their experience of it. It is therefore important to define the structure of a landscape and place to effectively engage with it in architectural terms.

The observable structure of landscape starts at ground. The ground can be thought of as the line separating the earth from the sky. This definition is an oversimplification of ground because it treats it as a pure geometric object on which to build (Berlanda 2014: 58). By considering the ground as the layer of the earth from which architecture starts, the landscape structure becomes a component of the design (Berlanda 2014: 56). The resulting building and landscape will be inseparable.

The choice of how to build in relation to the ground also depends on the shape of the landscape and how it translates into a building (Berlanda 2014:68). Generally, the shape of the landscape can be illustrated using topography. Since the landscape already has a structure and three-dimensional quality indicated by level changes and other topographical features, there is a spatial quality present in a landscape (Norberg-Schulz 1979:32). This spatial quality is defined by the both the extension of the landscape horizontally across the earth and vertically into

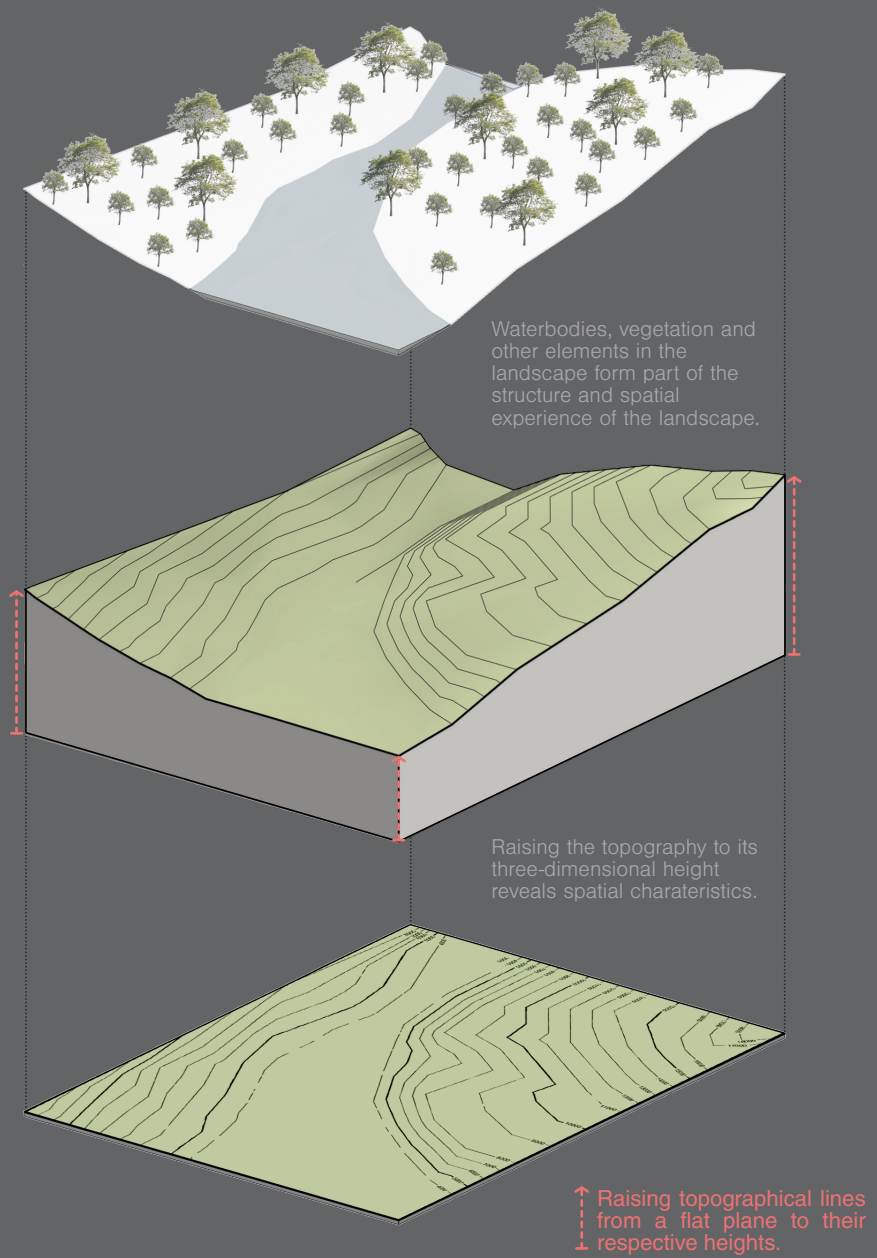


Figure 2.2: Topography represents the shape and structure of a landscape two-dimensionally. However, landscape is a three-dimensional configuration and extends both horizontally and vertically. This is part of the spatial definition of a landscape. Source: author.

the sky. This extension includes the rise and fall of the ground, fauna, flora, water bodies, and climate and the elements that are part of that landscape. Combining these elements defines a landscape with particular spatial characteristics that can be used in the exploration of deriving a method to connect architecture to landscape. Berlanda (2014:71) notes that the interrelationships between all these elements and experiences they portray is the first step in designing a building because of the clues they provide in understanding the structure of the landscape.

Figure 2.2 shows the extension of landscape, elements such as water bodies, vegetation and other features as being more than a flat line drawing. To engage with the landscape, it must be considered as a spatial phenomenon.

To understand the landscape better, the spatial qualities that can be present must be investigated. In figures 2.3-2.6 the spatial characteristics of trees, water bodies, mountains and valleys are explored. These can be experienced as nodes, paths, boundaries or canopies that provide spatial definition and orientation to people within the landscape (Norberg-Schulz 1979:32-35). The aim of considering the structure of landscape in these terms is to aid in the understanding of the spatial implication of place within landscape. This will help to define an architectural dialogue of connecting to that landscape with the aim of creating place.

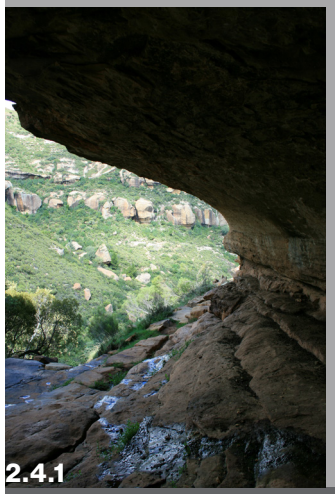


Figure 2.3: Landscape elements creating paths.

2.3.1. The lining of trees on both the left and right in the image creates an implied path along the trees. Source: author.

2.3.2. The valley between the clifs imply a path running through the landscape. Source: author.

2.3.3. The river running through the landscape implies a path. Source: author.

Figure 2.4: Landscape elements creating cannopies above.

2.4.1 A cave creating a roofing element. Source: author.

2.4.2 The cannopy of a large tree creates a barrier above. Source: author.

Figure 2.5: Landscape elements creating boundaries.

2.5.1. The river creates a physical boundary to the opposite bank. Source: author.

2.5.2. A collection of trees and plants create a visual boundary. Although this is not a physical boundary, it creates an enclosed space. Source: author.

2.5.3 The cliffs create a physical boundary going up the hill. Source: author.

Figure 2.6: Lions head viewed from the Llandudno is a beacon within the landscape. Source: author.

2.3 THE LANDSCAPES OF ELANDS BAY

Elands Bay is a town surrounded by different landscapes, each with its own character and experience (see figures 2.7.1-2.7.6). To the south, the landscape is defined by the cliffs of Baboon Point. The ocean is to the west, and dunefields to the north. Running though the centre of the town is the Verlorenvlei river and estuary.

The Baboon Point cliffs serves as a beacon from the town north of it, and its presence is a constant throughout the town (see figure 2.7.2). This makes the cliffs a constant visual entity and barrier to the south from the town, and it is also one of the defining landscape elements of the town.

The dunefields is an isolated landscape where orientation and movement is difficult. While moving through the dunefields, the other landscapes fade and become less prominent. The ground and its relief is the most prominent feature in the dunefields. Moving through the dunes islotates one from the surroundings and can be disorientating.

The Verlorenvlei river cuts through the landscape and town, while the ocean and beach provide views for some of the settlements in the town.

Figure 2.7: The landscapes of Elands Bay

2.7.1. The cliffs to the south of the town. Source: author.

2.7.2. The cliffs viewed from the town. Source: author.

2.7.3. The ocean to the west with the cliffs in the south. Source: author.

2.7.4. The ocean to the west. Source: author.

2.7.5. The dunefields to the north. Source: author.

2.7.6. The river and estuary running through the town. Source: author.

2.4 THE INFLUENCE OF LANDSCAPE AND PLACE ON ARCHITECTURE

The question of connecting architecture to the ground can not be avoided since all buildings will occupy a portion of a landscape. Semper (1989:103) describes the ground as one of the four elements of architecture which defines human dwelling on earth. An important question to answer would be how do we analyse the structure of landscape and design architectural relationships between earth and ground.

This is a complex question that can not be answered only by considering the structure of landscape. The structure of landscape can provide clues to the placement of a building, but ultimately the human connection must be considered as well. Since architecture is not purely reliant on the landscape but also to the human connection between people and landscape. The purpose is to identify and create a place where people dwell.

2.5 THE CULTURAL CONNECTION

Landscape does not possess a culture. Rather, the people that inhabit a landscape exhibit a culture in a landscape through their activities, methods and expressions. Since architecture is an endeavour linking human life to a place in a landscape, it is relevant to consider how culture influences architecture in a landscape.

Before humans constructed buildings, they dwelled in the natural landscape. Therefore, landscape is the original dwelling place of people (Spirn 1998:15) . In the start of the investigation into the link between building and place, place was defined as a location in a landscape influenced by human elements. It is therefore important to not lose this element in the discussion of place making and linking connecting buildings to a landscape. Spirn (1998:15) equates landscape to language in the stories the experiences it tells. It has the potential to be cultivated into the stage of life for people.

WHAT IS CULTURE IN LANDSCAPE?

Culture has its roots in early Latin which means to *cultivate,* or *grow.* This later developed into the term referring to people settling and growing (cultivating) crops (Etymology Online Dictionary n.d.c). Considering this origin, it becomes relevant to discuss the terms growth, settlement and place as an origin of people within a specific location landscape. In primitive architecture, different cultures interpreted and used the same materials differently, giving different expressions to the structures they build. This indicates that there is something unique to a culture that defines their settlement and that the settlement becomes an expression of the culture (Semper 1989:102-103). Further evidence of this can be found in the program and layout of their settlements. It places hierarchies around certain activities and groups of people (Semper 1989:103). The differences is a result of the different social and cultural structures amongst the people in that culture. It does point to the fact that different cultures and their way of life is expressed through their architecture. As

discussed earlier, architecture is also influenced by the landscape it is built in. Combining the two influences points to the making of place within a landscape. Architecture becomes the expression of the people, culture and landscape in place.

Elands Bay has a history with people stretching thousands of years. The early people who dwelled in the landscape expressed their culture and way of living. Evidence of this can be found in the plaintings in the Elands Bay Caves and the archaeological records of campsites in the vicinity of Elands Bay. Although the culture of people has changed between then and now, there is still evidence of a unique culture connected to the landscape. People can be seen daily to use the ocean for fishing, paths connecting various sections of the landscape accross the Verlorenvlei river and railway lines show how people inhabit and use the landscape.

The past and present cultural connection between people and the landscape shows how people live and can provide a uniquely adapted architectural response linked to the landscape.

Figure 2.8: The human influence in Elands Bay

2.8.1. The Elands Bay cave hunter gatherers occupied. Source: author.

2.8.2. Cave paintings in the Elands Bay cave. Source: author.

2.8.3. The current people of Elands Bay out on fishing boats. Source: author.

2.8.4. A pathway made in the landscape by people. Source: author.

2.8.5. A road in the dunefields made by people. Source: author.

Figure 3.1:
View towards baboon point where the Elands Bay caves, WWII watchtower and baracks are located. Source: author.

3. CONNECTING BUILDINGS TO PLACE

In the previous section, landscape was explored in theoretically to show that it has an influence on architectural design. In this section the placement of buildings in landscape will be explored. The building placement and material composition will be the physical elements connecting it to the landscape and generating the experience of place. This connection to place should not be an afterthought to give form to an envisioned design, but be considered as part of the architectural narrative to give meaning to place.

While Berlanda's Architectural Topographies is a unique and valuable resource, it does not consider the context of each building and comments on the methods and means to understand a landscape and building empirically. This is not sufficient in our complete understanding of architecture, landscape and place. Therefore, it requires further investigation. Architecture must be understood in terms of meaning and experience, considering both the human and material connection to place (Frampton 1995:2).

3.1 THE PHYSICAL CONNECTION

The physical connection between buildings and landscape is about more than placing structures on the ground. The connection between building and landscape should consider the structure of the landscape, its characteristics and the spatial qualities of it. This means that the placement and connection of is a design and place-making consideration while also being a structural element of the building (Berlanda 2014:62). While reading Berlanda, there are several types of connections used by architects which was inspired different philosophies. Some architects believed that a building floating off the ground implies a complete disconnection between building and landscape and rather ensures that buildings touch the landscape completely using platforms connected. Others, such as Glenn Murcutt uses floating buildings as a means to respect the natural condition of the landscape (Perković 2019). Each of these methods apply reasoning that must be investigated individually for each project as a design exercise.

The connection of a building to the ground can be summarised into four main categories. Buildings can be separated from the ground (lifted off the ground), rest on the ground, be nested in the ground or be under the ground.

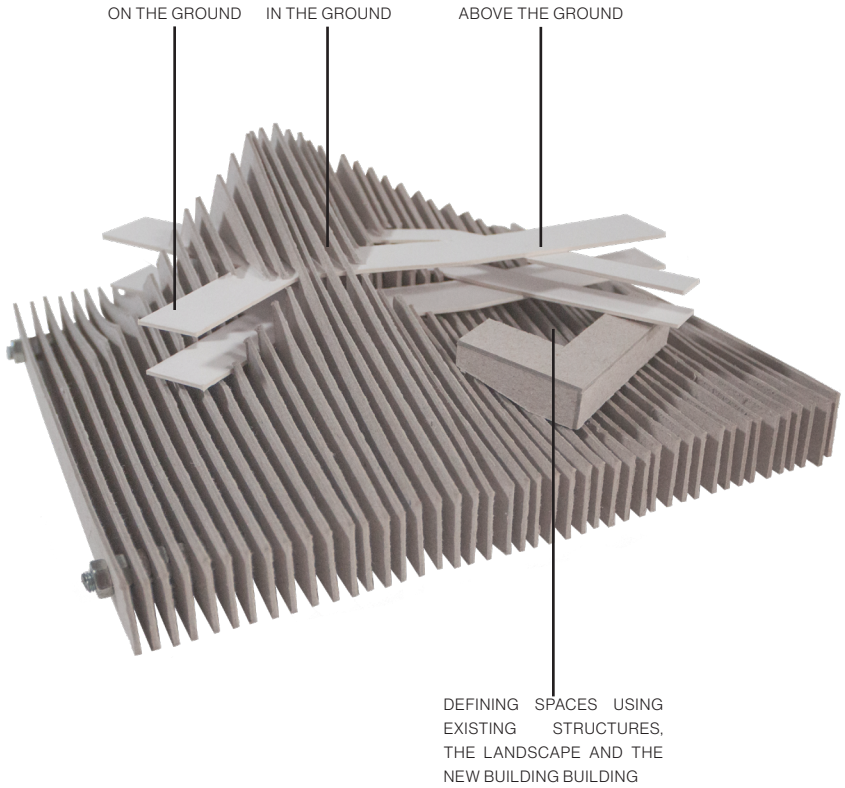


Figure 3.2: Model exploring connections between the building, surrounding structures and the ground. Source: author.

LIFTED OFF THE GROUND

Buildings that are lifted off the ground are separated from the topography using columns. This method draws criticism from some architects in that it ignores the shape of the ground and allows for the construction of building platforms of any configuration. However, if the shape of the terrain is extremely rugged and irregular, it may be useful to place buildings on columns. As pointed out before, it can also be used to reduce the impact of building on the landscape by limiting the amount of earthwork required (see figure 3.3).

RESTING ON THE GROUND

Buildings that rest on the ground have floor platforms resting directly on the surface of the ground. This means that the floor slab follows the shape of the ground and requires groundwork mainly on the surface and no deep excavations are required (see figure 3.4).

NESTED IN THE GROUND

A building that is nested in the ground is dug into the ground but is not underneath the ground surface. This can be achieved in two ways. Firstly, the ground can be dug out where the building will be inserted (see figure 3.5). The second method uses the shape of the topography to define and enclose part of the building (see figure 3.6). This method is of interest when the connection between the materiality of buildings is considered in terms of landscape because the landscape defines and becomes part of the building

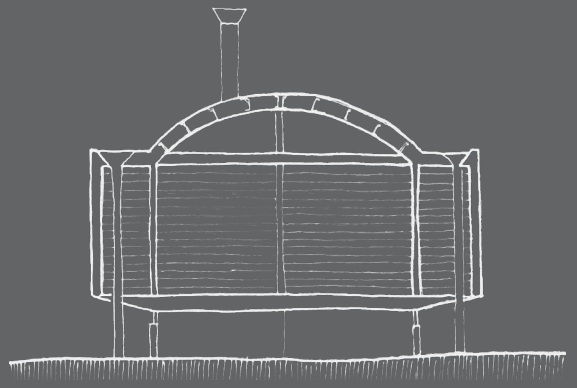


Figure 3.3: The Ball-Eastaway house designed by Glenn Murcutt shows a building lifted of the ground. (Source: by author, based on drawings from Glenn Murcutt, 2015)

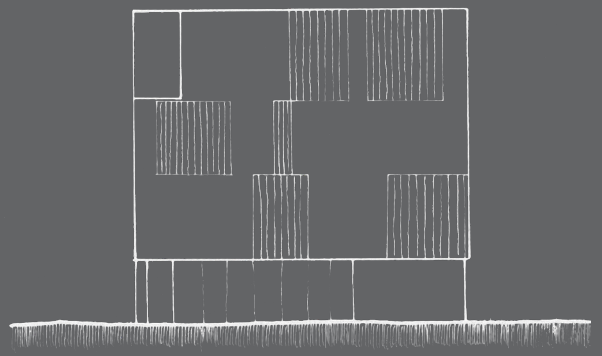


Figure 3.4: TThe 696 Office building by Proconcept Architects shows a building resting on the ground. (Source: by author, based on drawings from Proconcept Architects, 2021)

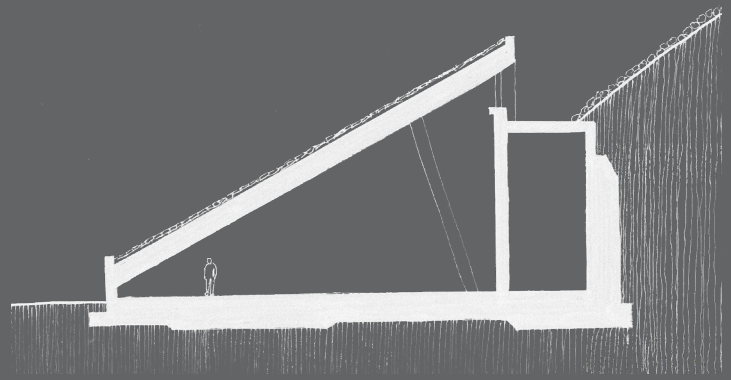


Figure 3.5: A section through a portion of Freedom Park shows a building nested in the ground. (Source: by author, based on drawing from GAPP, Mashabane Rose and MMA Architects, 2008)

envelope. Linked to this category is buildings that extend the existing landscape into the building. An example of this is using existing vegetation, sand and stone on a green roof connected to the landscape. Buildings enclosed by the earth is a special case of buildings being nested in the ground. It is therefore not of use to discuss it as a separate category as practical implications will generally require some part of the building to be exposed for access, light and ventilation.

A HYBRID SOLUTION

A hybrid solution of the above methods can be used to connect a building to the ground. This would use two or more of the methods described above to create the building.

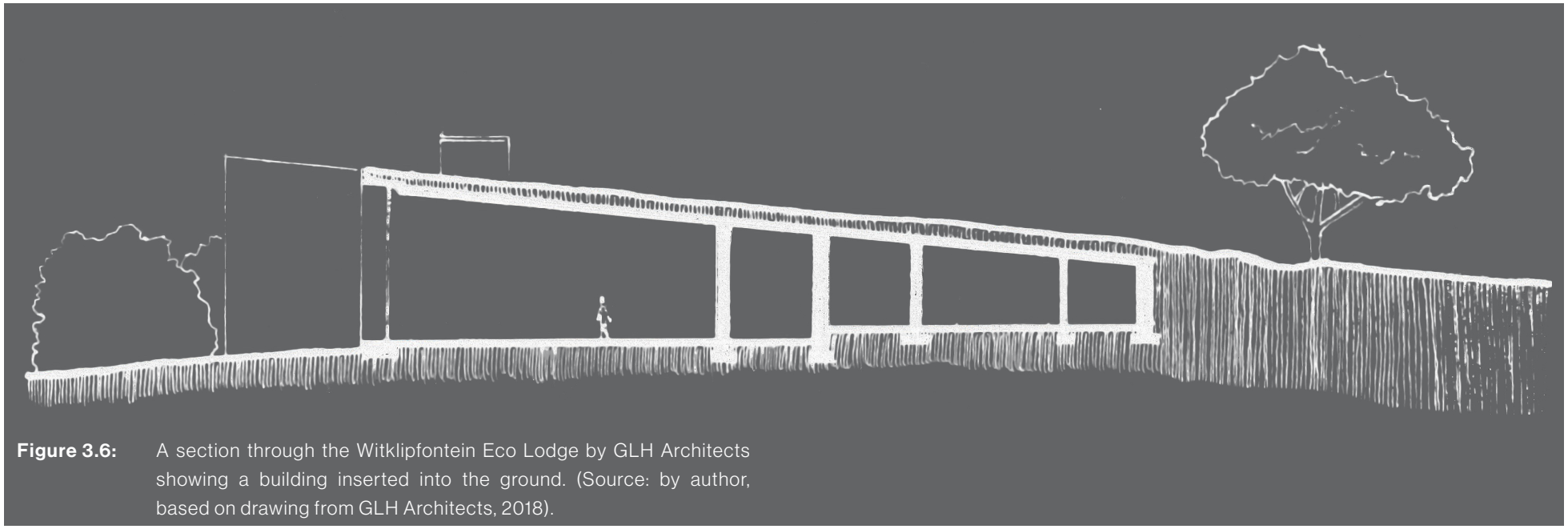


Figure 3.6: A section through the Witklipfontein Eco Lodge by GLH Architects showing a building inserted into the ground. (Source: by author, based on drawing from GLH Architects, 2018).

3.2 THE MATERIAL CONNECTION OF ARCHITECTURE IN LANDSCAPE

According to Norberg-Schulz (1979:35), there is a materiality in landscape. This is experienced as the texture, colour and combination of materials the structure of landscape reveals. Combining this with the spatial qualities of the landscape, a further level of tactile experience can be revealed in the landscape. Together with texture and colour, light is an intangible material that reveals these characteristics (Norberg-Schulz 1979:39-40).

The materiality revealed in the structure of landscape combined with the spatial qualities associated to the landscape defines the qualitative experience of a landscape. To give an example, an open field of wild grass is experienced differently to an open plane of sand. Each imply particular characterstics such as green and alive or desert and barren. These experiences of materiality should be a consideration in architectural design. By developing a design response relating the materiality of the landscape to the materiality of the constructed building, a building can give the appearance of being part of the landscape. It is important to note that the material and structural choices that end up defining the building space should not only be a copy of what exists in the landscape or traditional construction methods of the surrounding place. Also it should not deviate too far and be alien to it by adapting a method from an alien place. The material choices must be considered as a design decision within the making of a unique place within an existing landscape (Zumthor 1999:42). The aim in the choice is to generate a design response that reflects the essence of the landscape, people and building requirements. A copy and alien application of materials does not achieve this.

The Wadden Sea Centre in Denmark by Dortre Mandrup (see figure 3.7) is a good example of this. It uses thatch construction sourcing grass from the surrounding landscape. This has been used as traditional building material in the area. The resulting building therefore links to the surrounding landscape

through the material and the history of people in the area. The result shows the use of thatch in a new way by breaking away from traditional forms. The architecture has a direct link to the place it is situated in but provides something more than a copy.

A different approach was used to make the !Khwa Ttu San Heritage Centre part of the landscape (see figure 3.8). The material choices do not directly come from the surrounding landscape, but the green roof as a roof covering choice cements the building into the fabric of the landscape. While the concrete and plastered finishes is foreign to the landscape, the rough finishes and form it provides does not alienate it from its surroundings.

In the construction of buildings, the build-up form determines the spatial qualities and connection to the landscape of the design. This implies that there is a strong connection between the materiality of the building and the experience it offers. For this connection to exist, the material used to construct a building is the realisation of the experience of place as defined by the architectural design. The form of the building, the expression of the form and the material used to construct are not separate entities to consider individually in the design. Each of these must be considered as a unity in the design. This will bring about an honesty in the material use or challenge the traditional use of the material. Semper (2004) argues that material use must reflect the nature of that material. In doing so, the

Figure 3.7: The Wadden Sea Centre designed by Dorte Mandrup Architects (Source: Adam Mørk, 2017)

application of the material reveals a property of it and the user of the building enjoys a sense of familiarity and stability in the material use. This leads us to ask what the expression of materials can be and how can a theory be derived around them and how do the use of materials affect architectural experience?

Familiarity in material expression does not mean the materials are used as copies from earlier precedents. The details, and exact forms used previously should not limit the design of a new building. If this was the case, buildings would just be formal representations of what already exists and design becomes irrelevant. It is rather the methods used that can be mimicked in new ways and formal expressions. This will provide something new while at the same time connect to the existing building culture.

The question of how to resolve building and material details is captured in the idea of tectonics and stereotomics. Tectonics has had several meanings over the years all related to the art of making (Frampton 1995:3-4). Gottfried Semper (2004:624) used the term tectonic to refer to frame and infill construction. This can also be thought of a construction of lighter materials and a lighter appearing building enclosure. He further used the term stereotomic to refer to the piling of heavy objects on one another(Semper 2004:725). This shows a heavier construction incapable of the long spans a frame structure could achieve.

The distinction between tectonic and stereotomic construction reveals something about the materiality of the building. To achieve a tectonic frame structure, the material must

Figure 3.8: The new addition to the !Khwa Ttu San Cultural Heritage Centre by KLG Architects. (Source: Adam Letch, 2019)

be able to cover the long spans and support a frame structure. The infill used in the frame must also be considered and accounted for to be supported by the frame. A stereotomic mass structure cannot be separated from the ground unless supported by a strong base removed from the ground. All these imply that there are certain landscapes better suited to certain types of structures. A stereotomic structure would be difficult to construct on a steep cliff without a large amount of groundwork. Here a lighter tectonic structure would be more appropriate response to the structure of the landscape. To define a design response to a particular landscape, Norberg-Schulz classified landscapes into four categories namely romantic, classical, cosmic and complex landscapes. The differentiation between the landscapes is a result from the structure of the landscape and the experienced relationship between earth and sky (Norberg-Schulz 1979:47). To respond to a landscape, this experience can be used to define the type of structure and connection the building will have with the ground. If a landscape consists of an infinitely extending ground plane, such as a desert, the ground becomes a stable element under the ever-changing sky above. As a result, buildings tend to be built closer to the ground and are enclosed structures rather than open frames to protect people from the sun. This means that stereotomic construction methods become dominant in a such a landscape. If the ground plane is fragmented into smaller spaces by trees, mountains or other features, the ground plane is not experienced as a continuous extension. The sky also fades in dominance. The landscape becomes defined by other elements in the landscape. As a result, buildings tend to rise up rather than extend horizontally.

Each landscape will have its own character defined by the relationship experienced between the structure of the landscape and the sky. This in turn defines a building approach relevant to that structure, either being stereotomic or tectonic in nature. It is also possible that a combination of the two is used in a single structure. There is no correct answer, but rather characteristics related to the experience of the landscape that should inform the design and material choices.

4. ARCHITECTURE IN PLACE

In the previous sections the notion of architecture and place was addressed by considering landscape identity and the connection it has to architectural design. The question of how architecture exists in place will now be addressed.

This can be seen as architecture becoming part of place, or put differently, how architecture and place become a single entity. This does not mean that the form and material used in construction and the placement of a building creating an image-like reconstruction of the landscape to give the appearance of the original landscape. The landscape will be changed by any architectural intervention in it. Peter Zumthor (1999:17) states that the following of buildings in place:

> *And yet it is virtually impossible to imagine the place without them. These buildings appear to be anchored firmly in the ground. They give the impression of being a self evident part of their surroundings and they seem to be saying: "I am as you see me and I belong here."*

The question of how buildings achieve this is not easy to answer. It will mean different things to different people because it relies on being identified as being part of a particular environment by people using their frame of reference (Zumthor 1999:18). Since the purpose of architecture is to create buildings as dwelling places for people, the question must be considered with that in mind.

4.1 ARCHITECTURE AS DWELLING IN PLACE

Dwelling requires people to orientate themselves in the landscape they settle in and derive meaning from their existence through that settlement (Norberg-Schulz 1958:15). Orientation implies that dwelling takes place in a particular environment where humans have introduced order through building to make the environment recognisable. At the same time, this order must have a meaning through the materiality the building is composed of, the human action it provides for, and how this allows for people to identify and engage with the surrounding landscape.

4.2 ARCHITECTURE AS PLACE IN LANDSCAPE

Aaron Betsky (2005:7) notes that the consideration of the connection between building and landscape can either be a centralised point where architecture reflects place or completely redefines it. Architecture takes its place in a landscape when it provides a link to the existence of people as a part of that landscape. The connection of the building to the landscape extends beyond the material and physical requirements to create an enclosed structure to something that allows people to express their needs, wants, culture within a landscape. Architecture becomes the facilitator to this.

As mentioned in section 2, landscape combined with human intervention creates place. If architecture is considered a place-making endeavour, the ultimate aim of designing a building should be to create spaces where people can express themselves, associate to with the landscape and other people and develop their culture. Architecture in place is therefore an expression where the building reflects place, that is the landscape and the people settled there in a natural and unforced manned. In cases where the landscape is redefined by architectural intervention, it should be asked why it is required. Meinig (1979:50) mentions that some landscapes have been destroyed and reconfigured to a point where it is no longer liveable or a true reflection of its beauty (such as deforested areas, old mines and quarries and rubbish dumps). In such cases reconfiguring a landscape to restore it to a liveable place is acceptable. It should be noted that reconfiguring a landscape must be evaluated along with the environmental consequences of doing so. Reconfiguring a landscape must not be considered as a blank slate to redefine a landscape and design buildings removed from it. It should a response from the landscape to create a building involving the landscape and people that will use it.

The making of place is the purpose of architecture. This requires an understanding of the culture, methods and requirements of the people who will use it, as well as an understanding of the landscape it will be placed in. These from the requirements of making place, and architecture in place is a building providing a platform connected to the landscape for people to dwell in.

5. CASE STUDIES

The case studies below studies the relationship of architecture in place with respect to the connection between building and landscape. Each building connects to its surroundings in a different way while also becoming an artefact of human dwelling in the landscape. The human connection in each is defined by a unique relationship to ground and place that in turn shaped and inspired the architectural design. The projects that will be studied include:

1. !Khwa ttu San heritage centre
2. The Wadden Sea Centre in Denmark
3. Liyuan Library
4. Maropeng Visitor Centre
5. Iziko museum

The first three projects will be analysed in terms of the following:

1. The physical connection to landscape: What is the building's relationship to the ground and surrounding landscape.
2. The cultural connection: How does cultural elements influence the design?
3. The material connection: How does the use of materials relate to the landscape and culture?

The Maropeng visitor centre and the Iziko museum will be analysed in terms of exhibits and creating exhibition spaces.

5.1 !KHWA TTU SAN HERITAGE CENTRE

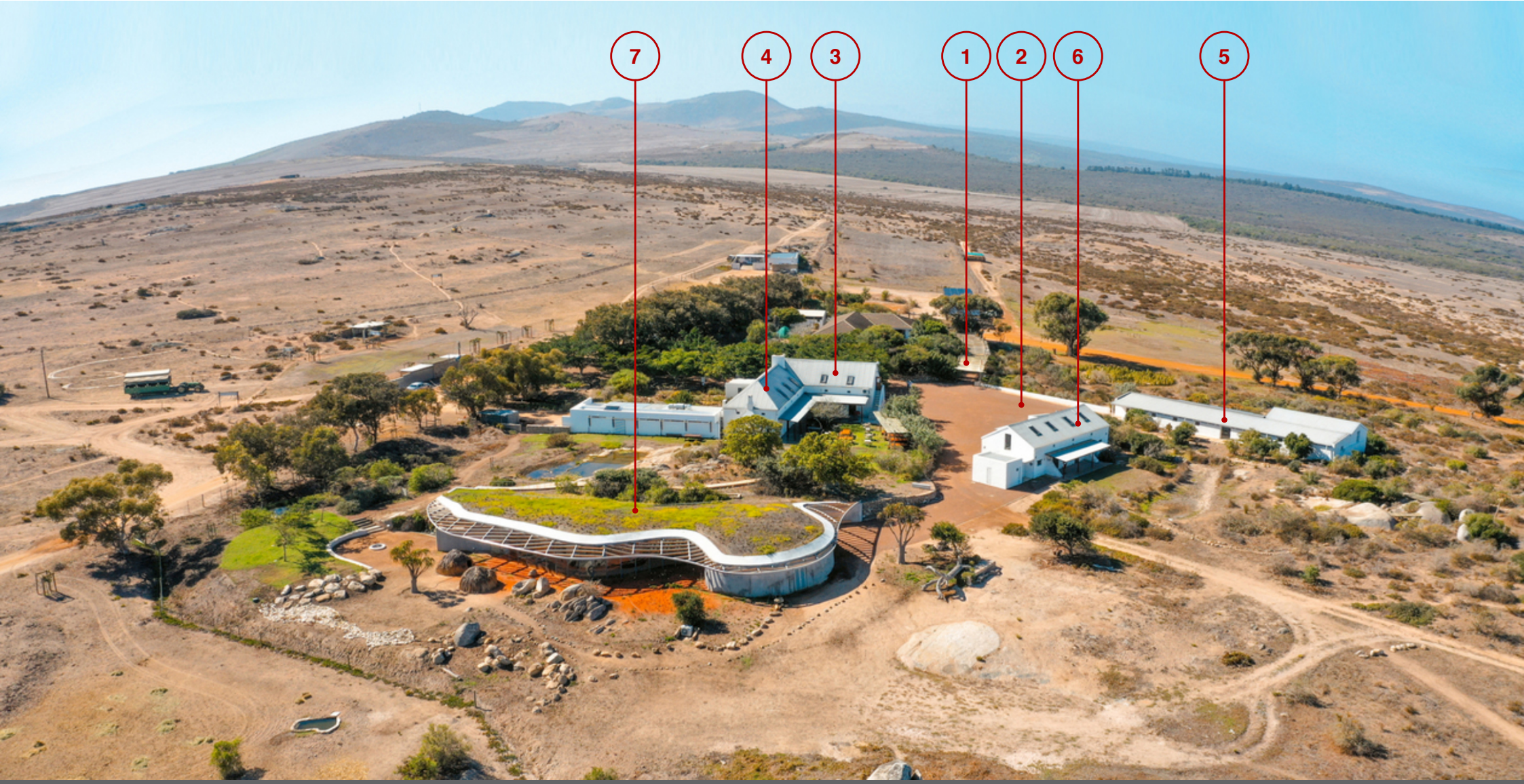
Architects: **KLG Architects**

Location: **Yzerfontein, Western Cape, South Africa**

The !Khwa Ttu San heritage centre is located on the West Coast of South Africa close to the town Yzerfontein. It started its existence in 1999 when the Grootwater farm was acquired and repurposed into the centre. The choice of location places the centre in the landscape the San have existed for more than 150 000 years. Since 2005, guided tours took place in the repurposed farm buildings of colonial heritage. In 2018 a new building was added to the centre to depict the way of life of the San people (Louw 2021:23-28).

Figure 5.1.1: The !Khwa Ttu San heritage centre Way of the San building addition. Source: author.

Figure 5.1.2: The building added to the centre merges into the landscape. Source: author.



Key:

1. Entrance pergola
2. Open courtyard
3. Reception
4. Restaurant
5. First people's exhibition building
6. Encounters exhibition building
7. Way of the San exhibition building

Figure 5.1.3: An areal photo of the !Khwa Ttu San heritage centre showing the building locations. Source: Adam Letch, 2019.

Figure 5.1.4: Covered entrance walkway leading to arrival courtyard. Source: author.

Figure 5.1.5: Arrival courtyard showing one of the original colonial farm buildings. Source: author.

Figure 5.1.6: Arrival courtyard showing the original colonial farm buildings. Source: author.

Figure 5.1.7: The building housing the origins of the people of South Africa Exhibition. The window connects the building to the landscape outside. Source: author.

The new building was integrated with the existing buildings to tell the story of the history of the San people. Throughout the centre, meaning and the experience of the history through architecture and connection to the landscape is apparent and aids in conveying the history of the people.

Upon arrival to the centre, a covered wooden walkway leads toward the reception area (see figure 16). The walkway is lined with natural vegetation from the surrounding nature reserve. The arrival to the reception area is a large open courtyard covered in gravel surrounded by the three colonial farm buildings (see figures 17 and 18). This is a harsh contrast to the pleasant and natural walkway. It exposes the contrast of the white buildings and method of settlement the colonial buildings in contrast to the surrounding landscape. The three farm buildings now house the reception, restaurant, and two exhibitions.

The first exhibition is the origins of the people of Southern Africa. This building has been adapted to include views to the surrounding landscape and the interior has been changed to a simple white space void of any further meaning (see figure 19). The second building contains an exhibition of the exploitation and cultural decimation of the San as well as the state of their livelihood, culture and artefacts in the world today. The interior of this building preserves original walls where plaster has fallen off, rough stone and small windows (see figure 20). No effort was made to connect the building to the outside landscape. The creates an experience completely removed from the outside environment once home to the San.

This simulates the removal of the people, their culture and artefacts from the landscape the San lived in harmony with architecturally.

Figure 5.1.8: The interior of the second exhibition building. Source: author.

Figure 5.1.9: The approach to the new exhibition building. The green roof and and surrounding plant growth obscures large portions of the building. Source: author.

The new building (see figures 21-23) added to the centre was designed as an exhibition space to depict the way of life of the San. In the book !Khwa ttu: San heritage centre (Louw 2021:45) is a quote by Job Morris where he explains the connection the San has to the land as follows:

> *"Territory has a spiritual dimension and a sense of heritage. There is an attachment to the land that brings a feeling of belonging and safety. Within this land life begins and ends, and so it should be treated with the utmost care and respect. Territories are marked by a big tree, a pond, some thickets, sip-well or any historical event that took place."*

This links to the idea of architecture in place where a building is carefully designed to belong to the landscape. Because the way of the San was to live in harmony with nature and the land they occupy, the new building changes the architectural narrative of the colonial farm buildings and creates a place in harmony with the surrounding landscape. Similarly, the meaning to the San is inherent in the design by building on land their ancestors dwelled on depicting an architectural narrative they can understand.

The centre includes permanent exhibitions portraying the history of the San people including their exploitation and the destruction of their culture that started with the arrival of European settlers to South Africa.

Figure 5.1.10: The building merges with the landscape and planting on the site. Source: author.

Figure 5.1.11: The shape of the building is fluid, following the contours on the site. Source: author.

CONNECTING TO THE LANDSCAPE

The new building follows the contours of the site and is nested into the landscape (see figure 24). It is covered with a green roof planted with indigeneous vegetation. This gives the impression that the building is actually part of the landscape. This is an appropriate design response to the depiction of the way of life of the San, that is being in harmony with nature(Louw 2021:44). The building form and materials are all modern do not relate to the traditional building culture of the San people, but poetically the form and connection with the landscape expresses the cultural beliefs and lifestyle of the San.

The external landscape extends to the interior of the building (see figure 25). The soil and planting becomes part of the interior space and finishing of the building. In doing this, the landscape and building becomes a single entity. Another area where this can be seen is from the rear of the building (figure 26). The edge of the building is visible while the green roof merges with the surrounding landscape. It is interesting to note the difference between the new building and the original farm buildings. The appearance of the original buildings in the open gravel courtyard appears completely dissociated from the surrounding landscape, while the new building appears to be an extension of it.

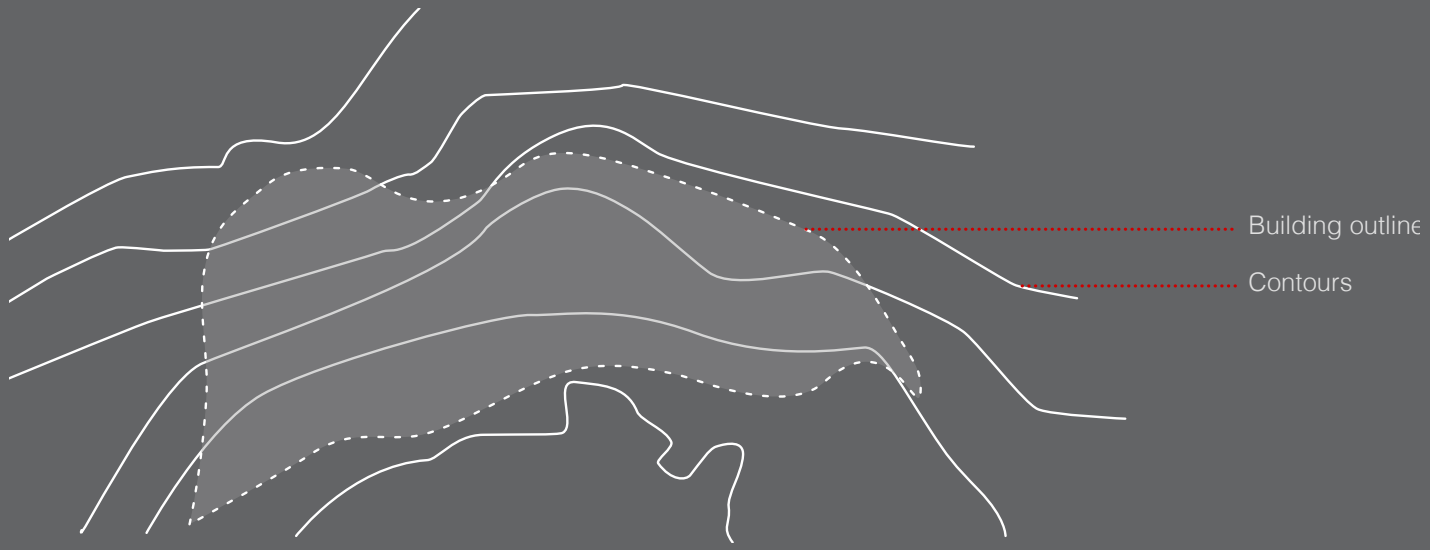


Figure 5.1.12: The relationship between the building outline and the contours on the site. The shape generally curves with the shape of the topography. (Source: author, based on plan from KLG Architects, 2019)

Figure 5.1.13: Interior of building showing the landscape extending into the building interior. (Source: author)

Figure 5.1.14: The green roof and shape of building nested into the landscape hides most of the building from the rear. (Source: author)

Figure 5.1.15:
The interior of the Way of the San Building. The boulders present on the site forms part of the back wall. Source: author.

USING BOULDERS AS PART OF THE BUILDING ENVELOPE

The back of the building incorporates the natural boulders on the site into the building envelope (see figure 27 and 28). The masonry walls are built on top of the boulders using them as a foundation. Because of the waterproofing and drain already in place for the green roof and earth backfill, no additional waterproofing is required on the wall.

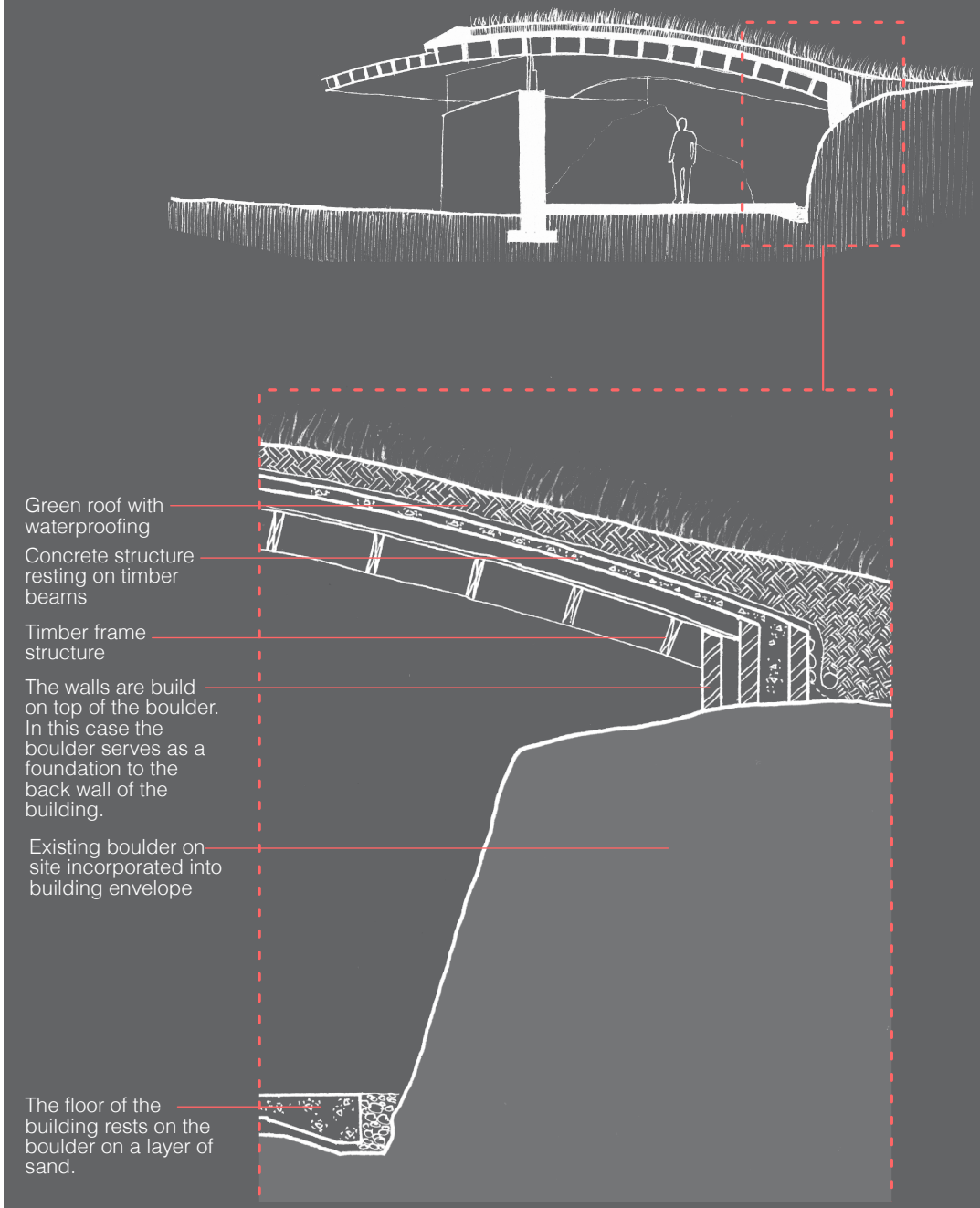


Figure 5.1.16: A section through the connection between the building and the boulders on the site. (Source: author, based on section provided by KLG Architects)

5.2 WADDEN SEA CENTRE IN DENMARK

Architects: **Dorte Mandrup**
Location: **Ribe, Denmark**

The Wadden Sea Centre in Denmark is an exhibition centre to bring awareness and educate people on the surrounding landscape and its ecosystem of the Wadden Sea national park. The park is a UNESCO world heritage site and is largely flat mud and sand plains that is flooded with the changing tides of the sea. The park is a transitory home to millions migratory birds and other species of plants and animals, which makes it's conservation of the unique natural environment essential for these species.

The design transformed an old colonial farmhouse into a visitors centre that reflects the historical building culture of the area, as well as being integrated with the surrounding natural landscape (Dorte Mandrup 2020:10:38). This was achieved by creating exhibition areas that visually integrate with the surrounding landscape and an outdoor exhibition portraying natural elements and systems in the courtyard of the building (see figures 5.2.1-5.2.4).

Figure 5.2.1: Courtyard exhibition with a view towards an interior exhibition. (Source: Rasmus Hjortshøj, 2017)

Figure 5.2.2: An interior exhibition with a view to the landscape outside. (Source: Rasmus Hjortshøj, 2017)

Figure 5.2.3: The courtyard space and exhibition showing a window providing a connection to the interior. (Source: Rasmus Hjortshøj, 2017)

CONNECTING TO THE LANDSCAPE

The sea centre is placed in a harsh and unforgiving landscape with intense climate changes and strong winds from the sea. The choice to use thatching and timber harvested from the surrounding landscape provides a direct connection between the building enclosure and place. These materials is a direct reference to the historic Scandinavian building culture and craftsmanship in the area (Dorte Mandrup n.d.).

The layout of the building was dictated by an existing colonial farmhouse that was converted into the centre. The old building was a white painted structure which the architects transformed into a shape dictated by the landscape (Dorte Mandrup 2020:10:50). The courtyard and building layout remains similar to the original building with additions made to increase the floor area to the new program. The shape of the walls and roof transforms a simple rectangular building with a pitch roof to a more dynamic form that also aids in deflecting wind from the courtyard and the structure (Munch 2017). Although the wind is not a visible element, the form of the building is directly influenced by the characteristics of the landscape.

Due to the nature of thatch, walls covered in thatch never touch the ground directly. The walls are lifted off the ground with a visible concrete plinth to ensure the durability of the thatch walls (see figure

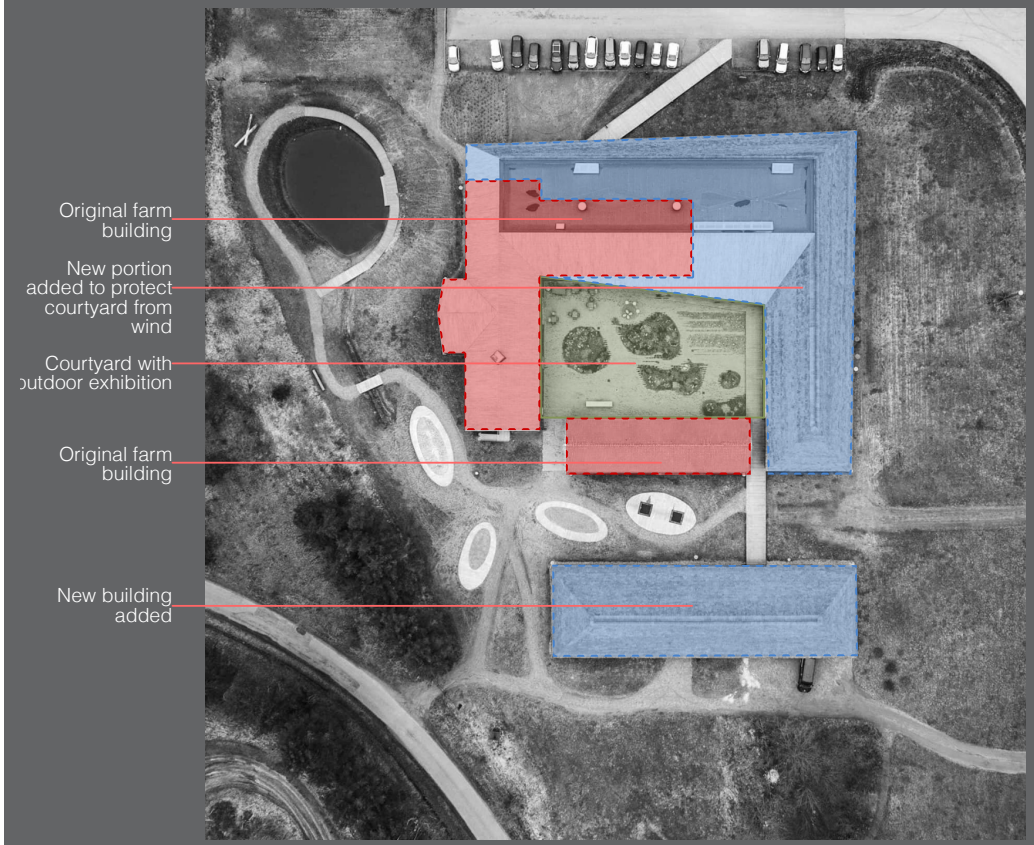
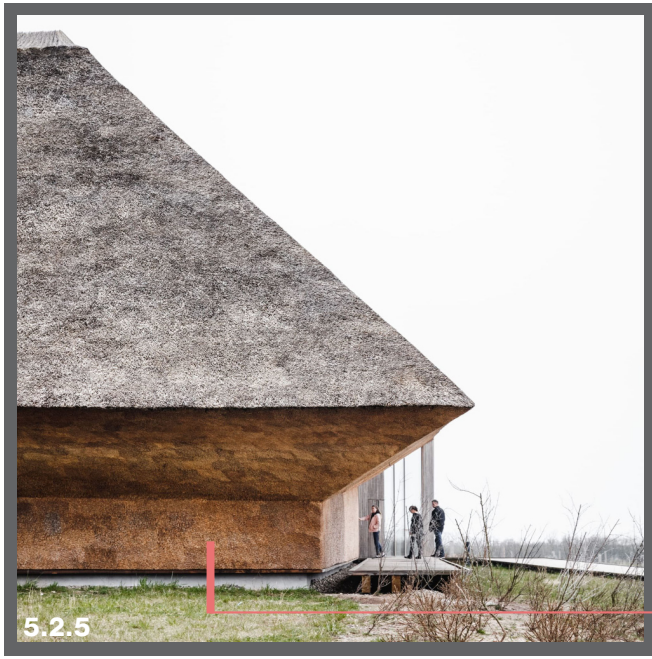


Figure 5.2.4: Diagrammatic layout of the Wadden Sea Centre showing the location of old and new buildings. (Source: by author from image by Rasmus Hjortshøj, 2017)

5.2.5 and 5.2.6). This creates a visible separation of the building from the ground in some areas. This separation does not create a building removed from the landscape, but rather creates an object linked to it through its shape and material use. The walkways and decking added to the design do not sit on a concrete or plinth, but rather rests on a timber frame providing a less destructive connection to the site (see figure 5.2.6).



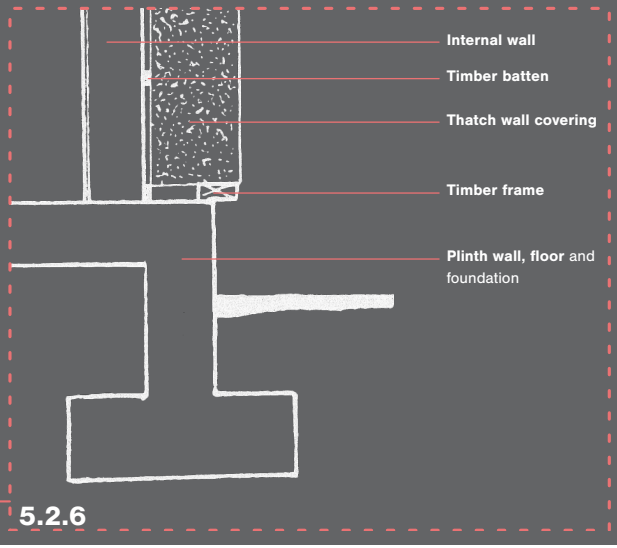


Figure 5.2.5: The thatch roof, eave and wall resting on a concrete plinth. The timber frame of the walkway/decks are clearly visible in this image. (Source: Rasmus Hjortshøj, 2017)

Figure 5.2.6: The thatch wall and plinth connection. (Source: author based on image from Dorte Mandrup, 2017)

THATCH USE IN THE BUILDING

The use of thatch in the Wadden Sea Centre goes beyond its traditional use as mainly a roofing material by incorporating it into the soffits and walls of the building. Also, instead of having traditional roofing shapes and thatch hut morphologies dictate the form, the shape of the building changes the perception of thatch construction (see figure 5.2.7). This made the study of the application of the material difficult since most literature available applies to thatching used as a roofing material and in more imprecise forms than seen in the Wadden Sea Centre. To study the material as used in the building, these sources were consulted and studied in line with the building to determine how the construction was realised.

Figure 5.2.7: The shape of the building has a traditional link through the pitch roof, but the lines and form in lower sections is more dynamic. (Source: Rasmus Hjortshøj, 2017)

5.3 LIYUAN LIBRARY

Architects: **Li Xiaodong Atelier**
Location: **Beijing, China**

The LiYuan Library is located outside of Beijing in China in a natural landscape (see figure 5.3.1). It is located in a mountainous region outside the village of Huairou on the edge of a river. The building was placed outside of the town centre to achieve a connection between architecture, people and the surrounding landscape. This means that the building must be completely integrated within the landscape while also being connected to the culture and lifestyle of the people who will use it.

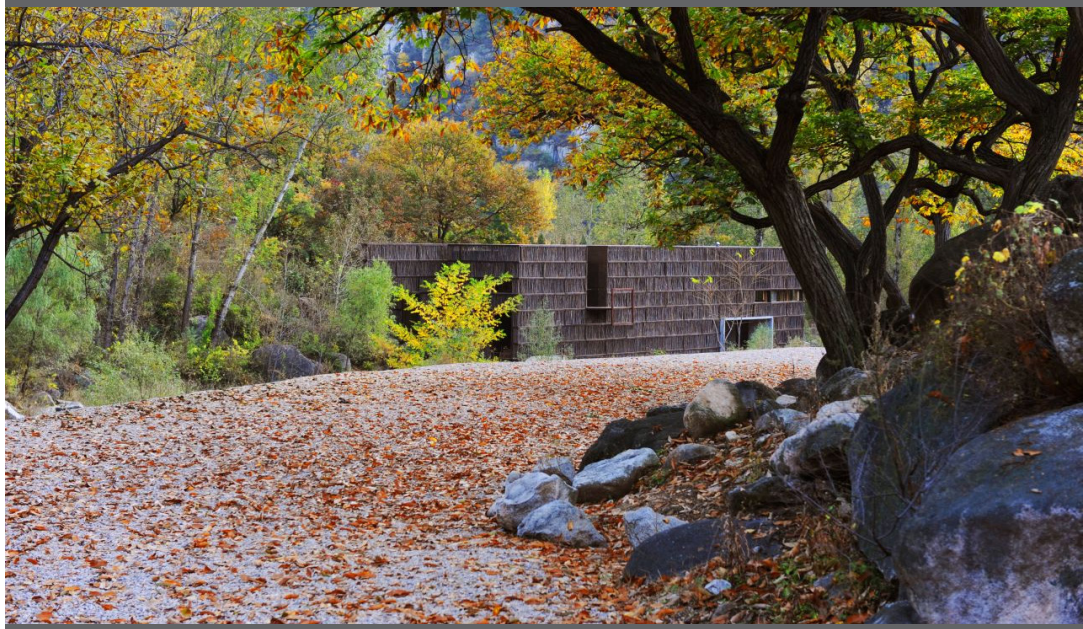


Figure 5.3.1: The approach to the LiYuan Library. (Source: Li Xiaodong Atelier, 2011).

CONNECTING TO THE LANDSCAPE

The placement of the building on the edge of a river in a mountainous landscape makes for an interesting connection to the landscape since the building becomes a threshold between the land and water (see figure 5.3.2). Since the river is inaccessible, the architecture must achieve a connection with it to prevent the building from being a one-sided addition to the landscape. The architectural language used in the building aids in creating a narrative between land and water by using visual rather than physical connections between the interior of the building and the landscape.

Figures 5.3.2 and 5.3.3 shows the balconies and entrance to the building that provide a connection between the water and ground on the exterior of the building. The building is completely glazed and then covered in a frame with sticks as an infill to filter the light and create the required conditions for a reading and reflection space (see figure 5.3.4 and 5.3.7). The sticks were sourced locally and left in their rough, natural state with the bark still on.

5.3.2

5.3.3

Figure 5.3.2: The opening in the building creates a physical and visual connection between the land and water. Source: Li Xiaodong Atelier, 2011.

Figure 5.3.3: The balconies protrude over the water to prevent the building from having a one-sided connection to the landscape. Source: Li Xiaodong Atelier, 2011.

The interior of the building is one large open space. Different areas within the library are created by level changes within (Li Xiaodong Atelier, 2011). This creates a dynamic interior space where the connection between the interior and the exterior is achieved through selected windows and balconies (See figure 5.3.6). While the sticks close off expansive views from inside the library, certain portions are left open a windows creating a visual connection between the interior of the library and the surrounding landscape, both towards the water and the land. Access to the building is from a walkway on the land (see figure 5.3.7). Being a

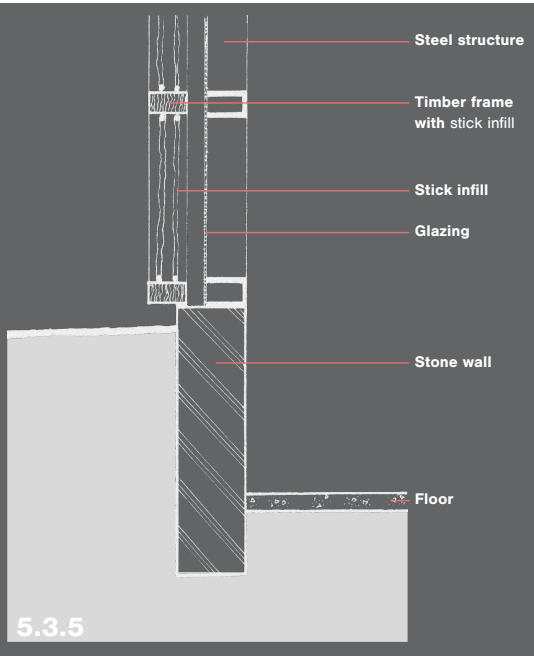


Figure 5.3.4: The stick cladding in the timber frame filters light into the building. (Source: Li Xiaodong Atelier, 2011)

Figure 5.3.5: A detail of the connection between the building and the ground. (Source: author based on section and detail by Li Xiaodong Atelier, 2011)

library, the focus was to create reading and reflective spaces within the building while maintaining a connection with the landscape from the interior (Li Xiaodong Atelier, 2011). This was achieved by creating balconies extending from the building over the water and placing unobstructed windows in the building enclosure framing scenes within the surrounding landscape.

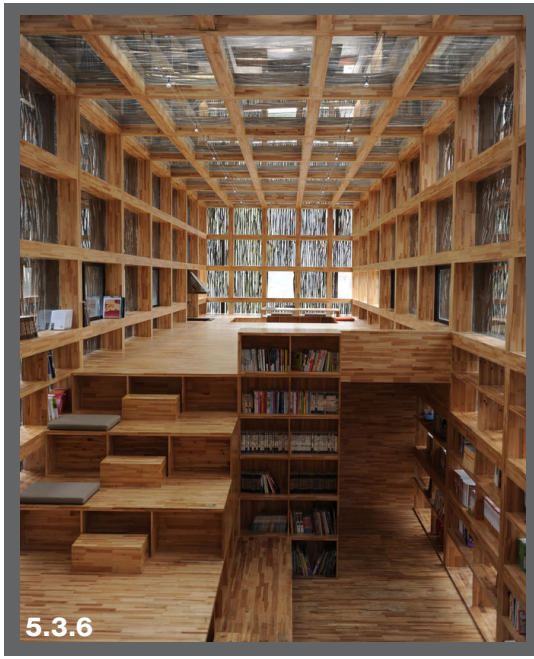


Figure 5.3.6: The interior of the library showing the open space and level changes that define the space. (Source: Li Xiaodong Atelier, 2011)

Figure 5.3.7: The building is completely surrounded by glazing and the stick cladding which filters light into the space. Portions of windows are left open to create a link between the interior and the landscape. (Source: Li Xiaodong Atelier, 2011)

5.4 MAROPENG VISITOR CENTRE

The Maropeng visitor centre is located in the Cradle of Humankind in Krugersdorp, South Africa. It was designed as a visitor centre accompanying the fossil discoveries within the Cradle of Humankind to house exhibits about the development of humans. It considers the discovery of fossils from around the world and shows the links and development throughout the ancestry of homo sapiens.

The reason for including the Maropeng visitor centre was less about the architecture of the building, and more about the exhibition of historical artefacts, cultures and ideas. The scope of the project is much larger than the anticipated design planned for Elands Bay, however, many valuable ideas can be used.

Figure 5.4.1: Entrance to the tumulus building at Maropeng. Source: author.

Figure 5.4.2: Interior of the tumulus building at the Maropeng visitor centre. (Source: The cradle of humankind. n.d.).

THE ARCHITECTURE

The architecture of the visitor centre was designed to merge historic and modern ideas. This is represented in the materiality and morphology of the building. The approach to the building gives the impression of a hill or mound in the ground with a cave-like opening. This represents the historic ideas of early human ancestors living in caves and the discoveries within the Cradle of Humankind.

Once inside the building, the experience is not that of a cave, but of a modern, clean and light space (see figure 5.4.2.). The rear of the building uses raw and natural materials, which is suited to the landscape (see figure 5.4.3.).

THE EXHIBITION

The exhibitions in the Maropeng visitor centre are dynamic and driven towards the experience initially. Thereafter the exhibition enters a general gallery space where artwork, interactive displays and artefacts can be seen to tell the story of the development of humankind.

Entering the exhibition is by a ramp showing a timeline going down a ramp to a waterslide. The timeline represents the entire development of the universe up to where we are today. This ends in a water ride going through a cave depicting the early development of the earth using multimedia technology and visual displays to depict water, earth, fire and air, the three elements that allowed life to develop on earth. The experience of the space

Figure 5.4.3: The rear of the tumulus building shows the use of natural materials. Source: author.

is interesting and involving for all the senses using a play on light, sound, heat/cold and visual aids.

Leaving the ride, the main exhibition space is entered. My initial experience of the space was that of confusion. There is an order to the exhibits as it progresses, but at times it was not clear what the intended path was to follow. This is something that could have been done better or indicated considered in the design. Another negative aspect of the exhibition was the disconnect between the architecture, the exhibition and the experience of the exhibits in the main space. It is essentially a black box into which the exhibition was installed. A new portion of the exhibition was included as an interactive space using plywood to create a cave-like experience. This space makes use of multimedia technology to allow people to discover how fossils are discovered and studied. The space is interesting and the design of it adds to the experience and character of the exhibition.

Figure 5.4.4: The main exhibition hall has very little to indicate order of exhibition. Source: author.

Figure 5.4.5: A man-made cave showing how fossils are created and discovered. The interactive displays shows microscopic views of fossils and how deductions can be made from them. Other displays make use of videos to describe things. Source: author.

Figure 5.4.6: Fossils on display on the entrance path towards the visitor centre. Source: author.

Figure 5.4.7: A timeline depicting the development of the earth as you enter the exhibition. Source: author.

Figure 5.4.8: A printed display showing the locations where discoveries were made in the Cradle of Humankind. Source: author.

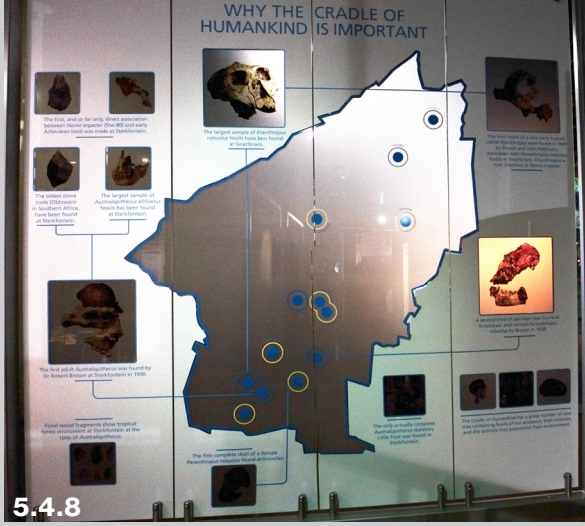
Figure 5.4.9: A skull of a human ancestor with a printed display describing origin and meaning. Source: author.

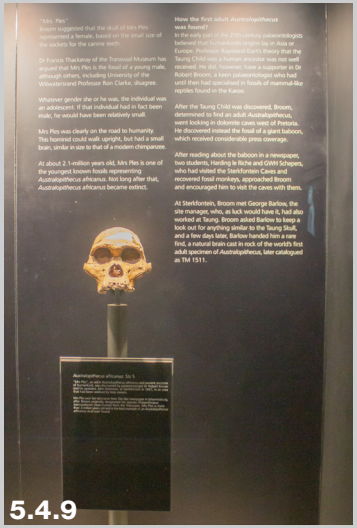
Figure 5.4.10: A photo exhibition showing the differences in humans all related to a common ancestor. Source: author.

Figure 5.4.11: Spheres hanging from ceiling displays various skulls of human ancestors. Source: author.

Figure 5.4.12: Artist recreations of what early human ancestors looked like. Source: author.

Figure 5.4.13: Physical interactive models that show various joints of humans that allowed their evolution. Source: author.





5.5 IZIKO MUSEUM

The Iziko museum was founded in 1825 in Cape Town. It currently houses an exhibition on the Khoisan, their culture and art. I visited the museum to get an idea of the spaces used for exhibition as well as to find artefacts and ideas of what can be exhibited in a museum in Elands Bay.

My first impression of the exhibition space was how generous the spatial allocation was for the exhibition (see figure 5.5.1.). This allowed the focus to fall completely on the artefacts and the experience of individual pieces or ideas. Allocation is also made for benches where people can sit and view the exhibition or take a break. This is unique to many of the museums I have visited.

The exhibition inside the museum had a large portion dedicated to rock art, its meaning and origins. Large slabs of rocks with art taken from caves during colonial times are displayed here. This is not the aim of the new museum, where it is more appropriate to display copies or artist impressions rather than removing the cultural history from the caves. However, it serves to preserve history as is and makes it available to the public.

There is also an installation on the methods, tools and paint used to create rock art. It explains the mixture and how it was applied. This shows something of the culture and understanding the early inhabitants of South Africa had towards materials and how to use them. It goes beyond the idea that it was used purely

Figure 5.5.1: The Khoisan exhibition space at the Iziko museum is generous in spatial allocation. Source: author.

Figure 5.5.2: An exhibition of African settlements and culture at the Iziko museum. Walkways are wide and space generous. Source: author.

as an available resource, but one that carried meaning in the culture of the people.

The final part of the exhibition displayed the tools and some crafts used by the Khoi/San men and women. This part of the exhibition was limited and small compared to that dedicated to the artwork and culture surrounding it.

Going forward in creating a museum to represent the early hunter-gatherers, this must be taken into account. Most museums currently have limited or compartmentalised exhibitions relating to the Khoisan. An exhibition in a new museum could account for this by focussing on a larger whole, integrating the entire culture, understanding and livelihoods of the Khoisan beyond a single aspect. This means that the exhibition should display their culture through art, their settlements, their understanding of the landscape and the environment, how they hunted and gathered food, and finally, their social structure and communal lives.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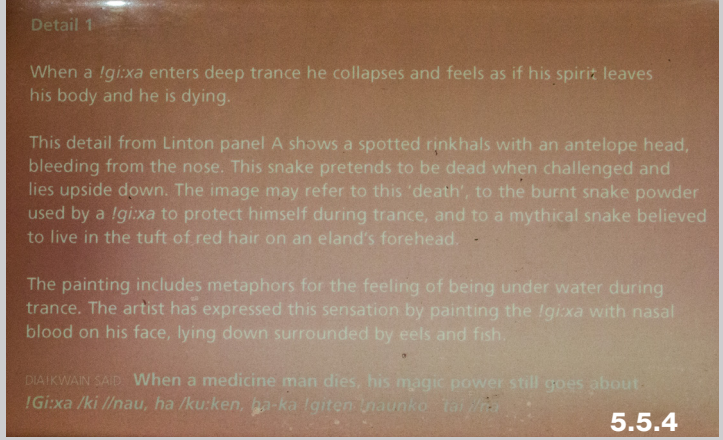

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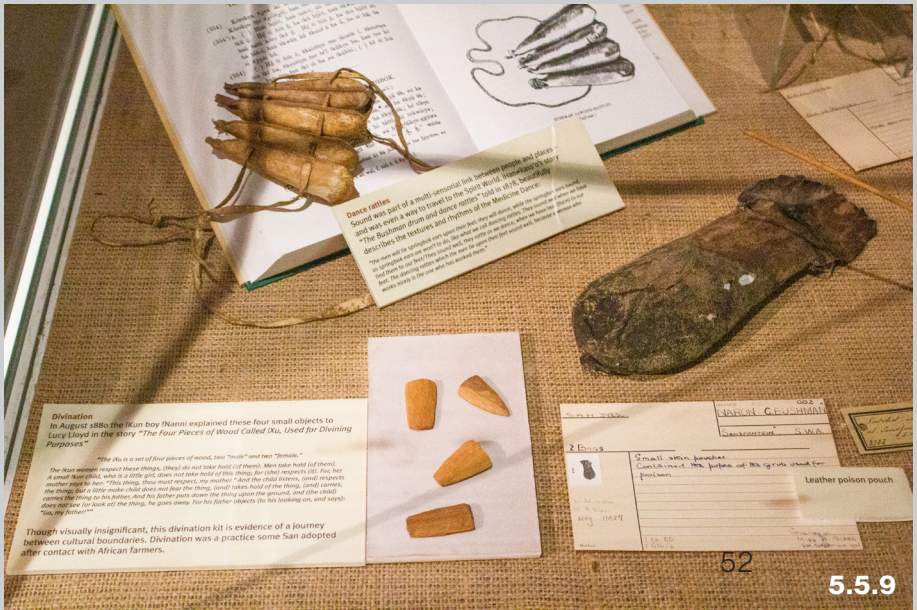
Figure 5.5.3-5.5.5:
A display of rock art and the accompanying descriptions. Source: author.

Figure 5.5.6:
Tools and substrates used to create rock art: Source: author.

Figure 5.5.7-5.5.10:
Tools and other creations made by the Khoisan. Source: author.



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5.5.10

6. BUILDING PROGRAM AND SITE

Elands Bay is a small coastal town on the West Coast of South Africa, about 190km north of Cape Town. There are two things that make the region interesting:

1. The different landscapes surrounding the town
2. The rich archaeological history is close to the town and the broader region (see figure 6.1).

Elands Bay itself is home to the Elands Bay cave and close to dunefield midden campsites where hunter-gatherers made camp about 1000 years ago (Orton, J. & Compton, J. S. 2006:90-91). Currently, the Elands Bay cave can be visited and is the only reference in the region of the rich history of people in the landscape. Most of the historical artefacts and the stories, culture and engagement of the early people that dwelled in the landscape are captured in academic writings, universities and museums located elsewhere. The history is unknown to most people.

Added to this, there is a lack of representation of the culture of the early inhabitants of South Africa on a broader scale. Several protests occurred in the past by the Khoisan challenging their lack of representation in the current cultural and political society of South Africa (see figure 6.2).

Because of this lack of representation, the Department of Arts and Culture of South Africa released a report in 2013 for the development of The National Khoe and San Heritage Route. The aim is to promote the history and heritage of the first people of South Africa (Department of Arts and Culture South Africa 2013:11). The Elands Bay Cave was mentioned in the report as one of the locations to be included in the route (Department of Arts and Culture South Africa 2013:57).

In response to this report, the program chosen for this design dissertation is a museum that can house exhibits that tell the story of the early people who dwelled in the landscape. The location can also be used to exhibit artefacts found in the surrounding Cederberg mountains where many discoveries have been made.

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DAC logo. Source: Department of Arts and Culture South Africa.

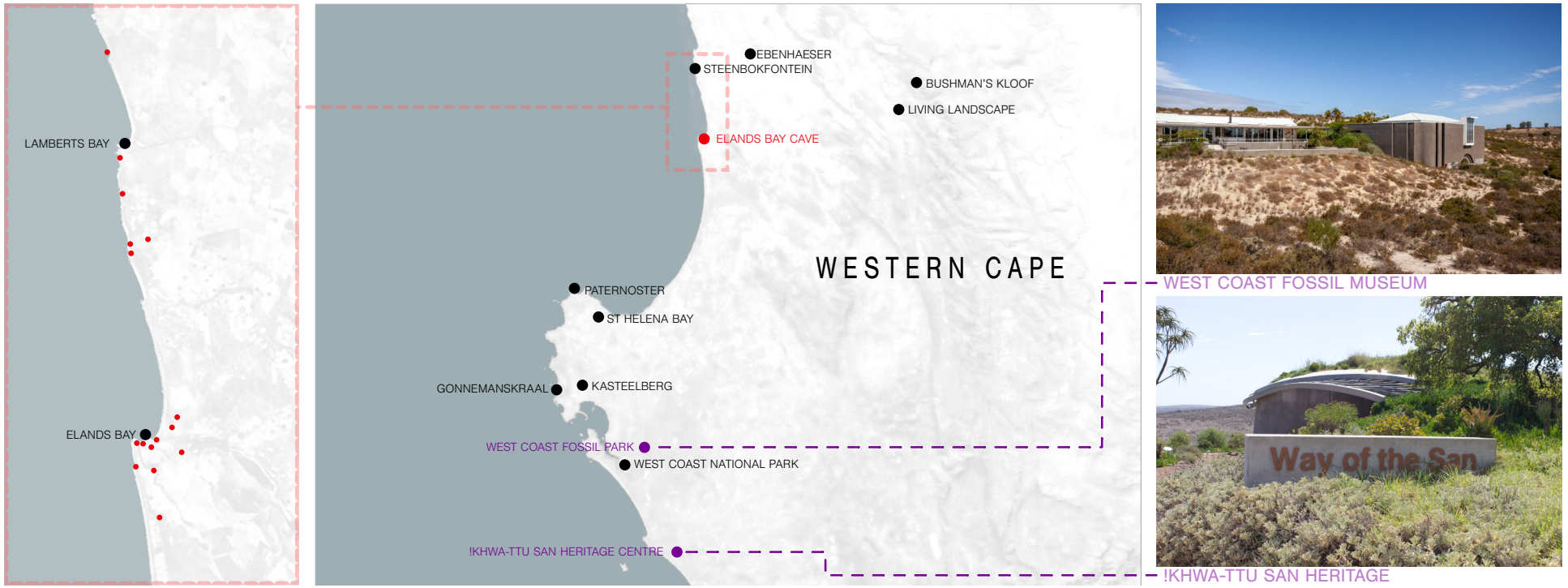


Figure 6.1: Map of archaeological findings in the Cederberg. Source: author.

Figure 6.2: Images showing protests by the Khoisan in South Africa where they ask for better representation and inclusion in their country. (Source: Rasmus Hjortshøj, 2017)

6.1 UNDERSTANDING THE CONTEXT

Elands Bay is a site within the Cederberg region of the Western Cape in South Africa. The region is rich in archaeological findings from the early hunter-gatherers that dwelled in the region (see figure 6.1). The findings mostly exist in museums or collections outside Elands Bay and in academic journals. The town itself is fragmented within the landscape and split into two regions, namely Elands Bay north and Elands Bay south (see figures 6.5 and 6.6). The first settlers in the landscape were early hunter-gatherers. Their occupation of

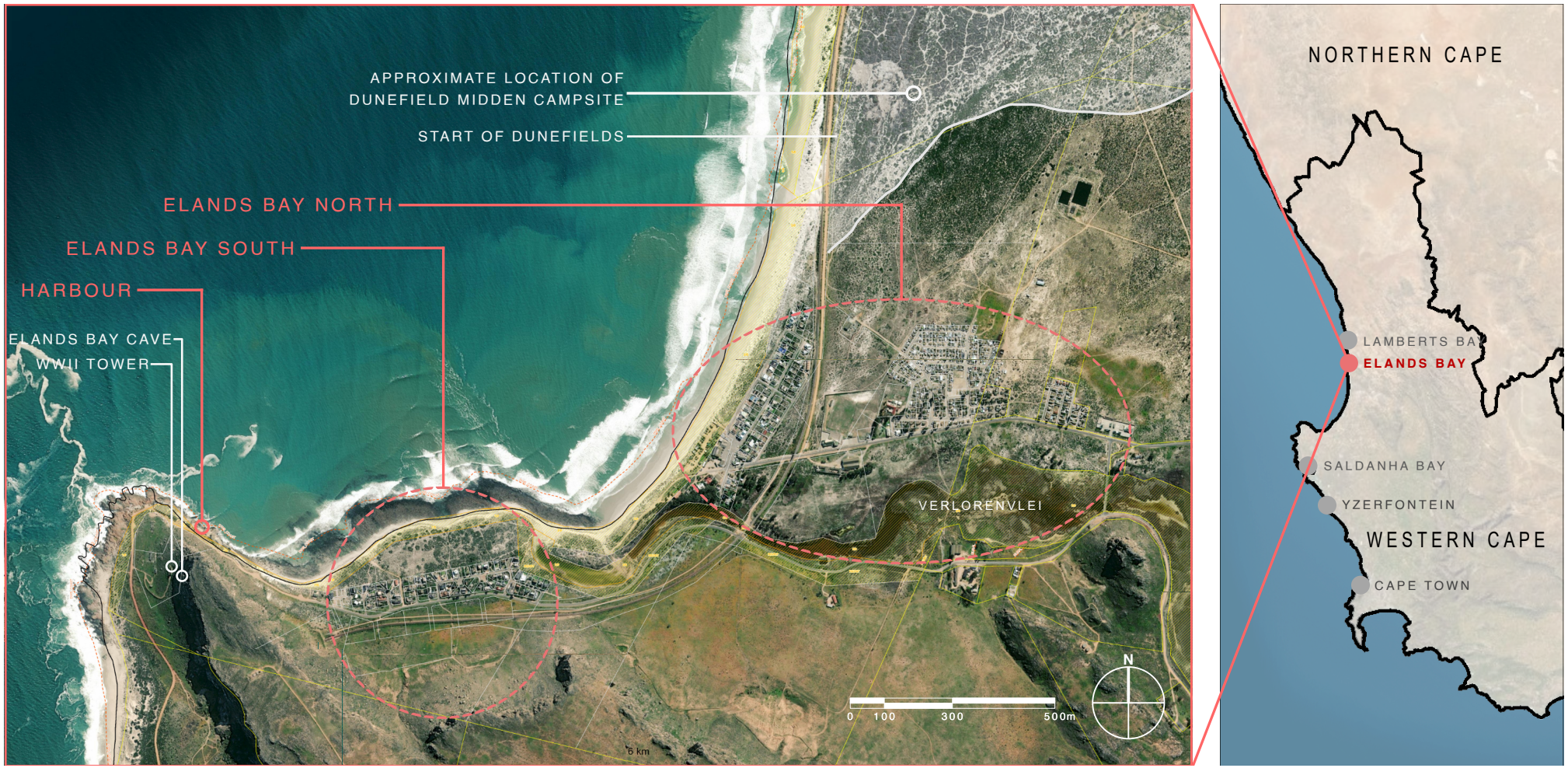
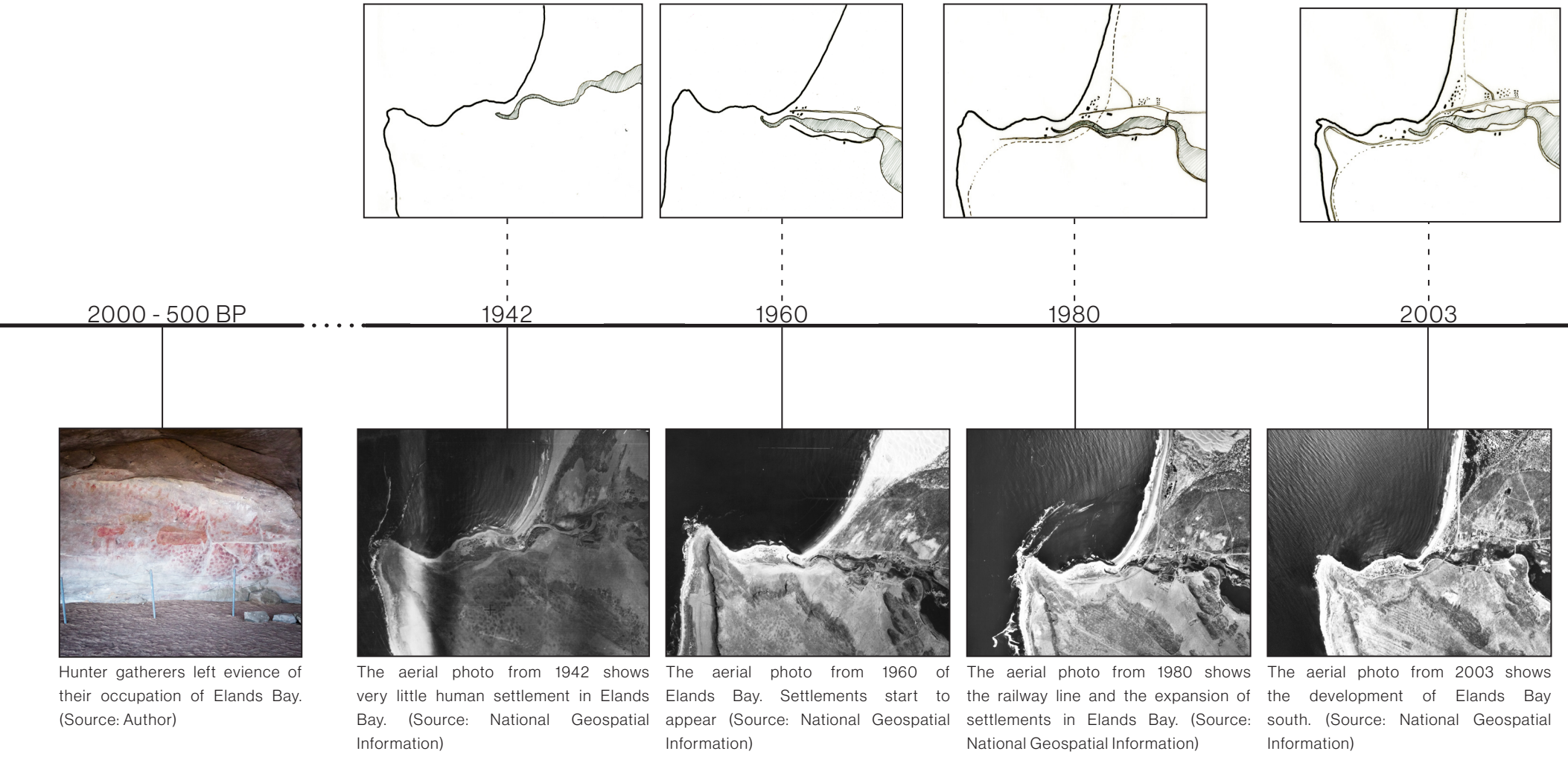


Figure 6.3: Location and layout plan of Elands Bay. Source: author.

the landscape covers thousands of years. The first settlements in the region were farmhouses. It is unclear exactly when they were constructed, but historic photos (see figure 6.4) show these first appearing in 1942. The next part of the development was the railway line first seen in 1960. This is also the period where more formal settlements appear in Elands Bay north. In 1980 settlements first appear in Elands Bay South. Today, most of the houses in Elands Bay south and those to the west of the railway line in Elands Bay north are used as holiday homes. Permanent residents live on the east of the railway line.



Hunter gatherers left evience of their occupation of Elands Bay. (Source: Author)

The aerial photo from 1942 shows very little human settlement in Elands Bay. (Source: National Geospatial Information)

The aerial photo from 1960 of Elands Bay. Settlements start to appear (Source: National Geospatial Information)

The aerial photo from 1980 shows the railway line and the expansion of settlements in Elands Bay. (Source: National Geospatial Information)

The aerial photo from 2003 shows the development of Elands Bay south. (Source: National Geospatial Information)

Figure 6.4: Timeline of development of Elands Bay. Source: author.

Figure 6.5: View to the north of Elands Bay. Source: author.

Figure 6.6: View to the south of Elands Bay. Source: author.

Figure 6.7: Landscape features and the layout of Elands Bay. Source: author.

COMPOSED OF LANDSCAPES

Elands Bay can be explained as a town captured between different landscapes. Figure 6.8 shows the location of these landscapes. Towards the south, the town is surrounded by cliffs (see figure 6.9). Towards the north of the town are dunefields which have an irregular ground relief and contain no buildings (see figure 6.10). To the west is the Atlantic ocean (see figure 6.11). Running through the town splitting it into Elands Bay north and Elands Bay south is the Verlorenvlei river (see figure 6.12). Each of these landscapes has a unique quality and experience. It also limits the expansion of the town. The built culture present in the town only relates to the landscape in terms of views of the ocean and in some cases the cliffs in the south. Buildings are also placed on flatter ground away from the cliffs (see figures 6.5, 6.7 and 6.8).

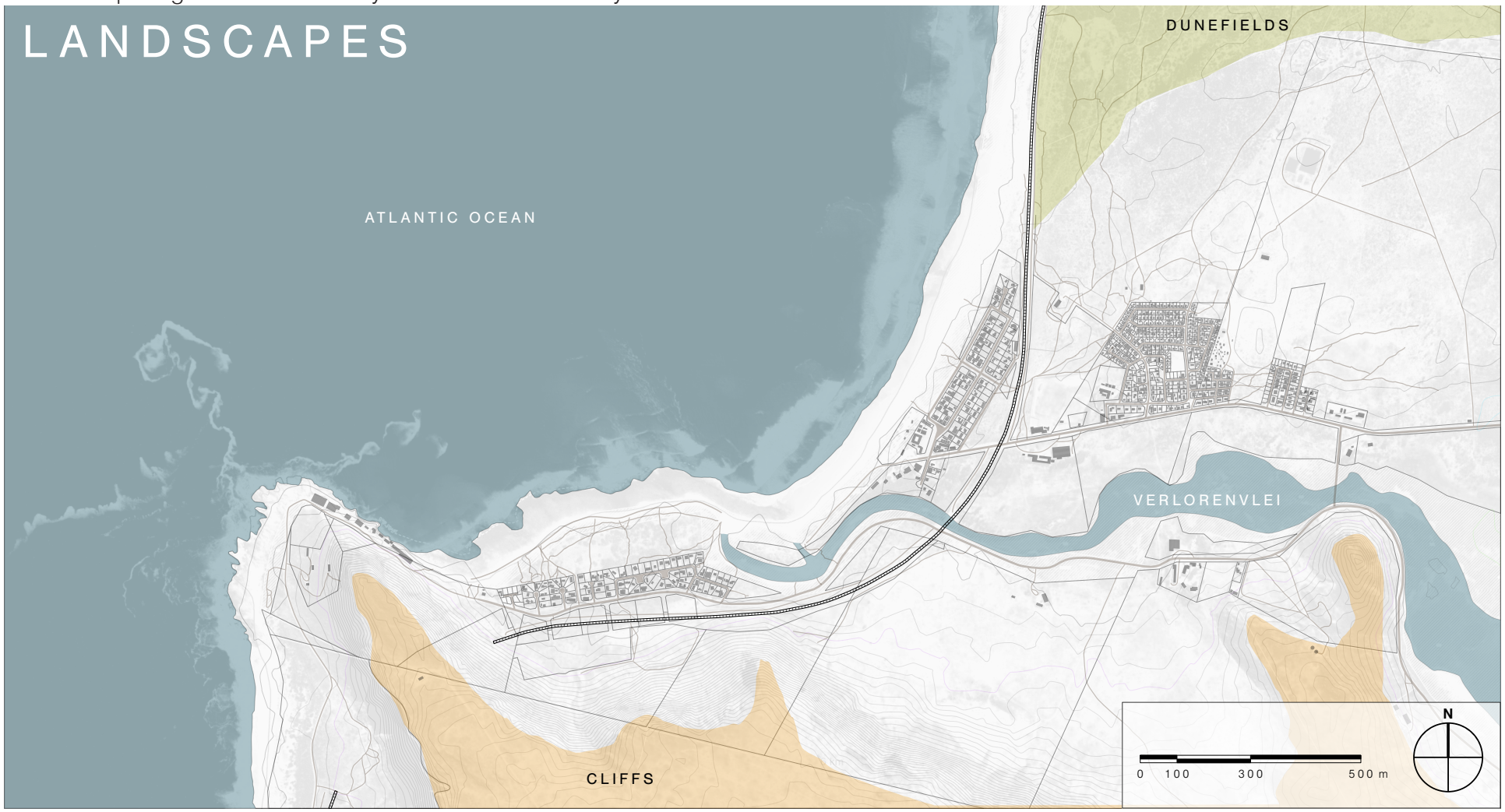


Figure 6.8: Map of the landscapes of Elands Bay. Source: author.

Figure 6.9: The cliffs to the south of Elands Bay. Source: author.

Figure 6.10: The dunefields north of Elands Bay. Source: author.

Figure 6.11: The Atlantic ocean west of Elands Bay. Source author.

Figure 6.12: The river running through Elands Bay. Source: author.

BUILDING FUNCTIONS, PATHS AND CONNECTIONS

The main building function in Elands Bay is residential housing. Commercial and institutional buildings are placed on the main road leading into the town (see figure 6.13). The railway line divides Elands Bay north into two parts. Most of the buildings to the west of the railway line are used as holiday homes. This part of the town is obscured from view by the railway line when entering the town (see figure 14). To create a feature building on this side of the town is therefore not feasible. To the East of the railway line houses most of the permanent residents (see figure 15) of Elands Bay. It also has the most institutional buildings (see figures 16 and 17). This indicates that it is the ideal location to place another institutional building which will also be in view when entering the town.

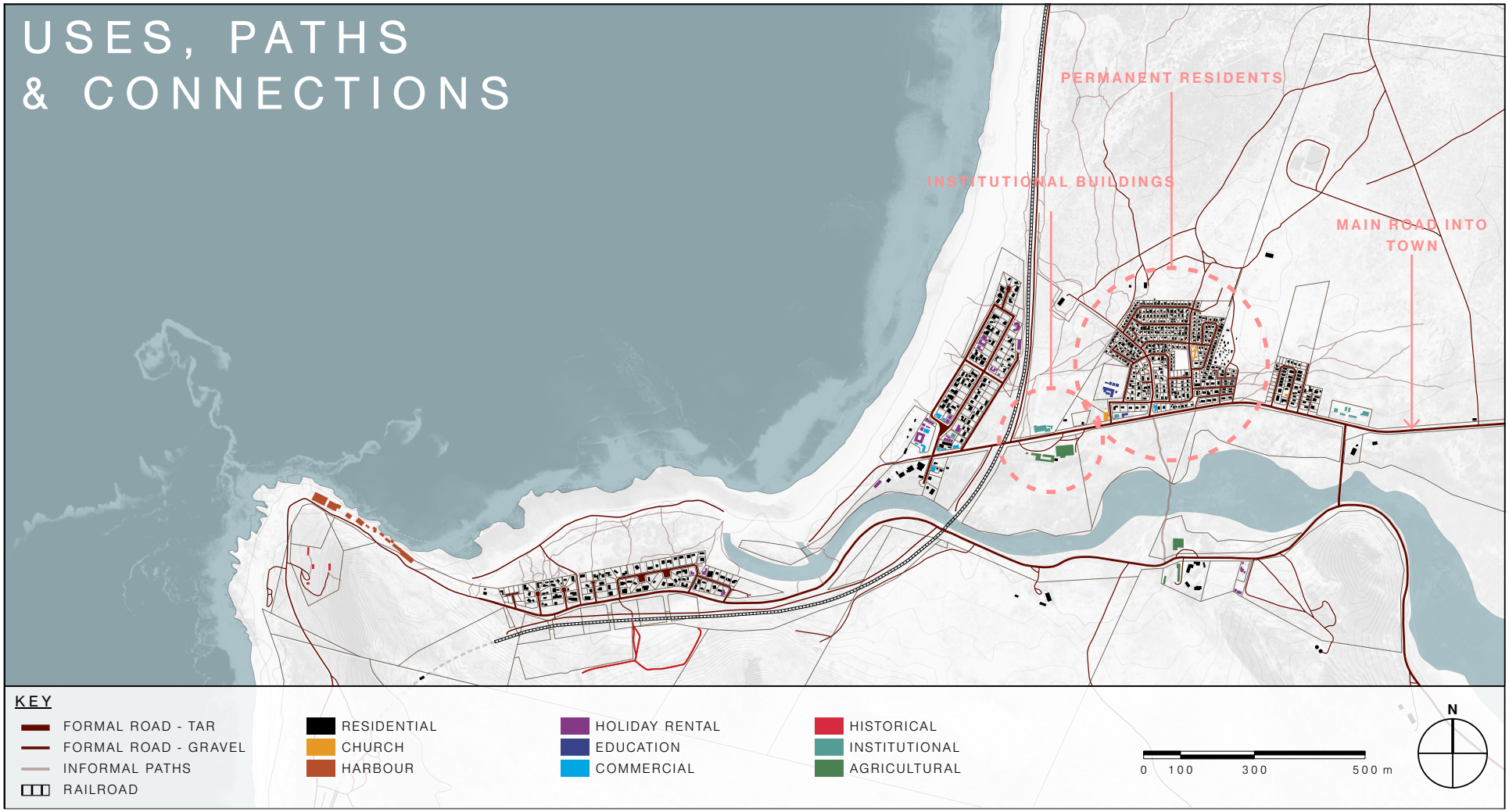


Figure 6.13: Map of building uses, paths and connections. Source: author.

6.14


6.15


6.16


6.17

Figure 6.14:
The railway line cutting through Elands Bay North. Source: author.

Figure 6.15:
The houses of some of the permanent residents in Elands Bay. Source: author.

Figure 6.16:
A church in Elands Bay. Elands Bay. Source: author.

Figure 6.17:
The community centre and library of Elands Bay. Source: author.

Figures 6.18 below shows a map of Elands Bay in which the landscapes limiting the town expansion have been darkened and the railway line thickened. The combination of these with the ocean and river reveals the different sections of the town are fragmented from one another. In figure 6.19 the roads and informal paths used by people have been coloured in red. This reveals that people have created their own lived experience of moving through the fragmented town and created a connected town through the way they use it.

This fostered the idea to create a path connecting historical sites in the different landscapes linked to a central museum within the town. This also links with the Department of Arts and Cultures proposal to celebrate the Elands Bay caves as a historical site. The proposal is to use the dunefields where campsites have been discovered in and the Elands Bay cave as peripheral sites on the route

Figure 6.18: Map showing landscapes isolating and fragmenting the town. Source: author.

Figure 6.19: Path connections traverse these landscapes. Source: author.

Figure 6.20 below shows the two peripheral sites and the site chosen for the main museum. The peripheral sites are located by the Elands Bay caves and the dunefields, in close proximity to where the campsites were located.

The site for the main museum is situated close to the other institutional buildings in Elands Bay and will allow the museum to be visible when entering the town. This allows the building to create an identity to the arrival to the town. Figures 6.21 and 6.22 on the next page show the conceptual plan for the design.

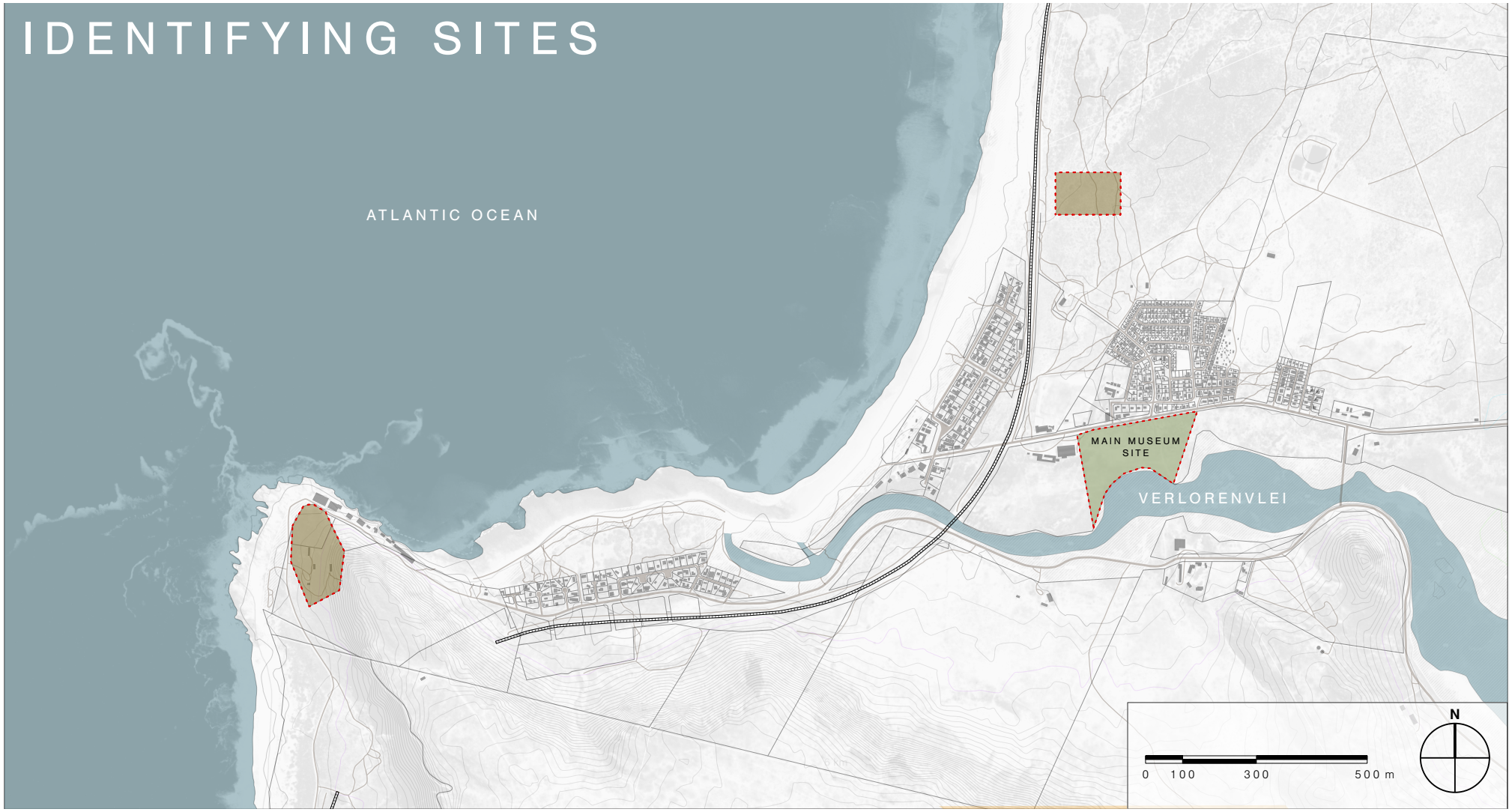


Figure 6.20: Project sites locations in Elands Bay. Source: author.

Figure 6.21:
The map shown above indicates the connection of the historic sites in red and the new building additions in green. The design aims to link the historic to the present. Source: author.

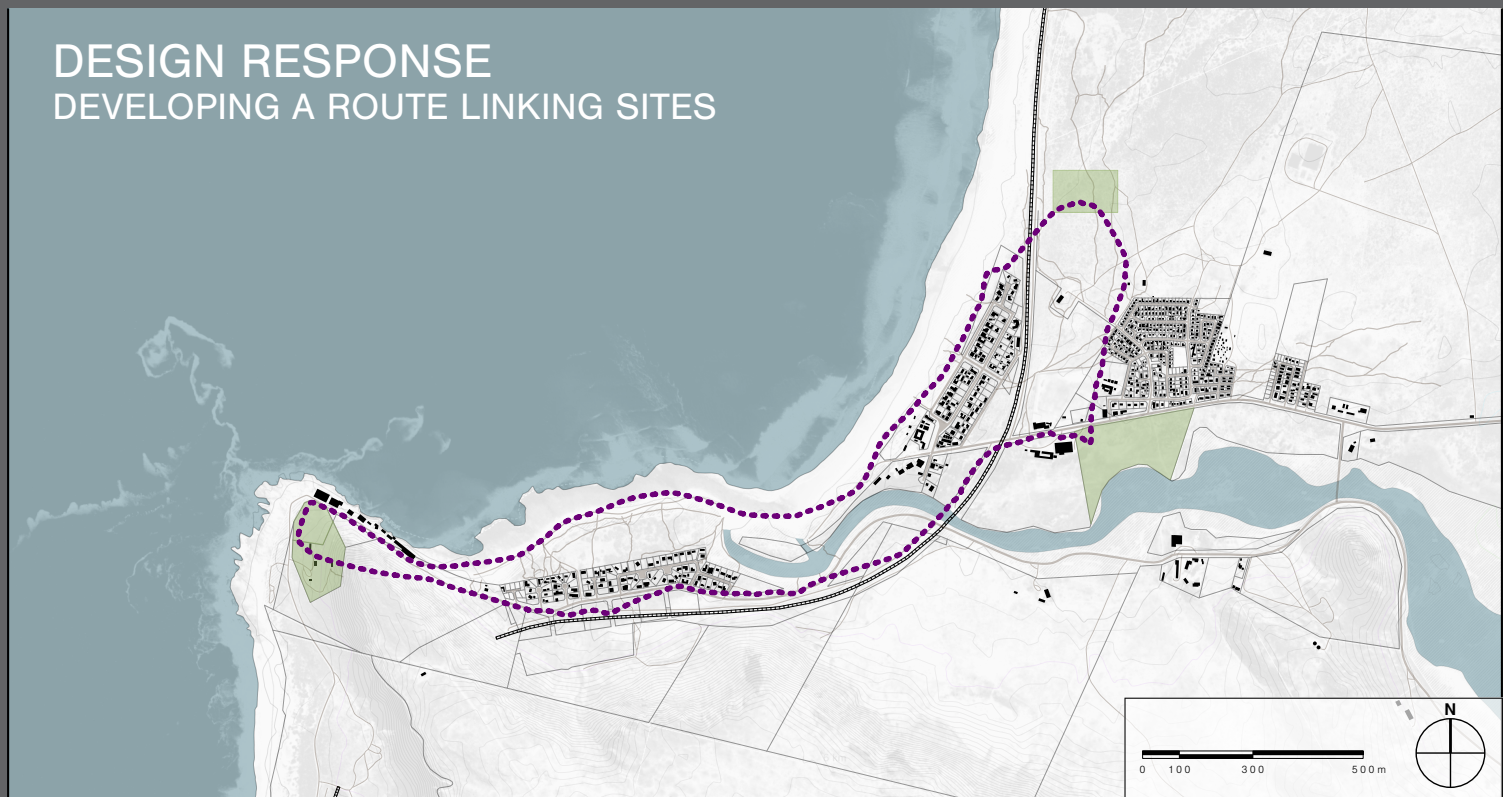


Figure 6.22:
The map shown below shows the realisation of a route through the town which is the realisation of the link. This link adapts the live paths present on the site to the design. Source: author.

6.2 INVESTIGATING THE PROGRAM

According to First In Architecture (n.d.: online), all museums have unique requirements determined by the experiential, security and display requirements they have. These must be fulfilled on two levels:

1. The experience of visitors to the museum
2. The workers and the efficiency required to manage and maintain the exhibits and spaces
3. The security of the artefacts being stored and displayed.

These requirements influence the layout and design details of the building. It is best explained as two separate areas functioning within the building, the experiential side fo
r visitors and the services used by museum employees to run the building.

6.3 SCHEDULE OF ACCOMMODATION

As mentioned before, the project proposes the development of a route through Elands Bay connecting a new museum building to the historic sites (dunefield midden campsites and the Elands Bay cave). The design intervention at the historic sites will only be pavilion structures to acknowledge and represent the history of those specific locations. The museum will be a central building within Elands Bay and should function as a museum while also integrating into the current fabric of the town.

From the study of museums and the program in the previous section, the schedule of accommodation derived is as follows:

1. Reception with a seating/ waiting area
2. Exhibition spaces for the museum. These are explored in more detail in the next section.
3. Cafe or restaurant with exterior or interior seating for 30-40 people.
4. Public restrooms allowing for up to 60 people aggregated for the museum and cafe/restaurant.
5. A multifunction public space that can be used for public events, the school as a learning resource, public meetings or temporary exhibitions for the museum.
6. A covered seating hub where people from the community can go to sit and access internet resources or have social gatherings. This space is intended to be separate from the museum building with no access control.
7. Office spaces for management of the museum and cafe/ restaurant. The office space must include workstations for 2-4 people, a meeting space and be serviced by a kitchenette and restrooms.
8. A storage space for the museum where exhibits not on display can be stored. This space must be located to allow for deliveries of items. An office space for a store manager can also be provided for or integrated with the other offices.

9. The cafe/restaurant must have a service counter with an area for preparing drinks, a kitchen and storage space. The storage space must allow for deliveries and the kitchen must have access to a yard for waste disposal.
10. Storage space for cleaning and maintenance equipment.
11. Staff room for museum workers with a kitchenette and restrooms must be provided for staff working inside the museum if this can not be accommodated for together in the office space.

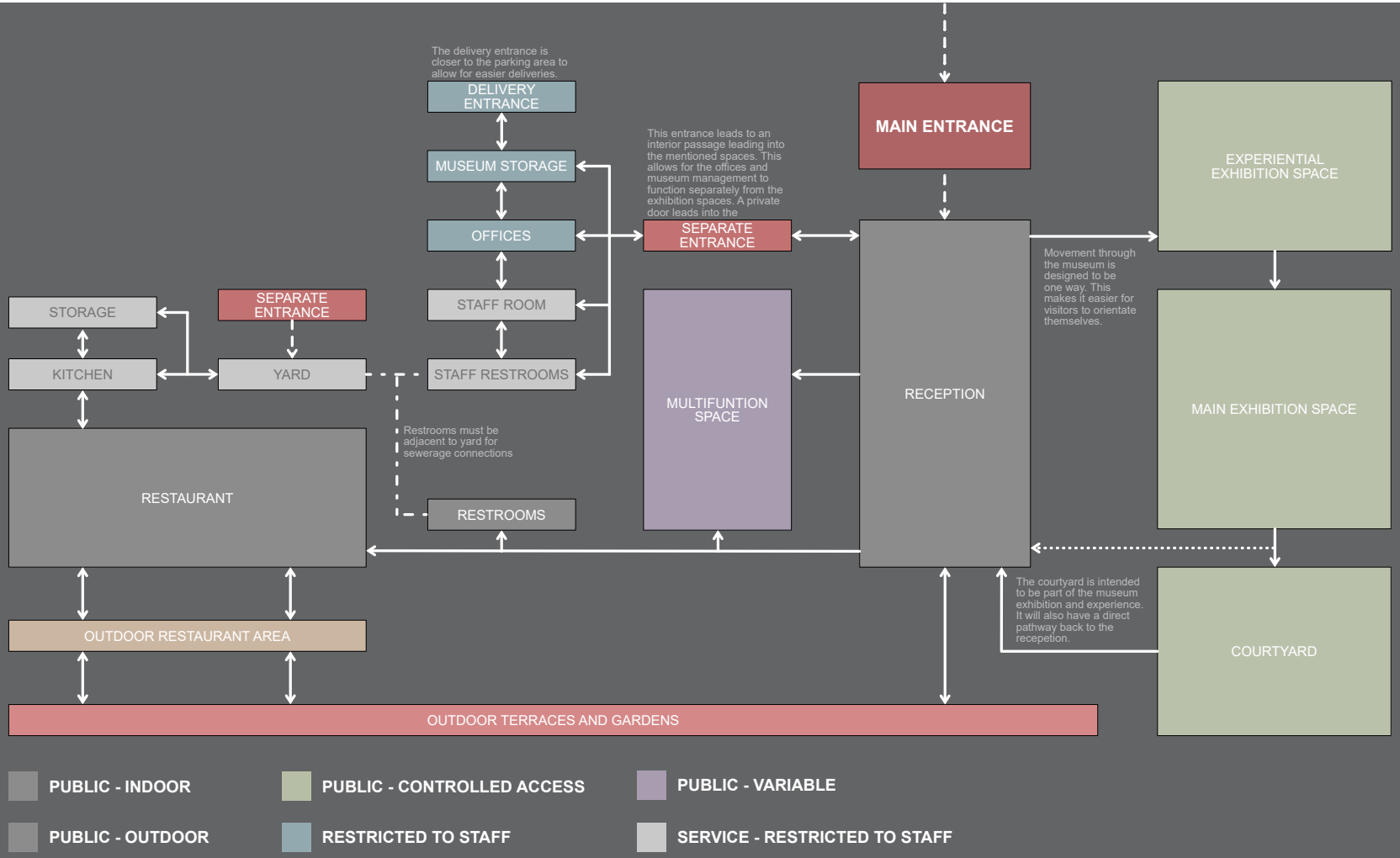


Figure 6.25:
Flow diagram of schedule of accommodation. Source: author.

Figure 7.1:
View from Elands Bay Cave to the ocean. Source: author.

7. THE CULTURE AND EXHIBITIONS

As mentioned before, the museum will be the main site within a larger development within Elands Bay. The purpose of the museum will be more general and a broader exhibition on the development of Elands Bay and the culture of the early hunter-gatherers and the Khoi/San.

Since the purpose of the museum is to provide a space in which history can be represented, the spaces are linked to the artefacts and exhibition. This section is an introduction to exhibition ideas that will be used for the development of the spaces within the museum.

THE HISTORY OF THE LANDSCAPE AND PEOPLE

The relationship of the early hunter-gatherers is linked to the landscape in which they dwelled. To understand their choice of settlement, the landscape must be understood within the period they inhabited it. The history of the landscape can therefore be represented as an item of change showing what it was over several periods of time, where the evidence suggests people settled and for what reasons. This could be displayed using a timeline and through the use of multimedia technology.

THE CULTURE, BELIEFS AND STORIES

The culture of the hunter-gatherers was linked to the landscape and their worldview. One interpretation of their culture and beliefs can be found in their art and use of art. However, there is a broader culture to be explored relating to their daily lives.

Figure 7.2: Drakensberg Rock Art. Source: TakeUsAnywhere.

Figure 7.3: Shaman rock art. Source: Siyabona Africa

ART

The art found in the landscape has many interpretations. Very little research has been done to understand the meaning of the art from the people who created it. Most interpretations are that of external sources (Smith, 2022:57). According to John Parkington (2015:86-87), rock art falls between the real and metaphysical world as viewed by the Khoisan. The art could have been a type of diary of their daily existence, a means to orientate and guide them in the landscapes they dwelled through, as well as spiritual rituals and beliefs they held. This can be seen in paintings where the figures appear to be of man and beast as well as disproportionate figures they experienced in the spirit world.

Figure 7.4: San rock art. Source: Catherine Sempill, 2013.

TOOLS AND ARTEFACTS

Tools were used by the early hunter-gatherers for a wide variety of tasks. Stone and bone were used to make sharp tools for hunting and carving (Parkington 2015:83). Wood and reeds were used to make bows, arrows and digging sticks (Parkington 2015:83). Shells, bone and fibres from plants were used to make beads and pendants (Parkington 2015:83). Eggshells, tortoise shells and sea shells were used as bowls (Parkington 2015:83). Animal skins were sewn together to make clothes, aprons and cloaks (Parkington 2015:83). There are few limits to the uses of the materials the Khoisan gathered from the landscape.

Figure 7.5: Bow and Arrows. Source: Gateway Africa.

PLANTS

Plants have been used by the early inhabitants of South Africa. According to Andrew Smith (2022:209), the healers traveled across the landscape to gather appropriate plat materials to treat influenza infections, stomach ailments, aches and pains. A summary of the most common plants used by the Khoi and San people include 40 different species (Smith, 2022:210-212), including Bok-Buchu, Ysterbosch, Miergras, Bitterboschje and Wilde Salie.

Figure 7.6: Salvia aurea. Source: SA National Biodiversity Institute.

SALVIA AUREA

WILDE SALIE

Infusions used against menstruation and coughs. Can be used to make a person sweat.

Figure 7.7: Agathosma crenulata. Source: SA National Biodiversity Institute.

AGOSTHOSME CRENULATA

BERG BUCHU

Against chest pains and fever in children.

Figure 7.8: Dodonaea viscosa. Source: SA National Biodiversity Institute.

DODONEA VISCOSA

YSTERBOSCH

Infusions used against high blood pressure, tuberculosis and chest pain.

Figure 7.9: Melianthus major. Source: SA National Biodiversity Institute.

MELIANTHUS MAJOR

KRUIDJIE-ROER-MY-NIE

Infusions used against worms.

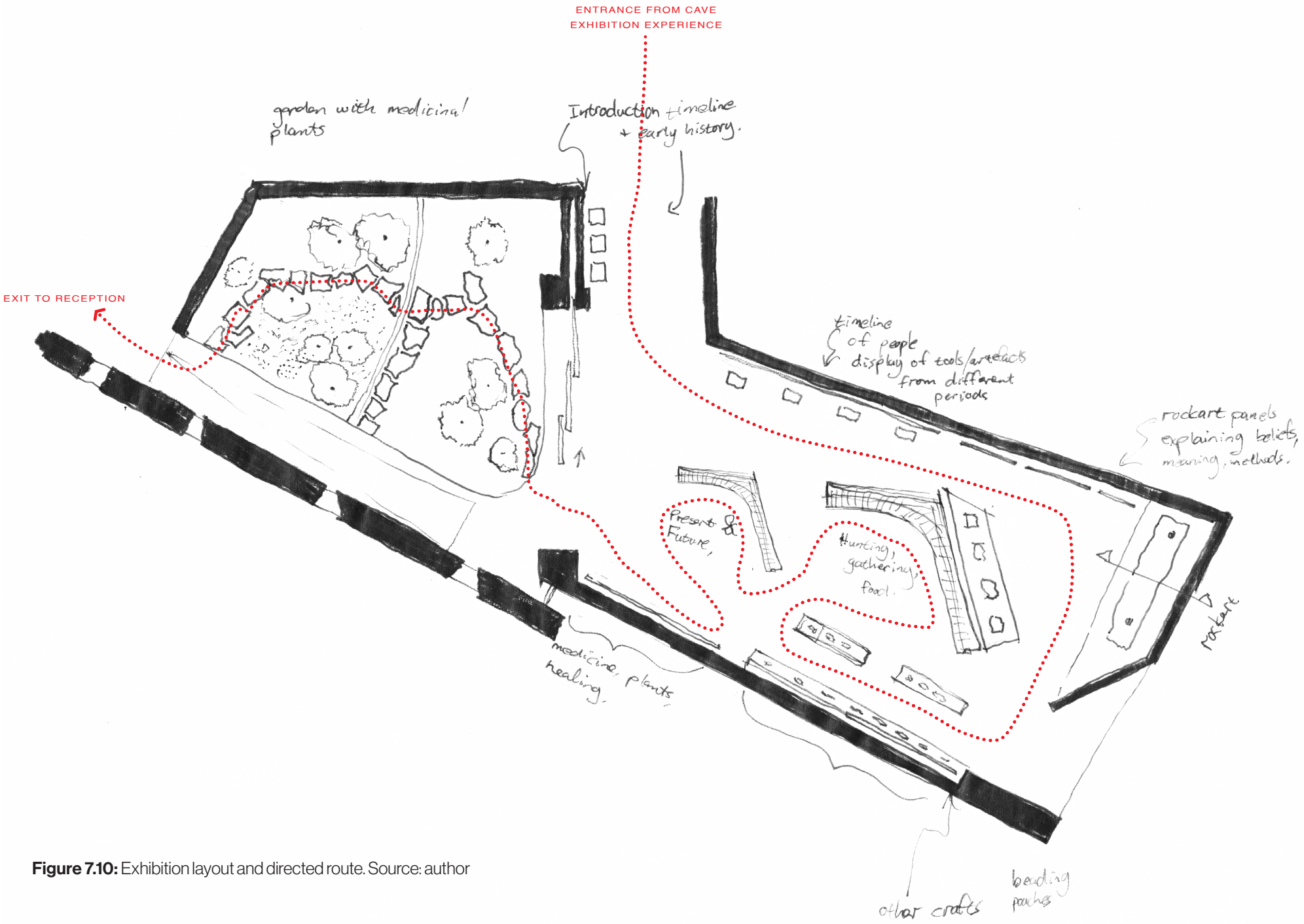


Figure 7.10: Exhibition layout and directed route. Source: author

Figure 8.1:
View of the main site showing the trees and hill used in the design of the museum. Source: author.

8. CONCEPTUAL DEVELOPMENT

The theoretical start of this dissertation considered the connection between architecture, place and landscape. This implies that there is a connection between the people, their culture and view of their surrounding landcape. The design of a museum to house exhibitions that tell the story of the early hunter gatherers of South Africa, the conceptual development must be representative of who they were, their views and connection to the landscape.

Hunter-gatherers lived in harmony with nature and connected to landscape around them (Smith 2022). Their understanding was different to modern people and their view of it rather different. The building being developed must therefore be closely connected and in harmony with the existing landscape.

This brings forward the idea of landscape emplacement. This means to set something in place. This is what should drive the conceptual development of the design.

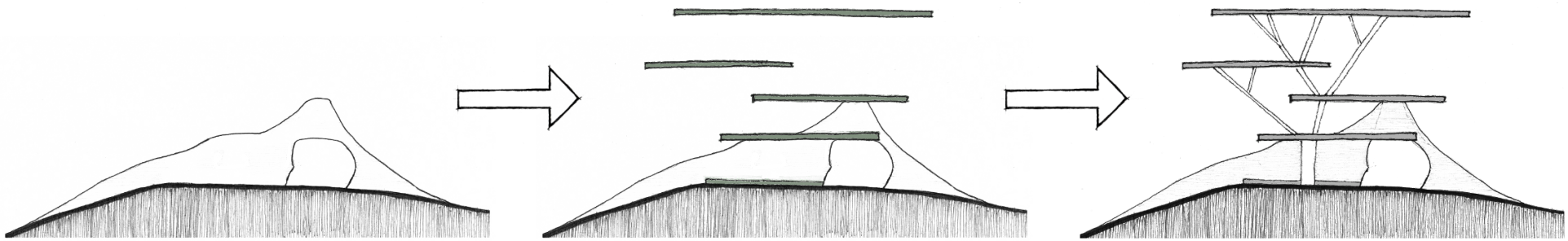
8.1 DESIGN PRINCIPLES

There are certain design principles that can be taken from the theoretical study up to this point. and adapted to the specific program and sites. This serves as a summary of the principles that can be used to develop the concept further:

1. Connecting the building to the ground by considering the physical structure of the landscape in which the building is placed as well as the cultural landscape in which the building will function.
2. Convey the relationship the hunter-gatherers had with their landscape through the connection of the building to the ground and the landscape.
3. Adapt the building to the current usage of the landscape by residents of Elands Bay.
4. Connect people (current residents and visitors) to the rich history of the landscape and hunter-gatherers.
5. Preserve and adapt the existing structure of the landscape as required to enhance the experience of place.

8.2 CONNECTING TO LANDSCAPE

The process of connecting a building to a landscape is not unique. As a design exercise, the Building-in-Landscape model (see figures 8.2 and 8.3) was created to depict the connection between building and landscape. The process depicted considers the landscape, how platforms will be placed in relation to the ground and the connection that will be used. All of this must be considered as an extension of the landscape in terms of place-making.



The landscape reveals spatial qualities through its structure.

Using the landscape structure as reference, decisions can be made about the placement of building platforms .

Finally, the connection of the platforms to the ground must be considered as a material connection to place.

Figure 8.2: Building-in-Landscape analysis. (Source: author)

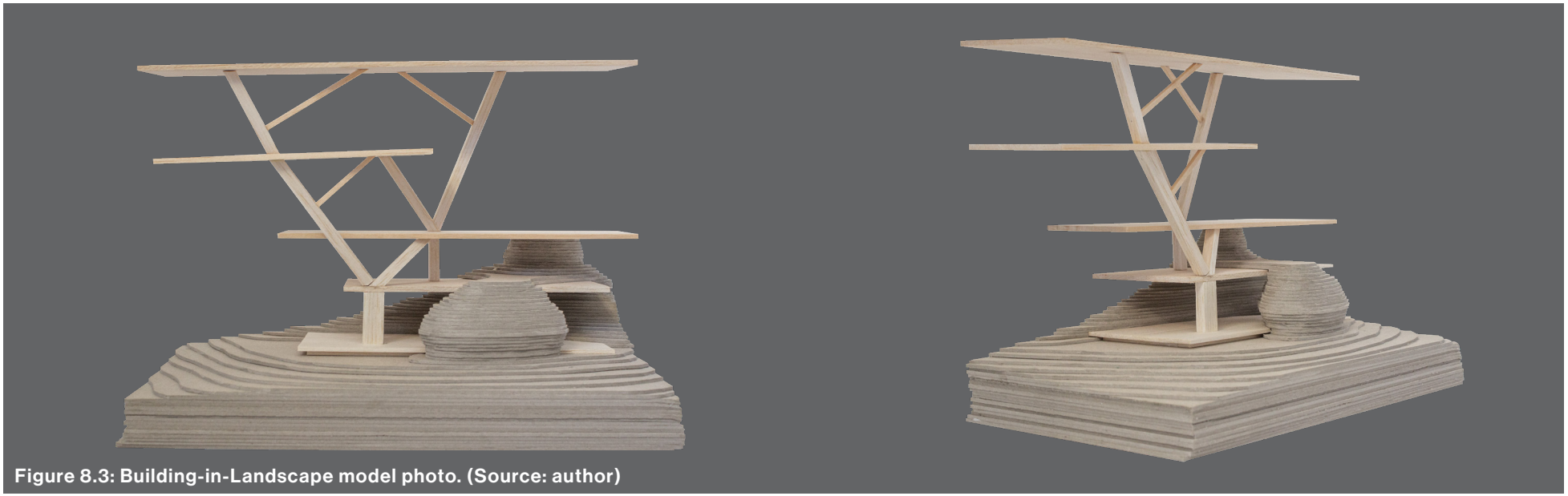


Figure 8.3: Building-in-Landscape model photo. (Source: author)

8.3 LANDSCAPE EMPLACEMENT

The landscape emplacement model shown in figure 8.4 below is an abstract exploration between building, landscape and existing structures on a site. The exploration is without context and considers the possible relationships between ground, the built form and building. Several possibilities exist, where the building design is integrated into the ground and the separation between the building and ground fades, structures present on the site is used to support and define a new spatial relationship, and a spatial relationship is created between the ground relief and the new structure. The final product is a combination of the ground, existing structures and a new building where the design incorporates everything redefining the character of space and place.

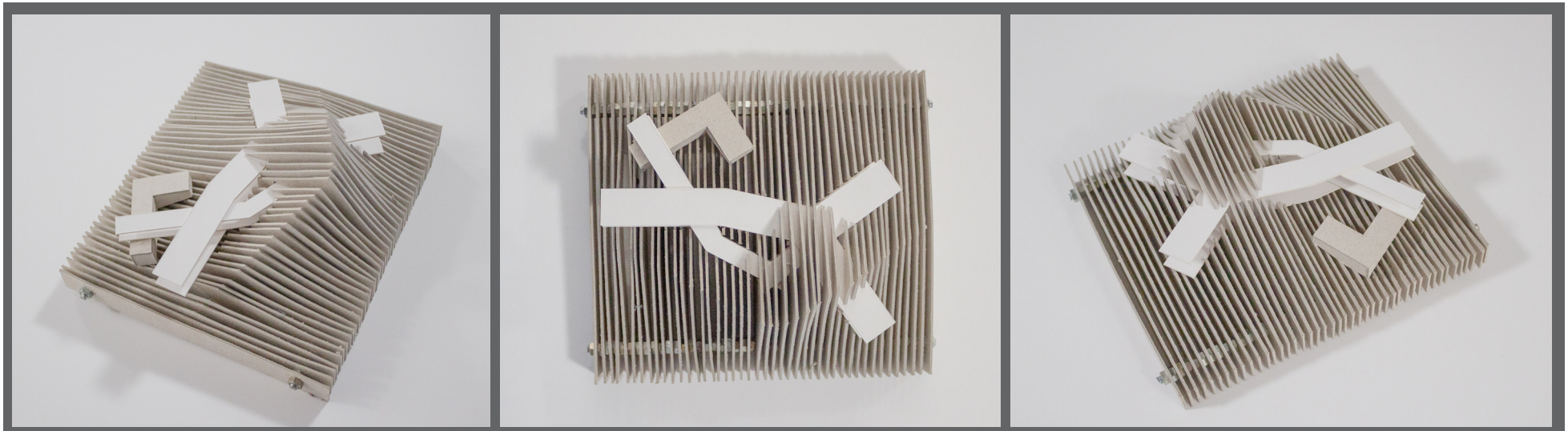


Figure 8.4: Landscape emplacement model photographs made by author. Source: author.

8.4 INITIAL DESIGN IDEAS - MAIN MUSEUM

The models shown in figure 8.5 shows initial design ideas for the main museum. These are not placed on the current site for the main museum because the location changed as the design progressed. However, some of the earlier design ideas can still be seen in the models. The design incorporated a the building along a path/route and used building elements to define the it. In earlier iterations of the design, the massing of the museum was split into smaller masses. This changed in later iterations to consolidate the building into one. The final idea that was shown is the connection between inside and outside that creates a visual focus onto the surrounding landscape.

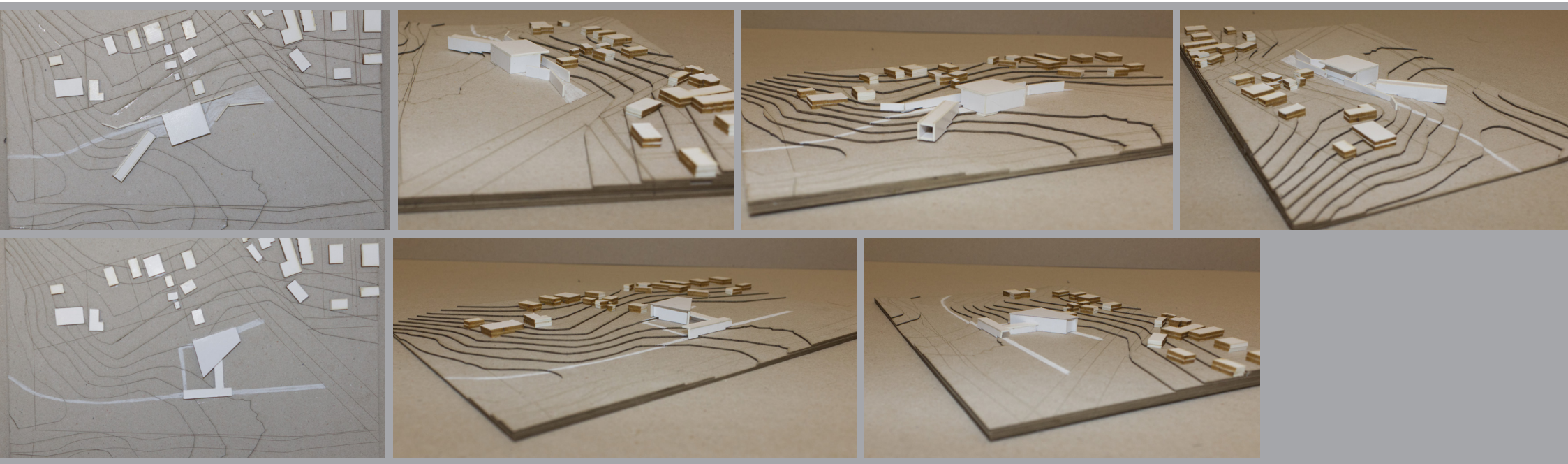


Figure 8.5: Images of models of initial design ideas of the main museum. Source: author.

8.5 INITIAL DESIGN IDEAS - PAVILLION AT THE CAVES

The models shown in figure 8.6 shows shows two initial ideas for the the pavillion design at the Elands Bay caves. The first design (upper row) places the pavillion along a newly designed route to the caves and focusses a view onto the caves. The second (lower row) places the pavillion on the current access route to the caves, again focussing a view out to the caves.

The placement of the two pavillions has a different connection to the caves and the surrounding ruin structures. The placement along a newly defined path separates the new building from the existing and creates a respecting composition. The other imposes on the existing structures and goes against the original spatial character they create.

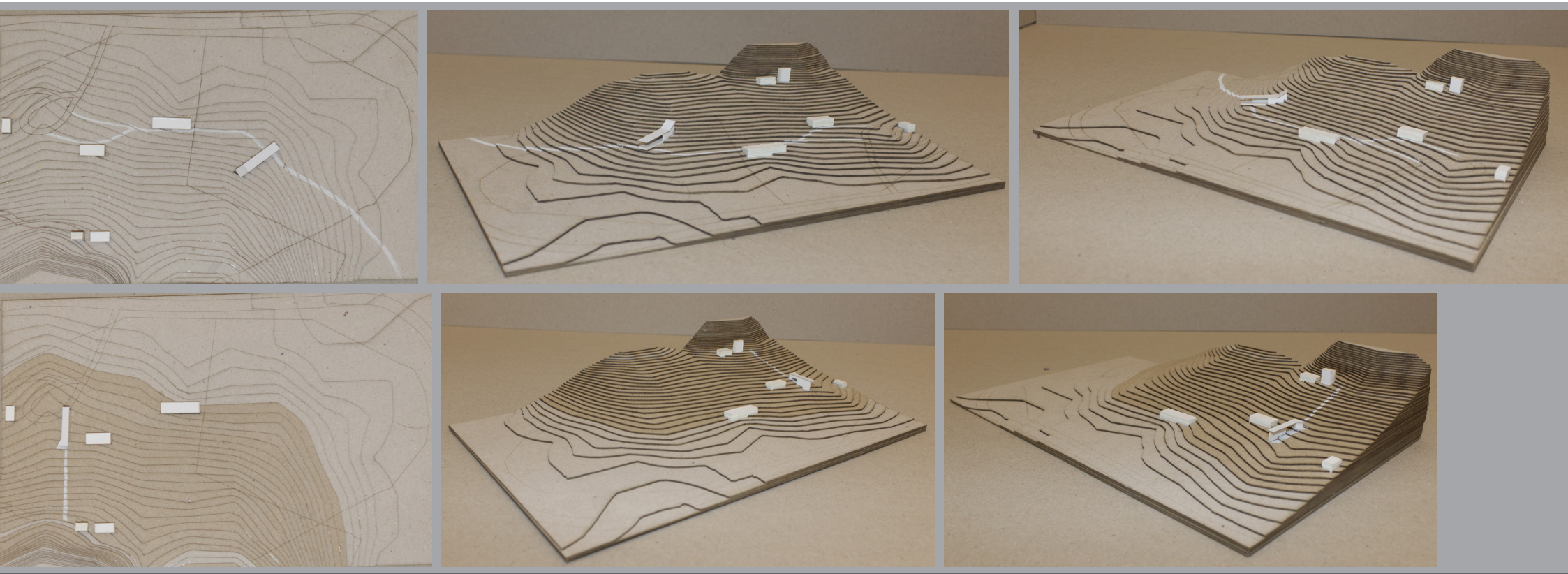


Figure 8.6: Images of models of initial design ideas of the pavilion at the Elands Bay cave. Source: author.

8.6 INITIAL DESIGN IDEAS - PAVILLION IN THE DUNEFIELDS

The models shown in figure 8.7 shows initial design ideas for the pavillion in the dunefields. The first (upper row) is a simple structure resting on the ground, respecting the dunfields groundline. The second (lower row) inserts a wall into the dunefields and makes the structure part of the landscape. The first design becomes a destination with more formal formgiving. The second defines a path through the building and has less formal forms, adapting to the landscape.

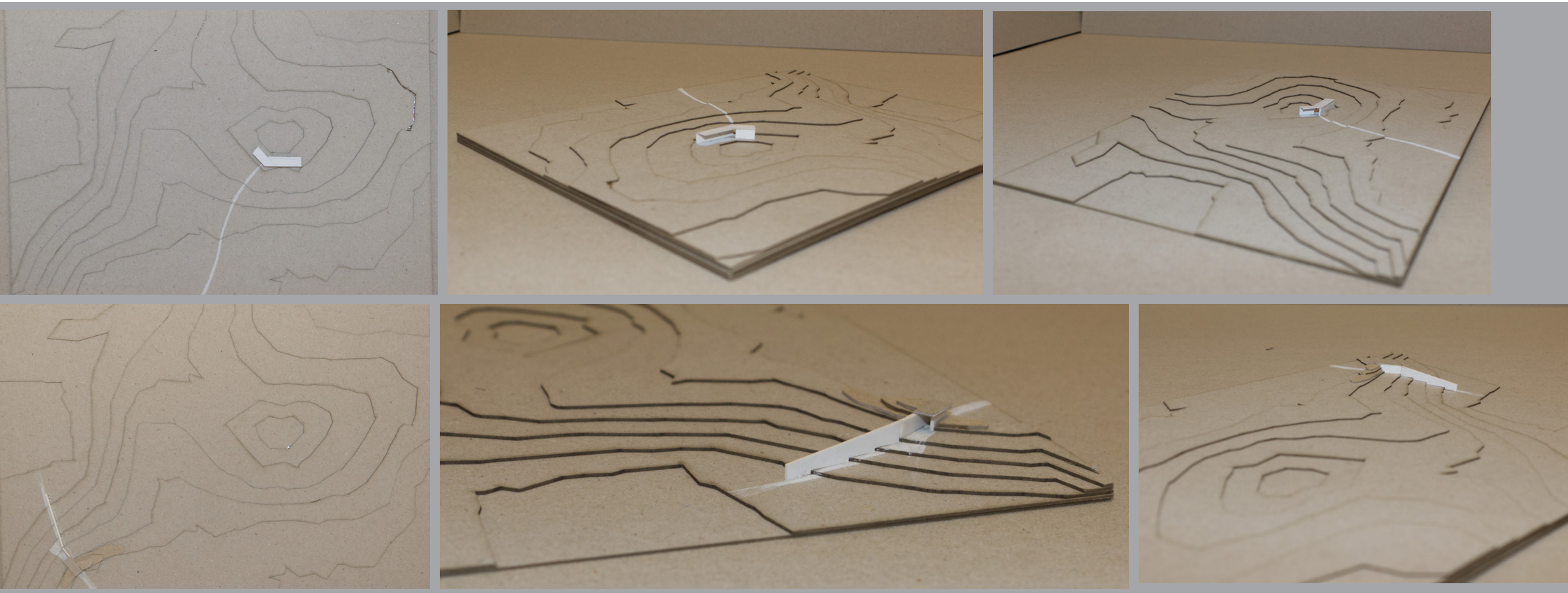


Figure 8.7: Images of models of initial design ideas of the pavilion in the dunefields. Source: author.

8.7 UNDERSTANDING THE LANDSCAPE OF THE SITE OF THE MAIN MUSEUM

The site of the main museum is situated on a threshold between the Elands Bay north and the natural landscape to the south. The topography is fairly flat with a gentle slope towards the south (see figure 8.10). Vegetation on the site is limited to low growing shrubs and small plants on the sandy soil, with a group of trees next to the potato shed (see figure 8.8). The trees create a spatial character and visual anchor on the site. It also obscures the potato shed from view from the site. The dominant view from the site is towards the cliffs in the south, where an isolated hill is a focal reference point from which to orientate (see figure 8.9).

The site is next to the main road leading into Elands Bay. The buildings adjacent to the main road have a mixture of uses (see figure 6.13, 8.10 8.11 and 8.13). The existent uses vary, including public-, institutional-, commercial- and residential buildings. The placement of another public building must therefore respect the existing structure and points to the placement of the museum towards the more public buildings of the town (see figure 8.10). This will also allow the potato store to be incorporated into the design for public functions, and it allows the trees adjacent to the store to be incorporated into the design. Another consideration for doing this preserving the view the residential buildings have towards the cliffs and natural landscape.

Figure 8.8: View from the main museum site towards the potato store. Source: author.

Figure 8.9: View from the main museum site towards the hill. Source: author.

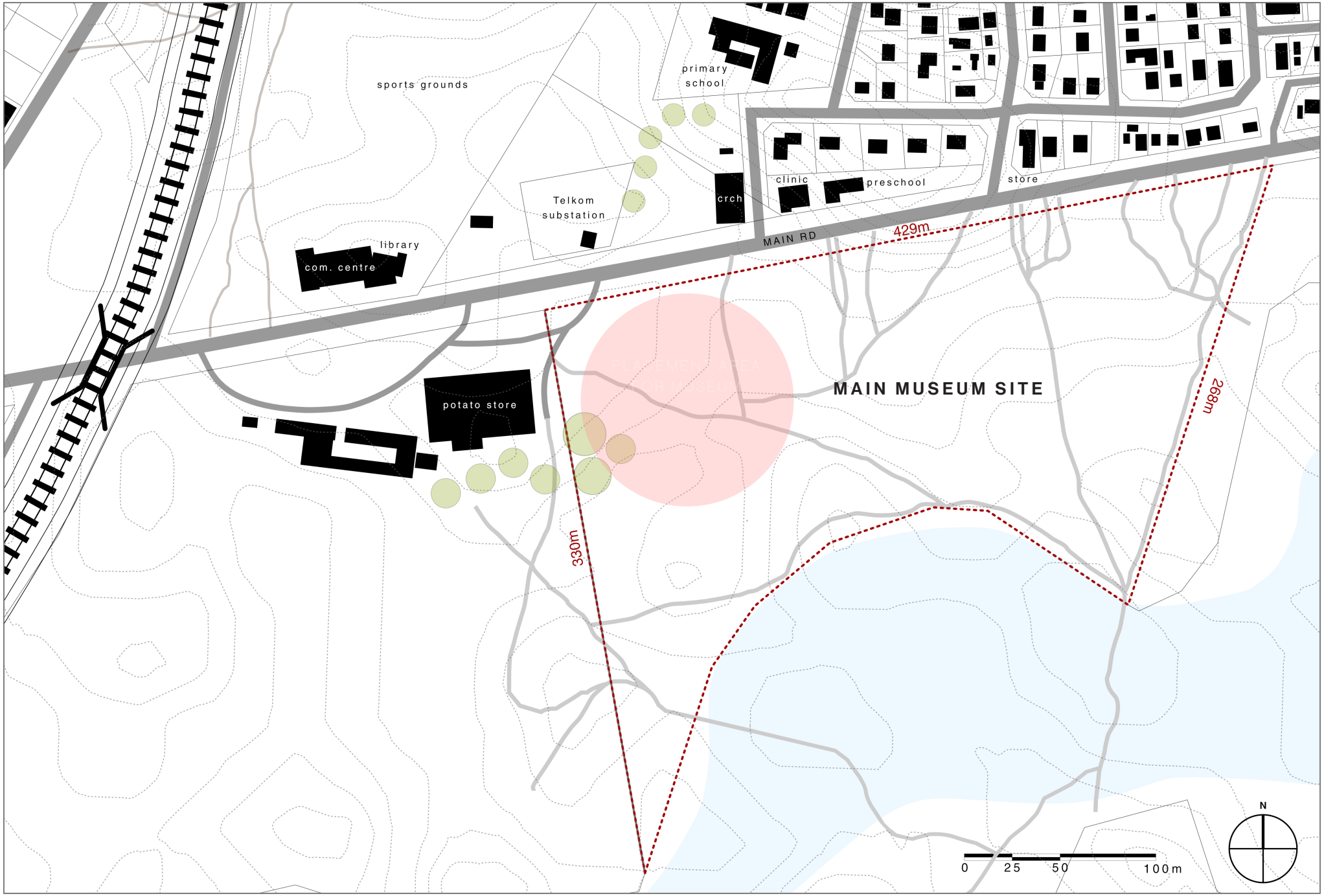


Figure 8.10: Main museum site in Elands Bay. Source: author.

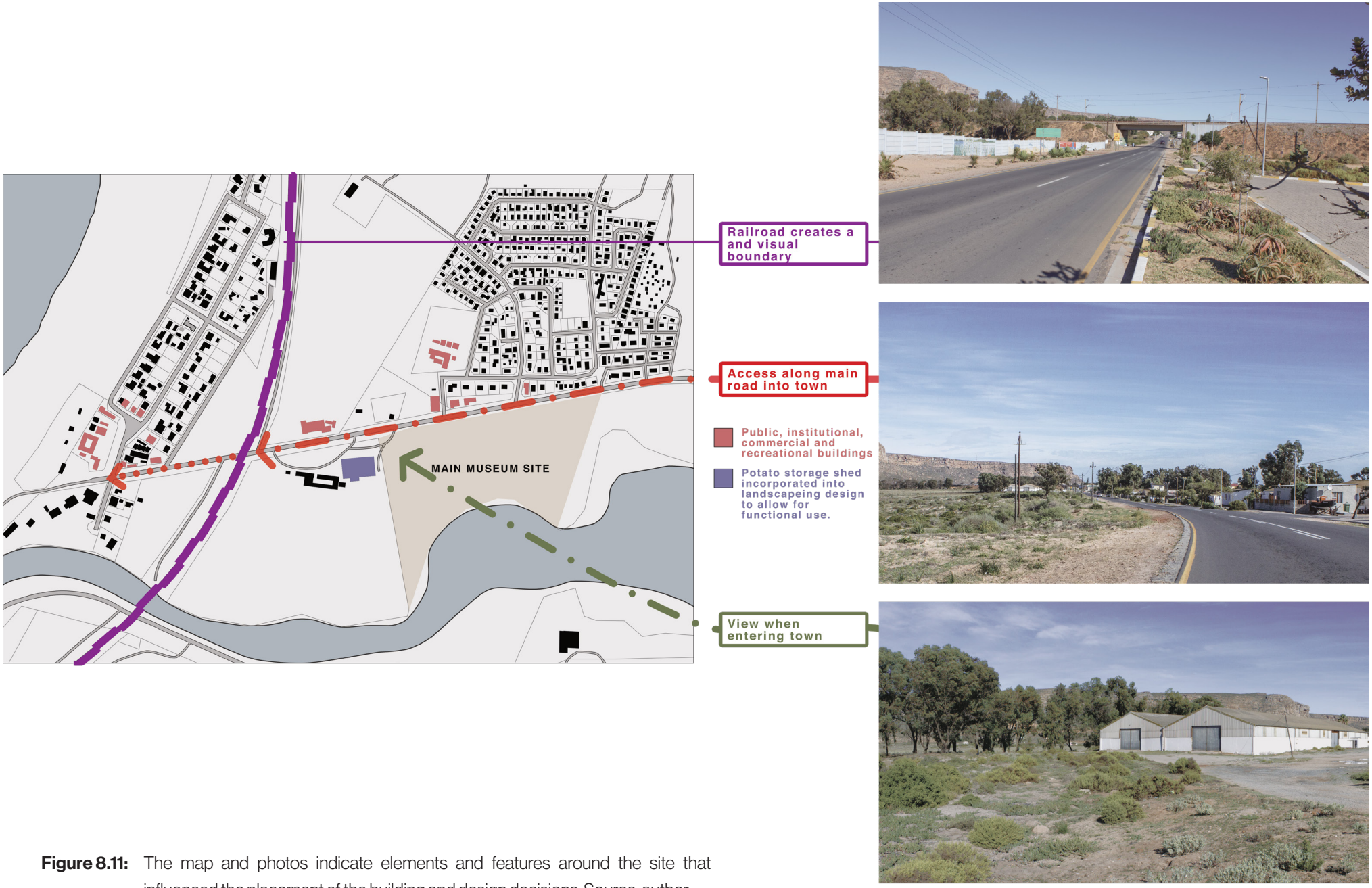


Figure 8.11: The map and photos indicate elements and features around the site that influenced the placement of the building and design decisions. Source: author.

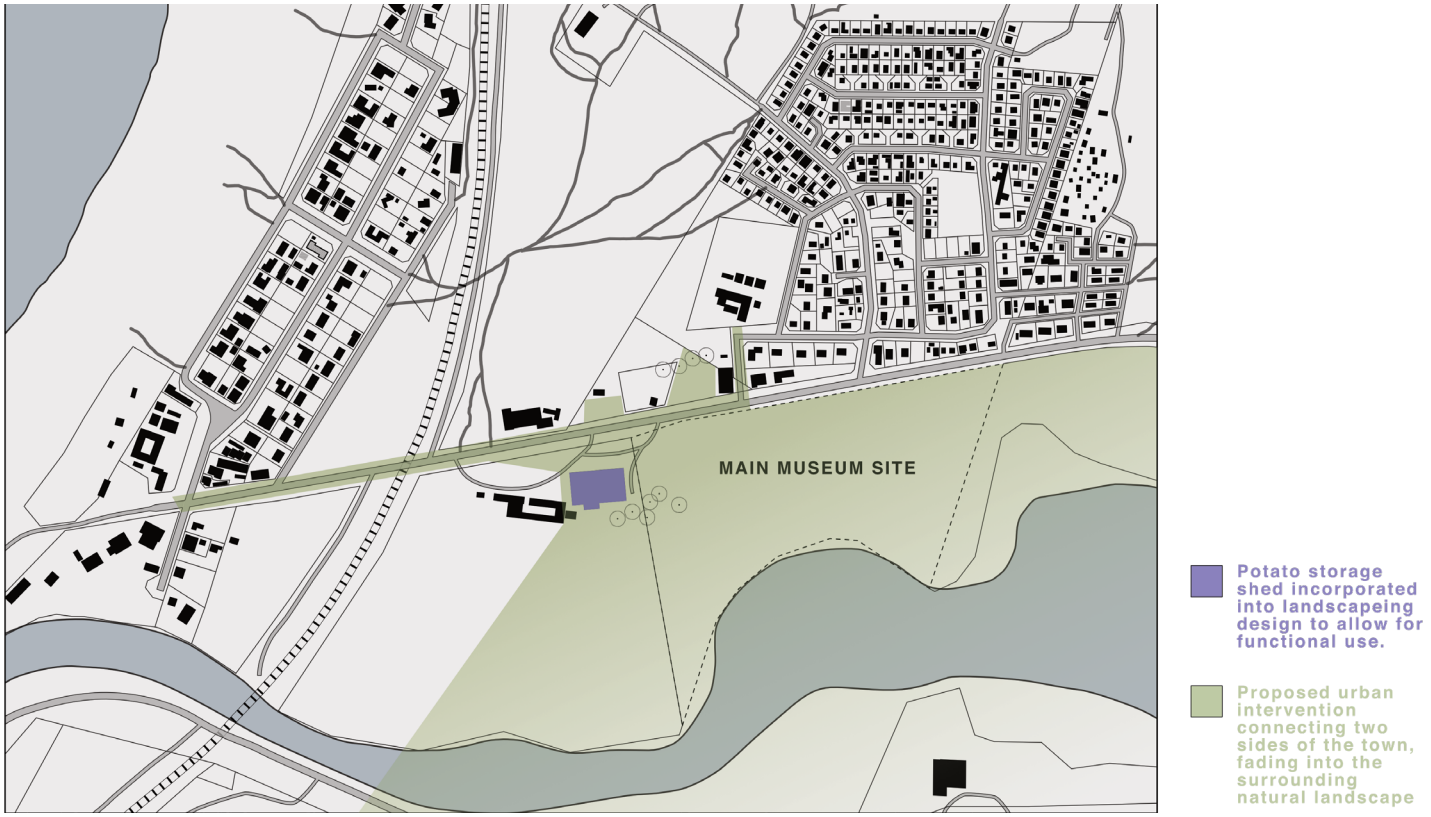


Figure 8.12: A diagram indicating a design principle to connect from the site to the surrounding built- and man-made landscapes. The potato store and trees surrounding it is an interesting node on the site that can be included. Source: author.

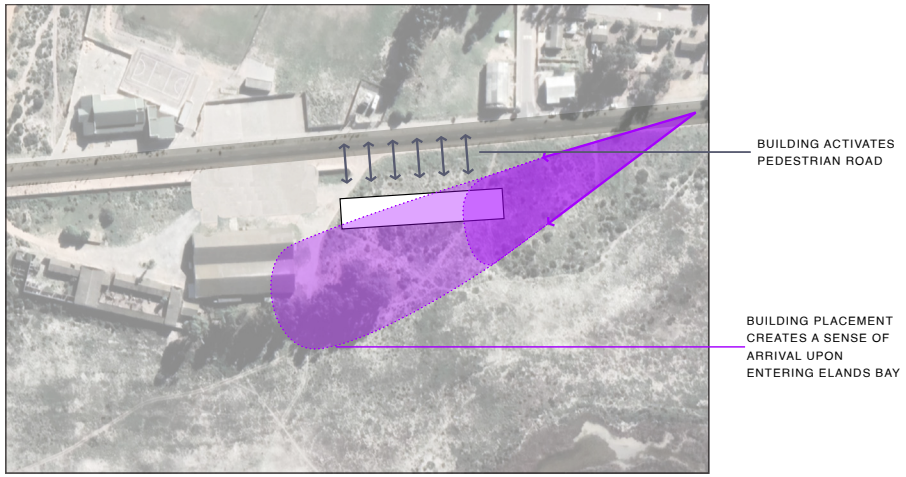


Figure 8.13: A sense of arrival can be created upon entering the town. This also creates the opportunity to create a pdestrian friendly street edge.. Source: author.

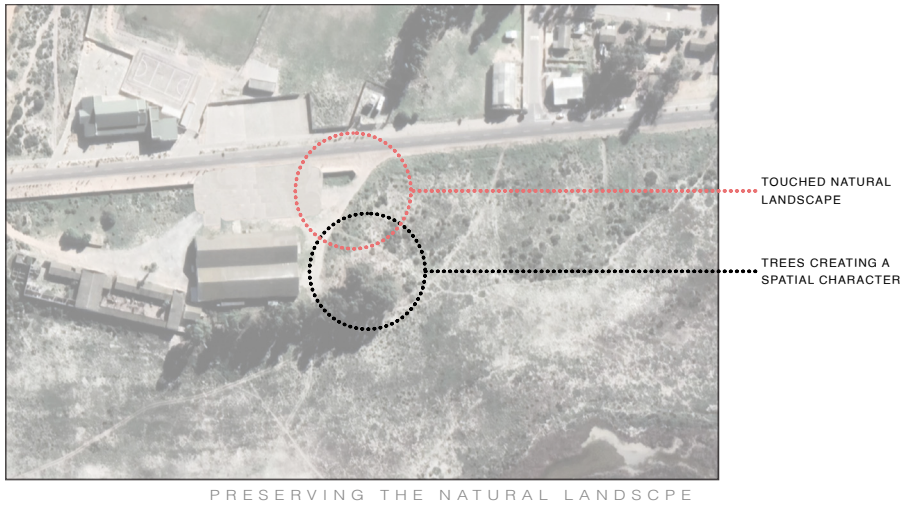


Figure 8.14: Reasoning for the placement of the n=building to the north-west corner of the site. Source: author.

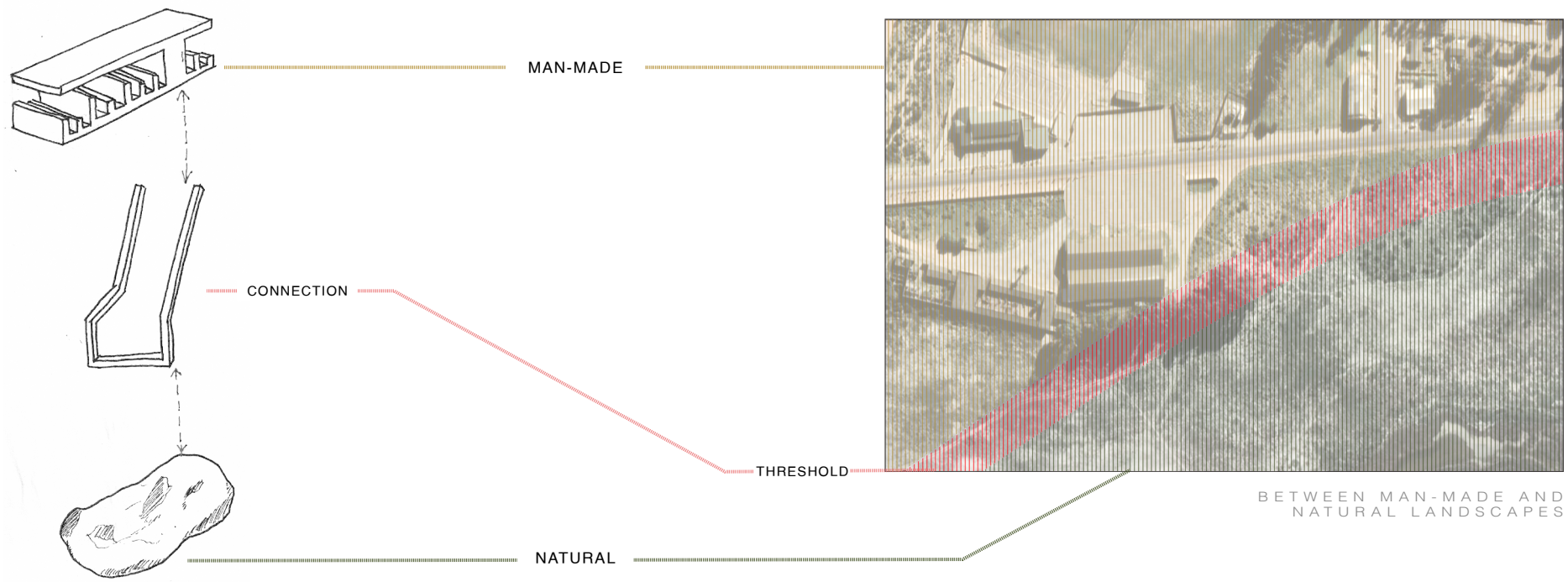


Figure 8.15: Architecture can become the connection between the man-made and natural landscapes... Source: author.

8.8 DEVELOPING DESIGN IDEAS

Initial design ideas developed from the existing informal pathways present on the site, views to the mountains in the south and the focal point to the isolated hill (see figure 8.16), and the trees creating a unique spatilal character on an otherwise flat and empty site (see figure 8.17).

These elements hinted at the mass forms seen below, using the building to frame views to the landscape and as spatial generators amongst the trees. The slope applied to the masses in figure 8.18 allows views to be opened up and reveal more of the landscape.

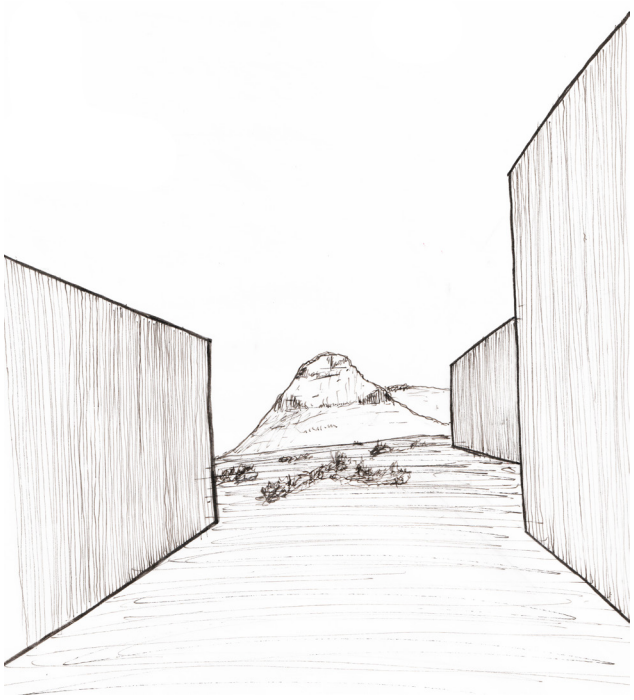


Figure 8.16: Initial design sketch framing view of hill in landscape. Source: author.

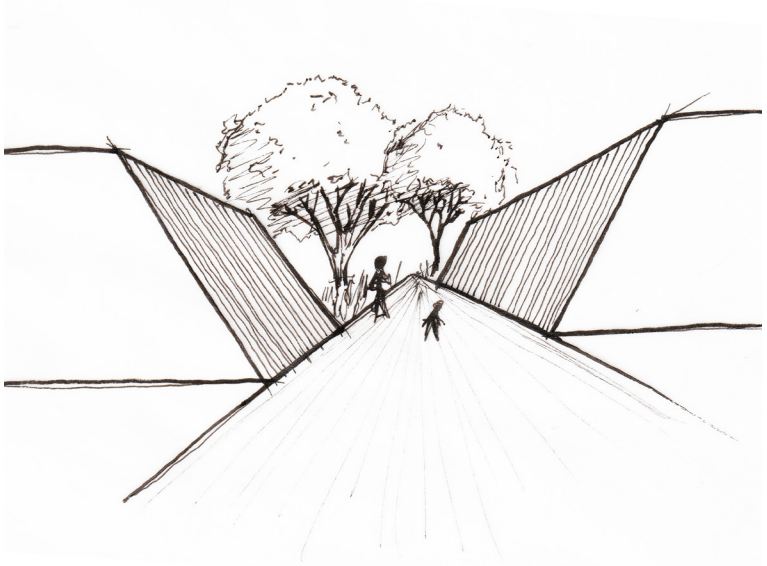


Figure 8.17: Initial design sketch using existing trees as focal point and to create space. Source: author.

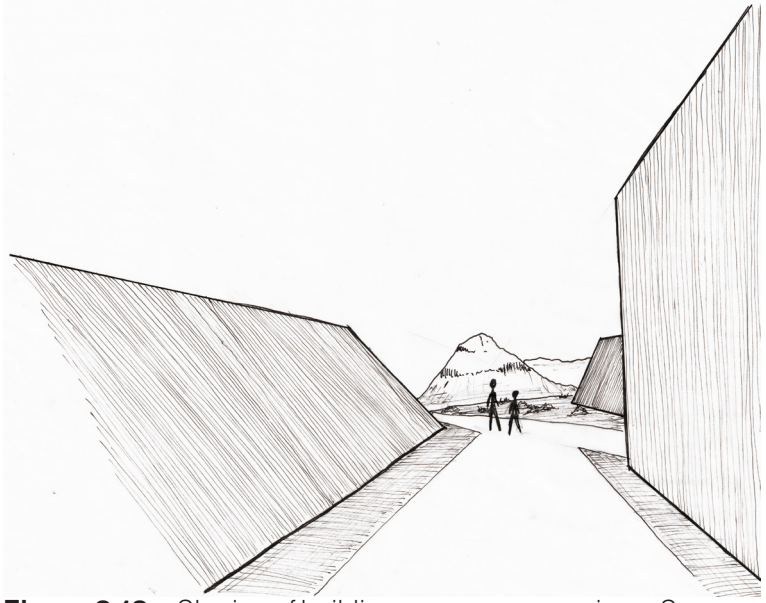


Figure 8.18: Sloping of building mass opens up views. Source: author.

INITIAL DESIGN EXPLORATION

Figure 8.19 shows another early idea to extend the landscape onto the building and use it as part of the building envelope. In doing so, the line between building and the ground fades and the building becomes part of the landscape.

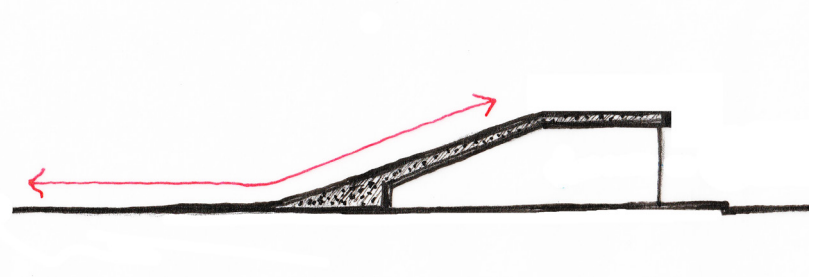


Figure 8.19: Sketch of idea to extend landscape onto the building. Source: author.

Figure 8.20: Sectional model of building 1. Source: author.

The section model shown in figures 8.20-8.22 was the first exploration in the tectonics, structure and spatial design of the building. The extension of the landscape mentioned earlier is shown as a building envelope with a lighter, tectonic structure extending from underneath it.

Figure 8.21: Sectional model of building 2. Source: author.

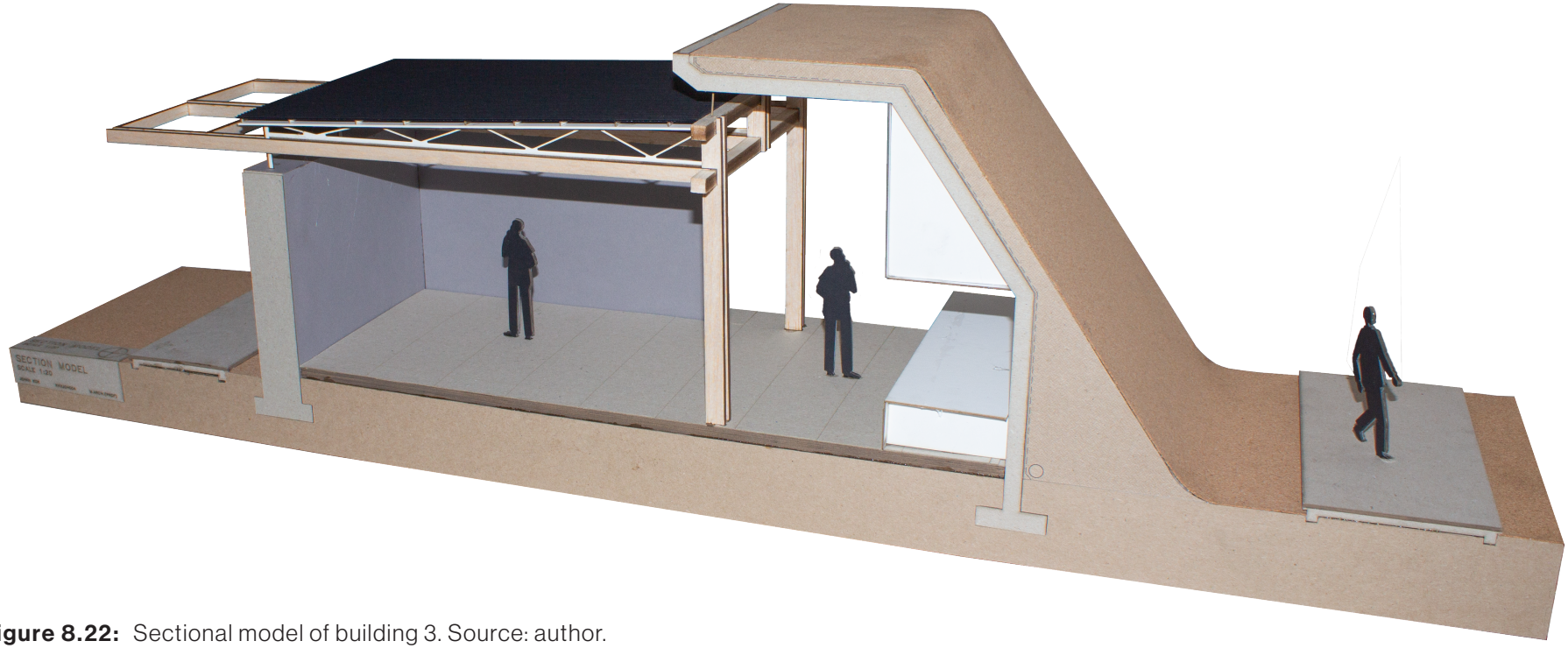


Figure 8.22: Sectional model of building 3. Source: author.

8.9 MASSING AND PLAN DEVELOPMENT

Figure 8.23 shows the initial placement of masses on the site. The masses at this stage explores the placement of separate structures on the site to house different functions.

A decision was made to condense the separate masses into a single building (see figures 8.24 and 8.25). The limited schedule of accomodation tends towards a single building, which limits the amount of entrance/exit points that would require supervision. It also allows building services to be grouped around a single point (service yard, sewerage pipes, electrical and plumbing connections). This is more efficient than having several connections.

The initial plan and form of the building was very condensed, resulting in smaller spaces inside the building. The next step was to expand these spaces, still considering the initial influences on the form of the building (see figure 8.26).

Figure 8.27 shows the development of the building mass from the sectional model in figure 8.15. The model had two separate buildings: the green roof extending over and the lighter tectonic structure. These were at odds with one another. This was solved by extending the green roof and wrapping it over the building mass.

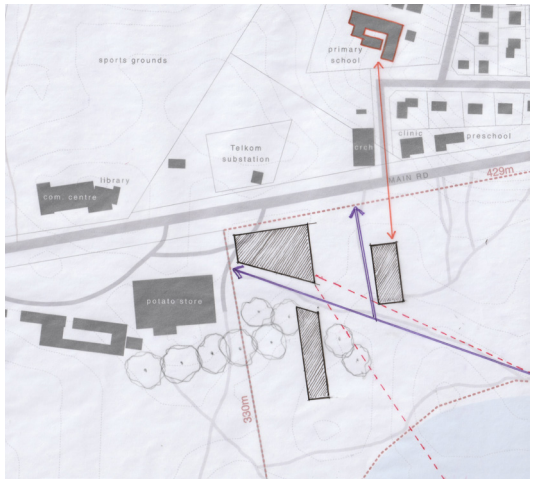


Figure 8.23:
Initial placement of masses on site. Source: author.

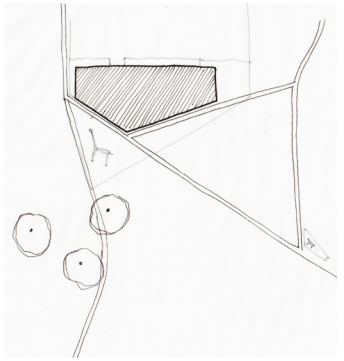


Figure 8.24:
Consolidated mass of building. Source: author.

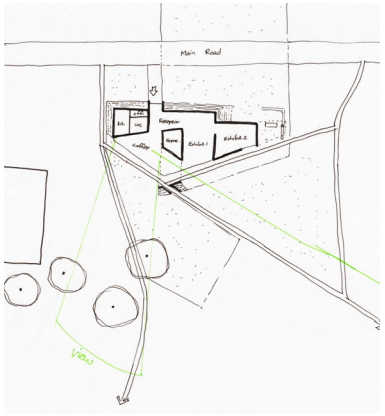


Figure 8.25:
Plan of consolidated building. Source: author.

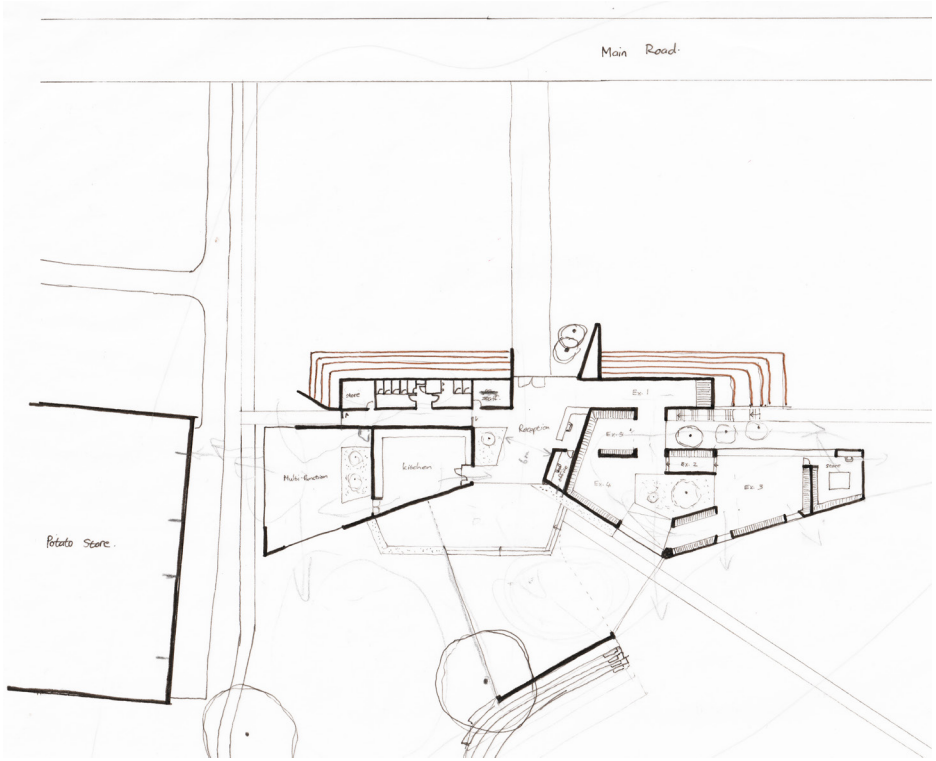


Figure 8.26:
Expanded plan. Source: author.

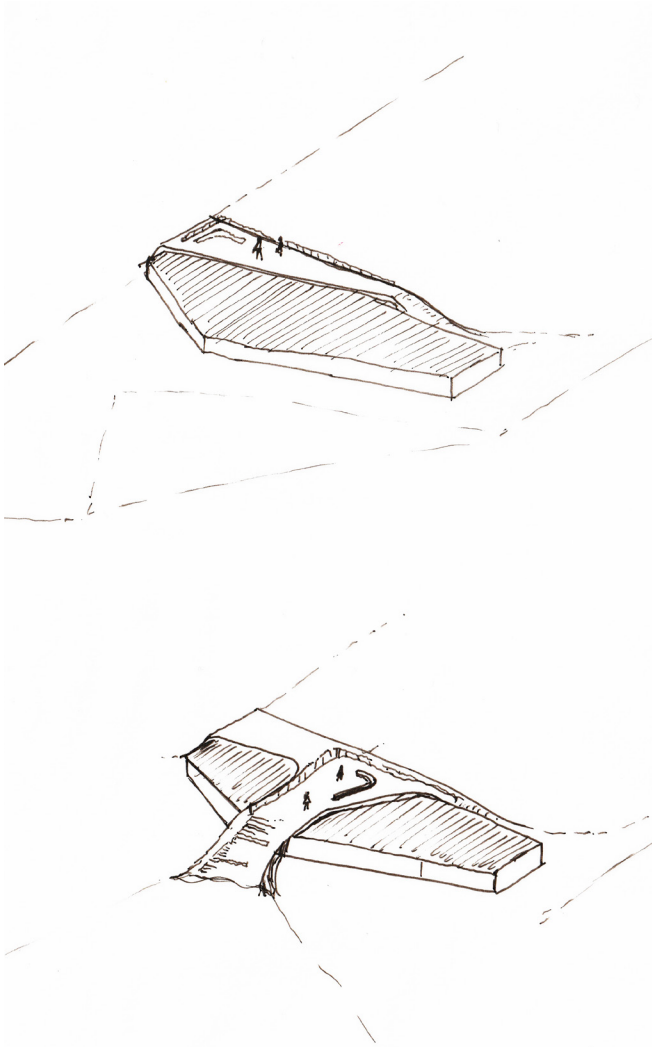


Figure 8.27:
Extending the green roof to wrap over the building. Source: author.

The above resulted in a building with the massing and geometry shown in figure 8.28. The geometry opens up the building to the road and also to the natural landscape in the rear. The trees, building and potato store aid in defining space towards around the building.

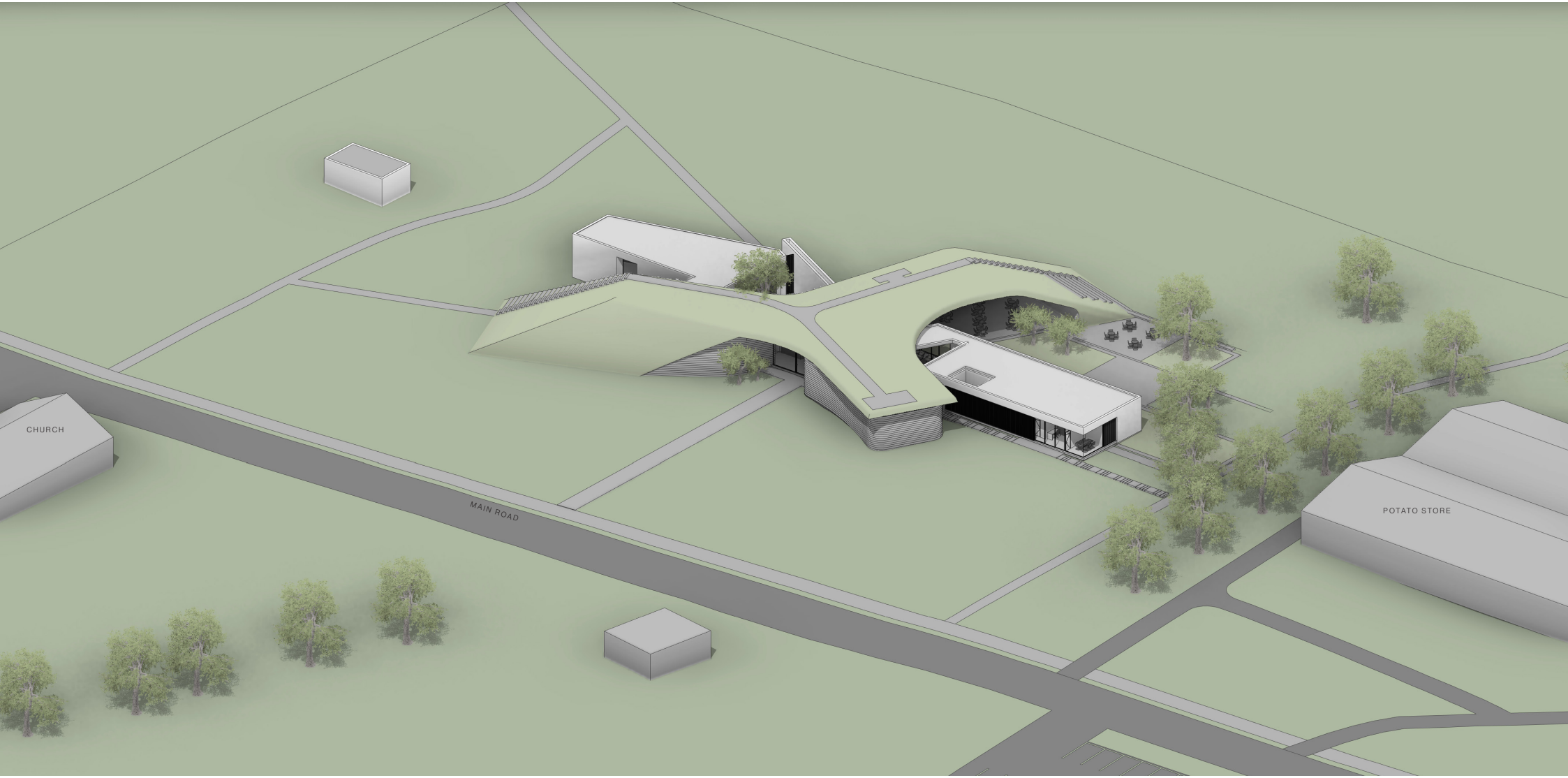


Figure 8.28: Axonometric view of the building. Source: author.

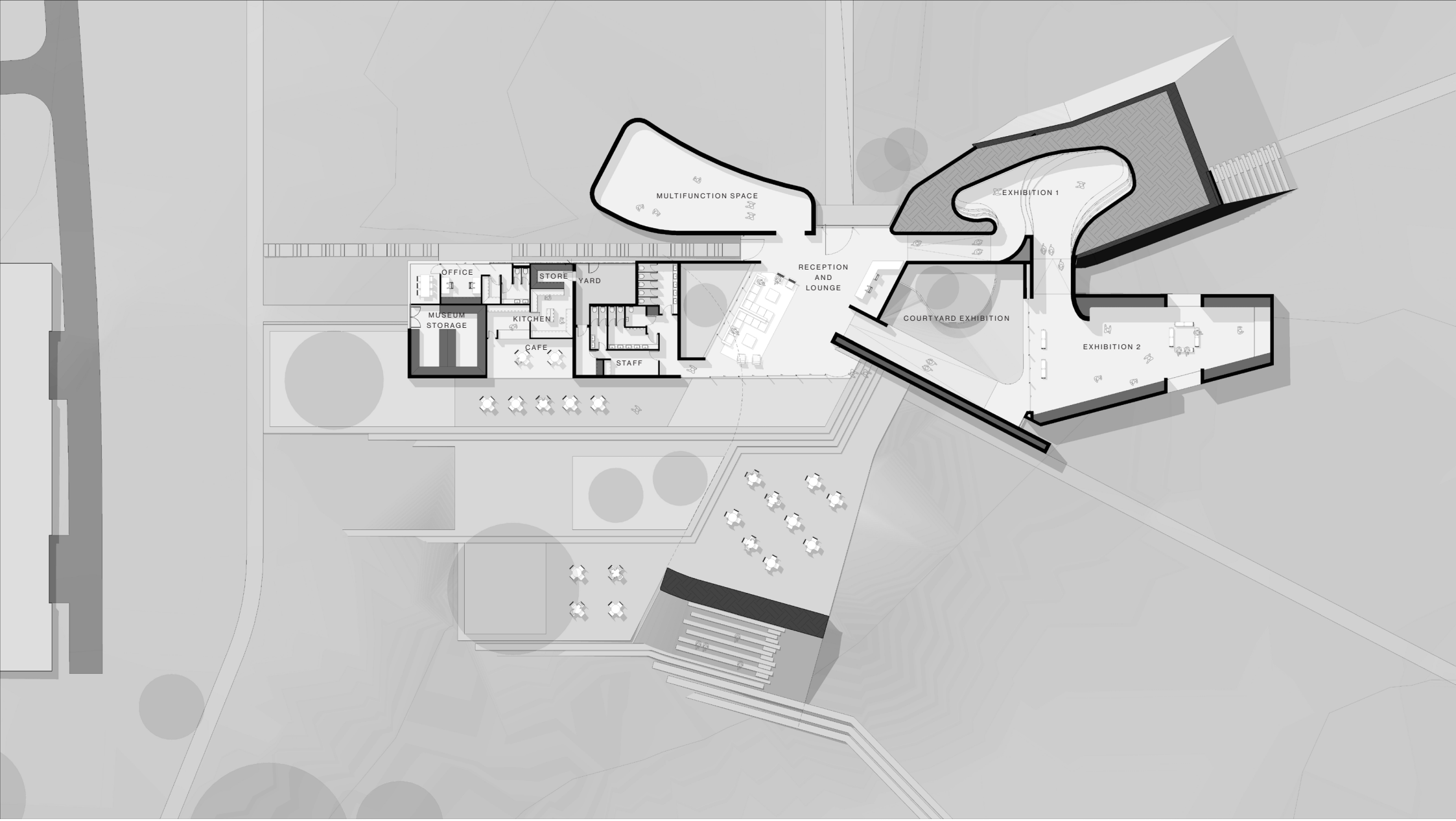


Figure 8.29: The plan above is from a point in the design process. Source: author.

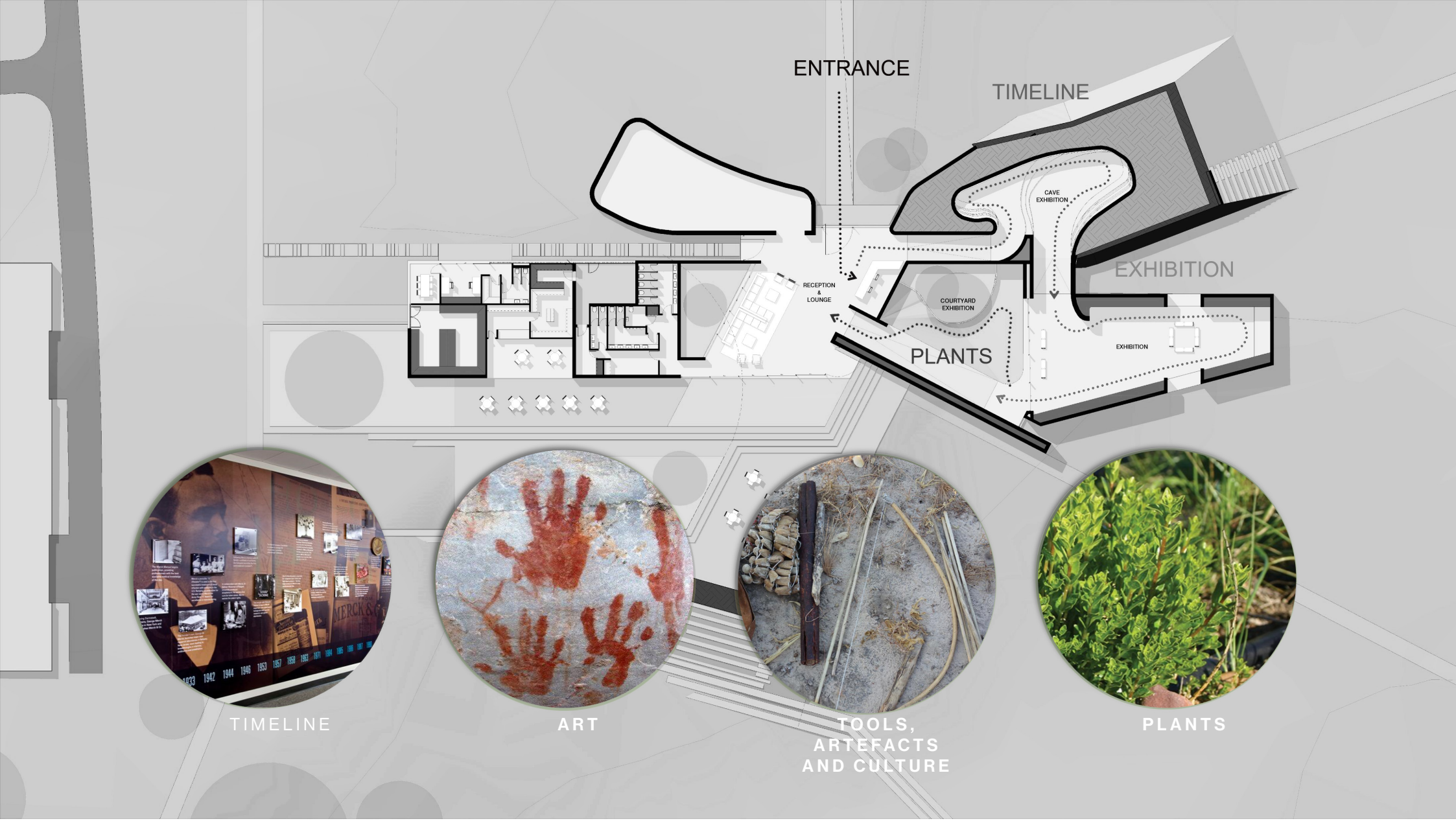


Figure 8.30: A breakdown of the exhibitions and spaces shown on the next pages. The first views are of the entrance, reception and lounge. From there, the exhibition is entered into a cave-like exhibition with a development timeline of Elands Bay and multimedia exhibitions. That follows into the main exhibition area where the art, culture and daily lives of the Khoisan can be explored. The final part of the exhibition is the courtyard where plants used by the Khoisan will be exhibited. Source: author.

Figure 8.31: Approach and museum entrance. Source: author.

Figure 8.32: Museum reception and lounge. Source: author.

Figure 8.33: Lounge in reception area. The stone wall accentuates a formalised pathway on the site with a view to the hill south of the site. Source: author.

Figure 8.34: The first exhibition space. A cave-like enclosure creates an experience where multimedia and sound can be used. Source: author.

Figure 8.35: The second exhibition area is more gallery like. A seating area and views to the landscape allows visitors to take a break from the exhibition. Source: author.

Figure 8.36: A view from the main exhibition space to the courtyard exhibition where plants associated with the Khoisan can be explored. Source: author.

8.10 DESIGN DEVELOPMENT

Reflecting on the massing, meaning and emplacment of the building raised a few questions about the appropriateness of the design:

1. The creation of an in-place building must comfortably settle into its surroudnings and create a space where people experience a sense of belonging. The high embankment along the main road was an imposing structure and may create an alienating experience for pedestrians while also separating the man-made landscape from the natural landscape rather than integrating the two.
2. The wrapping green roof had no real purpose other than creating an extension of the landscape into the building. While this is a design principle, I started questioning whether this was the appropriate response.
3. The green roof could potentially be accessible to people. However, the roof would not be visible from anywhere and it was not clear that it had to be a green roof.
4. While the wrapping green roof creates an interesting and complex expression, it does not successfully create a sense of arrival and place upon entering the town.

These critiques resulted in two things at this stage of the design process. The first was to develop alternatives to the green roof and the second was to consider and integrating the landscape design surrounding the building.

The first step to addressing this was to consider an alternative way in which the building can extent into both the natural and man-made landscapes. Also, a consideration was made to create a beacon within the town that would also create a sense of arrival. This is suited to the cosmic landscape found around Elands Bay, which is dominated by the horizontality of the ground and intense sky.

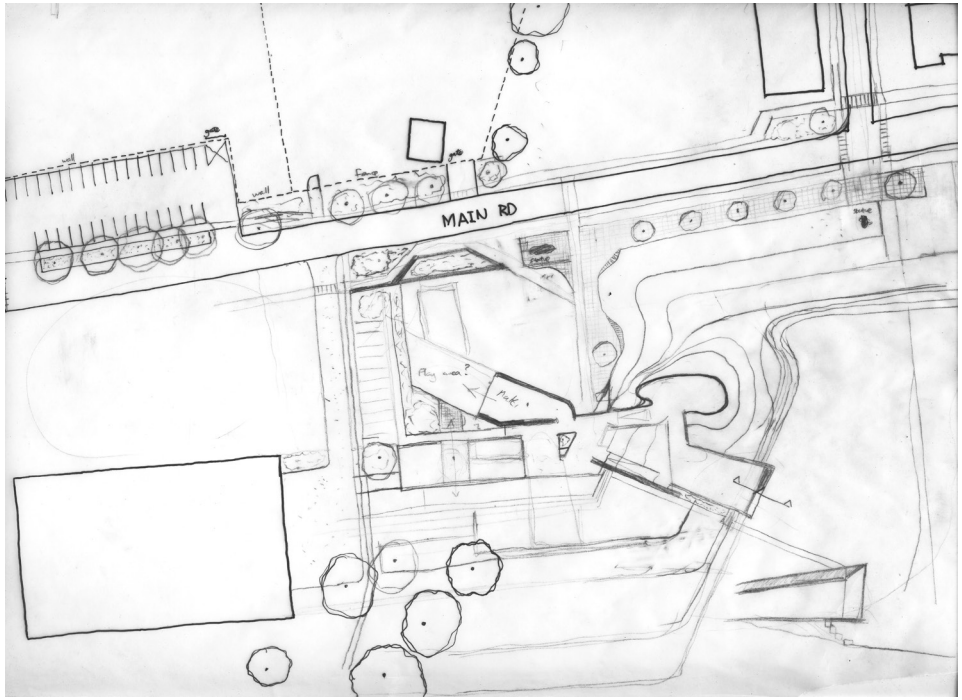


Figure 8.37: A plan diagram introducing landscaping to extend into and connect to the landscape. Pathways extend into the man-made landscape. Source: Author.

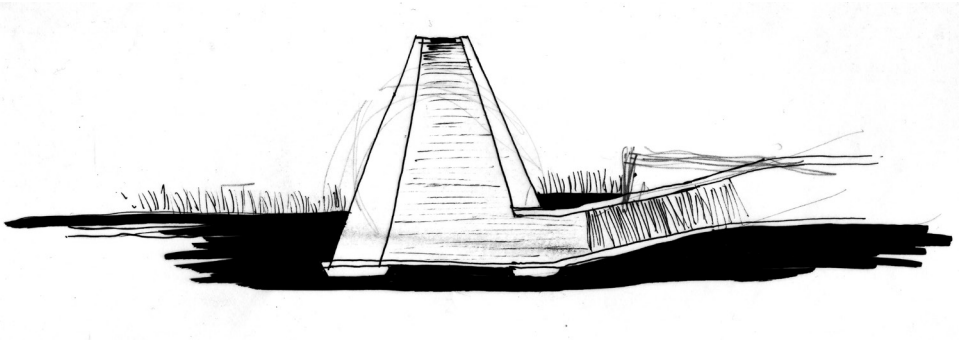


Figure 8.38: The exhibition space that was under the embankment was extended to become a beacon. Also, it was lowered into the ground. The depth was determined by the 1:12 slope on the ramp into the space. Source: Author.

The final version of the design developed from this where the green roof is removed completely. The extension into the landscape was achieved using a less literal interpretation.

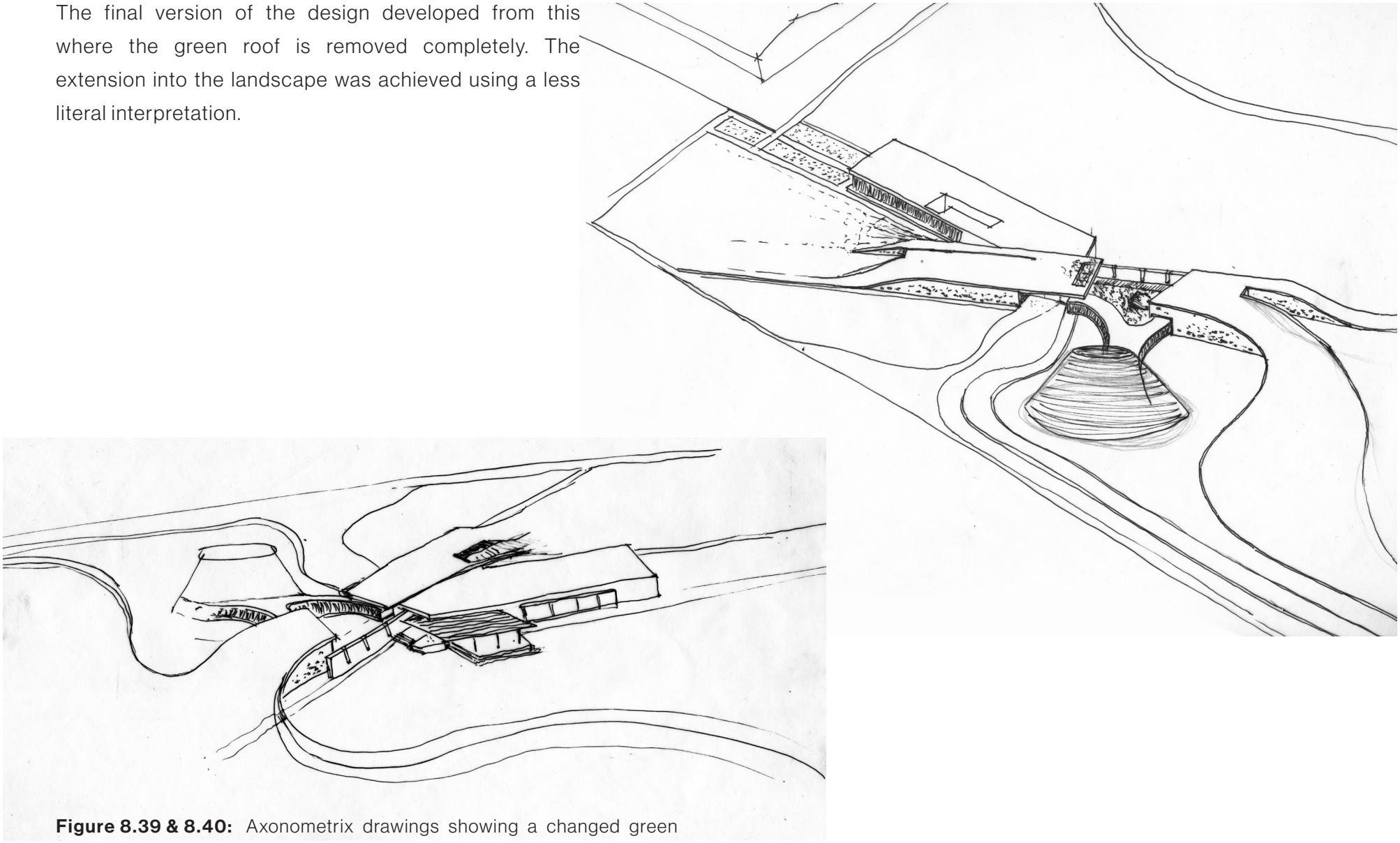


Figure 8.39 & 8.40: Axonometrix drawings showing a changed green roof structure that covers a smaller part of the building. Terraces also start forming extending into the surrounding landscapes. Source: Author.

9. FINAL DESIGN

The final design is inserted into the landscape next to Main Road in Elands Bay. This placement allows for the following:

1. The museum building becomes part of the built fabric of the town and creates a sense of arrival into the town that is currently lacking,

3. A redesigned pedestrian-friendly sidewalk creates a sense of place for Elands Bay residents that frequently make use of it,

4. The upliftment and creation of a public park that is directly accessible to more of the permanent residents of the town.

The placement of the building on the site is towards the north-eastern corner of the site results in the building acting as a threshold between the natural landscape to the south and the man-made landscape to the north.This position allows the building to incorporate elements from both the natural and man-made landscapes that define the town.

Terraces create a platform for the building on the threshold between the natural landscape and the existing build fabric. The form of the terraces is defined by the shape of the topography and creates a softer edge leading from the natural landscape to the buidling.

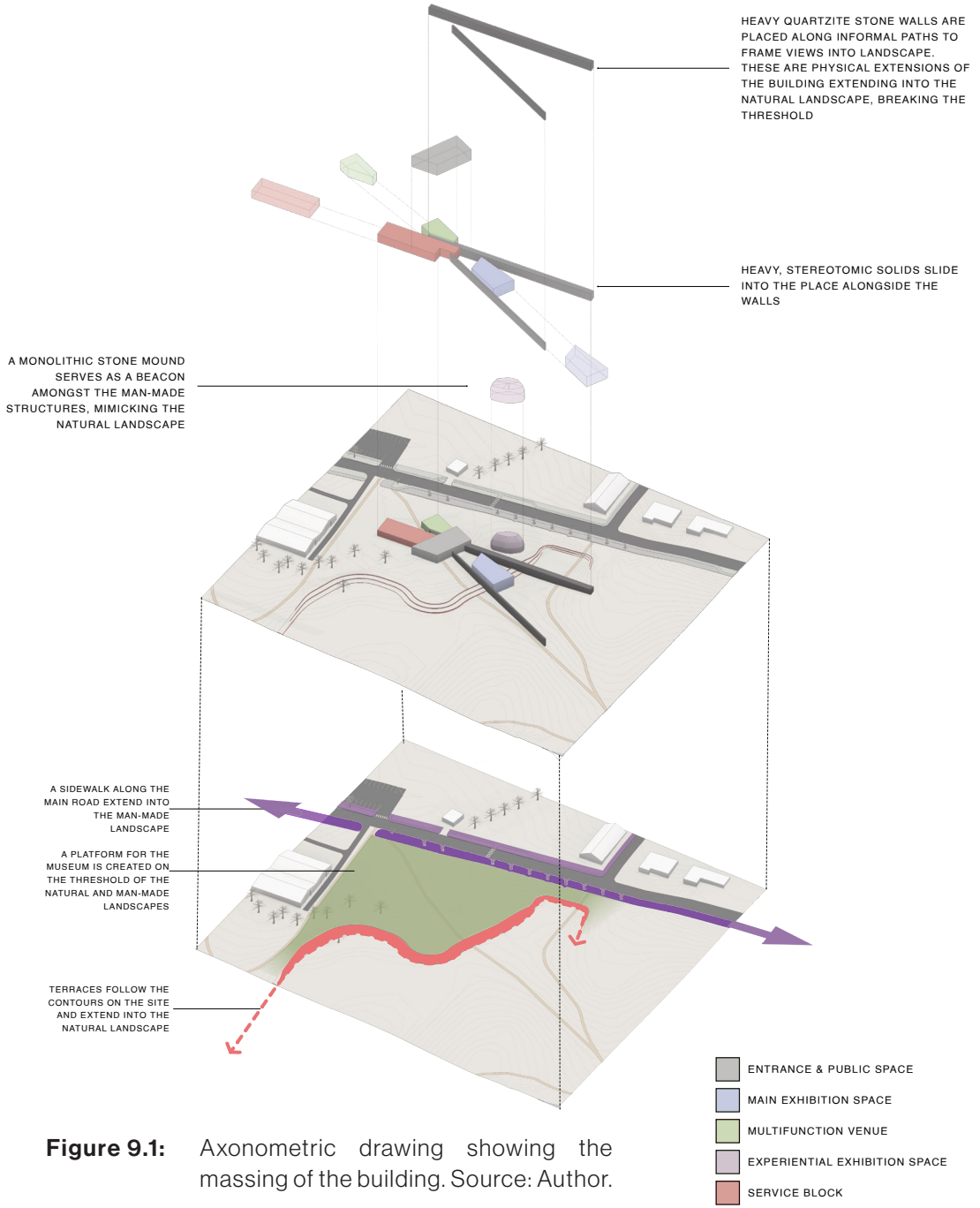


Figure 9.1: Axonometric drawing showing the massing of the building. Source: Author.

Figure 9.2: View when entering Elands Bay showing the landscaping, terraces and redesigned sidewalk. Source: Author.

The terraces ultimately define a public edge along the road with integrated seating and trees providing shading. This also defines the pedestrian path which leads to the entrance of the museum and extend further into the urban fabric of the town.

Solid stone wall masses then extend into the landscape from the platform along existing paths on the site toward primary views on the site. These provide a physical connection between the two man-made and natural landscapes by cutting through the terraces and threshold, resulting in the building becoming the connecting element of the different landscapes. From the interior of the building, these walls guide user's eyes towards specific views in the landscape.

The solid stereotomic building forms that relate to the cosmic landscape slide into place alongside these walls to define interior and exterior spaces around the building. These blocks respectively house exhibition spaces, services and a multifunction area. A single mass convers a central node, defining the main entrance to the building and providing space for the public functions of the building.

All the geometries mentioned above are single storey, lower building elements that extend horizontally accross the cosmic landscape.

The mound protruding from the terraces and landscaping mimics the cliffs and surrounding landscape and connects to the use and expression of art by the San. The San used art in the landscapes they dwelled in to orientate and connect themselves to place. The art was also used to give an account of their activities and beliefs. This meaning extends to the use of the interior space, which is an amphitheatre-like space that can be used to tell the stories of the San.

Figure 9.3: View framed by the building and accentuated by the solid stone walls. Source: Author.

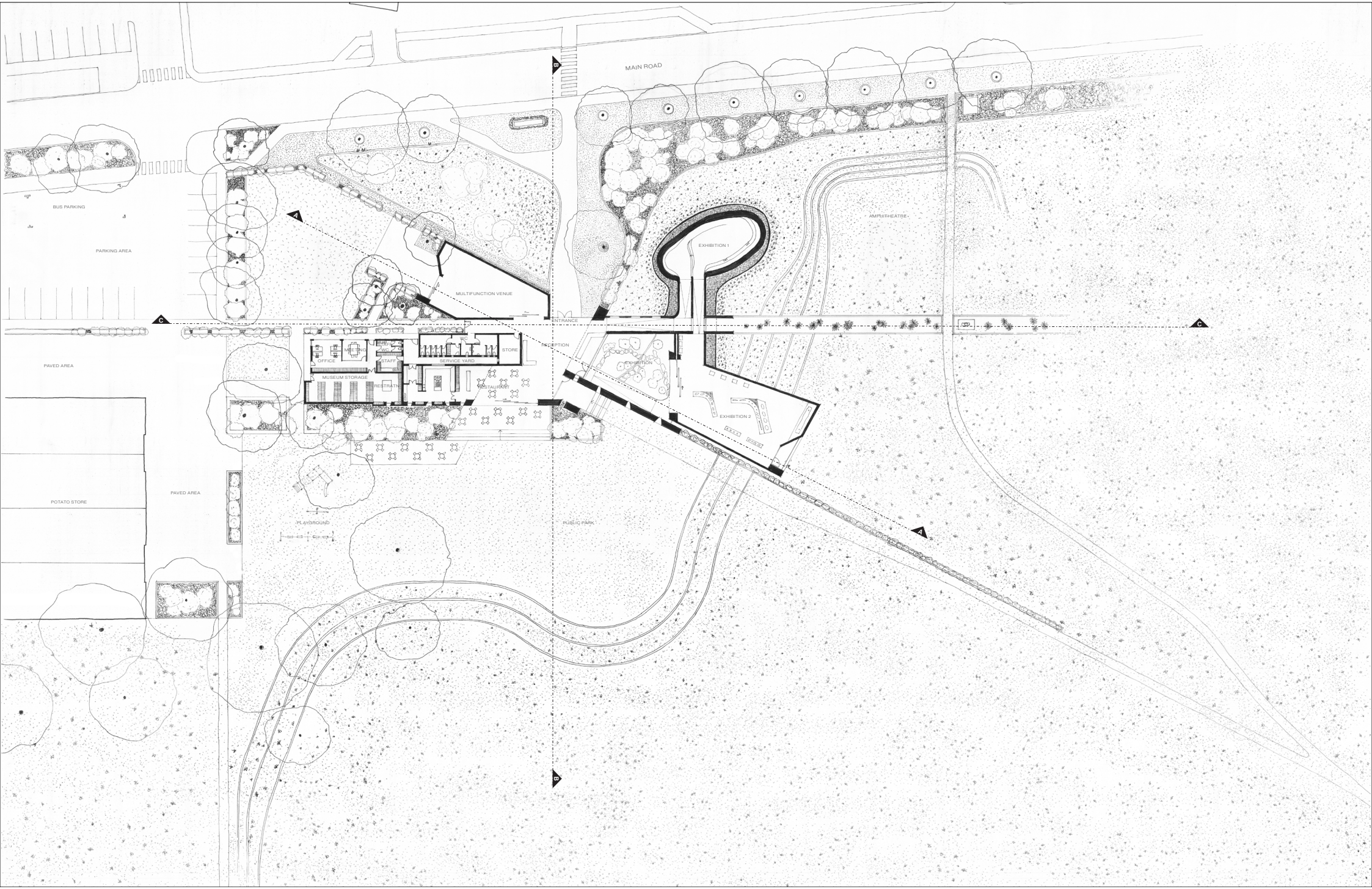
Figure 9.4: View down the entrance path of the building. Source: Author.

BUILDING LAYOUT

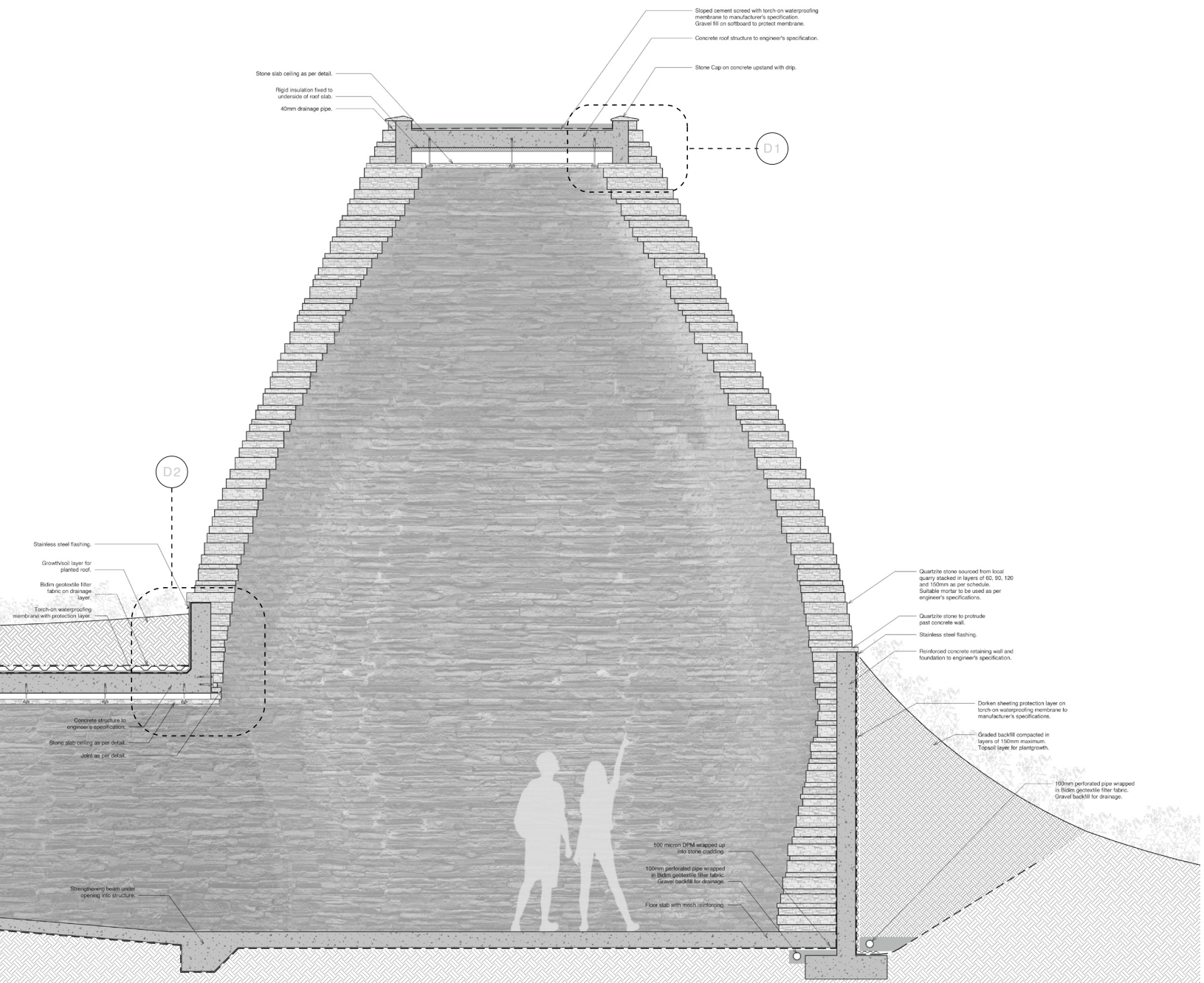
The entrance to the museum is created from a path leading in from the redesigned sidewalk. Natural planting and landscaping connects the experience to the landscape while the solid, stereotomic forms settles the building into the cosmic landscape. The simplicity of the forms visually connects the building to the surrounding buildings, while a single sculptural mound protrudes from the landscape as a beacon.


SCHOOL
AANDBLOM STREET
SERVICE ROAD
SPORTS GROUNDS
LANG STREET
LANG STREET
STRAND STREET
CHURCH
CLINIC
PRESCHOOL
COMMUNITY CENTRE
EXISTING PUBLIC PARKING
TELKOM
MAIN ROAD
SITE BOUNDARY
RAILROAD
BUS PARKING
POTATO STORE
SITE BOUNDARY
VERLORENVLEI RIVER
N
0 10 20 30 50 100 m

SITE PLAN



GROUND FLOOR PLAN



SECTION DD

Entering the museum leads directly to the reception area and a restaurant behind it that extends into a park created towards the rear of the building. The park makes use of existing and new trees on the site to create a pleasant, shaded area with a playground for children. The space is open and accessible to public and provides a recreational space for residents of Elands Bay.

Three separate blocks extend from the reception area, namely the exhibition spaces, a service block and a multifunctional space.

The exhibition spaces are designed to have a directed path starting and finishing in the reception area. This makes it easier for people to move through the exhibitions.

The first exhibition space is entered into down a ramp. A constant visual connection to the outside emphasizes the feeling of entering the ground. The space is designed to be experiential and cave-like. This hints to the dwelling of the San in the landscape and

Figure 9.5: The main exhibition space as windows maintaining a constant connection with the landscape. Source: Author.

caves, while providing a space where stories and fables of the San can be told. The space is also open enough that a curator can use it for more formal exhibitions if required.

The main exhibition space is entered directly from this space. It is organised into sections related to different aspects of the culture, life and beliefs of the San. The space is fairly generic providing for

Figure 9.6: The main exhinition space looking towards the exhibition courtyard. Source: Author.

future changes to the exhibition. Visual connections is maintained to an outside courtyard which contains an exhibition of plants used for medicinal and other uses by the San. The sliding doors that open to the courtyard provides a break from the other exhibitions.

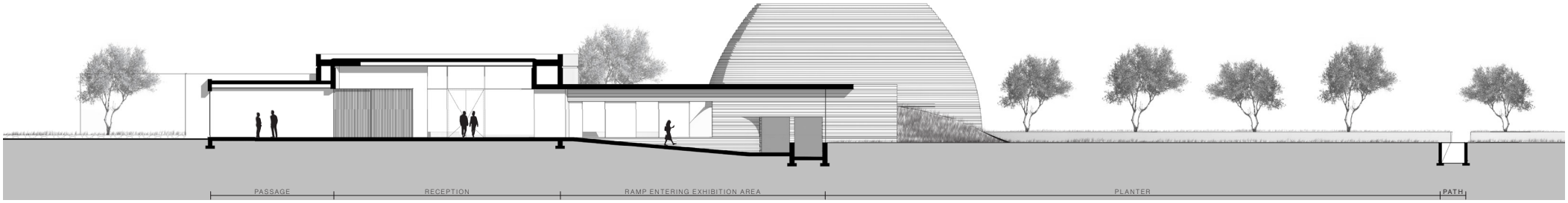
Windows to the landscape agian emphasizes and frames certain views into the landscape providing a continuous connection between the exhibits and the place the San dwelled in. This connection provides a pause to the otherwise densely populated exhibits.

A multifunction space sits directly off the reception area. The use of this space is not dicated, but examples of what it can be used for include public gatherings, private functions, specific exhibitions or holiday programs for children.

The final block that extends from the reception area contains service spaces for the museum.

Visual connections to the landscape are framed throughout the building. This is done using the solid geometry of the of the building envelope and using architectural elements that extend into the landscape. Within the monotony of the cosmic landscape, certain elements such is the ‘koppie’ in this view provide visual anchors that relates the building directly to the surrounding landscape.

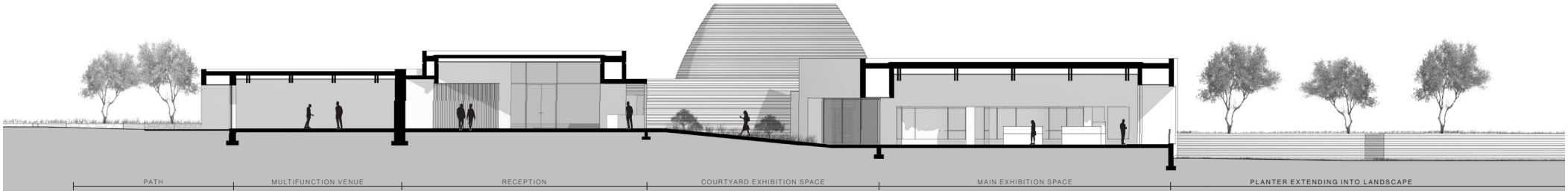
This also allows the artefacts that have been removed from the museum to be viewed in their original setting. While most of the context around the artefacts, stories and the way of life will never be viewed in their original, undisturbed context, this gices an idea of where the hunter-gatherers lived.



SECTION CC

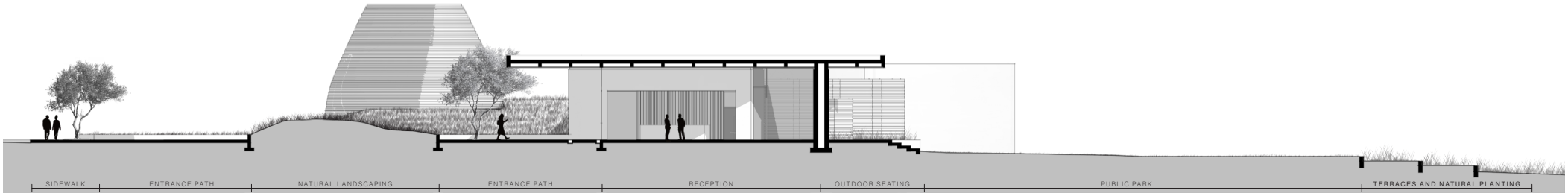
Figure 9.7: North-western view to the museum showing the paved area by the potato store being used for a market. Source: Author.

Towards the west of the site joining the public park is a paved platform next to the potato store. Incorporating the potato store into the park provides an alternative use to a seasonal building where markets, exhibitions and festivals can be held in the town . The choice to leave the potato store structure unchanged is deliberate to allow it to still be used for agricultural purposes.



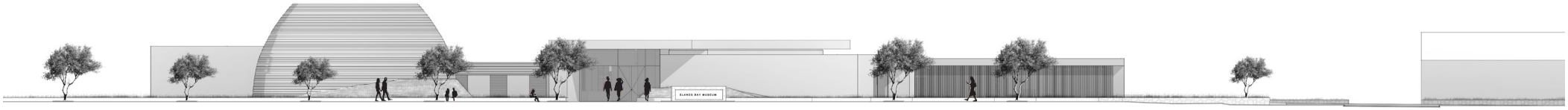
SECTION AA

0 5 10 20 50 m



SECTION BB

0 5 10 20 50 m



NORTH ELEVATION

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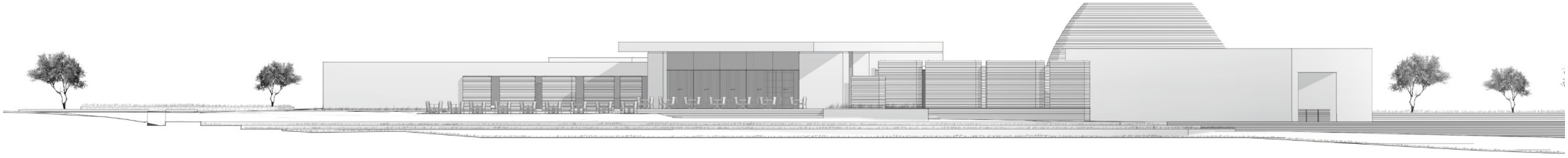


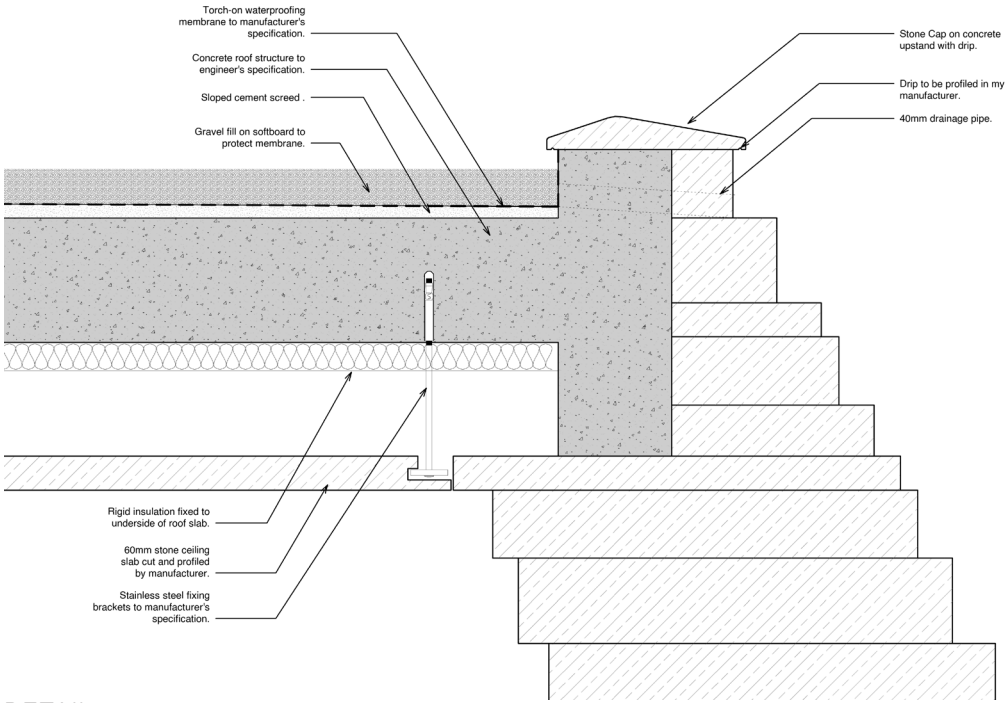
SOUTH ELEVATION

0 5 10 20 50 m

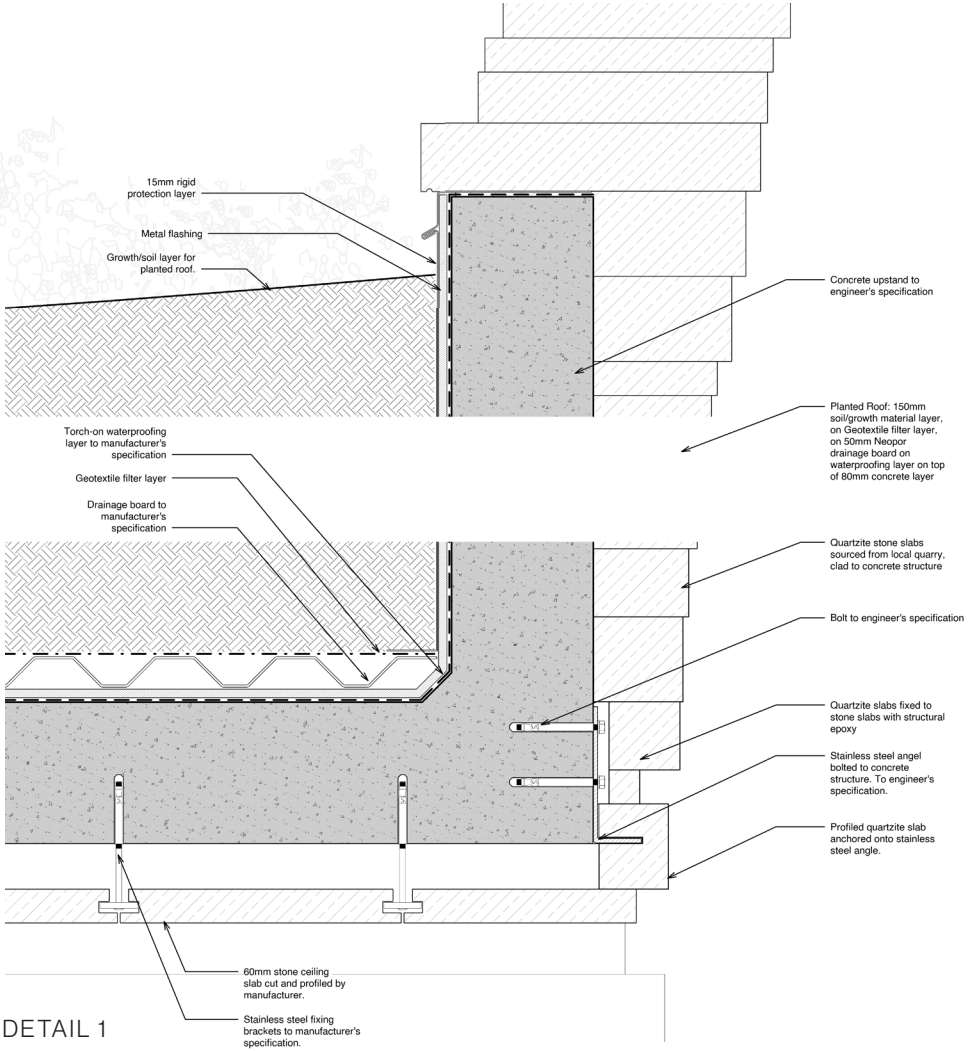
MATERIALITY

The materiality of the building is dictated by its surroundings and form. The solid quartzite stone used in feature elements can be found in the cliffs to the south of Elands Bay. Several quarries exist on private farms in the area where the material can be sourced. Limiting the use of stone to the elements that mimic and extend into the natural landscape emphasises the link between the building and surrounding natural features. The other boxes are constructed out of masonry with rough plaster, mimicking the other structures in the town. The public portion of the building also contains concrete columns, beams and a roof cast with quartzite aggregate to get a colour similar to the natural stone.

The combination of the materials provides a connection between both the natural and man made landscapes surrounding the museum.



DETAIL 2



DETAIL 1

10. CONCLUSION

This dissertation explored what in-place architecture means and how it influences the design of a museum in Elands Bay. The final design became a connecting element between the natural- and man-made landscapes. The purpose was not to redefine the natural landscape, but to create a building that becomes a natural extension of it while also uplifting the man-made landscape.

This was achieved by creating a park and pedestrian sidewalk for the Elands Bay community, and also by creating a sense of place and arrival into the town

The broader design concept to connects the historic sites to a centrally located museum, using some of the existing informal and formal paths on the site. This places the design into the existing fabric and lived culture of Elands Bay.

11. LIST OF ILLUSTRATIONS

Figure 2.7.5: Author. 2022. Elands Bay dunefields. Elands Bay, (Created June 2022).

Figure 2.7.6: Author. 2022. The river and estuary running through the town. Elands Bay, (Created June 2022).

Figure 2.8.1: Author. 2022. Elands Bay Cave. Elands Bay, (Created April 2022).

Figure 2.8.2: Author. 2022. Paintings in the Elands Bay cave. Elands Bay, (Created April 2022).

Figure 2.8.3: Author. 2022. Fishermen in Elands Bay. Elands Bay, (Created April 2022).

Figure 2.8.4: Author. 2022. Pathways in Elands Bay. Elands Bay, (Created June 2022).

Figure 2.8.5: Author. 2022. Road in Dunefields. Elands Bay, (Created June 2022).

Figure 3.1: Author. 2022. Baboon point. Elands Bay, (Created June 2022).

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