A Fisherman's Tale

A Fly Fishing Retreat and Hatchery
Mpumalanga, Dullstroom.



An investigation into the poetic translation of tension embodied in the relationship between man and nature

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This dissertation is submitted in partial fulfilment of the requirements for the degree M.Arch (Professional).

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Declaration of original authorship

I hereby state that the work contained in this document has not previously been submitted to meet the requirements for the M.Arch (Professional) qualification at this or any other tertiary educational facility.

Additionally, I confirm to the best of my knowledge that this dissertation contains no work previously published or written by any other person except where the necessary referencing has been provided.



Acknowledgements

First and foremost this dissertation is an instrument to glorify God through the talent and skills that I have been given. The main objective of the dissertation is to inspire architecture that will only enhance the world that was so beautifully crafted. This dissertation would not have been possible without the grace of God, the support of my family and friends, the lecturers at the UFS department of architecture and therefor I give them all the utmost sincere thanks. Special thanks to the lecturers of our department for their immeasurable amount of knowledge, input and support throughout this year.

NOTE:
In this dissertation I refer to “man and nature”’. Man, is an older way of writing, but I base a large part of my theory on the work of theorists from an era where this was not a problem. However, the term is used in the sense that Norberg-Schulz and Heidegger use it, and it does not imply that anyone is excluded by not using the term human/people etc.

Additionally all hand-drawn sketches incorporated into this document were drawn by the author, except where indicated differently, and will not be referenced

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Preface

"The Science of Architecture, followed out to its full extent, is one of the noblest of those which have reference only to the creation of human minds. It is not merely a science of the rule and compass, it does not consist only in the observation of just rule, or of fair proportion:

It is, or ought to be, a science of feeling more than of rule, a ministry to the mind, more than to the eye. If we consider how much less the beauty and majesty of building depend upon its pleasing certain prejudices of the eye, than upon its rousing certain trains of meditation in the mind, it will show in a moment how many intricate questions of feeling are involved in the raising of an edifice; it will convince us of the truth of a proposition, which might at first have appeared startling, that no man can be an architect, who is not a metaphysician. To the illustration of the department of this noble science which may be designated to the Poetry of Architecture."(1888:1-2): the poetics of architecture.

The poetics of Architecture as referred to by John Ruskin in his book The Poetry of Architecture illustrates and alludes to an ideology of what the creation of architecture should be: a "science of feeling" and a "ministry to the mind". (1888:1-2)

This ideology will serve as a theoretical backbone in the attempt to understand and interpret the poetic qualities of fly fishing (the angler's journey) in a contemporary investigation of an age old engagement – A osculating tension in the relationship between man and environment.

This dissertation is a comprehensive effort to propose an intervention that draws from the – stories (narratives), mysteries, poems, related precedents, subjects, thoughts and illustrations – in the ancient engagement between angler and water (trout). It is an attempt to amalgamate and address the inherent tension that exists between build form and the natural landscape.

The ritualized process of fly fishing will be analyzed and abstracted to formulate a translation of the fly fishing process, in order to create a set of ordering principles, rooted in the ritualized understanding of the angler, that will govern how the multiplicities are gathered, movement within the landscape and the way built form will be orientated.

A further attempt towards a gathering of a "existential foot hold" (Norberg-Schulze,1980:5) and a method of 'unconceiling' the deep rooted nature of ideas, is discovered in an in-depth parallel with the fly rod. The fly rod has been a long standing companion in the endeavor to associate architectural investigations with fly fishing concepts.

The fly rod crafted from nature, wielded by man overcomes the threshold between man and nature by connecting the angler and water through a rhythmic osculation between the tensions embodied in the two. The fly rod works because of this tension. The line is held in place and drawn into tension by the rod. The rod is brought into constant contortion as it embraces the path of the line. Both elements static apart, but vibrantly dynamic in engagement. Whithout the rhythmic engagement between the two ,tension dissipates and the poetic ingagement is lost.

The fly rod in a continual tension – is as Ruskin's ideology alludes: a call towards the poetic.
The metre cannot be broken.

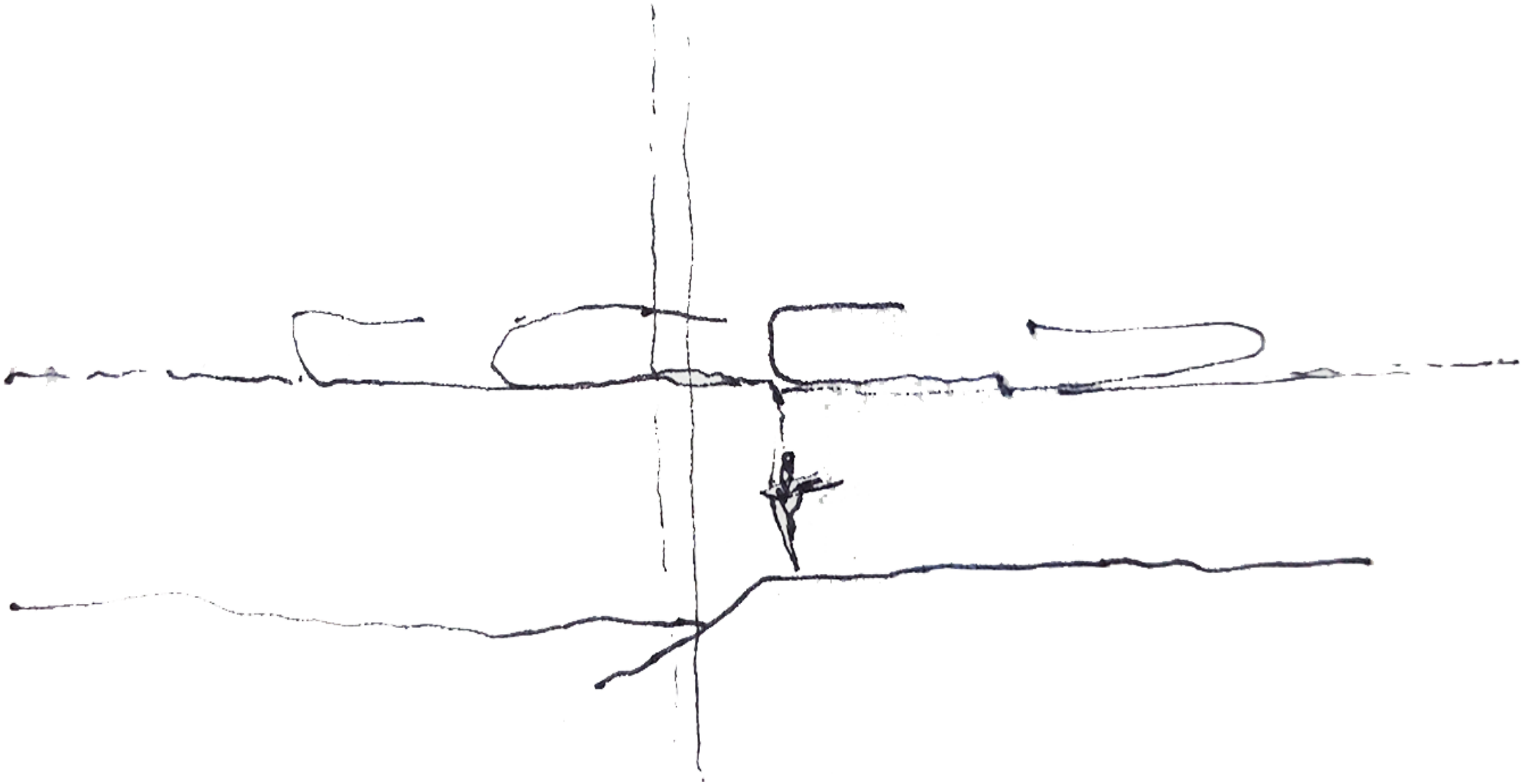


Figure 1: The osculating tension between man and nature.

Introduction

A fly fishing retreat and trout hatchery in Dullstroom, Mpumalanga

This dissertation is designed around understanding the ideology of the poetics of architecture and how it becomes a body of knowledge that alludes to a method (to be) used to represent the tension embodied between the science of rule and the compassion of feeling. The tension can also be described as the dialogue between thoughts and feelings. The poetics of architecture thus becomes a means in which to understand and interpret or translate, the poetic qualities embedded in (the act of) fly fishing and will create an understanding of how to address the osculating tension embodied in the relationship that exists between man and nature (built form and the environment).

I use the term osculating, a verb that describes the way two lines touch or intersect. This accurately describes the way the fly fisher's cast has to touch the water.

This dissertation includes an in-depth analysis of fly fishing and the metaphors encapsulated within the art. This is done to gain a greater understanding of the process of fly fishing and how the act of fly fishing becomes something that bridges the tensions between angler and water, and in the same sense, the building and the natural landscape.

I engage with the design process within this osculating tension by abstracting the fly rod (as a mechanism) to formulate a method as a metaphor to understand how to address the tensions apparent between built form and natural landscape. When building within the natural environment, the architect, similar to the flyfisher, acts as a translator, engaging in an act that links mind, body and landscape.

By studying the fly rod and how it works (as a functional tool, but also a metaphor for design) a method of architectural application will be formulated. The method is based on the continuous stages of how tension builds; moments are created; tensions break down and eventually how this tension is translated into place/event. These notions will be used as inspiration to develop a theoretical approach to support the design of a dwelling/institution (fly fishing retreat and trout hatchery) within the natural landscape and context of Dullstroom, Mpumalanga, South Africa.

Research projects by Gareth Butler will be analysed to gain a greater understanding of the town, its history, culture, architecture and the impact of fly fishing on the previously mentioned. The theories of Martin Heidegger (1971), Christian Norberg-Schulz(1963, 1980, 1981, 2000, 1975), John Ruskin (1888), Tadao Ando (1991) and Hendrik Auret (2015, 2019) will be used to inform design decisions and contextual orientation to enable the arrival to an accurate and responsible architectural response within the Dullstroom landscape.

When in the Dullstroom landscape, it becomes apparent that the governing aspect that adds to the 'Phenomenology of architecture' can be identified as the relationship between earth and sky (dealing with the relationship between human-made and natural. This is described by Heidegger and Norberg-Schulz (1979:18) and discussed by other phenomenologists as the Fourfold. The concept of "phenomenology" as described by Norberg-Schulz is dictated by "the Spirit of Place" or ***"genius loci"*** (Norberg-Schulz, 1979:18) which could be identified in this context and will add layers of complexity to this natural landscape.

As a result, the theme of tension between earth and sky, the osculating movement of humans within it, and how one can address this tension (between man-made and natural) will be used throughout this dissertation as a guideline to aid the design and reach an appropriate final proposal.

Introduction

Thus this dissertation is a translation process:

The translation of fly fishing into built form:

- Seeing that there are connections between how the fly rod bridges the tensions between the angler and water.
- Seeing that if the building 'becomes a fly rod', that it could do the same in addressing the tensions between itself and its natural landscape.
- Thus this dissertation in-its-entirety and at its core, is an act of translation
  - A translation of fly fishing.
  - A translation of building.
  - A translation of poetics.

How can an investigation of the tensions embodied in the relationship between angler and nature be used to poetically translate the angler's world of life into built form, in a means to address the tensions that exist between the built form and the natural environment?

A translation of the poetics encapsulated in the tensions between (Fly Fishing) angler and water and (Architecture) building and landscape.
Thus, this dissertation is an attempt to illustrate how the act of fly fishing and everything it encompasses can be translated into built form, by drawing reference to the relationship, the angler has with the water and the tensions that exist in this relationship. This relationship becomes a metaphor in how to address the way we build in the natural landscape and a tool to understand how the tensions between built form and the natural landscape can be addressed.
The Poetics of architecture becomes the voice in which this translation will be told.

Aims and objectives

- To poetically translate fly fishing into built form by means of understanding fly fishing and what it encapsulates.
- The design of a building becomes a mechanism that addresses the inherent tensions that exist between the built form and the natural landscape.
- To implement an intervention that will create food security and social and economic growth in Dullstroom and uplift the existing community by providing:
  - A sustainable source of income,
  - Education on trout farming that will empower the local community with knowledge of the trout farm ing process and the economic advantages linked to this industry.

Limitations

For the purpose of this architectural translation the field of understanding will be limited to the body of knowledge represented in fly fishing. Because the proposed project is a fly fishing retreat and hatchery and therefore will not entail the understandings of knowledge embodied in other forms of angling. These other forms of angling and the knowledge associated with it, will become obscuring to the understanding and translation of fly fishing into built form.

Project Rationale
A fly fishing retreat and trout hatchery in Dullstroom, Mpumalanga

The investigation of this topic began when two passions collided; that for fly fishing on the one hand and that for architecture in the natural landscape, on the other. The combination of these areas of interest along with the possibility to address the potential positive impact on a social, economic and cultural level, through a trout hatchery and fly fishing retreat, served as inspiration for the design that could influence the local community of Dullstroom.

The idea of designing a fly fishing retreat and hatchery came to life in 2014 during a visit to Dunkeld Country Estate and Trout farm in Dullstroom, Mpumalanga but only became feasible as dissertation topic during a fly fishing expedition to a farm located 6 km outside of Dullstroom in June 2018.

That June, I found myself fishing the farm dams and river for the first time. Before this experience, I had only heard about these fabled dams with their healthy rainbow trout and had only seen photographs of the magnificent river gorge and dams. I did not realise the great potential of this section of the river and dam for a design intervention until I stumbled upon it, quite by accident. Since the discovery of the farm and its almost untouched landscape, the idea of designing a fly fishing retreat and hatchery in that specific place began to grow.

After discussing the prospect of a fly fishing retreat and hatchery with the owner of the farm, it became apparent that there was both a need for the establishment for food security in the area and potential to empower the community by involving them in such a project.

In addition to the rationale for this proposed project, I was interested in how one could address the tensions that exist between human-made (the human as an angler) and the natural environment (nature as trout) when building in the natural landscape by relevantly attempting the translation of the angler's way of life (being) into built form.

In addition to this, the fly rod and its capacity to bridge the divide (tension) between the angler and the water also became of interest to me, as it has been a lifelong partner of mine in the search for a bar of silver (trout).






Project Rationale

A fly fishing retreat and trout hatchery in Dullstroom, Mpumalanga

Food Security	Community Empowerment	Community Education	Fly Fishing Ecotourism












The Rainbow Trout

CHAPTER 1
POETIC UNDERSTANDING OF THE DWELLER
Client

The proposed client for the Fly fishing retreat is a private investor; Mr Mitch Marescia. He is the sole owner of the farm and will be the sole investor in the proposed fly fishing retreat and hatchery. Mr Marescia will act as the founding director for the newly proposed Fly fishing retreat and hatchery and will provide the funding to the project. He will take responsibility for marketing, financial management and the maintenance and upkeep of the project.

The intervention will attempt to create a unique fly fishing retreat that is divided into four sub- divisions:

- Educational
- Entertainment and commercial
- Accommodation
- Agricultural

Educational

The introduction of an educational element to the retreat: where visitors and the people from the community can learn more about trout and trout farming as well as sustainable methods of farming. This division of the retreat will aim to empower the local community by supplying the community with a means to invest in their futures and enable the people to be able to grasp a greater future. In this way translating knowledge into livelihoods.

Entertainment and commercial

This division of the design will encompass the Fly fishing aspect of the retreat. Dullstroom is recognisized as South Africa's premier fly-fishing destination and the farm – with its two well-stocked still fresh water dams and river– will give visitors the chance to experience this for themselves. The cool waters and climate provides ideal conditions for trout and establishing a hatchery as is proved by surrounding estates.

Accommodation

This subdivision of the retreat will entail the design of accommodation units that will be used by the visiting fly fishermen and their families. The design parameters for the gestalt will respect the natural landscape and will attempt at creating a harmonious union between the key challenge, the tension between man-made and nature on the site.

Agricultural

In the following division, a trout hatchery is proposed. The function of the proposed hatchery will be as follows: The hatchery will spawn and bread brown and rainbow trout in a more organic and natural method of breeding to release trout into the existing dams and river system. Attempting to create a more sustainable trout population that could ensure that fly fishing and the community benefits thereof can be sustained for generations to come.

Additionally, the trout, as well as the eggs spawned from the hatchery, will be exported to various farms as a secondary form of income. The hatchery will also be used to keep the dams and river on the farm well stocked and in doing this, the expenses regarding stocking are eliminated. Another client of the hatchery will be local and commercial restaurants and fish wholesalers across the country. The hatchery will also aid the educational division of the retreat as the participants can take part in and have a hands- on experience in trout farming and aquaculture.

ACCOMMODATION AND BRIEF

Proposed accommodation list:

Educational
Community empowerment

Foyer
Lecture room
Storeroom
Exhibition space
Toilets
Office
Parking

Entertainment and
Fly Fishing

Two dams
River
Fly fishing shop
Jazz Bar
Restaurant
Reception
Storeroom
Slaughterhouse

Accommodation

Cottage units
Ablution
Kitchen
Lounge
Bedrooms
Parking
Reception
Bar
Restaurant
Gatehouse
Office

Agricultural (hatchery)

Office
Juvenile building
Broodstock building
Filtration room
Pump room
Oxygen room
Generator room
Food storage storeroom
Electrical room

Staff requirements

Educational
Community empowerment

Manager
Teaching staff
Cleaning staff

Entertainment and
commercial Fly Fishing

Manager
Receptionist
Kitchen staff
Bartenders
Cleaning staff
Restaurant staff
Gate house official
Manager
Fly fishing guides
Shop Attendants

Accommodation

Manager
Receptionist
Kitchen staff
Bartenders
Cleaning staff
Restaurant staff
Gate house official

Agricultural (hatchery)

Manager
Aquaculture specialist
Locals educated in aquaculture to manage hatchery
Support staff
Trained technicians
Packing staff
Driver
Receptionist
Cleaning staff
Slaughter house

Staff requirements

ACCOMMODATION AND BRIEF

Hatchery The process of farming fish:

At this point, it is essential to understand the entire process of breeding trout to design a building that accommodates this process tn all aspects.

An illustrative description and summary of the processes in the hatchery.

Processes:

1. Capture mature fish (both males and females) (cocks and hens)
   5 hens and 5 cocks

2. Hens stripped of their eggs: Eggs go into egg store, which needs to be under 14 ˚C immediately.

3. Cocks stripped for their milt: The milt is stored separately and also needs to be under 14 ˚C im mediately.

4. Eggs and milt mixed in a container (Cold water below 14˚C).
   Fertilisation takes place.
   During this process water hardening will take place. Eggs will grow 20%
   After 48 hours eggs reach eyed stage (sign of life).[Fertilised and non-fertilised, bullets]



Figure 2: (du Preez, 2014: 43, 44)



Figure 3: (du Preez, 2014: 43, 44)



Figure 4: (du Preez, 2014: 43, 44)

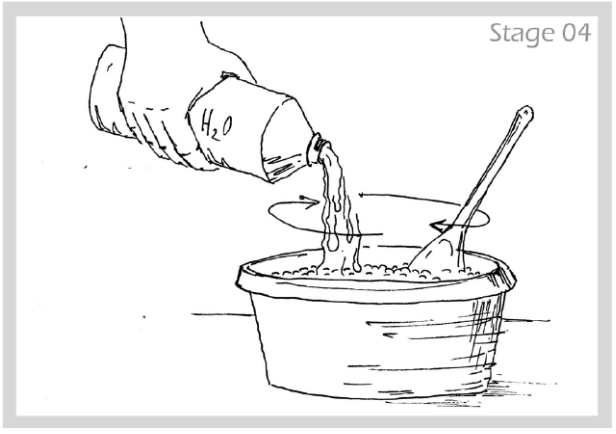


Figure 5: (du Preez, 2014: 43, 44)

5. Fertilised eggs go into container where they are rinsed in povodine solution to kill bacteria.

6. Eggs then checked for any unfertilised eggs.
Fertilised eggs are counted.
Eggs go to incubation chambers.

7. Three –four days, eggs hatch. At this stage they are known as sack fry.
Kept in incubation chamber until they absorb their sacks (2-4 weeks)Fry that have not ab sorbed their sacks, are removed.

8. The hatchlings are now called Fry.
Moved to early rearing ponds till they weigh 15-20 gr. and are 25-30cm in length.
They require feeding at 15min intervals.
During this stage their health is continuously monitored and they are weighed to determine if their diet is correct.

9. When Fry reach size 75mm in length and 80- 90 gr. (Fingerlings)
Moved to advanced rearing ponds.
Fed by feeding schedule till they reach par size.
Takes 4-5 months to become par (150 mm)

10. Par then moved to grow out ponds.

11. As the trout grow bigger, they are moved to bigger grow out ponds.

12. Once the fish are the desired size (0.5kg) (8-12 months) they are removed and shipped or released into the dam system.

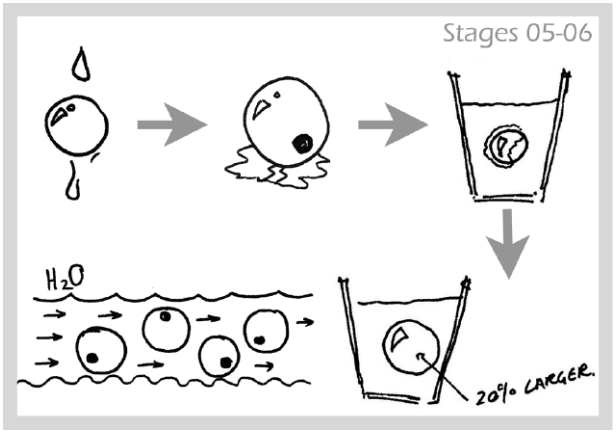


Figure 6: (du Preez, 2014: 43, 44)

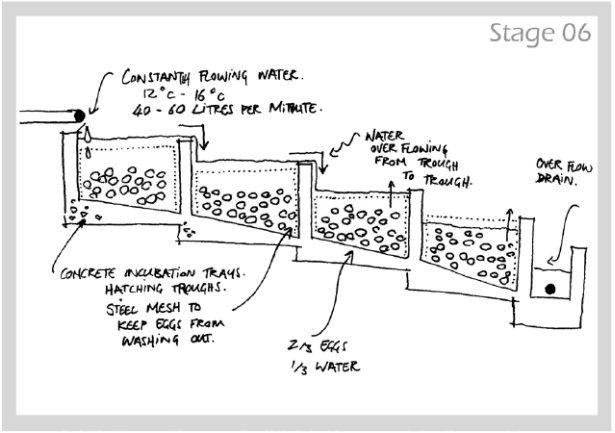


Figure 7: (du Preez, 2014: 43, 44)

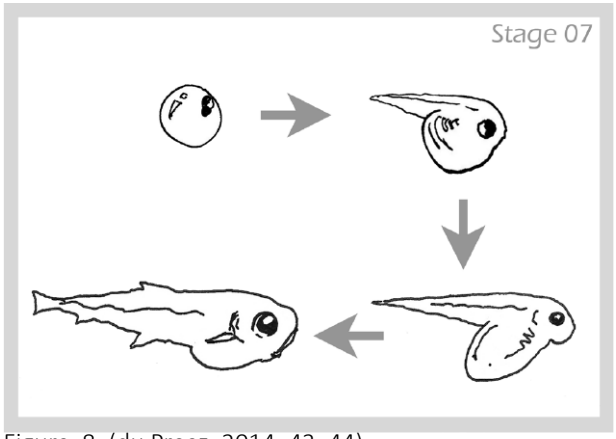


Figure 8: (du Preez, 2014: 43, 44)

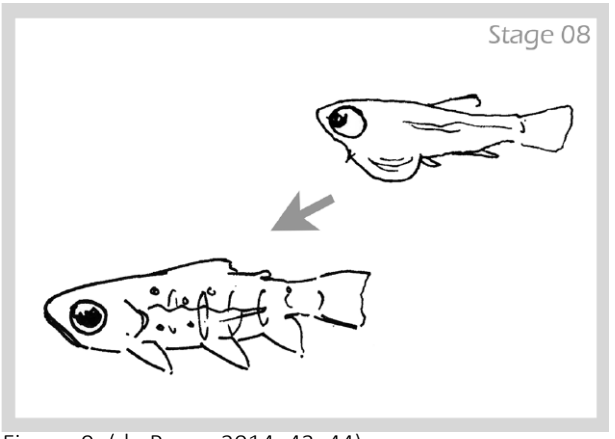


Figure 9: (du Preez, 2014: 43, 44)

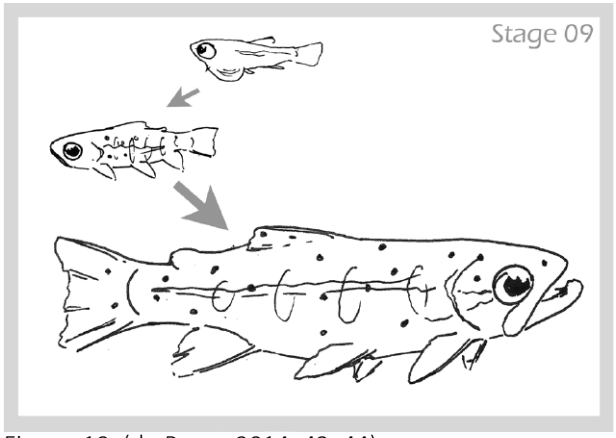


Figure 10: (du Preez, 2014: 43, 44)

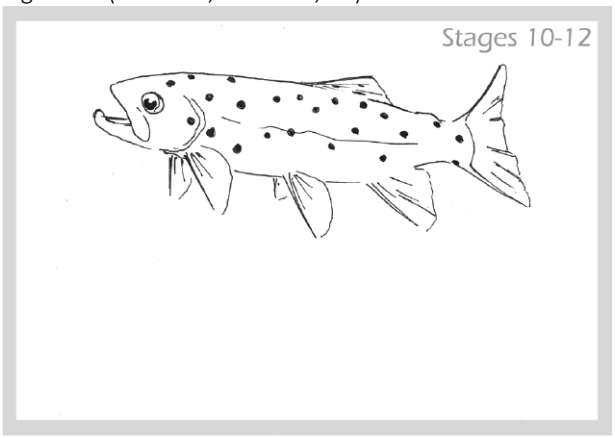


Figure 11: (du Preez, 2014: 43, 44)

Stages 1 – 6 happen on the top floor of the proposed Hatchery.

Stage 1:

The eggs are delivered to the hatchery in sealed polystyrene containers. These containers are taken to the delivery shaft located on the floor below the ground floor. Here the containers are hoisted up into the rehydration chamber by a mechanical lift.

Stage 2:

The containers are then moved to the allocated packing station where a staff member will remove the eggs from the container and place them in the rehydration stalls.

In the rehydration stalls the eggs are rinsed in a povodine solution to kill any bacteria. After this they are rinsed in clean water trays adjacent to the rehydration stalls.

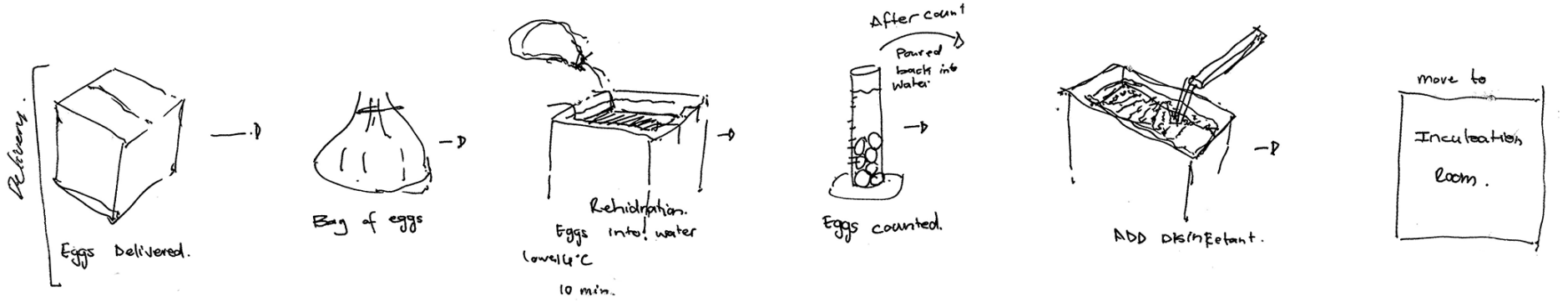


Figure 12: Delivery to incubation process

Stage 3:
The next step is to fertilize the eggs. In the fertilization process the eggs are placed in a container containing cold water (14°C) and milt from a cock (male trout) is added to the water to fertilize the eggs.
During this time water hardening will take place and the eggs will grow 20% in size. After 48 hours the eggs will have reached the eyed stage which marks the beginning of life inside the egg.

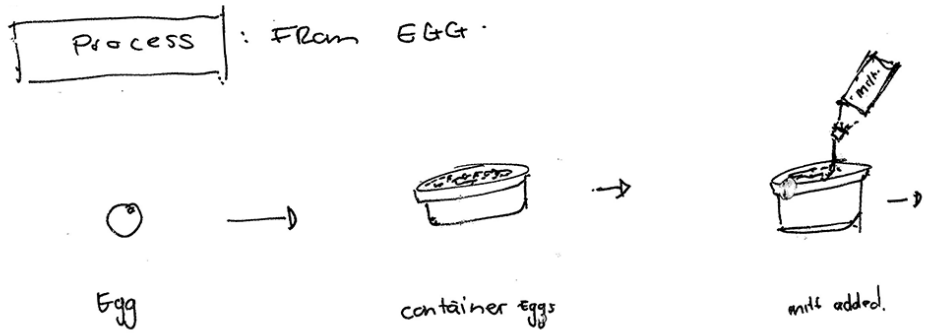


Figure 13: Fertilization process

Stage 4:

The eggs are then checked for any unfertilized eggs. These are called bullets and appear white in colour; they are removed from the healthy, fertilized eggs and discarded. The healthy eggs are then moved to the counting station and counted to determine the correct egg to water ratio for the incubation trays.

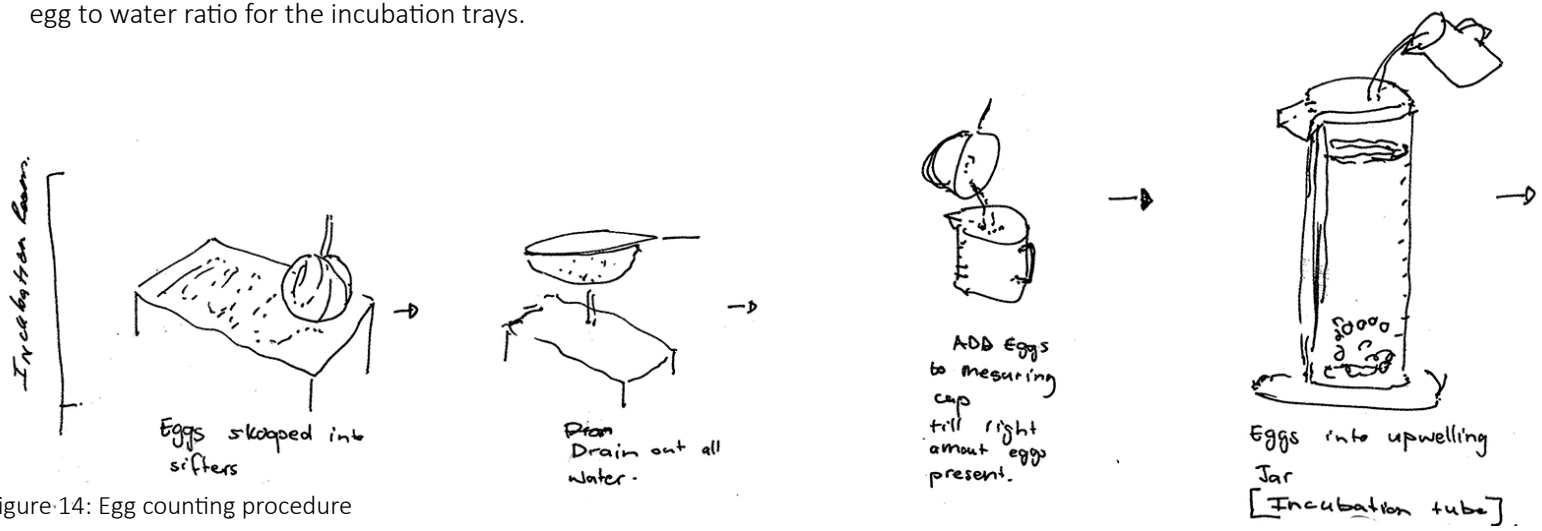


Figure 14: Egg counting procedure

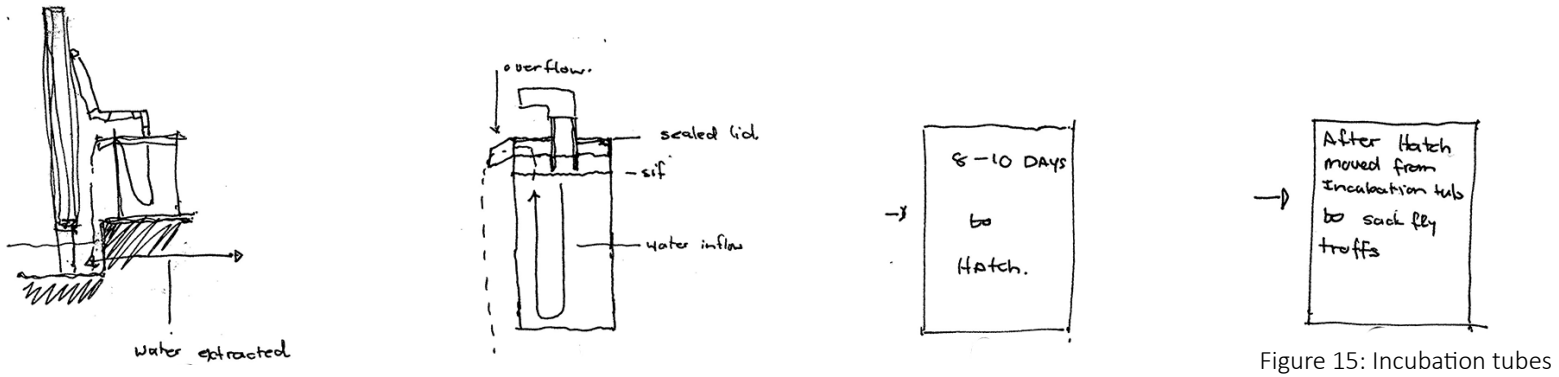


Figure 15: Incubation tubes

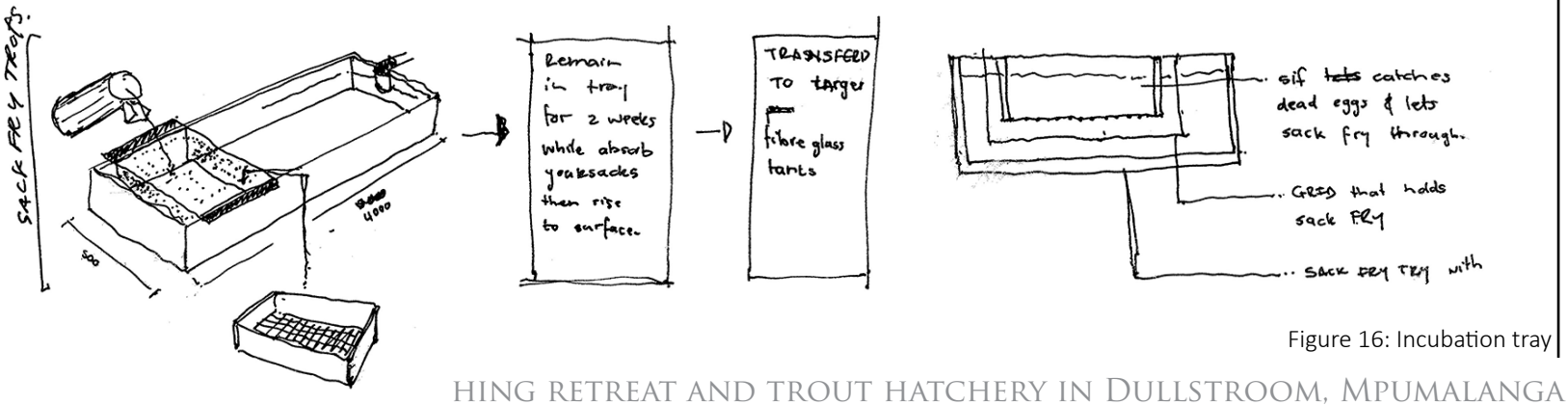


Figure 16: Incubation tray

Stage 5:

After the eggs have been counted they are moved to the incubation tubes. Here the ratio of water to egg is 1:2 and there needs to be a constant flow of between 40 to 60 litres of 12-14°C water for optimal hatching conditions. Within three to four days the eggs will hatch and will then be known as sac fry.

Stage 6:

The sac fry are then moved to the sac fry trays to be monitored until they have used up all of their nutrient sacs. This takes about two to four weeks. Any unhatched eggs or fry that have not completely absorbed their nutrient sacs are removed from the population.

Stage 7 - 10 happens on the last level of the proposed hatchery in the grow out tanks

Stage 7:
They are now called fry and are ready to be moved to the grow out tanks. The fry are lowered into the last level of the hatchery by a delivery shaft that makes use of a mechanical lits system. The fry are than released into the grow out tanks where they will remain until they weigh about 15-20 grams and are 25-30 mm in length. They will require feeding at 15 minute intervals consisting of 48-50% crude protein and 12-15% fat. During this stage their health is constantly monitored and fry are weighed to make sure that their diets and water conditions are up to standard.

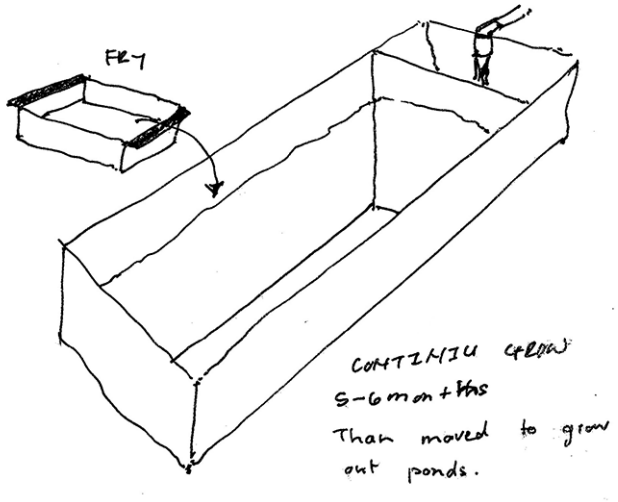


Figure 17: Grow out tanks

Stage 8:
When the fry reach a size of 75 mm in length and a weight of 80-100 grams they are called fingerlings and are moved to the outdoor raceways. They will now be fed in accordance with a feeding schedule until they reach parr size. The fingerlings will take about 4-5 months to become parr which are about 150 mm in length.

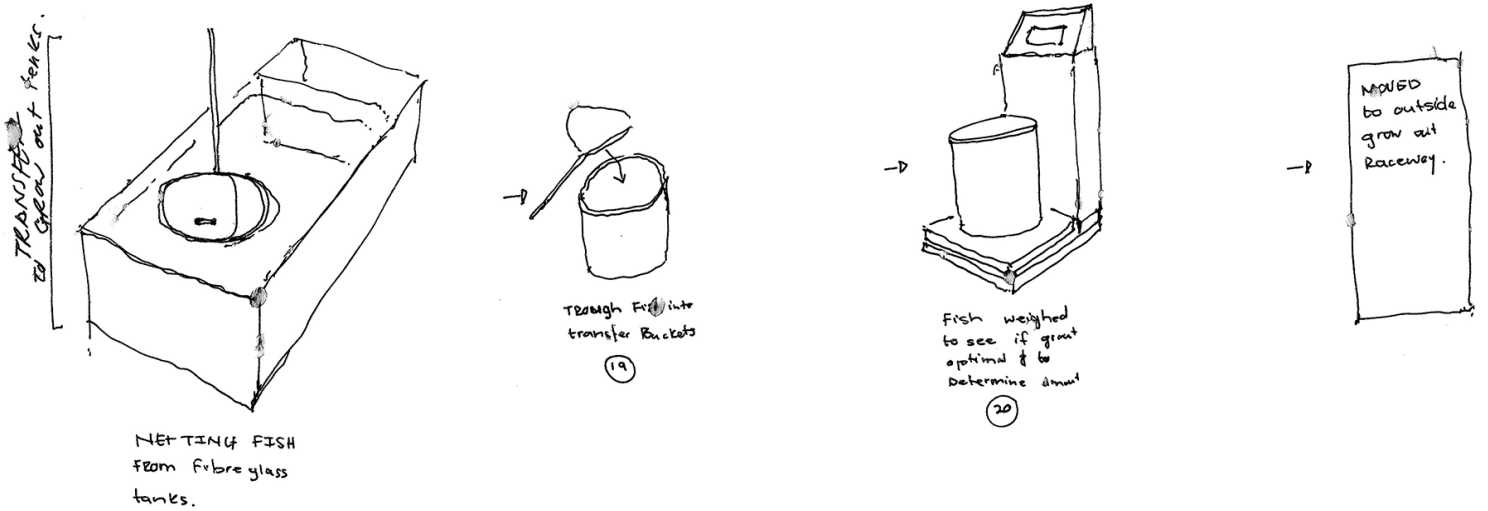


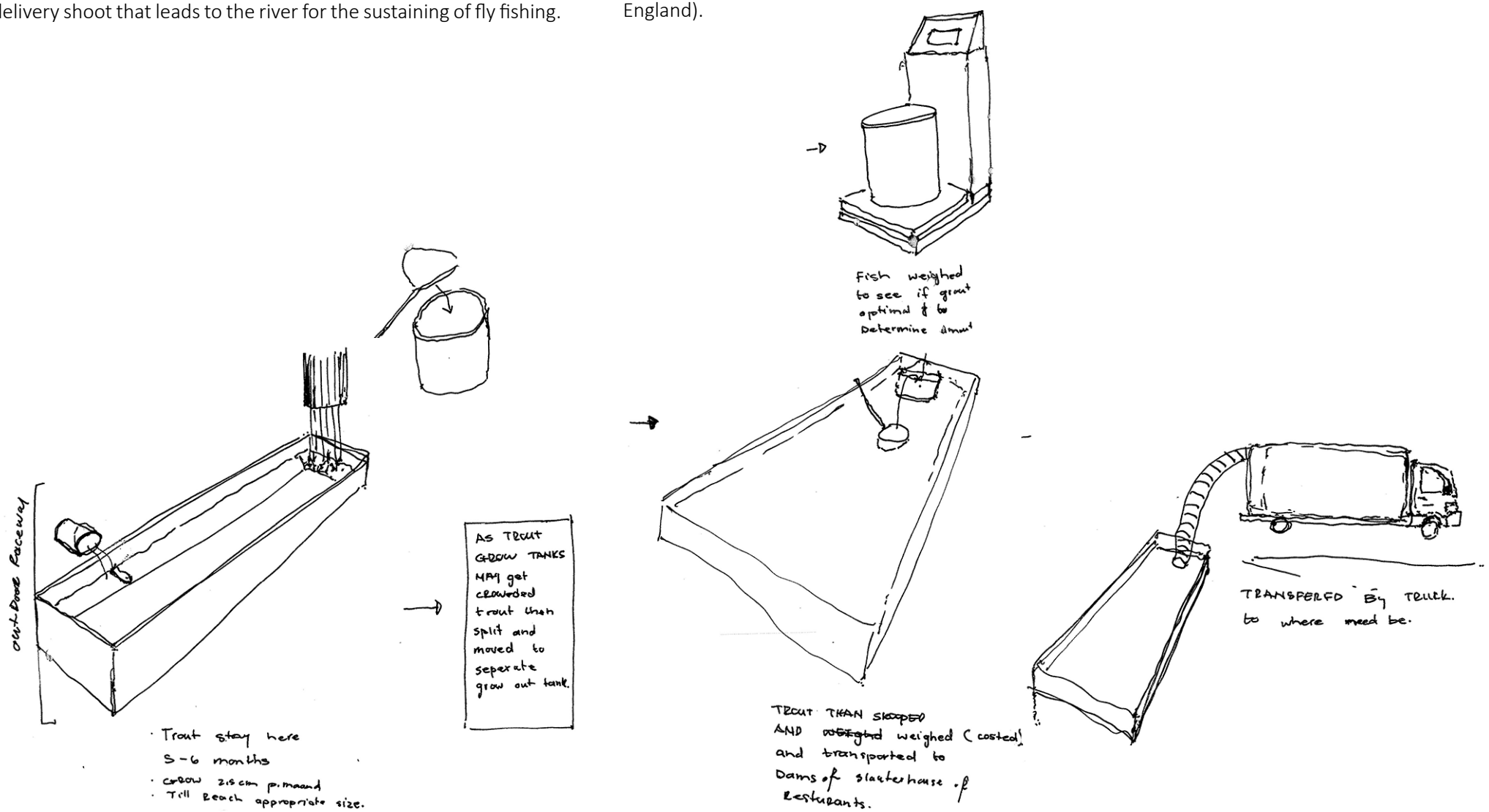
Figure 18: Outdoor raceway and weighing

Stage 9:
Once the fish reach a proper size of 0.5 kg after 8-12 months they will be removed from the outdoor raceways and then weighed and transported to the different clients where thy will be released into their dams.

20% of the trout will be reintroduced into the river system via the delivery shoot that leads to the river for the sustaining of fly fishing.

Stage 10:
The fish for slaughter will be humanely killed and put into cold storage from where they will be processed. The fish will go straight to the on-site restaurant where the public can buy fresh trout. Between each stage of the processing the fish will undergo a quality check to ensure an export standard final product.

(Stevenson, J.P. 1987.Trout Farming Manual. Fishing News Books Limited. Farnham, Surrey, England).



Case Study

In a further extent to gain a greater understanding of the process involved in the production of trout, Dunkeld Country Estate and Trout Farm was investigated as a case study. It could be seen as an ideal case study, as it is the existing trout hatchery and it served to provide an indepth knowledge of the trout farming process.

Furthermore, it is an ideal case study as the existing building makes use of the sloped landscape to inform its situatedness within the landscape and makes use of this landscape to hide the overall building mass.

But after this investigation it became clear that a secondary hatchery within the town of Dullstroom will be necessary. This will be further discussed in “Understanding the Poetics of site”

CASE STUDIES

Dunkeld country estate and Trout farm in Dullstroom, Mpumalanga
Designed by a cabinet of touchdown architects
80 Tonteldoos Road Dullstroom 1110

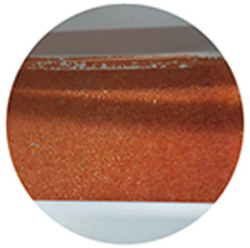
THE HATCHERY.



Building horizontally placed in the landscape trying to compliment the natural landscape



drum filtration system



Eggs in the incubation period waiting to hatch



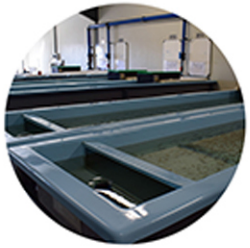
grow out ponds



Irrigation channel



Incubation chamber



Fry pond where the newly hatched trout grow till large enough to be moved to grow out ponds



Fluidised filtration system



Water cooling system



Feeding the fingerlings in the fingerling pond



Horizontal orientation emphasizing the relationship with the horizon



Pump room



Figure 20: Dunkeld Country Estate Trout Hatchery (Cilliers, 2019: own photos)

CASE STUDIES
THE ACCOMMODATION

DUNKELD
Country & Equestrian Estate



Native rock introduced into the build form



Building orientated to frame the natural landscape



Jazz bar located adjacent to reception



Restaurant adjacent to reception



Use of natural material detailing in the interior spaces



Building designed to open views towards the landscape emphasizing the relationship between man-made and natural



Build form integrated harmoniously into the natural threshold of the tree line



Build form integrated harmoniously into the natural threshold of the tree line



Building designed to open views towards the landscape emphasizing the relationship between man-made and natural



Build form horizontally emphasized by the reflection on the water



Native rock introduced into the build form

CASE STUDIES

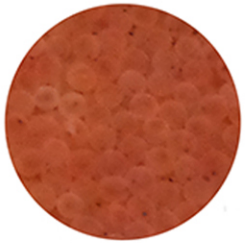
Fly Fishing

Dullstroom is recognised as South Africa's premier fly-fishing destination and Dunkeld – with its 19 well-stocked still water dams – gives visitors the chance to experience this for themselves. Trout were introduced into the area in the 1900s because the cool waters and climate provided ideal conditions. Stocked with Rainbow Trout, Dunkeld offers enthusiasts the chance to spend time in pursuit of the perfect catch



Figure 4.1: Arial view illustrating circulation and location of dams on Dunkeld Country Estate. (GoogleEarth, 2019: online)

Precedents



Eggs in the hatchery



Brood stock ponds



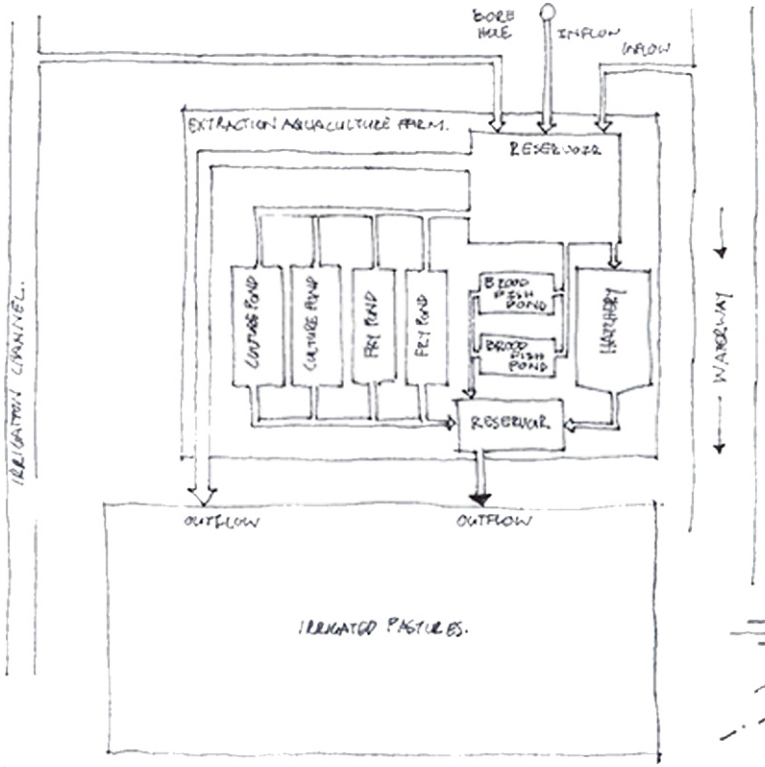
Fry pond where the newly hatched trout grow till large enough to be moved to grow out ponds

Tropenhaus Frutigen

Gauer Itten Messerli Architects
July 2011
Bern, Switzerland

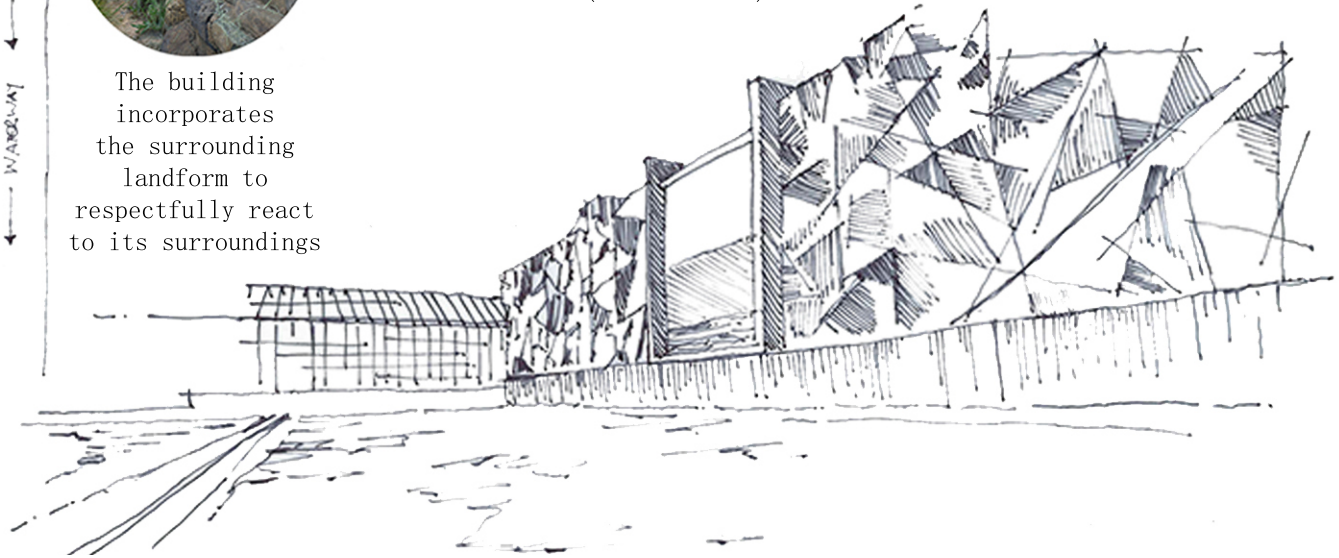
This fish farm in Switzerland was a good precedent for two reasons; firstly for the intricate fish farming system that they used and secondly for the way that the mountainous backdrop was incorporated into the design to form a scheme that is both functional and respectful towards the natural landscape.

Basic Program derived from precedent:
The Fish farm: Production-driven Component:
Hatchery: 50m2
(Fry Pond) Early Rearing Tanks: 50m2
(Fry Pond) Advanced Rearing Tanks: 50m2
(Culture Pond) Grow-out Pods: 100 m2





The building incorporates the surrounding landform to respectfully react to its surroundings



Precedents

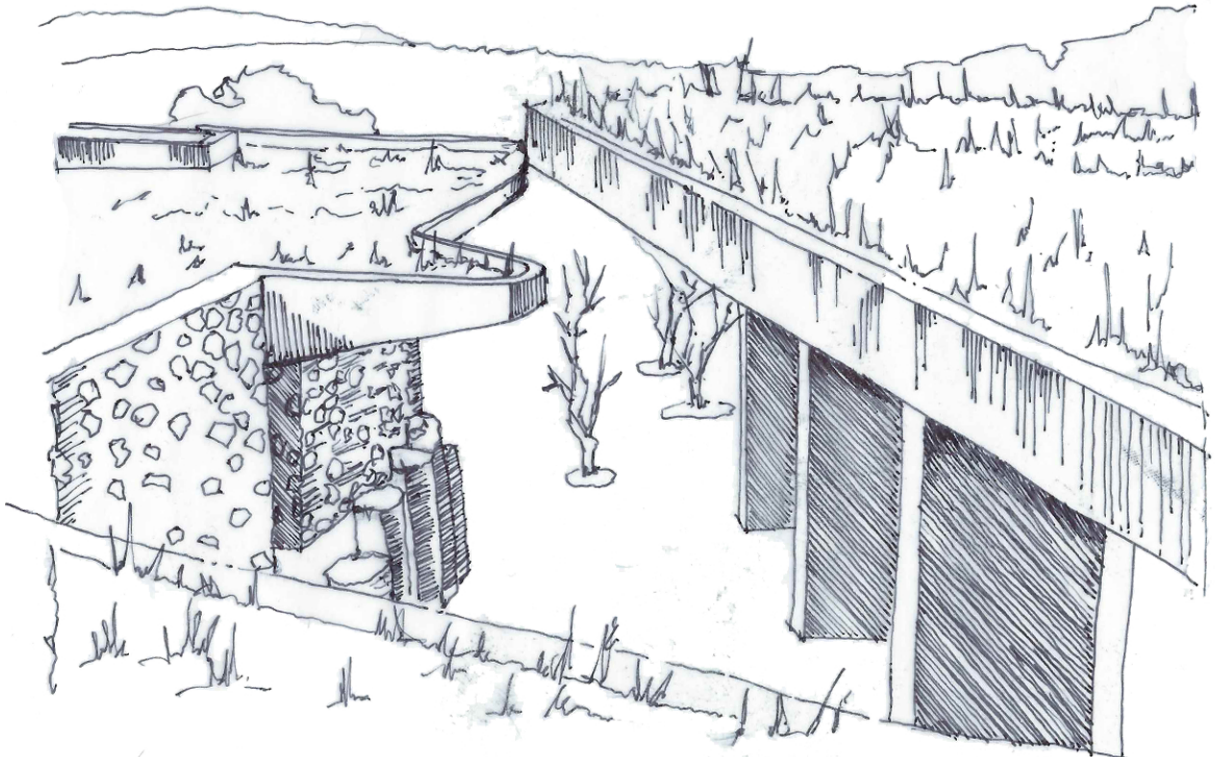
Forum Homini Boutique Hotel

Activate Architects

2005

Cradle of Humankind Precinct, South Africa

This project is an ideal example of how a building complex makes use of the topography to inform its entire layout. It is for this reason that I chose it as a topological precedent; to better understand the design of a building in and with the natural landscape. This building was not only moulded by the landscape, but also embraces the natural vegetation by means of green roofs and terraces.



CHAPTER 2

Understanding the poetics of site

Piscatoribys Sacrym: Sacred to all angler:

"To me, trout fishing, in particular fly-fishing, is many things, but above all, it is a conversation, a communication — with a creature to which we are connected by common ancestry not so very long ago. Trout fishing connects us not only to our ancestral past, but to our legacy as hunter-gatherers, to a time when we needed to catch and kill in order to survive. This, I have concluded after many years of doing it, must be primarily why we fish, to satisfy some latent impulse deep in our evolutionary fabric — even if now, as we release the fish, it is more of a kind of predatory performance art. It is not, however, nor has it ever been, simply about the predation itself, but the whole assemblage of steps before and after, about engaging our senses with a larger interconnected whole." (Prosek, 2015: online)

This quote illustrates the osculating relationship present in the being of an angler and the sites of their engagement with nature, the trout dams. To the fly angler, the water is a "sacred place, a place where Mother Nature meats human being… connected by a fly line and a fly". A place where one is in attunement with nature, a setting where the angler draws a connection to the natural environment.

By understanding this connection, the angler has towards the natural landscape, it became essential to choose a site situated in the natural landscape that will allow the angler a clear connection to the natural environment.

Thus Dullstroom became an ideal location for this translation as the town was established around trout and trout fishing and could, to a certain extent be identified as the ancestral grounds for trout fishing in South Africa.

The chosen location for this Architectural translation is in located approximately 2, 5 Km North of Dullstroom on a farm hidden between dense pine forest-sthat has two existing trout dams.

This location was chosen because the town of Dullstroom has an established fly fishing community and trout population and has become synonymous with fly fishing in South Africa. Beyond the practical considerations, the landscape of this area creates unique experiences and captures many of the aspects I investigate in relation to place, site, experience and meaningful engagement with the landscape.

Thus by placing the fly fishing retreat and hatchery in Dullstroom, it will allow the design to be rooted in a place where fly fishing is part of the existing relationship between the human-made and the natural landscape. But also allows for the exploration of the poetic.

CHAPTER 2
Understanding the poetics of site
Introduction

In this chapter, the following question is posed:

How can the tensions embodied in the relationship between man and environment be reconciliated by the introduction of fly fishing?

This chapter will entail an investigation into the existing relationship between man and nature and how the relationship between man (angler) and nature (trout) lead to the existence and wellbeing of the town of Dullstroom as it exists today.

Additionally, this chapter will contain an investigation into the existing relationship between the built form and the natural landscape of Dullstroom to gain an understanding of the effect fly fishing has on the relationship between man and nature.

This information will be used to identify the impact and relevance of the addition of a fly fishing retreat and hatchery to Dullstroom's existing relationship between man and the natural landscape.

CHAPTER 2
Understanding the poetics of site

How can the tensions embodied in the relationship between man and environment be reconsolidated by the introduction of fly fishing?

When an attempt is made to answer this question, the flowing aspects of the study become important:

Fly fishing and how the fly rod overcomes the tension (divide) between angler and water, is used to understand how this relationship should be translated.

Thus to bridge the tensions between human and environment, the building must be a translation of fly fishing and the fly rod into built form.

In the site analysis, it is essential to determine what the existing relationships are between the built form and the natural landscape and if the addition of a fly fishing retreat and hatchery will be an ideal intervention in the existing environmental situation of Dullstroom.

The Dullstroom landscape (as discussed in the Macro context) is in danger of industrial encroachment if the human-made contribution to the environment is not handled with care.

Seeing that Dullstroom's economy has grown to rely heavily on the tourism industry, it becomes essential to understand that further additions to the economy will have to entail a function that adds to the existing tourism industry.

As will be discussed in the macro context, it becomes essential to understand that the local community must be made aware of the benefits associated with the developing of the tourism industry, in the relationship between the built form and the natural landscape to ensure that the local community participates in this relationship and as a result, safeguards the natural environment.

Thus the proposed addition of a fly fishing retreat and hatchery aims to reconcile the tensions that exist between the built form and the natural landscape by addressing further development that enables growth in the tourism industry. This will include the local community in the building project and as a result, prevent industrial encroachment, but still support the economic reality of the area.

In the macro context, the relationship between trout fishing and the development of Dullstroom's built environment will be discussed. Additionally, I will adress the effects of further development of the tourism industry on the existing relationship between the built form and the natural landscape.

CHAPTER 2

Understanding the poetics of site



Figure 21: Map of South Africa.
(Google Maps,2019:online)



Figure 22: Location of Dullstroom in Mpumalanga.
(Google Maps, 2019: online)

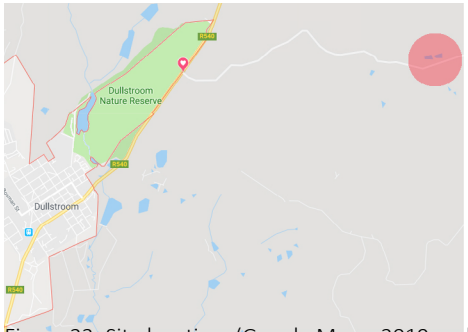


Figure 23: Site location. (Google Maps, 2019: online)

Impact of tourism development on the existing relationship between built form and natural landscape of Dullstroom.

25.4184° S, 30.1041° E

When the Dutch settlers made their way to the place of “eternal mist” in 1880, there was no hint that this high lying area in Mpumalanga, would, a century later, become one of South Africa’s premier fly fishing destinations. At 2100 m above sea level, Dullstroom is one of the highest and coldest towns in South Africa.

In 1880, President Paul Kruger encouraged emigration from Holland to South Africa. In 1883, a company led by Wolterus Dull, which had been established to strengthen ties between the two countries, bought the two farms, Groot Suikerboschkop and Elandslaagte, to establish a settlement. Shortly thereafter, the settlers from Holland arrived and established a small village. Their buildings reflected a mixture of 19th and 20th century Dutch Colonialist designs. Dull visited the village in 1890 and when, in 1892, Paul Kruger proclaimed it a town, the name of Dull’s stroom was an apt combination of the owner of the farms and the Crocodile River (***stroom*** - stream), flowing nearby. The name was later simplified to Dullstroom.

One year later, the town consisted of 48 people, eight houses, three stables, ten cattle kraals and a trading store. During the South African-Boer War 1899-1902 (or Anglo-Boer War), the town was occupied and vandalised by the British soldiers to such an extent, that on their return to the town after the war, the immigrants had to rebuild the village from the ashes. By 1920, eight shops had been rebuilt, and by 1921, the village was granted the status of a town council .

The catalyst to the town’s progression, was the introduction of trout fishing and the trout industry, when J Gurr, the post-master of Lydenburg, unexpectedly, caught a fish that looked like a trout in the Dorpsrivier (townstream) in 1912. In 1916, the first trout fingerlings from hatcheries in the Cape Winelands, were released into the local streams of the Dullstroom and Lydenburg area. When Gurr departed from the town, the responsibility of stocking the streams with trout, was taken over by the local watchmaker and jeweller FC Braun.

The first stocking in the Dullstroom district took place in 1927 when trout hatching boxes were placed into the old municipal dam. The present municipal dam was stocked with 17 000 trout fingerlings one year after it had been constructed in 1965. The hatchings were so successful, that it created the opportunity for angling and breeding of trout to form the basis of a strong tourism industry in Dullstroom that continues to this day.

CHAPTER 2
Understanding the poetics of site
MACRO CONTEXT

Impact of tourism development on the existing relationship between built form and natural landscape of Dullstroom.

It is important to understand the impact that further development to the tourism industry will have in Dullstroom. The addition of a fly fishing retreat and hatchery will result in growth in the existing tourism industry, which will result in the need for additional supporting commerce, such as accommodation and restaurants.

"In a country of expanding population, increasing unemployment, a declining currency, and a steady drop in the value of its mineral wealth, until now its most profitable commodity, tourism presents one opportunity to turn the tide of unemployment through the generation of jobs and the creation of entrepreneurial opportunities" (Butler, 2013: 4).

This study observed tourism development in the popular nature-tourism and recreational fishing destination of Dullstroom, Mpumalanga, and sought to highlight the significant benefits that have been triggered as a consequence. Dullstroom is synonymous with fly-fishing (particularly trout fishing) and is well-known throughout South Africa for its unique natural environment that is host to more than 150 bird species, as well as the vulnerable Grey Crowned Crane (Butler, 2013: 4). Not only is the area important to the regional tourism economy, but the fact that it is a Ramstar site, confirms its ecological significance as well.

According to Michel and Ashley (2010: 15) case studies exploring the positive impact of tourism, remained on the micro-level by focusing on individual hospitality establishment. On the other hand, studies with a strong focus on nature and wildlife, have highlighted environment or economic sustainability. (Cock & Fig 2000: Ferreira, 2006; Loon & Polakow, 2001; Mazibuko, 2007; Myburgh & Saayman 2002; Saayman, Saayman & Ferreira, 2009; Spenceley. 2005; Spenseley & Goodwin. 2007)

While the development of a Fly Fishing Resort and Hatchery will have an obvious positive impact on tourism in the area, this dissertation explores the reciprocal positive impact on the :

- economy
- environment
- society

Resulting from the addition of a fly fishing retreat and hatchery as a reconciliation of the tension existing between man-made and natural environment.

"The larger picture" of benefits associated with tourism, (1991: 97) includes long-term community stability, skills development, greater access to education and better standards of living (Michel and Ashley 2010).

However, the disadvantaged, local communities are often distrustful of and fail to identify with tourism development because they perceive it as exogenous with benefits mostly to outsiders (Hall & Richards :298). This distrust could lead to indifference or even resistance. As Dullstroom may potentially be exposed to industrial encroachment in the future, it is essential not only to identify the benefits of tourist developments but also to ensure that local communities understand the positive personal impact these benefits will have on their lives.

A qualitative study on the impact of tourism development in Dullstroom, conducted in October 2013 by Butler, revealed that all community members of different demographics, experienced benefits exceeding economic gains:

Some of the outcomes included:

- Retention of community members due to inreased job opportunities and economic stability.
- Improved incomes and higher standard of living.
- Creation of opportunities to learn new skills and gain work experience.
- Access to opportunities to pursue formal qualifications.

CHAPTER 2
Understanding the poetics of site

MACRO CONTEXT

Impact of tourism development on the existing relationship between built form and natural landscape of Dullstroom.

According to this study, tourism development was identified and perceived to be a mutually beneficial process from the vantage point of both local business owners and members of the township of Sakhelwe. However, the study concluded that, for the benefits to continue, it is imperative that all members of the community (all genders and all races) be aware of future tourism developments in their area and the potentially positive impact these changes could bring.

Sustainability in developing tourism has become increasingly important in recent years. Therefore, community-based-tourism (CBT) engages with communities and includes them in the decision making stages of tourism growth, ensuring that locals are aware of the need to protect the environment if they are to profit from it. Sebele (2010) and Tosun (2006) agree that community participation ensures sustainability as locals develop positive attitudes to the environment that provide them with jobs and financial resources.

The reciprocal, give-and-take from nature (created by the Fly-Fishing resort), empowers the community multi-dimensionally (Nyaupane & Poudel, 2011) to include economic, social, political and psychological empowerment in their description of empowerment.

Members of the community may be economically empowered as a direct influence of job creation. Many respondents in the research done by Gareth Butler, (The social and Economic Impacts of Tourism Development in Dullstroom, 2013: 18), gained long term employment which offered them the opportunity to improve their skills and gain experience. This, in turn, led to internal promotions and salary increases. The Dullstroom Business Sector developed successful establishments, supported by a strong foundation of loyal, highly skilled and experienced staff members.

The economic stability spilt over to neighbouring towns and encouraged employees to start their own businesses in the same sector. Indirectly the economic growth will improve infrastructure and access to health care and education. The social empowerment, which springs from a community working together towards a common goal, spreads confidence in the group and also in the individual, creating a strong sense of psychological empowerment.

The social benefits had an increased impact on black females, who were released from their non-economic household work and freed their time to earn an income. The economic emancipation empowered females on domestic and social levels and built self-confidence (physiological empowerment and political empowerment. (Nyapane & Poudel, 2011 :1346-47).

The increased self-confidence creates a fertile breeding ground for capacity building through the development of community access to information, greater social inclusion and increased participation.

Thus, with sufficient community involvement in the planning and implementation stages, the project could become the catalyst of sustainable prosperity with benefits ed-dying out over Dullstroom, Sakhelwe and the surrounding towns.

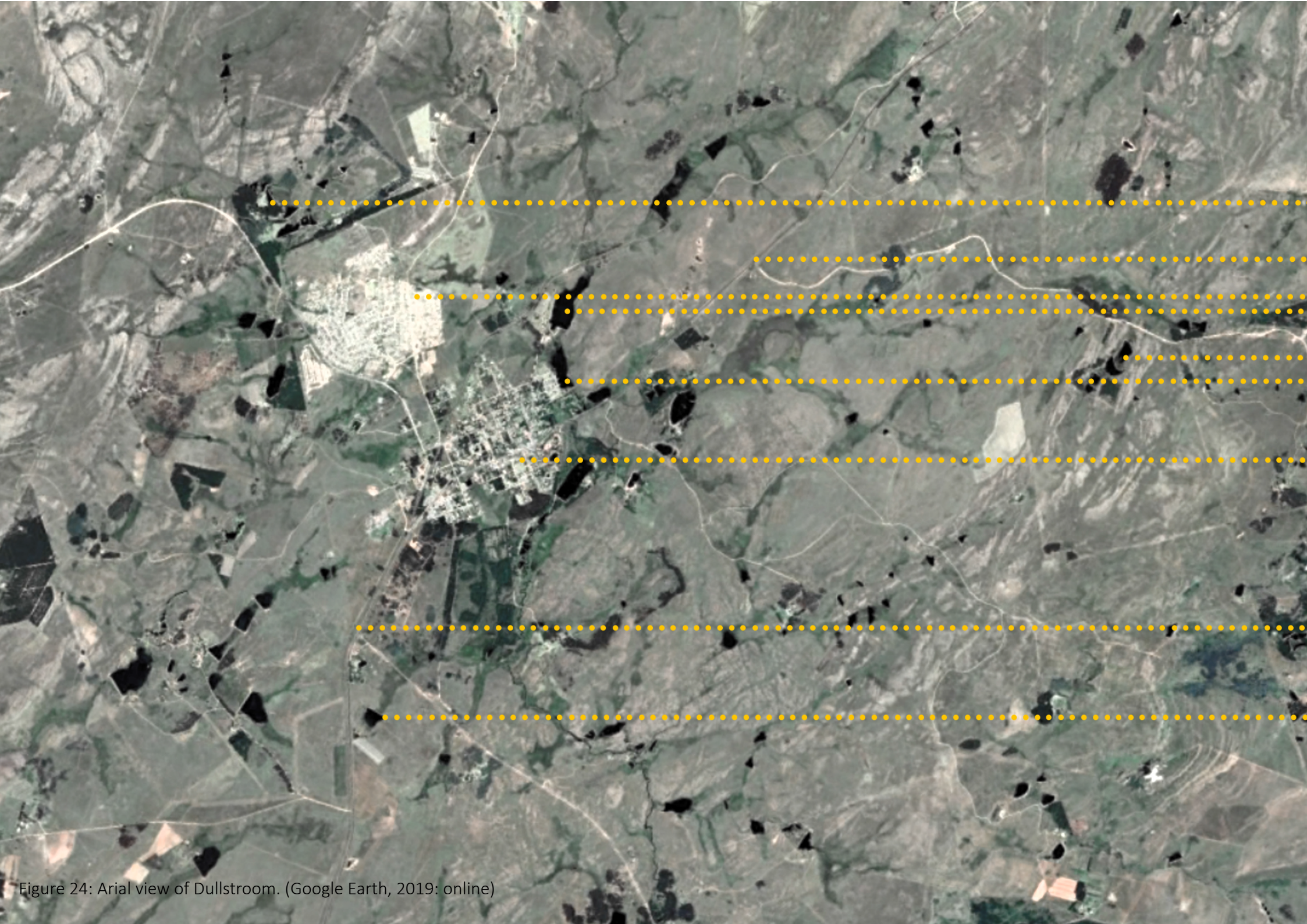
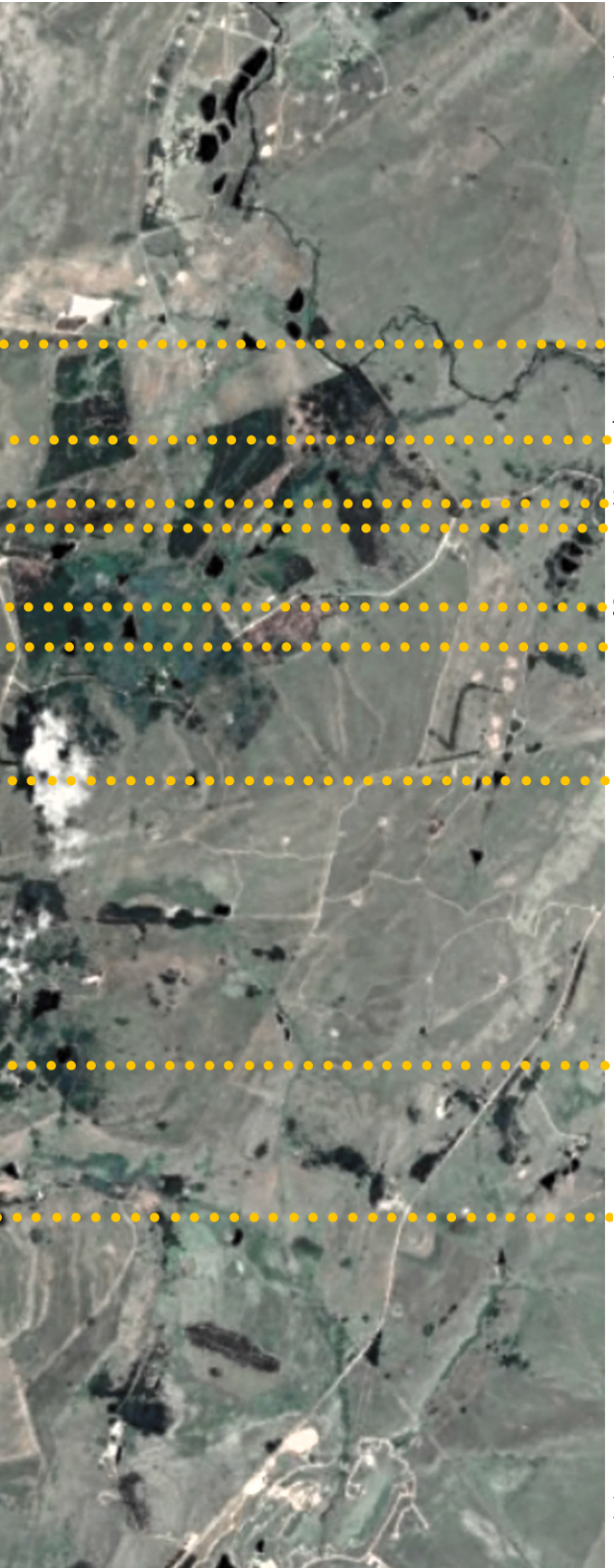
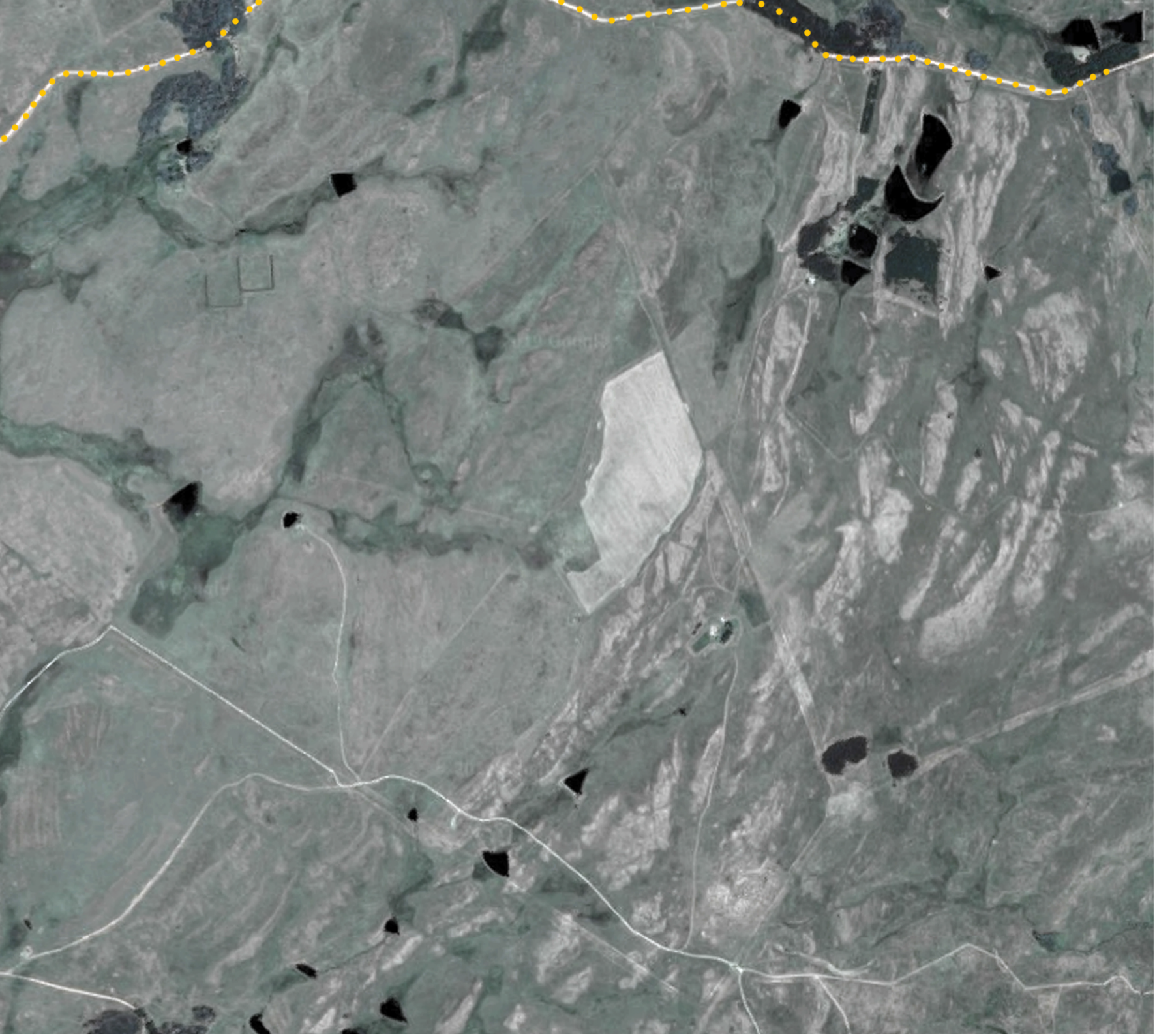


Figure 24: Arial view of Dullstroom. (Google Earth, 2019: online)

MACRO CONTEXT







Main access route from site to Sakhelwe Township and Dullstroom Town

10 km of travel

MEANS OF TRANSPORTATION:

- Shuttle busses:
  From Dullstroom town centeral

- Taxies:
  From Sakhelwe township and Dullstroom town central

- Motor vehicles:
  From R540 to town roads and dirt road

- Horse, Donkey & Foot:
  Sakhelwe Township

Figure 25: Main access route from site to Sakhelwe Township and Dullstroom Town. (Google Earth, 2019: online)

CHAPTER 2
Understanding the poetics of site
Meso context
Introduction

In this this segment I will discuss why Dullstroom can be seen as an ideal location for a fly fishing retreat and hatchery. To gain an understanding of why Dullstroom can be considered as an ideal location for a fly fishing retreat and hatchery, an investigation must be done into the existing relationships between man and nature – built form and the natural landscape.

In terms of the built form:

The town of Dullstroom is situated on the R540 (Coming from Belfast after taking the N4 from Johannesburg to Nelspruit) 33 Km from Belfast, the R540 (coming from Lydenburg via the R36) 56 km from Lydenburg. The town is also accessible by railway coming from Belfast (via Gesukkel to Long Tom to Palmer to Dullstroom), coming from Lydenburg (via Nedershorst to Dullstroom).

Thus the town becomes a thoroughfare to South Africa's premier fly fishing destinations (Dullstroom, Belfast and Underberg) making it an ideal location for a fly fishing retreat and hatchery.

In addition to this, the specific location for this project is located very near to the local township of Shekelwe, which enables the employment of the local people.

The sites' central location also allows for ease of distribution of fish to the surrounding lodges and restaurants. Furthermore the site is located very near to the town of Dullstroom which allow an ease of access for the public to the site which enables the public to learn about trout farming and the life cycle of trout.

In terms of the natural landscape:

The site has an abundance of naturally accruing cold water that is essential for the farming of trout and the dams located on the site have an existing population of brown and rainbow trout.

Understanding the spirit of natural place:

The site identifies itself to be understood as a romantic landscape (1980 :42) that reveals a relationship of "interminable multitude(s) of different" natural "phenomenon" . (Norberg-Schulz 1980:42). The site is typical of what Norberg-Schulz describes as a romantic landscape and has almost the exact features as : "The ground is rarely continuous, but it is subdivided and has varied relief": (1980:42).
Covered with pine needles rock and a multitude of vegetation with sloping hills and steep escarpments.

"The sky is hardly experienced as a total hemisphere": (1980:42)

As large conifer and pine forests raise to the sky and creates a narrowness in the experience of the sky which constantly changes as the clouds move by. The sun is filtered through vast amounts of trees, creating an interplay of light and shadow.

"Water is ever present as a dynamic element both as running streams" and large still water dams.

As a whole the landscape provides a variety of multiple natural experiences which embodies mystery and "a host of natural forces" engaging our senses within the larger interconnected relationship towards the natural landscape.

Understanding the relationship between Dullstroom's existing built environment and the natural landscape.

The architectural typology present in Dullstroom is a combination of 19th and 20th century Dutch colonialist building designs. The existence of this architecture is as a result of Dutch Settlers that made their way to Dullstroom in the 1880's when emigration to South Africa was strongly encouraged by President Paul Kruger in an attempt to strengthen ties between the two countries.

These buildings were typically constructed from natural materials such as rock/stone and timber and consisted of a combination of thresholds such as the polity roof supports and large covered "stoep (veranda)". These large and deep covered "stoep" areas are a building technique the settlers brought along from their vernacular building heritage which was a reaction to the harsh sun exposure. In many of the examples, the large covered "stoep" surrounds the entire building. Additional techniques of protectiong against the elements such as deep window sills and louvrers are also prevalent in these buildings.

The existing built heritage also incorparates natural occuring building materials such as timber rock.



Figure 26 & 29: Incorporation of sandstone walls.
Figure 27: Rock from natural environment used as building material with layered facade quality.
Figure 30: Use of corrugated steel roof materials.
Figure 31 & 34: Large, deep covered "stoep" surrounding the whole building.
Figure 35: Louvered windows with deep windowsills.
Figure 36: Use of light weight timber construction, with corrugated roof.
Figure 37: Combination of timber and sandstone building facade.
Figures 26-37: Images of the existing built form in Dullstroom, depicting the existing relationship of built form towards the landscape. (CDCEHOA, 2015: online)






Figure 38, 39 & 40: Timber constructed roof structure with corrugated iron wall finish. (Cilliers, 2019: own photo).

Current facilities sharing the same function as this dissertation.

At the present moment, Dullstroom has only one hatchery at Dunkeld Country Estate, as the hatchery at Elandskloof closed down in 2012 and since then, the existing hatchery has been struggling to keep up with the demand for trout.

This, along with the fact that the existing hatchery can only be visited by the public if remunerated and escorted to the remote location on the farm, makes it quite inaccessible to the public, the local community and tourists. Furthermore, the existing building does have a platform for educating people on the life cycle and trout production process.

Hence, a more appropriate location and building, is needed to aid in both the production of trout and to educate the community and visitors on the process of trout production.

CASE STUDIES

Fly Fishing

Dullstroom is recognised as South Africa's premier fly-fishing destination and Dunkeld – with its 19 well-stocked still water dams – gives visitors the chance to experience this for themselves. Trout were introduced into the area in the 1900s because the cool waters and climate provided ideal conditions. Stocked with Rainbow Trout. Dunkeld offers enthusiasts the chance to spend time in pursuit of the perfect catch



Figure 41: Arial view illustrating circulation and location of dams on Dunkeld Country Estate. (GoogleEarth, 2019: online)

CHAPTER 2
Understanding the poetics of site
Micro context
Introduction

In this segment the specific conditions on the site will be investigated in order to gain an understanding of the relationships pertaining to the specific site.

MAIN NODES RELEVANT SITE:



Figure 42: Location of the site in Dullstroom. (Google Earth, 2019: online)





Micro Context

Climatic Conditions

Height 2100 m above sea level
Position: 25.4184° S, 30.1041° E

Climatic Data

Temperatures (degrees Celsius)

Summer max: 27
Summer Average: 19
Summer min: 13
Summer extremes: 30

Winter max: 17
Winter average: 9
Winter min: 2
Winter extremes: -10

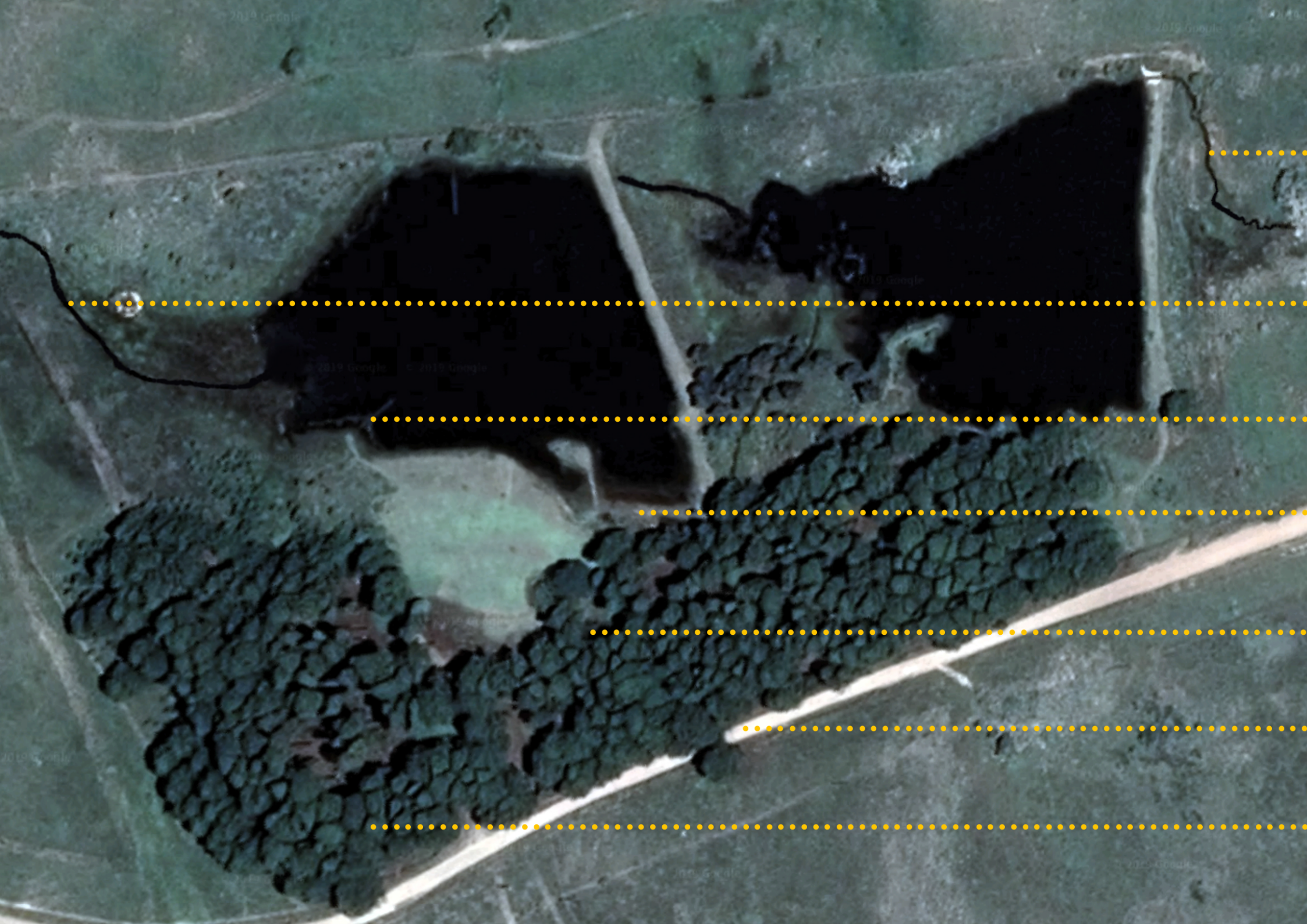
Precipitation

Average yearly: 894 mm
Highest recorded in 24 hours: 92mm

Wind speeds (Kmph)

Average wind: 10
Average Gust: 9.6
Max: 12.6

Figure 43: Topographical analyses of site. (Google Earth, 2019: online)



WATERFALL FROM DAM OUTLET



RIVER INLET TO SITE



WOODEN JETTY



CONGLOMERATES ROCK FORMATION ON SITE



NATURAL BOREHOLE WATER SOURCES



ROAD TO THE FARM IS TOUGH AND REQUIRES MAINTENANCE.



PINE TREES SURROUNDING PERIMETER OF SITE



Figure 44: Image of site showing the main features on site. (Google Earth, 2019: online)

Figure 45: Main features on site. (Cilliers, 2019: own photos)

Existing textures on site


46


47


48


49

Figure 46: Existing gravel road to site.
Figure 47: Stone textures.
Figure 48: Thin, clay upper soil.
Figure 49: Water.
Figure 50: Pine trees.
Figure 51: Grass.
Figure 52: Pine needles.
Figure 53: Vegetative bushes.
Figure 54: Cut pine trees.
Figure 55: Bark of a pine tree.
Figure 56: Steel jetty.
Figure 57: Soil character in water.

Figures 46-57. (Cilliers, 2019: own photos)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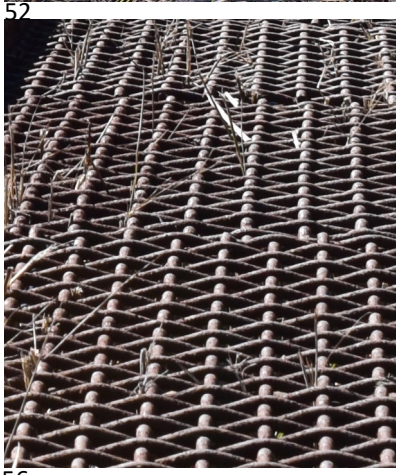
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Vegetation on site



Figure 58: Shrubs.



Figure 59: Grass extending into water.



Figure 60: Pine trees.



Figure 61: Grass landscape.

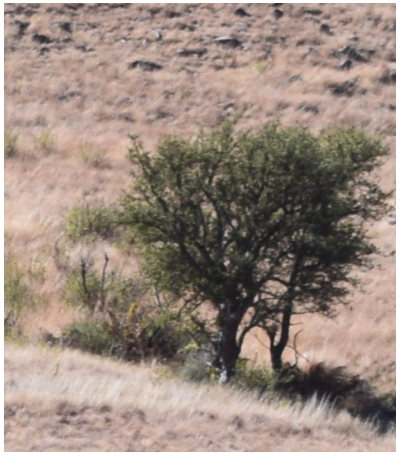


Figure 62: Conifer tree.

Existing structures on site



Figure 63: Steel jetty extending into water.



Figure 64: Dam overflow into river.



Figure 65: Existing electrical connection.

Figures 58-65. (Cilliers, 2019: own photos)

Views from the site



Figure 66: View from the site towards the north, overlooking the water.



Figure 67: View from the site towards the west.



Figure 68: View on approaching the site.



Figure 69: Filtered light quality.



Figure 70: View from the pine forest.

Figures 66-70.(Cilliers, 2019: own photos)

Existing site

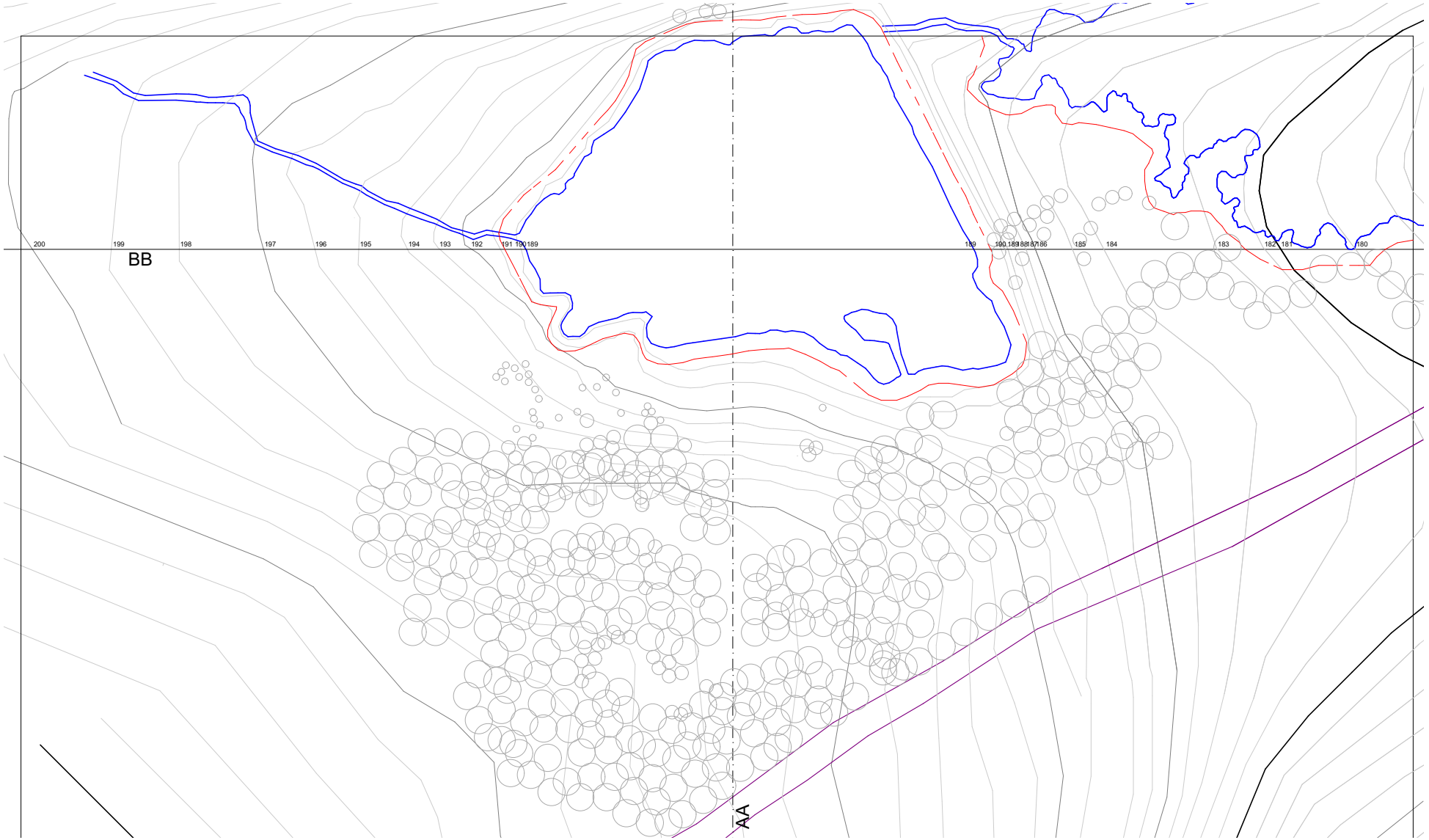




Figure 71: Location of the buildings (Google Earth, 2019: online)



Figure 72: The proposed site. (Cilliers, 2019: own photos)

CHAPTER 3
The poetics of tension.

Introduction

This chapter is focused on the formulation of a coherent theoretical grounding to motivate and suggest possible design approaches. The objective is to create a general understanding of how design decisions can provide appropriate contemporary interpretations of the making (***poesis***) of a building situated within the natural landscape as the translation of the fly fishing process into an architectural application. Furthermore, using this translation creates a greater understanding of how the fly rod can describe and help to grasp the osculating tensions embodied between angler and nature.

Ruskin (1888), Baracco(2010), Auret (2015) and Wolton (1903), although each writing in a different context and with different expertise all share a deep concern for the landscape and our position within it, either as architects or as an angler.

Wolton describes angling as follows :"for angling is somewhat like poetry, men are to be born so: I mean with inclinations to it, though both may be heightened by discourse and practice; but he that hopes to be a good angler, must not only bring an inquiring, searching, observing wit, but he must bring a large measure of hope and patience, and a love and propensity to the art itself; but having once got and practiced it, then doubt not but angling will prove to be so pleasant, that it will prove to be, like virtue, a reward to itself." (1903: 32)

By understanding that Walton refers to angling (fly fishing) as poetry- a poetic act – and furthers this idea by adding that those who hope to master it must engage an "inquiring, searching" and "hope" "patience, and a love" (1903: 32). Thus it becomes clear that, angling can be understood as a discourse of a science of thought and a compassion of feeling and that when mastered, it will prove to be like virtue, an unmeasurable reward to itself.

"The Science of Architecture, followed out to its full extent, is one of the noblest of those which have reference only to the creation of human minds. It is not merely a science of the rule and compass;, it does not consist only in the observation of just rule, or of fair proportion:

It is, or ought to be, a science of feeling more than of rule, a ministry to the mind, more than to the eye. If we consider how much less the beauty and majesty of building depend upon its pleasing certain prejudices of the eye, than upon its rousing certain trains of meditation in the mind, it will show in a moment how many intricate questions of feeling are involved in the raising of an edifice; it will convince us of the truth of a proposition, which might at first have appeared startling, that no man can be an architect, who is not a metaphysician. To the illustration of the department of this noble science which may be designated to the Poetry of Architecture."(Ruskin 1905:1-2): the poetics of architecture.

The Poetics of Architecture as referred in: *The Poetry of Architecture* (Ruskin 1905) illustrates and alludes to an ideology of what the creation of architecture should be: a “science of feeling” and a “ministry to the mind” (1905:1-2).

This idea is linked to what I have described of the role of the fly fisher in the landscape and will serve as a theoretical backbone in the attempt to understand and interpret the poetic qualities of fly fishing. Fly fishing is explored as the angler’s journey in a contemporary investigation of an age-old engagement – An osculating tension in the relationship between man and a natural place.

This dissertation is designed around understanding the concept of the poetics of architecture and how it becomes a body of knowledge that alludes to a method to be used, to represent the tension embodied between the science of rule and the compassion of feeling, in other words a dialogue between thoughts and feelings.

The poetics of architecture (Ruskin :1905) thus becomes a method to understand and interpret the poetic qualities embedded in fly fishing and the osculating tension embodied in the relationship between man and nature or built form and the environment.

In an attempt to gain a greater understanding of this concept and method, the concept can be deconstructed by identifying the meaning of poetics. The word poetics stems from the word “poiesis” (Greek) that translates in Auret’s (2015: xxxiii) interpretation as “The act of making as poetic revealing and safeguarding”. Thus the poetics of architecture can be understood as the making of architecture.

It is in this making of architecture where the architect must strive – in the same sense as the poet – towards the poetics (making) that echo the concept -encapsulated in The Poetry of Architecture.- The act of making that refers to an amalgamation between sentiment and science, objectivity and subjectivity.

This notion is concretised by Heidegger, as Auret (2015: 101) explains, when he argues that “any way of life is grounded in the poetics” and that only a poetic mindset can grasp the authentic depth that makes existence meaningful (Auret 2015: 101).

Thus this chapter is an attempt to illustrate how the act of fly fishing and everything it encompasses can be translated into build form, by drawing reference to the relationship the angler has with the water and the tensions that exist in this relationship.

This relationship becomes a metaphor to explore the way we build in the natural landscape and a tool to understand how the tensions between built form and the natural landscape can be addressed.

The Poetics of architecture becomes the voice in which this translation is told.

Bachelard (1994: xxi) observes that “at the level of the poetic image, the duality of subject and object is iridescent, shimmering, unceasingly active in its inversions.” The poetic image is unattainable in this sense, as unattainable as a static cast. The duality of these elements in tension is in constant motion, an angler still seeking a position, still practicing the cast.

CHAPTER 3
The poetics of tension.

Thus it is essential to understand that a strive towards the poetic is a continuous osculation between the objective and the subjective, a discourse between thought and feeling.

"The poetic saying of images gathers the brightness and sound of the heavenly appearances into one with the darkness and silence of what is alien. By such sights the god surprises us. In this strangeness he proclaims his unfaltering nearness" (1971:226)

Here Heidegger describes the way in which the poetic measure can be understood by referring to two gods: the first understood as the God of 'revelatory-ness' (revelation) which is known to human and can be identified but not reached and the second, the god that is alien to us. This god is something that man knows to exist but cannot be quantified. A god that humans endeavour to identify, but he cannot be identified. In spite of this, man still strives to this identification whilst knowing it is unachievable. Thus this striving to attain the unattainable, as an attempt to near to its unattainability, can be understood as the striving towards the poetic (revelation). It is this striving towards the poetic knowing that the poetic is unattainable that captures what the poetic endeavour is:

Thus the endeavour to achieve the poetic, is poetic. By understanding this, it allows one to realise that the poetic comes to reveal itself and is encapsulated in the process of striving towards it.

"Through the poetic image, through the dimension of the poetic, we metaphysically realise the existence of the unthinkable and the unrepresentable; yet at the same time we are destined to continuously metaphysically stay in a state of search and inquiry towards the unthinkable/unrepresentable." (Baracco 2010: 12). As the angler searches for a position in the landscape and practices a cast, as the angler makes the fly, the static moment of complete balance between the planes of tension is unpresentable, it too shifts and moves, a swimming trout, meaning constructed through being in-between.

Thus one can come to understand that the realization '*vergestalting*' of the poetic is an impossibility as, if the poetic were to be attainable it would undoubtedly be a denying of its revelatory nature. Thus the poetic is a continuous osculation between the objective and the subjective, the specific and the general and as a result the poetic can never be fully understood nor can it be fully translated. Thus one can only near to the poetic when striving towards it in the discourse osculating between thought and feeling.

CHAPTER 3
THE POETICS OF TENSION. THE ART OF TRANSLATION

This dissertation is a comprehensive effort to propose an intervention that draws from the – stories (narratives), mysteries, poems, related precedents, subjects, thoughts and illustrations – in the ancient engagement between angler and water (trout). It is an attempt to amalgamate and interpret the inherent tension that exist between build form and the natural landscape.

It thus becomes essential to understand the relationship of the angler in his engagement with the natural landscape for one to grasp a poetic understanding of the lived world of the angler. For only with this understanding can the architectural implementation become a poetic translation of the angler's lived reality (Norberg-Schulz, 1985:71). As "only the vita Poetica makes it possible for man to translate his practical and theoretical understanding into a concrete image and to preserve its meaning" (Norberg-Schulz, 1985:71).

It is understanding that enables the translation of fly fishing into gestalt. For only when one can understand the practicalities and theories (dialogue between thought and feeling) embedded in fly fishing can one attempt to translate its lived reality.

All translations are, in a sense, interpretations (Auret, 2015: xiii). According to Gadamer (1960:390), the interaction between understanding, interpretation and language can be summarized as the following: "language is the universal medium in which understanding occurs. Understanding occurs in interpreting".

Thus interpretation (translation) implies implementation which means "building the world of life in accordance with an understanding of place" (Norberg-Schulz, 2000:91). "To build the world of life implies translation more than discovery" (Norberg-Schulz, 2000:143). Norberg-Schulz implies that the "architectural implementation of the life-world" of the angler "can more appropriately be envisioned as an act of "translation", rather than "discovery" '' (Auret. HA, 2015: xiii).

Norberg-Schulz (1963:22-23) also emphasized the purpose of architecture as: the translation of a way of life into build form and furthered this idea by adding that, the effect that architecture has is that: "it influences the way people experience the environment and stresses that "architecture's purpose and effect involves translating a "practical-psychological-social cultural situation" into a built form, with the capacity to "order and improve our relations with the environment" (1963: 22-23). (Auret 2015: 78) also highlights this feature of a relationship with the environment.

CHAPTER 3
The poetics of tension. The art of translation

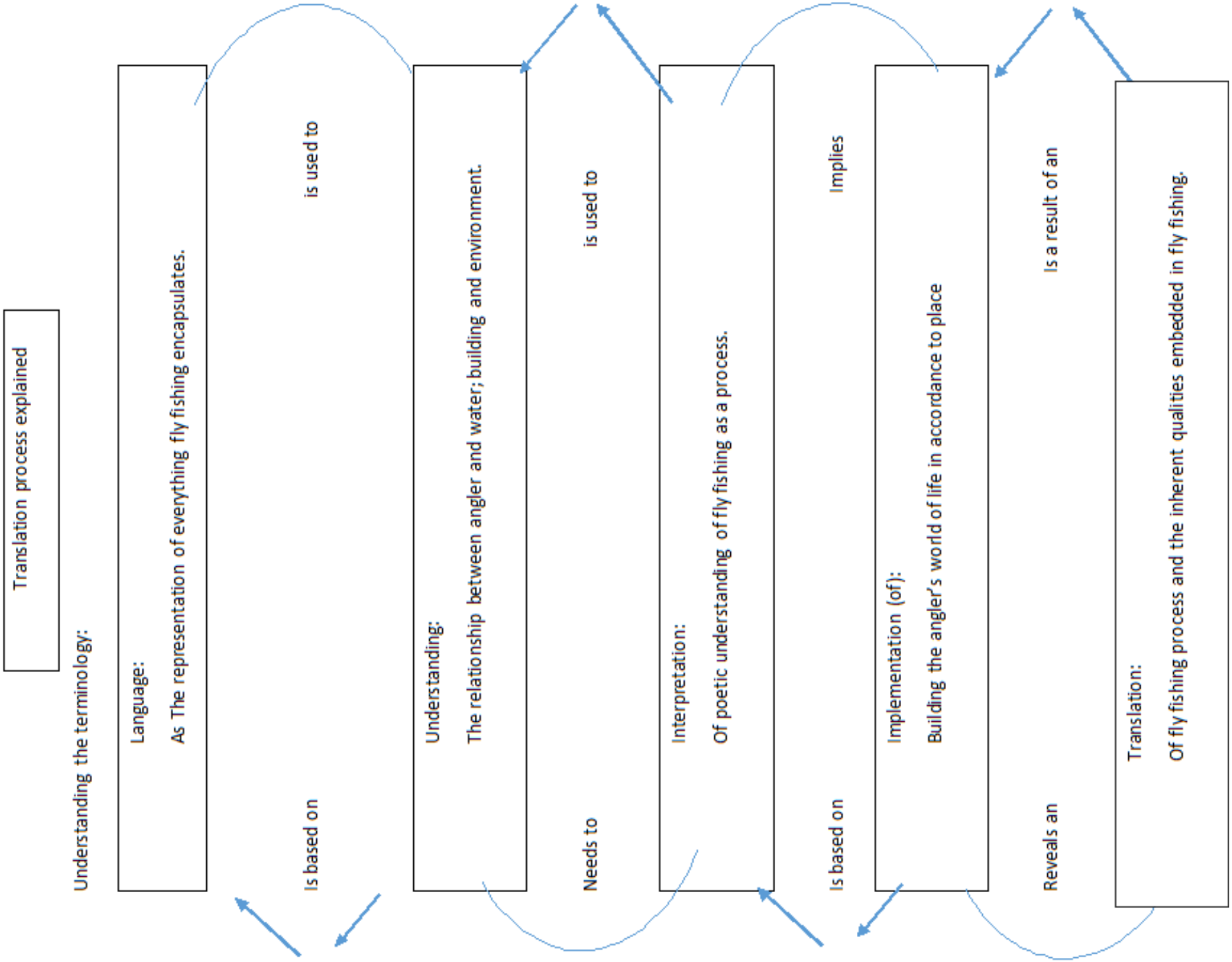
Norberg-Schulz adds that the relationship between humans and their environments can be understood as "the relation between building task and architectural solution" (1963: 23). An implementation of a work of architecture as an ordering "controls and regulates the relations between man and his environment" (1963: 109). "Norberg-Schulz believed that this relationship could "[explain] the architectural intention" (1963: 107) and reveal the 'purposes' and 'effects' of architecture." (Auret.HA, 2015: 78). This again, is a reference to the act of making, as the art of fly tying is also a relationship between the task of tying a fly and the solution of a completed representation to deceive a trout.

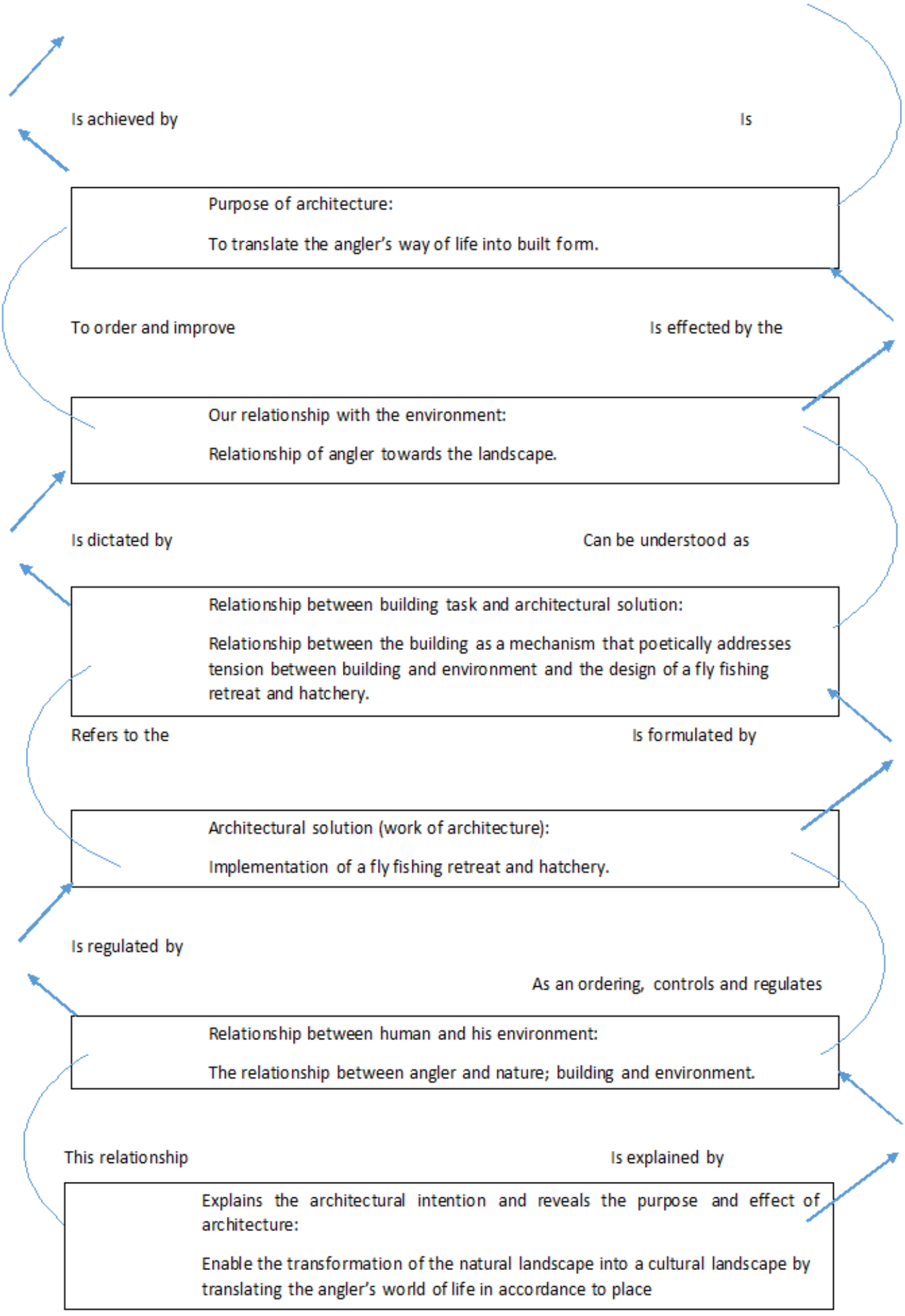
These ideas become of paramount importance when trying to gain an understanding in order to be able to interpret by means of implementing an architectural translation of fly fishing and stresses that the implementation of built form must be based on a poetic understanding. The process of fly fishing as poetic action as understood in terms of architectrue can then become a true revealing of the inherent qualities embedded within fly fishing and landscape. Only then can one come to understand the true tensions that exist between human and nature and built form and the natural landscape. And only then can one's implementation of this translation be understood as an architecture that enables the transformation of the natural landscape into a cultural landscape (Norberg-Schulz, 2000:91).

The following diagram has been constructed as a means to understand the process of translation and is an attempt to create map understanding of the principals one can use to engage the process of translation.

Understanding the terminology Lexican

Language:	Understood as the content of knowledge: Lived experiences of angler; fly fishing and everything it encapsulates.
Understanding:	Understood as: Origin of what wants to be understood and translated.
Interpretation:	Understood as: Poetic understanding wanting to be translated.
Implementation:	Understood as: Building the world of life in accordance to place.
Translation:	Understood as: What wants to be implemented
Architectural solution (work of architecture):	Understood as: Implementation of the building
Purpose of architecture:	Understood as: To translate a way of life into built form.
Relationship between human and his environment:	Understood as: Relationship between human and environment.
Our relationship with the environment:	Understood as: Relationship of human towards the environment.
Explains the architectural intention and reveals the purpose and effect of architecture:	Understood as: Reason for the architecture.
Relationship between building task and architectural solution:	Understood as: Relationship between what wants to be achieved and architectural work


Translation process explained
Understanding the terminology:
Language:
As The representation of everything fly fishing encapsulates.
Is based on
is used to
Understanding:
The relationship between angler and water; building and environment.
Needs to
is used to
Interpretation:
Of poetic understanding of fly fishing as a process.
Is based on
Implies
Implementation (of):
Building the angler's world of life in accordance to place
Reveals an
Is a result of an
Translation:
Of fly fishing process and the inherent qualities embedded in fly fishing.


Is achieved by
Is
Purpose of architecture:
To translate the angler's way of life into built form.
To order and improve
Is effected by the
Our relationship with the environment:
Relationship of angler towards the landscape.
Is dictated by
Can be understood as
Relationship between building task and architectural solution:
Relationship between the building as a mechanism that poetically addresses tension between building and environment and the design of a fly fishing retreat and hatchery.
Refers to the
Is formulated by
Architectural solution (work of architecture):
Implementation of a fly fishing retreat and hatchery.
Is regulated by
As an ordering, controls and regulates
Relationship between human and his environment:
The relationship between angler and nature; building and environment.
This relationship
Is explained by
Explains the architectural intention and reveals the purpose and effect of architecture:
Enable the transformation of the natural landscape into a cultural landscape by translating the angler's world of life in accordance to place

CHAPTER 3
The poetics of tension. Poetic Translation of place

Brother

To you my friend, my brother:

At water's edge we meet

Rhythmically casting line
our souls entwined

In search of bars of silver
we near to the river

Your golden glazed reflection
echoes my intention
as lines begin to fly
through silent misty sky
we stand side to side
waiting for a sign of the silver bar's hide

At once your shimmer breaks
revealing the silver's wake

In moments of fleeting tension
we rhythmycally engage the mentioned
with one enormous stride
the silver is in tension

The game of bends and leaps
continues at your feet
with vanishing roles of line
the silver breaks my line

In gasps of awe and wonder
I am now called to ponder
If your golden light
has always been the fight

With you my friend, my brother
the journey never ends
for you'll provide another
when morning comes to end...

(By author)

"You see the search for fish is really a search for a grail: the place of perfect companionship and flawless contentment…" is Izaak Walton's (1998:xi) description of the angler's inherit connection to the water.

This idea speaks about the angler's rootedness in place and how the (spirit of place) Genius Loci has changed one's understanding and belonging to that place. This notion of one's belonging to place agrees with Martin Heidegger's (1971) notion that states that the way in which man identifies himself (belongs to) in a specific place in regards to the earth, sky, horizon and the divine, should be revealed.

It is in this act of poetic revealing (making) where one must preduringly listen to achieve what is described by Norberg-Schulz as the chief obligation of the architect: to reveal the true nature of the spirit of the place "to create architecture that relevantly translates a way of life" (Auret 2015: 78). In a way the act of fly tying becomes a process of revealing, through gathering and assembling the fly fisher interprets and engages with the place inhabited by the trout but also by him. This notion is extended by referring to Heidegger who says that "any way of life is grounded in the poetics" (Auret 2015: 101) and adds that "only a poetic mindset can grasp the authentic depth that makes existence meaningful". (Auret 2015: 101)

Tadao Ando (1991:436) in the same breath acknowledges that this act of revealing ("unconceiling") creates a new landscape and emphasises that the architectural response must endeavour to "discover the architecture that the site itself is seeking". He has also said that "the purpose of architecture is basically the construction of place" (1991:436) in an attempt to bring the place to its predetermined *lotsbestemming* (destiny).

Thus in the act of poetic revealing ("*poiesis*"), a new landscape is created that will expose the true nature of place and enables man to identify his belonging to the fourfold (gathering it into a "thing") allowing a concretisation of his understanding of the natural landscape. Allowing us an understanding of what the grail embodies.

So, in order to translate place one must engage language as Auret (2015:119) suggests –the context of knowledge (in my case fly fishing and everything it encompasses) – as a means to understand the existential situation as a gathering of a concrete variation (the grail) in order to be able to formulate an interpretation of the "poetic vision" (Norberg-Schulz 1981b: 230) received that will enable the implementation of building the anglers world of life to be a translation of the particular place into an image.

This image can then be used as a guideline in the making of architecture. According to Auret (2015:119) Norberg-Schulz "understood this 'vision' as an alternative to "scientific description" and explains that "in order to "keep" this vision, it must be set into work." .

"The work of architecture, serving as a "poetic interpretation of the ancient theme of the meeting of earth and sky" (Norberg-Schulz 1981a: 209), preserves 'memories' while being open to particular situations. Making an architectural imago Mundi is a poetic act of translation which engages with the general and the particular" (Auret 2015: 119). The general aspects and the particular details of the proposed design are tied to tensions described. In a way the design process is both the act of fly tying, finding a place to cast and being in tension with the caught trout simultaneously.

The general aspects and the particular details of the proposed design are tied to tensions described. In a way the design process is both the act of fly tying, finding a place to cast and being in tension with the caught trout simultaneously.

Conclusion

In this chapter, an understanding was gained that in order for one to attempt the translation of the angler's world of life, one must engage understanding of the process of fly fishing as the angler's way of life. For only if one can understand the lived realities of the angler, can one attempt to interpret the poetic understanding of fly fishing, which will enable a translation of the angler's world of life into built form.

Chapter 4
Towards interpreting the poetics of fly fishing.
Introduction

This chapter of the dissertation is focused on an investigation of fly fishing . It includes stories (narratives), mysteries, poems, related precedents, subjects, thoughts and illustrations in an attempt to create a comprehensive effort to understand the ancient engagement between angler and water (trout). A comprehensive understanding will allow an interpretive implementation that enables a translation of the angler's world of life into architectural principles, that will in turn, be used as an attempt to amalgamate and address the inherent tension between built form and the natural landscape. The investigation is divided into three parts, A B and C. I will briefly describe each and follow with a deeper description.

A: Understanding the poetics of tension embodied between man and nature.

In a further attempt towards a gathering of an existential foothold and a method of "unconceiling"as described by Norberg-Schulz Heidegger and Auret, the deep-rooted nature of ideas is discovered through drawing a parallel with the fly rod. The fly rod has been a long-standing friend in my endeavour to associate architectural investigations with fly fishing concepts.

B: The ritualized process of fly fishing

The ritualized process of fly fishing is analyzed and abstracted to formulate a translation of the process, and in this way, create a set of ordering principles -rooted in the ritualized understanding of the angler. In turn these principles govern how the multiplicities are gathered into a coherent design, how movement on-site is addressed, and the orientation of the architecture.

C: towards a poetic translation of fly fishing techniques:

Thirdly , an in-depth investigation of the techniques of the angler is included to gain an understanding of how these techniques could be interpreted and implemented, to allow a translation of the techniques into built form.

Chapter 4
Towards interpreting the poetics of fly fishing.

A: Understanding the poetics of tension embodied between man and nature.

The fly rod crafted from nature wielded by a human overcomes the threshold between human and nature by connecting the angler and water through a rhythmic oscillation between the tensions embodied in the two. The fly rod works because of this tension. The line is held in place and drawn into tension by the rod. The rod is brought into constant contortion as it embraces the path of the line. Both elements static apart, but vibrantly dynamic in engagement. Without the rhythmic engagement between the two, tension dissipates, and the poetic engagement is lost.

The fly rod in a continual tension – is as Ruskin's ideology alludes: a call towards the poetic. The metre cannot be broken.

This dissertation is an aim to address the tension that comes to exist between man and nature when building in the natural landscape.

Man has to prudenty or ponderingly listen to the 'voice' of the site to enable the architectural translation of built form to bring the site to its predetermined destiny and become a poetic answering to the voice of the site.

For man to engage in this poetic answering and preduring listening man must address the tension that exists between himself (built form) and nature (natural landscape).

I investigate the fly rod to reach an understanding that the fly rod in its entirety becomes an instrument that the angler uses to address the tension (the divide) between angler and water; man and nature; architecture and landscape.

It is important to understand how the fly rod works, to be able to interpret how the functioning of the fly rod can aid one, to attempt the poetic answering of the voice of the site. Which will be an implementation that addresses the ongoing tensions described previously and that reveal a translation of the fly rod and its inherent ability to address these tensions.

Ultimately, the purpose of the architectural intervention is to translate the angler's world of life into a built form, to order and improve our relationship with the environment.

This again can be understood as the relationship between the building task and the architectural solution: designing a fly fishing retreat and hatchery that is a poetic translation of the angler's world of life, which acts as a mechanism to poetically address the tension between built form and natural landscape and refers to the realised architectural work.

The architecture, as an ordering, controls and regulates the relationship between ourselves and our environment.
This relationship explains the architectural intention and reveals the purpose and effect of architecture: the transformation of the natural landscape into a cultural landscape by translating the angler's world of life in accordance with the place.

POETIC UNDERSTANDING THE FLY ROD AS A MECHANISM

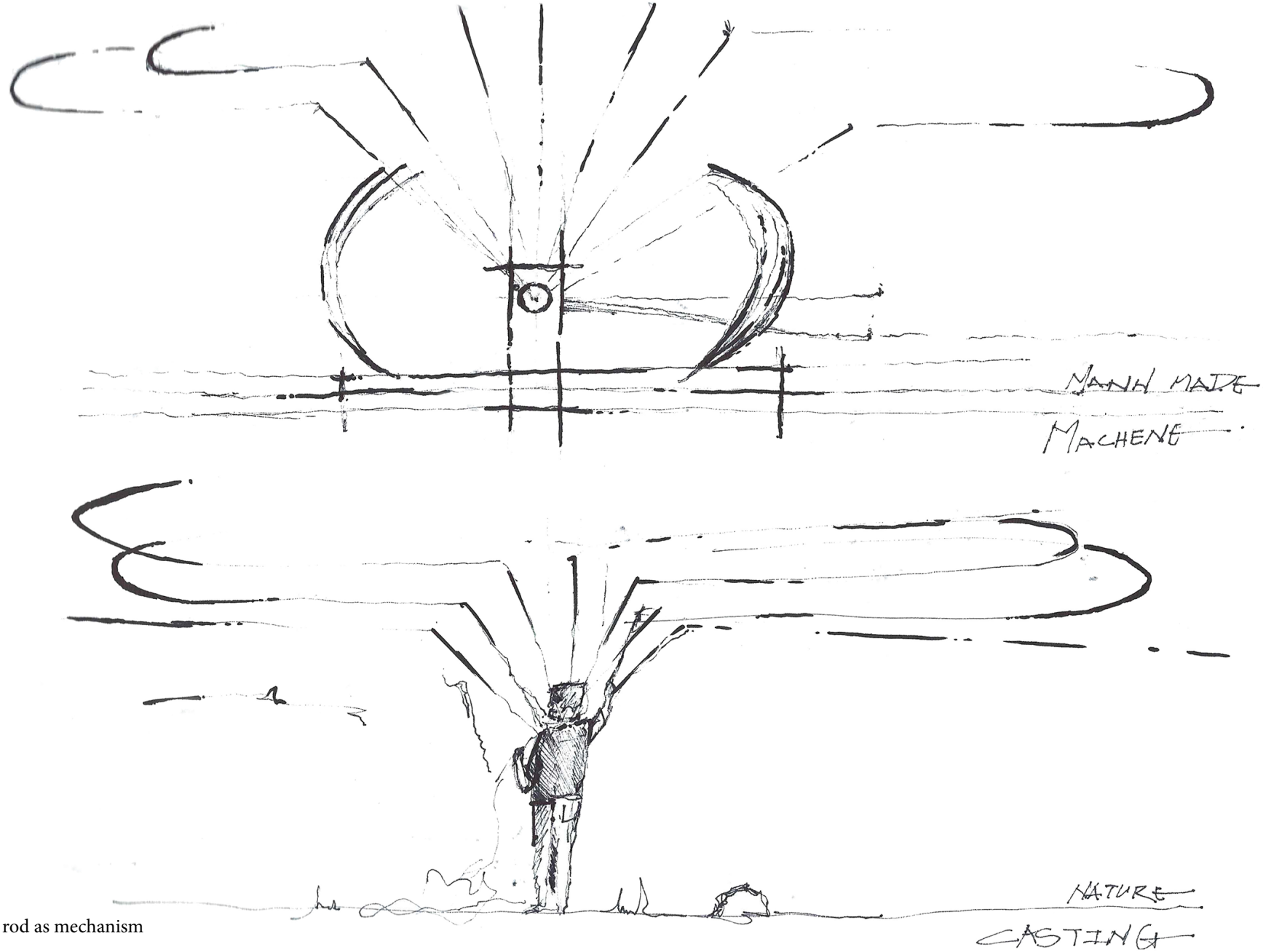


Figure 73: The fly rod as mechanism

Chapter 4
Towards interpreting the poetics of fly fishing. poetic understanding the fly rod as a mechanism

When investigating the relationship the fly rod has towards the angler, and simultaneously the environment, it can be understood as a mechanism that the angler uses to overcome the divide between him and the trout rhythmically. As a mechanical tool, the fly rod can be understood as a device that functions as the result of continuous tension between the line and the rod to produce a cast that enables the bridging of the aforementioned divide (tension). The fly rod has a reel that houses the line and enables the reaction (the cast) to be repeated. This understanding of the fly rod can be translated into an architectural application that allows an intersession between the built form and the landscape that works as the result of continuous tension.

In a further attempt to understand the fly rod as a mechanical mechanism used to address the tension between man and landscape, and translate how the fly rod functions and addresses the tensions embodied between human and nature, a mechanism was built as a representation. This touchstone aimed to translate how the fly rod works and how it becomes a mechanism to addresses the tensions between planes.

TOUCHSTONE:
The methodology of how tension exists between manmade and natural.

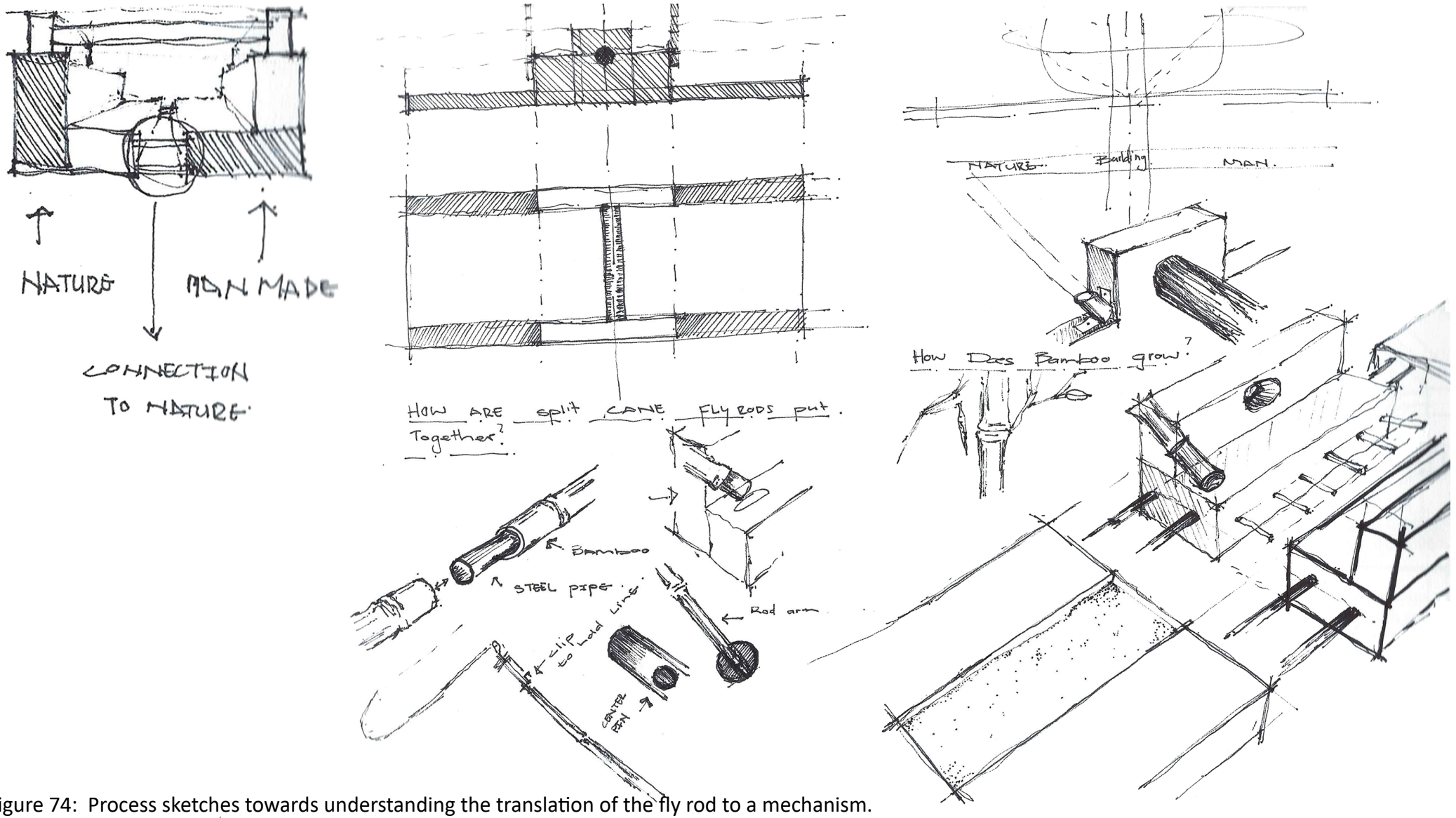
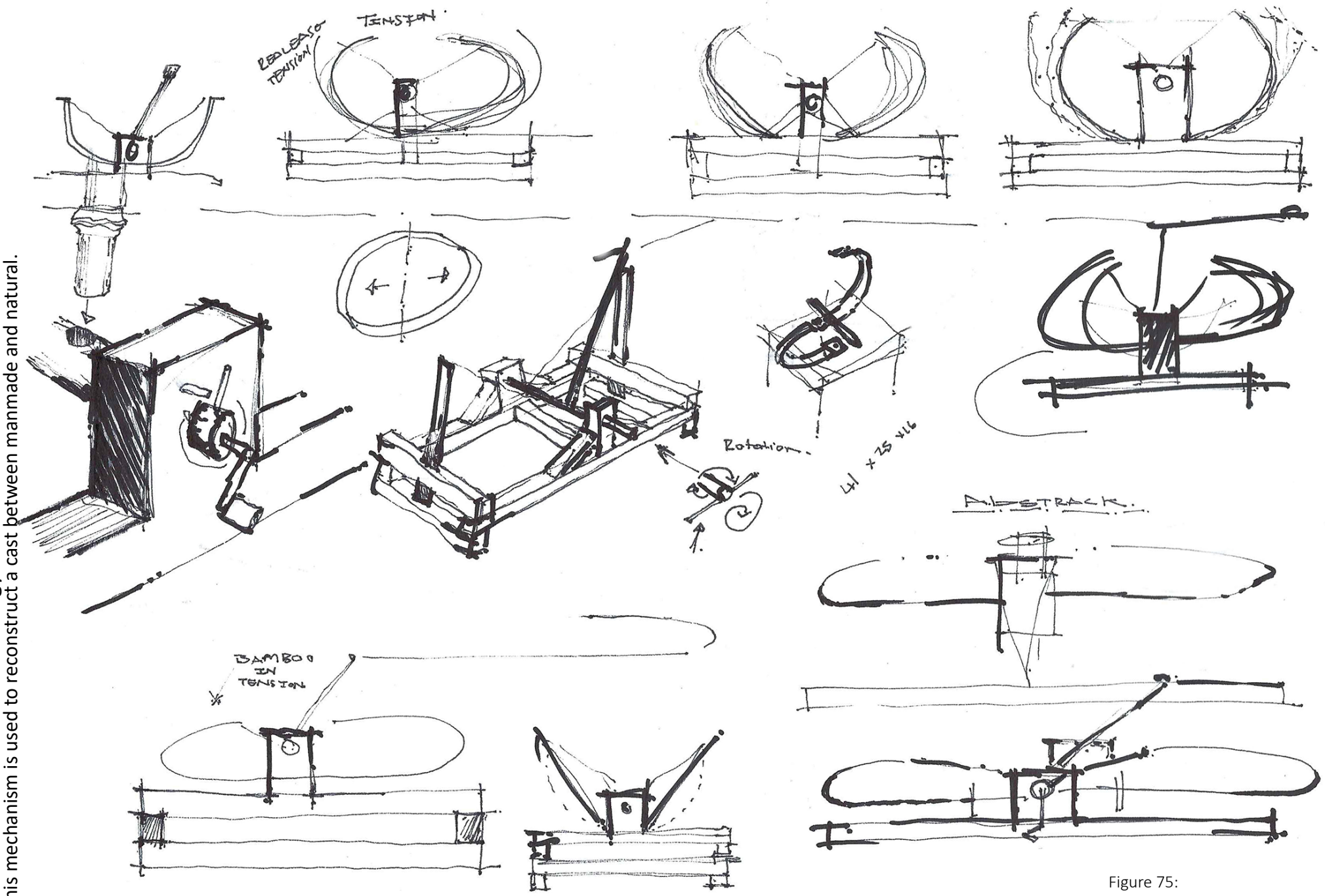


Figure 74: Process sketches towards understanding the translation of the fly rod to a mechanism.



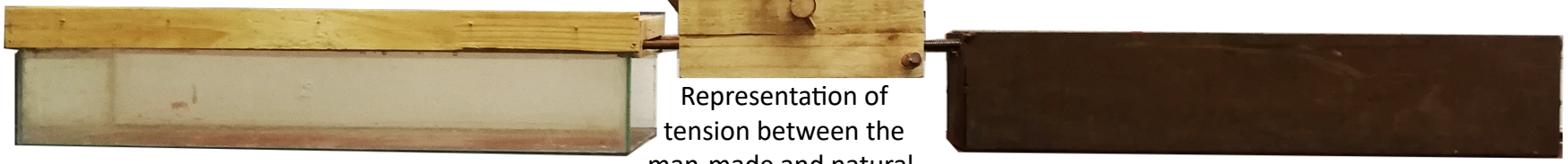
TOUCHSTONE: The methodology of how tension exists between manmade and natural. This mechanism is used to reconstruct a cast between manmade and natural.

Figure 75:

Representation of the fly rod.

Nature

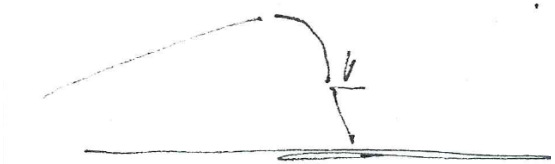
Man-made



Representation of tension between the man-made and natural.

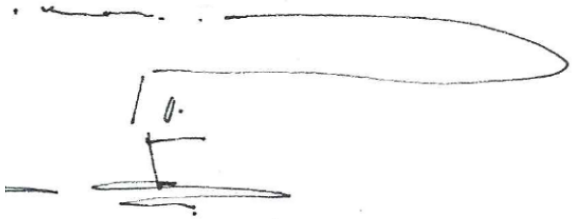
FRONT CAST:

To get the perfect roll of the fly line, it must be released at the two o'clock position.



Build-up of tension

BUILD-UP:
As the angler lifts the rod, the weight of the line loads the rod with kinetic energy and enables the line to move through the air.



Moment of tension

MOMENT:
The moment the line moves overhead of the rod the kinetic energy from the rod is released as it encounters a moment of loss of tension and the kinetic energy is transferred to the line and loads the line, enabling it to move through the air.

BACK CAST:
Timing needs to be perfect for the line to roll out. This requires a release of the line at the ten o'clock position with a two-second pause to load the line.



Release of tension

RELEASE:
As the line roles out to a fully extended back roll, the tension in the line is released. The weight of the line causes the rod to bow as it rolls out and loads the rod with kinetic energy and the process repeats.

Figure 76: Representation of tension between the man-made and natural.

Chapter 4
Towards interpreting the poetics of fly fishing. poetic understanding the fly rod as a mechanism

UNDERSTANDING THE POETICS OF THE REACTION:

- The two bamboo catapult arms are in constant tension, and one represents the tension of the natural landscape and the other the tension from the man-made reaction.
- This is because it is impossible to remove the tensions that exist between man and nature, but there exists a method to interpret this tension to en sure that the reaction (Architecture) on the landscape can be handled in such a way to ensure the site reaches its predetermined destiny (by poetic answering of the voice of site).
- The reaction works as a result of this constant tension and implies that constant tension between man and nature is necessary as it enables one to react to this tension. Thus the reason for its existence is to make use of the tensions and to reinterpret it in such a way that the reaction between man and nature is a positive one.

  The tensions between man and nature are in equilibrium as a result of the tension between the two bamboo catapult arms and stresses that if the reaction has happened, the system must be able to reset itself to equilibrium.

- With this said the reaction also portrays an individuality in the experience of it as each time you release the line, a unique pattern is left on the cloth which alludes to the concept that each person experiences the landscape differently.

  This mechanism alludes to a methodology that must be used in the poetic answering of the voice of the site when working within the natural land scape.

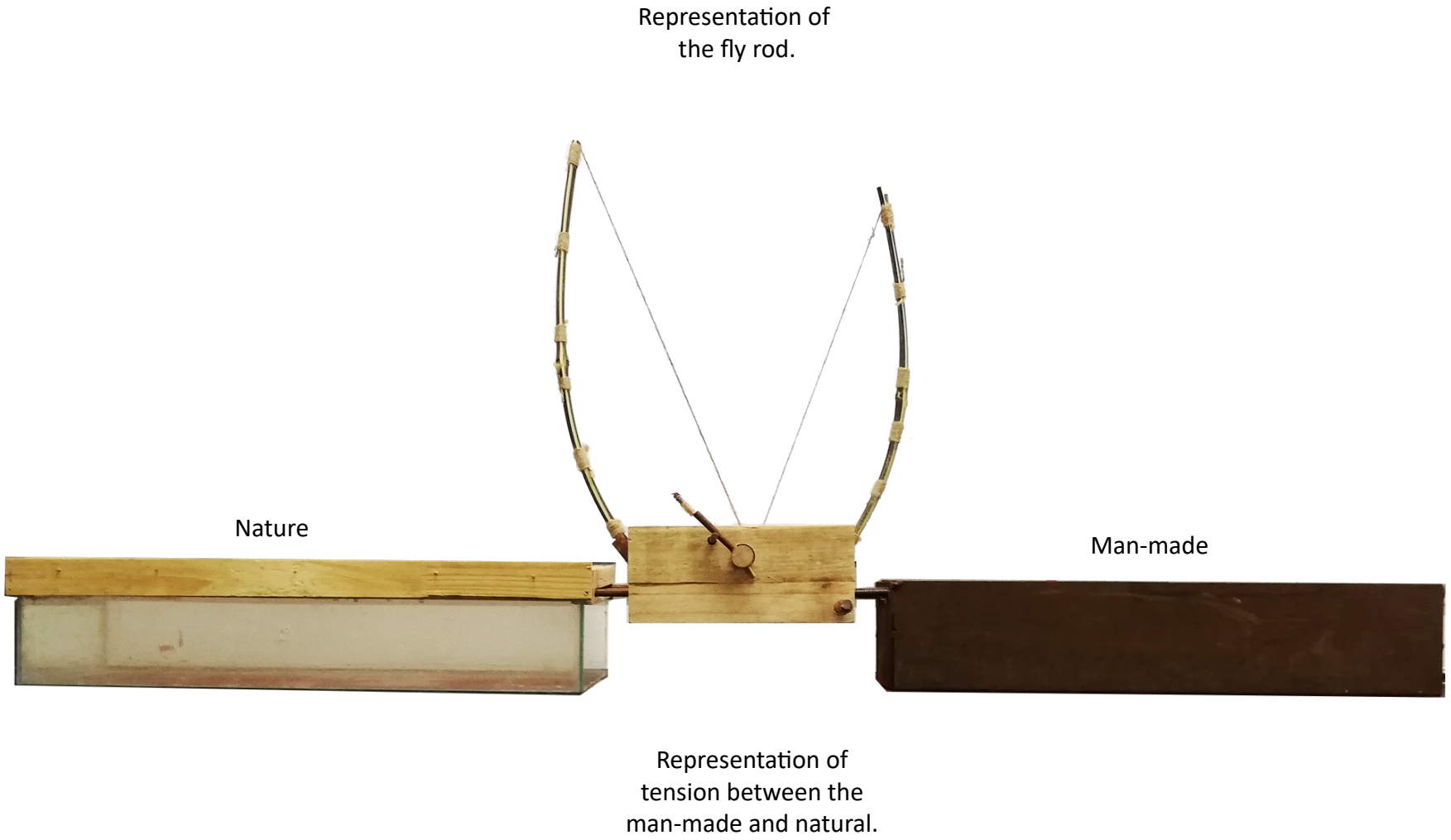


Figure 77: Understanding the poetics of a reaction.

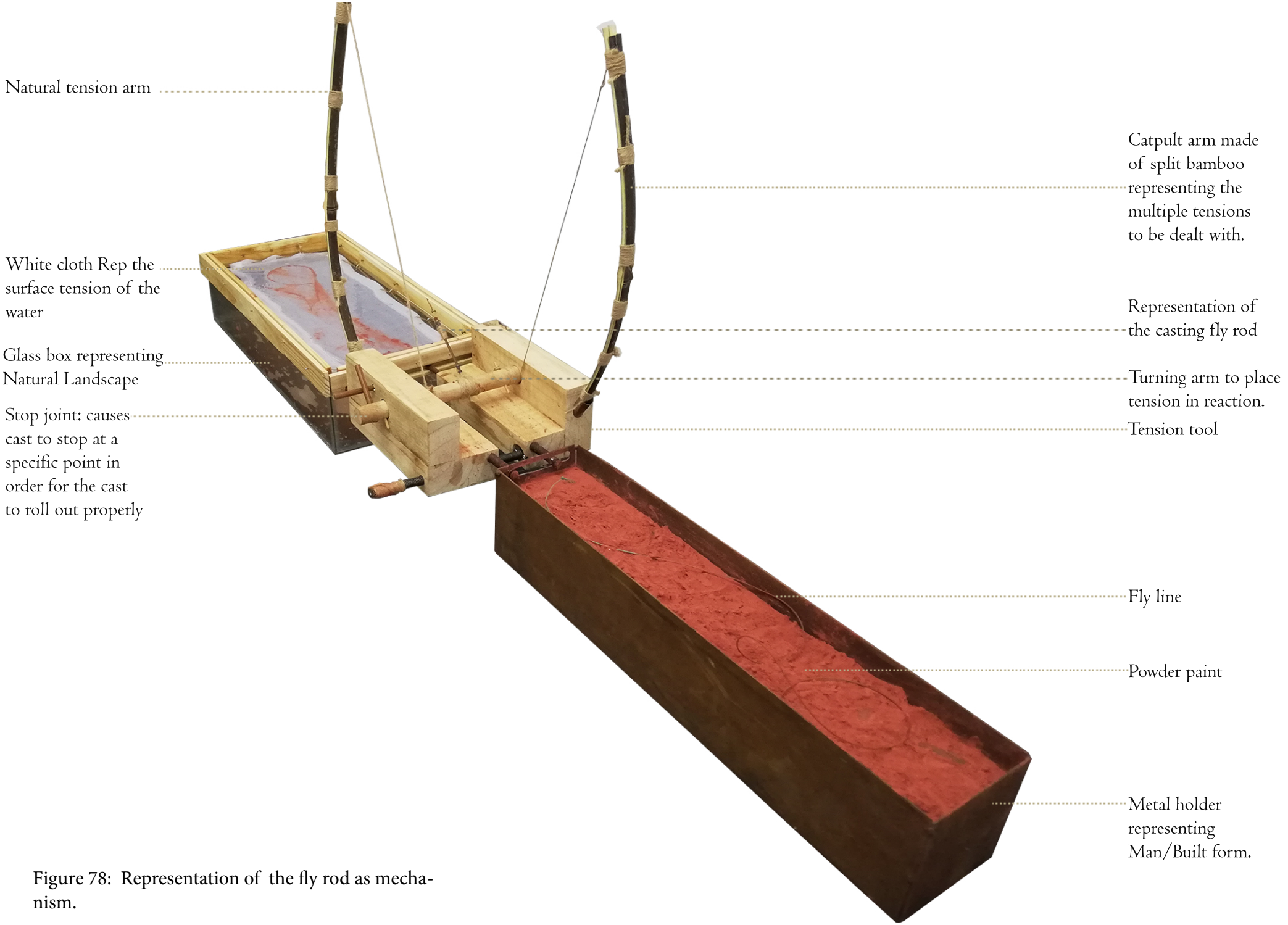


Figure 78: Representation of the fly rod as mechanism.

AN EXPLANATION OF HOW THE REACTION WORKS:

The reaction starts on the man-made side of the instrument (as man approaches nature, as architect approaches landscape, as angler approaches landscape) and ends at the natural side of the instrument.

The reaction entails the following:

- On the man-made side, a core-ten steel rectangular box is filled with powder paint and represents the man-made interaction.
- A fly line is submerged in the paint and connected to a catapult arm representing the fly rod.
- When the catapult arm is pulled back, it loads the two bamboo arms and when the catapult arm is released, the line is cast through the air.
- The catapult arm has a stop joint in the 2 o'clock position to enable the line to roll out completely in the air and falls on a white cloth suspended in the menis-cus of the water contained in a glass box representing nature.
- The moment the line falls on the white cloth, the powder paint on the line is transferred to the white cloth representing man's reaction on the natural land scape.
- If the instrument is left for approximately 15 minutes, the powder paint on the white cloth will filter through the cloth, and the cloth will remain unstained.
- This represents the way man's reaction should be on the landscape. A reaction that is not scarring the landscape and a reaction that allows the natural land scape to return to its untouched state.

Nature Representation of the fly rod. Manmade

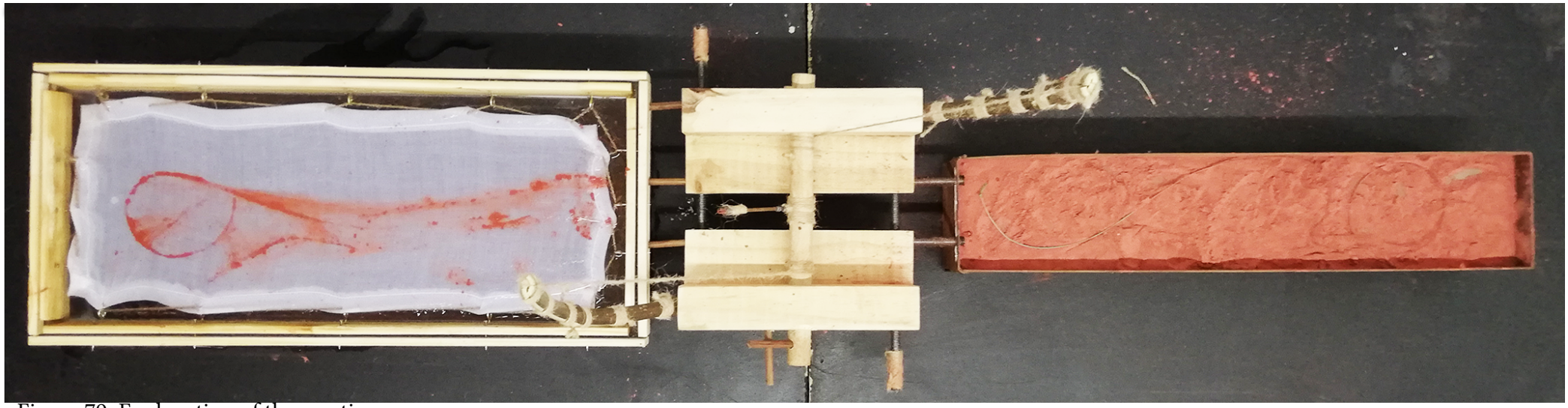


Figure 79: Explanation of the reaction.

Chapter 4
Towards interpreting the poetics of fly fishing.

B: The ritualized process of fly fishing

The ritualized process of fly fishing is analyzed and abstracted to formulate a translation of the process, and in this way, create a set of ordering principles-rooted in the ritualized understanding of the angler. In turn these principles govern how the multiplicities are gathered into a coherent design, how movement on-site is addressed, and the orientation of the architecture.

Readings from: The complete angler: A discourse of fish and Fishing. (Walton & Cotton, 1903: 60)"Pisc. Nay, stay a little, good scholar. I caught my last trout with a worm; now, I will put on a minnow, and try a quarter of an hour about yonder trees for another: and so, walk towards our lodging. Look you, scholar! Thereabout, we shall have a bite presently, or not at all. There is a trout now, and a good one too, if I can but hold him: and two or three turns more will tire him; now you see he lies still, and the sleight is to land him: O' my word I have hold of him. Reach me that landing-net. So, sir, now he is mine own: what say you now, is not this worth all my labour and your patience?"

This extract provides an understanding of how the angler moves through the natural landscape in search of the perfect positioning that will enable him to catch a trout. This links to how an architect has to understand a site in order to orientate and engage with the design of a building. The extract can be interpreted as follows:

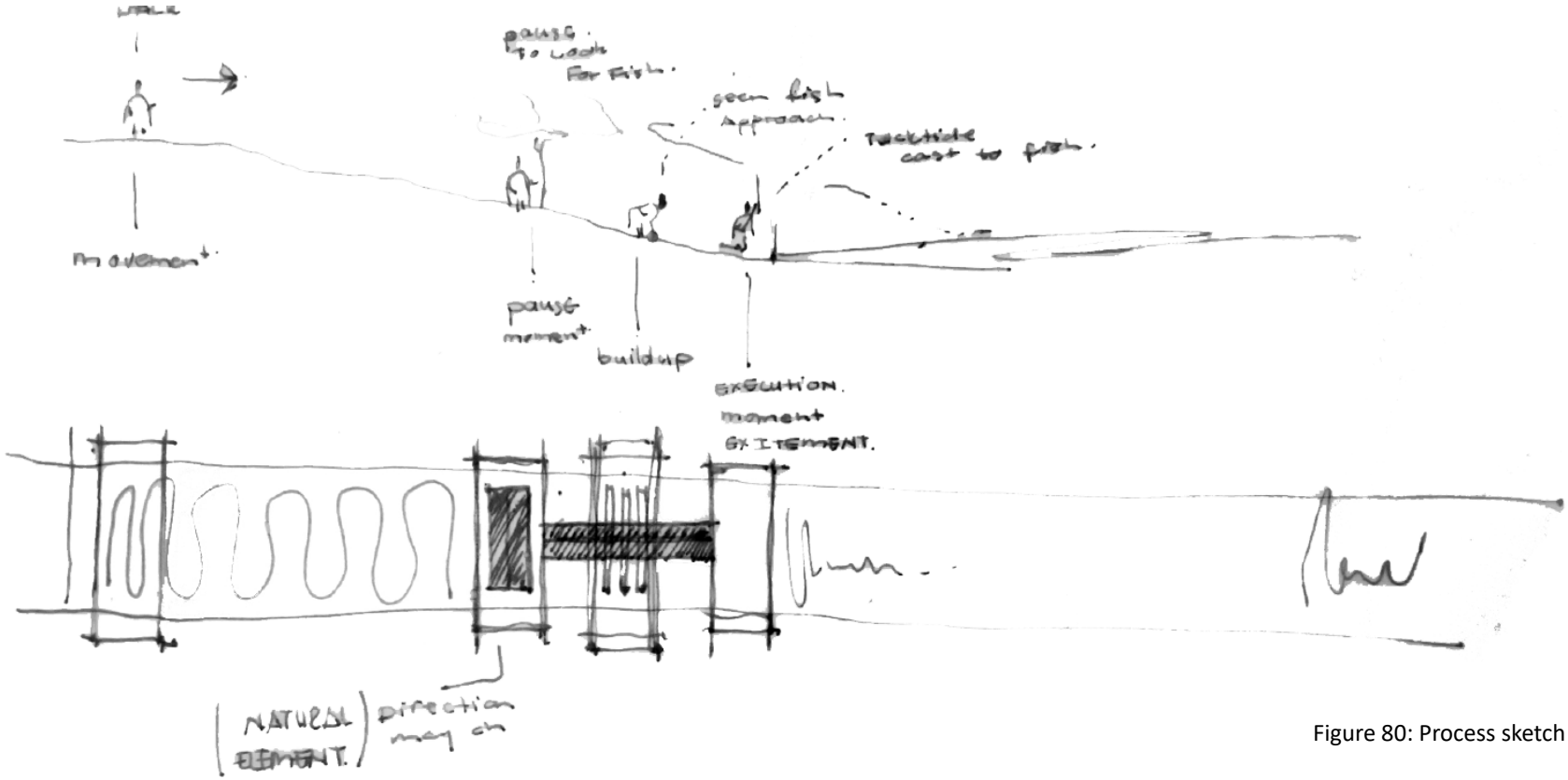


Figure 80: Process sketch

The angler's first directional contributor is a movement through the landscape towards a tree, an element in the landscape that acts as a point of orientation. Here the angler pauses to observe the landscape and the water in an attempt to identify the best location and position for fishing. At this location, a trout could be spotted and entail an advance to this location, which now becomes the second directional contributor. Between the natural element in the landscape (the tree) and the proposed location, there is a build-up and suspense as the angler stalks the fish. On arrival at this location, the execution of the cast takes place; the divide between the angler and trout is breached by the rhythmic action of the rod advancing the line over the water. The line then breaks the surface tension of the water and the fly is presented to the trout. The trout then engages the fly and the instant the trout takes the fly a moment of poetic intensity is created where the angler and the trout are connected in a poetic tension.

This extract can further be interpreted into a set of ordering principles used to govern circulation in the buildings and through the landscape. The principles also dictate the way the built form is orientated in the landscape. The ordering principles can be understood as follows:

The ordering principals can be understood as follow:
- Movement
- Pause (at a natural element)
- Build-up
- Execution
- Moment of poetic intensity.

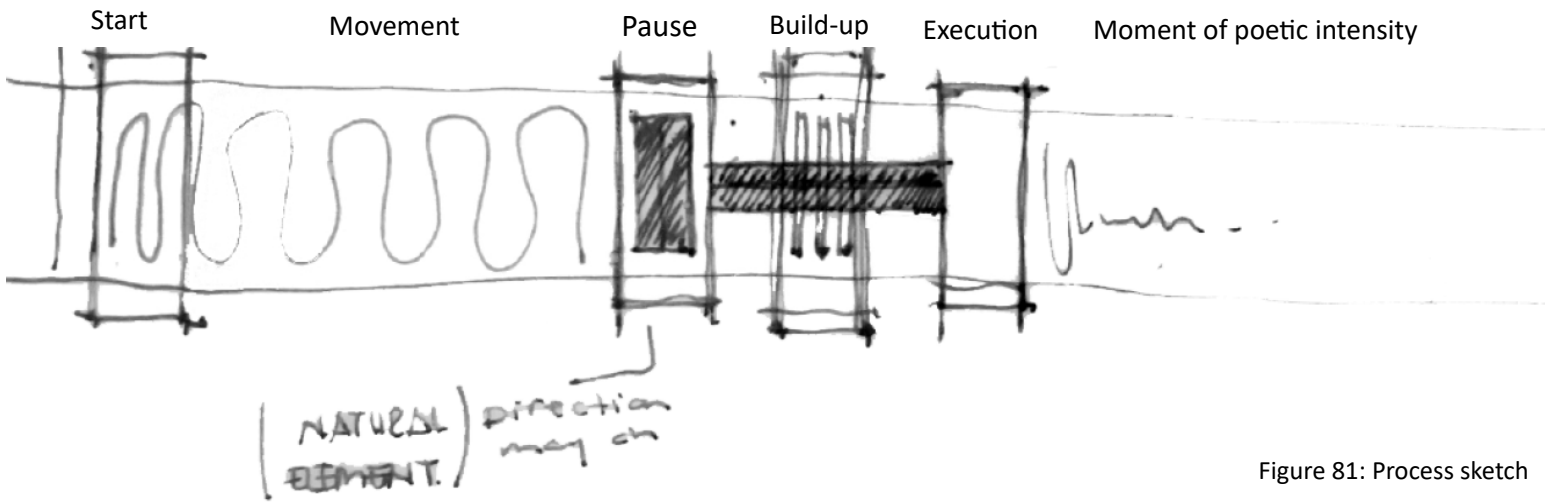


Figure 81: Process sketch

This set of principles becomes an interpretation of how the angler orientates himself and circulates through the natural landscape. By implementing these principles in the design it allows a translation of the angler's world of life (being) into architectural form.

Chapter 4
Towards interpreting the poetics of fly fishing.

In a further attempt to ground the orientation of the built form in the angler's world of life an investigation is executed on the three relationships the angler and the casting of the fly rod has towards the landscape.

Alternating textile embodiment

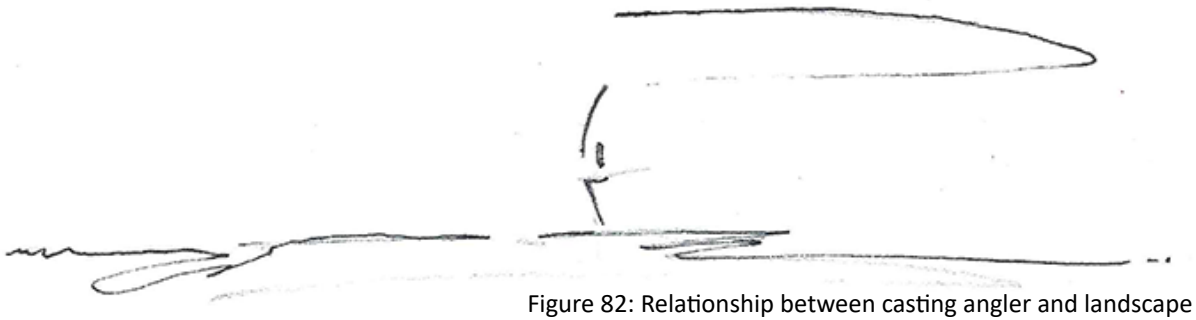


Figure 82: Relationship between casting angler and landscape

In the first relationship, the fly line is casted and rhythmically oscillatesulates back and forth, hovering above the landscape and the water as a result of the tension in the line and rod while being in the hands of the angler who is standing on the ground.

This understanding of the relationship between the casting angler and the landscape, can be interpreted as a two horizontal planes (earth and sky; line and water) which are connected by means of a vertical element (the angler). The vertical and horizontal planes are dependent onf each other.
This understanding can further be interpreted as an implementation of an element suspended above the landscape by the connection to a vertical element.
.This implementation allows a translation that dictates the orientation of the architectural form should be suspended above the landscape

Surface tension, Friction materiality viscosity

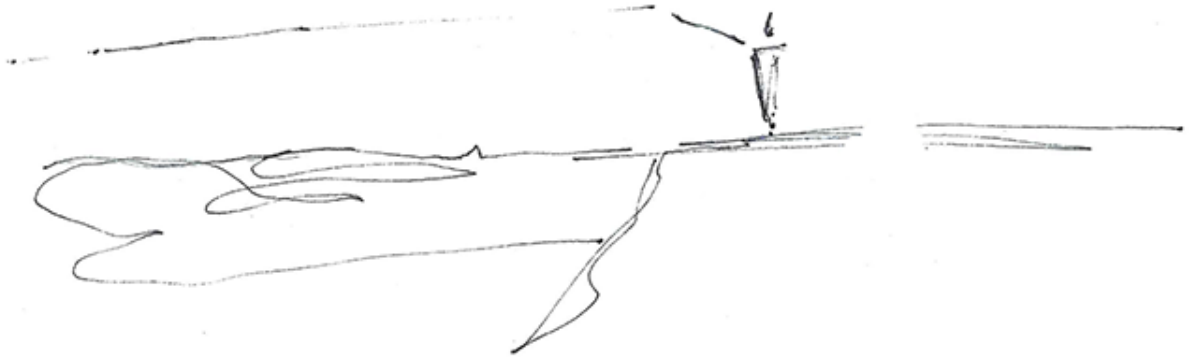


Figure 83: Relationship between casting angler and landscape

In the second relationship, the fly line is cast, falls on the water and floats on the surface. The fly line floats as a result of its material composition. In this sense, the fly line meets with the landscape with no intersection between the water and the line. Neither the water tension nor the line's materiality are altered.

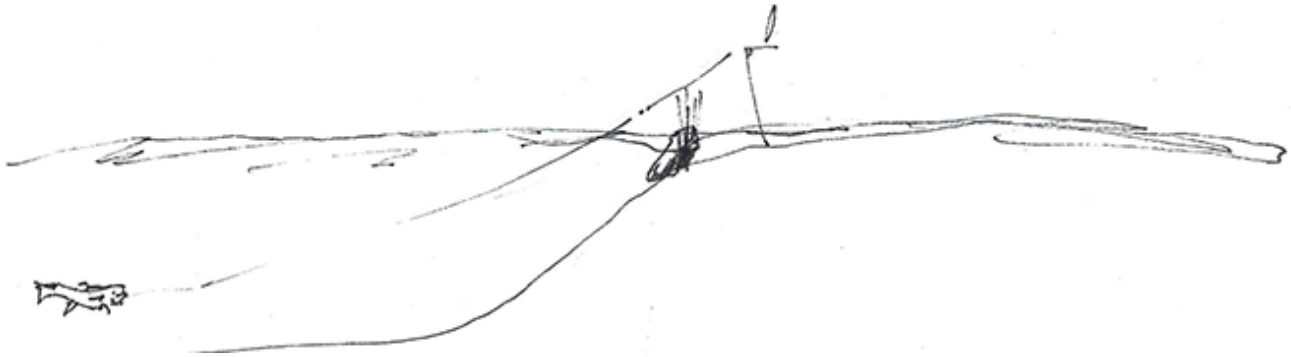
As with the vertical relationship described above, between the casting angler and the landscape, this moment of tension can similarly be interpreted as two horizontal planes (earth and sky; line and water) that meet with each other and are held together by this meeting where neither of the planes are altered as a result of this meeting.

This understanding can further be interpreted as an implementation of an element that meets with the landscape and functions like a friction joint – as the line does not alter the materiality of the water but uses it to stay afloat- joining the plane to the landscape without altering its surface.

This implementation translates how the architectural form's orientation meets with the landscape.

MYSTERY HIDDEN SUPERSTITION "SUNKEN-NESS".

Figure 84: Relationship between casting angler and landscape



In the third relationship, the fly line is cast and falls on the water and snakes down becoming submerged in the water. In this relationship, the fly line is submerged in the landscape, and the angler is standing on the landscape, so there is a tension as the line is retrieved.

The relationship between the casting angler and the landscape can be interpreted again as two different planes, but in this case one is submerged in the ground and the other lifted from it.

This understanding can further be interpreted as an implementation of an element that is submerged in the landscape with the secondary element suspended above the landscape and connected to the submerged element.

This translation indicates orientation of the architectural form that is submerged in the landscape with the secondary orientation of the form seamlessly joined to the submerged element.

Conclusion
By understanding these three relationships that the angler and the fly rod have towards the landscape, one can interpret an understanding of how the orientation of built form must can be an implementation of an amalgamation of these three relationships.

The amalgamation allows the implementation to be a building of the angler's world of life in accordance relation to place. In turn it that reveals the translation of the relationship between angler and landscape.

Chapter 4
Towards interpreting the poetics of fly fishing.

C: towards a poetic translation of fly fishing techniques:

This segment will discuss the angler's age-old technique of translating life into an artificial fly.

The 'translatory' art of fly tying: "The angler's art is artifice":

"To me, trout fishing, in particular fly-fishing, is many things, but above all, it is a conversation, a communication — with a creature to which we are connected by common ancestry not so very long ago. The rod, the line and the hook are the tools of this communication, but the fly or lure is the ultimate translator between languages, between our world of names, structures, systems and hierarchies and theirs of instinct, impulse and experience." (Prosek, 2015: online).

According to Izak Wolton artificial fly making (fly tying) is indubitably an art, and an art which all anglers should find time for, as he states "is it not an art to deceive a trout with an artificial fly? A trout that is more sharp-sighted than any hawk, and more watchful and timorous than your high-mettled merlin is bold?" (Wolton and Cotton,1903: 12)

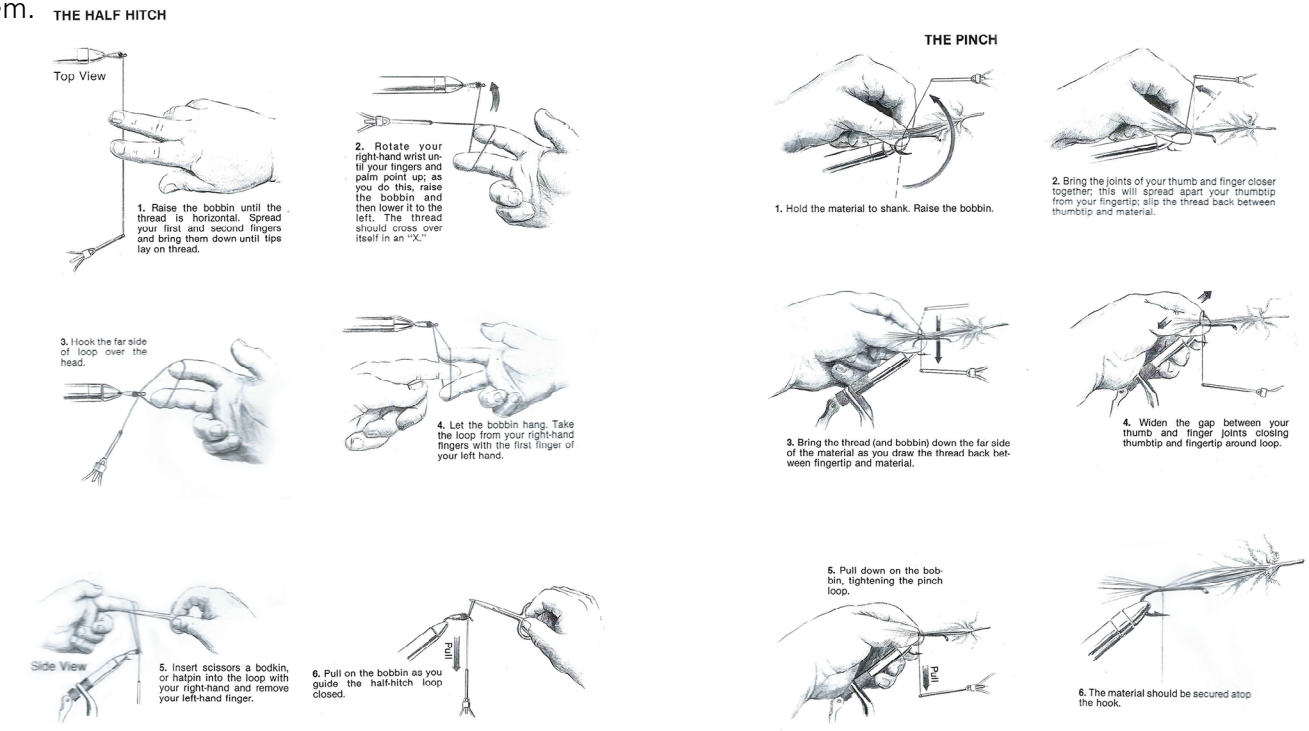
The art of fly tying has been a longstanding tradition for fly fishing anglers in their pursuit of deceiving the eallusive trout, and as a result it became important to understand this tradition and its technique, because it forms part of the angler's world of life and thus becomes an important part of the translation of fly fishing into built form.

The art of fly tying:

Fly tying is the process of using fur and feathers to imitate life. This technique and its evolution originated from a necessity to procure food. People noticed that trout come to the surface of the water to engulf small insects that where to minuscule to catch and tyie to a hook to use as bait. and aAs a result, the anglers had to create small imitations of these insects to devise deceive the fish in order to catch them. This tradition is an ancient engagement and dates back to the second century AD with the earliest writings on using an artificial imitation of an insect to catch fish written by Claudius Aelianus's "De Natura Animalium" (Prosek, 2015: online).

In its most basic form, fly tying is the process of binding a wide variety of materials, to a steel hook with thread. These materials incude a wide variety gathered from the environment such as animal hide or feathers. These elements are held together by the thread kept in tension binding the material to the hook. The thread is then tied off with a knot, and an adhesive is applied to the thread to finish the fly. These materials are held together by the tension applied by the thread, if the knot were to come loose the materials would come apart, and the fly will lose its imitative properties.

This act of making can be interpretively translated into an architectural application that stresses the use of a wide variety of natural textures held together by a tensile structural system.



Fiigure 85: Illustration of how flies are constructed and how the materials are held together by tension.Fly tyingtechniques. (Morris, 1992: pp)

Chapter 4
Towards interpreting the poetics of fly fishing.

"These translation devices are as beautiful and diverse as the fish they are meant to deceive. They imitate not only insects but anything that might fall prey to a fish" (Prosek, 2015: online) and as a result, a multitude of different fly patterns have evolved throughout the progression of the tradition.

As these flies aim to translate a specific living creature's life in a specific location in the water column, they have been categorized according to this relationship.



Figure 86: Streamers (Prosek, 2015: online)

Streamers:
These are larger elongated flies used to imitate fast swimming creatures such as small minnows or larger insect larva and are fished with a fast retrieve.



Figure 87: (Prosek, 2015: online)

Dry Flies:
These are small flies that are made by using a hackle feather and winding it around a small cluster of deer hair to ensure a more insect-like imitation. They float on top of the water and imitate Mayflies that have just evolved from their larval stage.



Figure 88: (Prosek, 2015: online)

Nymphs:

These are flies that are constructed with heavier materials such as small beads and copper wire and feathers that have a low buoyancy which enables the fly to sink into the middle of the water column where they imitate small aquatic larvae of winged insects like stoneflies, mayflies or caddisflies. These flies are most commonly just drifted in the middle of the water column.



Figure 89: (Prosek, 2015: online)

Terrestrials:

These are large flies that are made of materials with a high buoyancy such as deer hair and turkey wing feathers. These flies also commonly make use of synthetic materials such as sponge and rubber that allow them to float on top of the water and imitate large insects like grasshoppers or dragonflies that have fallen into the water. These flies are most commonly fished with a short strip retrieve to imitate the grasshopper's kicking action as it struggles in the water.

It becomes apparent that the materials used and the method in which these materials are linked together, becomes a direct translation of the imitation's use and location in the water column.

Thus, to interpret and implement this understanding of the art of fly tying into an architectural translation of the angler's world of life, a further attempt was made to amalgamate the three different relationships; between the casting angler, and the natural landscape, and the architectural translation of the art of fly tying.

This attempt lead to an investigation of three of the previously discussed fly classifications because there are similarities between these three classifications of flies and the three 'orientating' relationships of the casting angler.

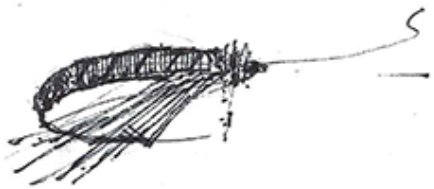
The three classifications of flies investigated are:
- The Dry Fly:
- The Terrestrial
- The Nymph



The Dry Fly



The Terrestrial

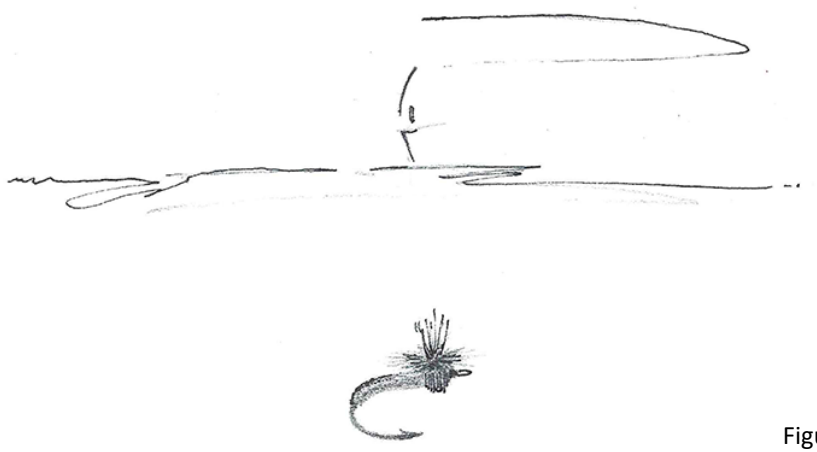


The Nymph

Chapter 4
Towards interpreting the poetics of fly fishing.

The Dry Fly: The May fly

ALTERNATING TENSILE EMBODYMENT MATERIALITY



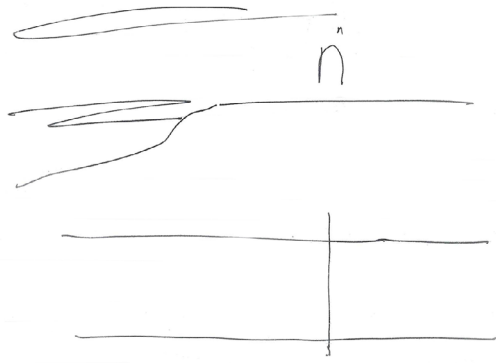


Figure 90

The Dry Fly: The Mayfly

The May fly is a fly that floats on the water.

In this fly the hackle feather is in winded around a cluster of stiff rabbit's face hair, which is fixed to a wing casing of turkey wing feather.

The two horizontally placed feathers are reliant on the vertically placed feathers.

Thus two horizontal planes are connected to a vertical plane.

The Terrestrial: The Hopper fly

SURFACE TENSION FRICTION MATERIAL VISCOSITY



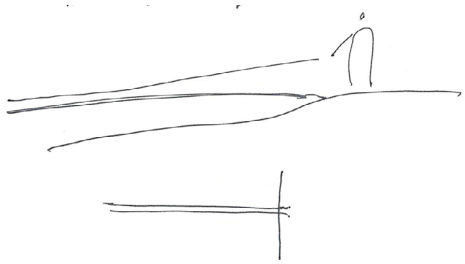


Figure 91

The Terrestrial: The Hopper fly

The hopper is a fly that sits on top of the water and only his legs touch the water.

This fly makes use of rubber strings that are knotted to form legs which are used to suspend the body of the fly just above the water

Thus the legs do not intersect the water.

The same effect as a friction joint is achieved

The Nymph: Ghost shrimp

mystery Hidden superstition

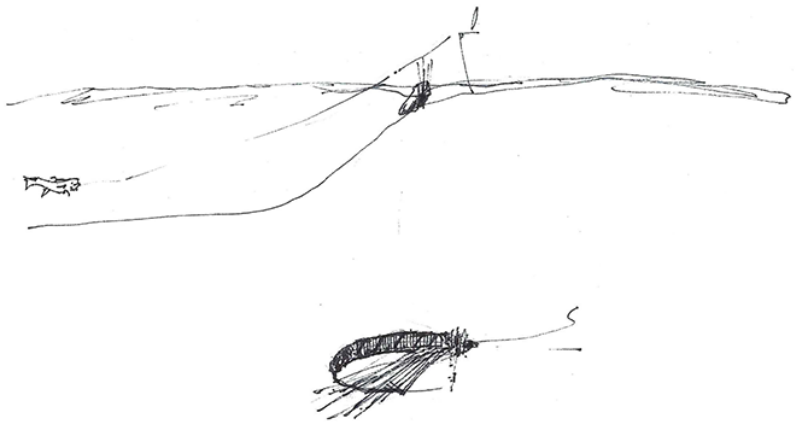
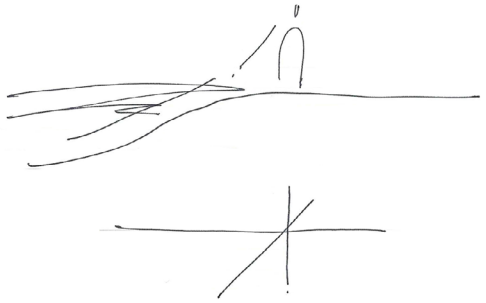


Figure 92



The Nymph: Ghost shrimp

The Ghost shrimp forms part of the wet fly family as these are flies that are submerged in the water column.

This fly has an inverted rooster saddle wing casing tied at a 30 degree angle. With a horizontal English partridge feather body.

The relationship exists two different planes, one submerged in the water and the other above the water on the ground.

alternating tensile embodyment materiality

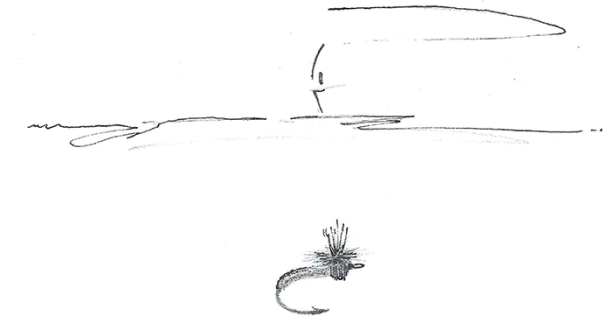


Figure 93

surface tension friction material viscosity



mystery Hidden superstition

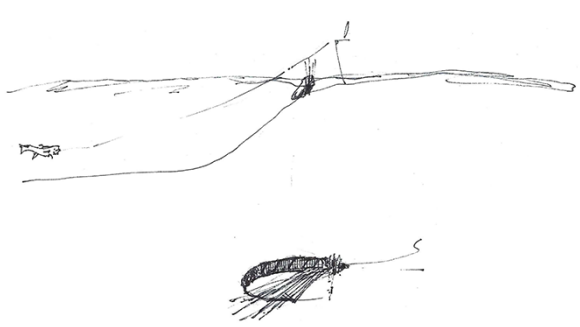


Figure 90- 93: Interpretation of planes between fly and cating angler.

Conclusion

This allows one to implement an architectural translation that understands that the location of the architecture is dictated by specific material use and structural system.

Understanding the poetics of tension embodied in the fly rod

By examining the fly rod, the following can be understood:

- The fly rod is a precise instrument designed to produce a cast enabling the angler to present a fly to a fish, which leads to the catch of the fish.
- Effective because of the objective rationality behind the design: Mechanical energy that builds up and is transformed into kinetic energy, enabling the fly line to be cast through the air and across the water.

In a closer investigation, the fly rod has been divided into six moments of tension: Build up, moment, release, build up, moment, release/transformation.

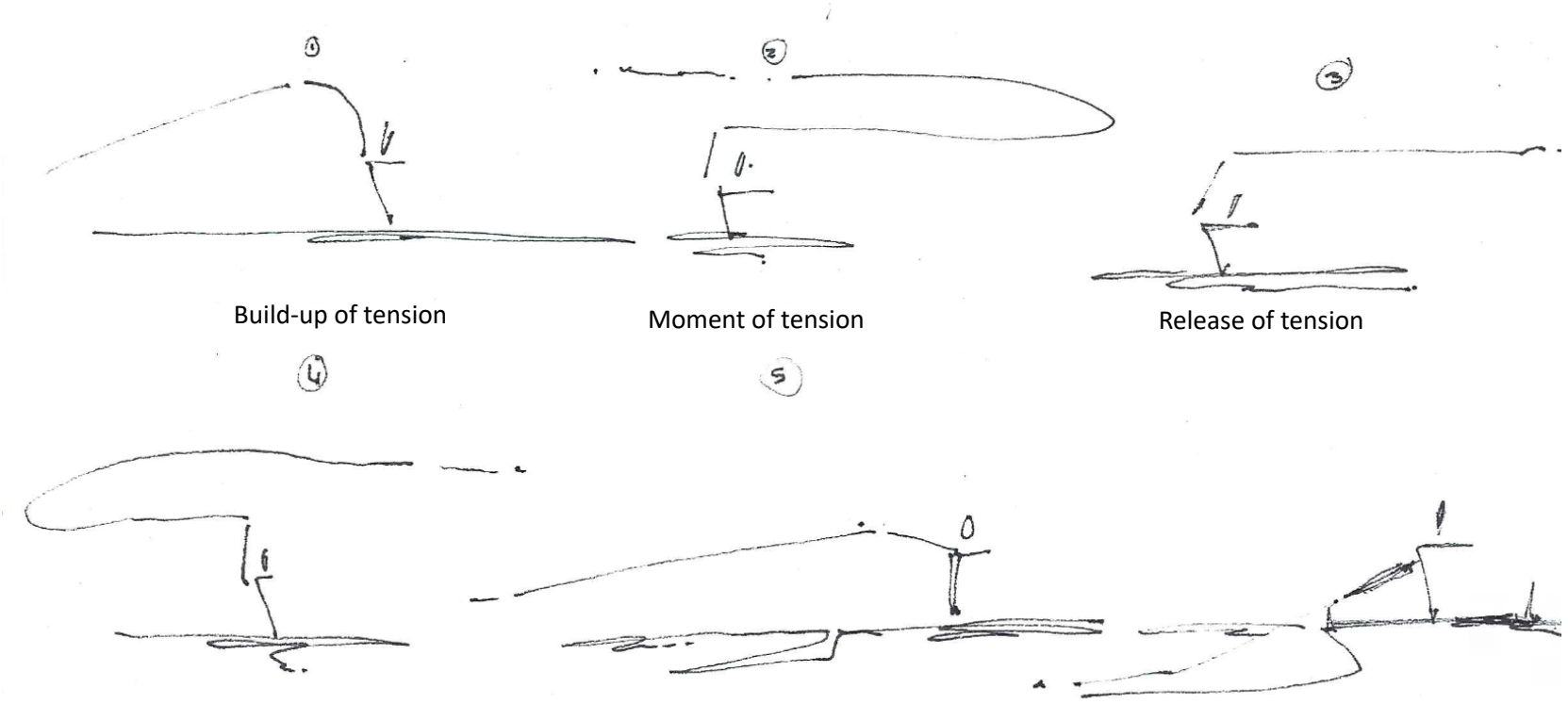


Figure 94: Six moments embodied in the fly rod.

An interpretation of these six moments has been translated into six architectural moments or ordering principles used to govern how the building can be designed.

Build-up of tension; Moment of tension; Release of tension; Buildup of tension; Moment of tension; Transformation of tension.

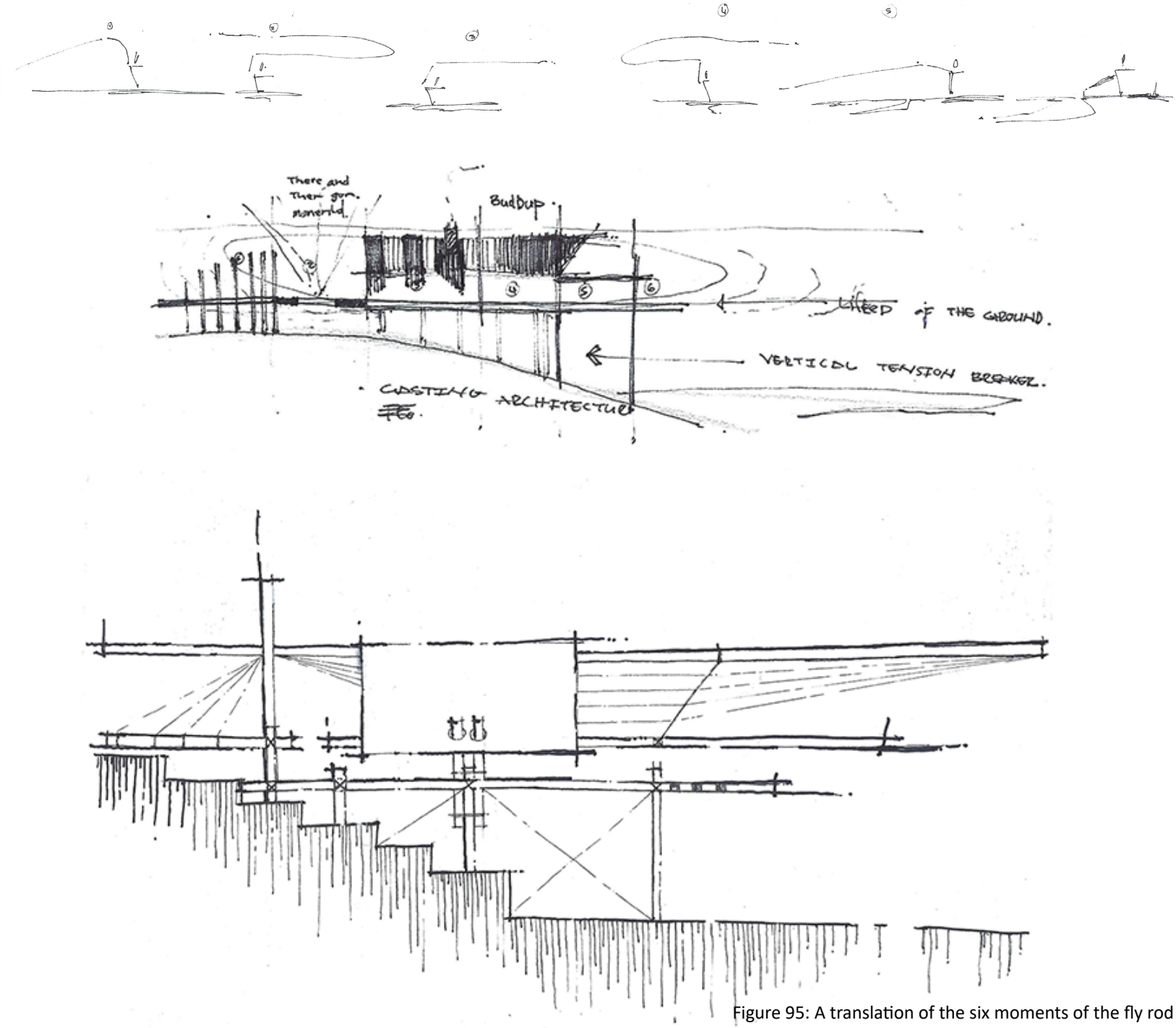


Figure 95: A translation of the six moments of the fly rod into built form.

Build-up of tension; Moment of tension; Release of tension; Buildup of tension; Moment of tension; Transformation of tension.

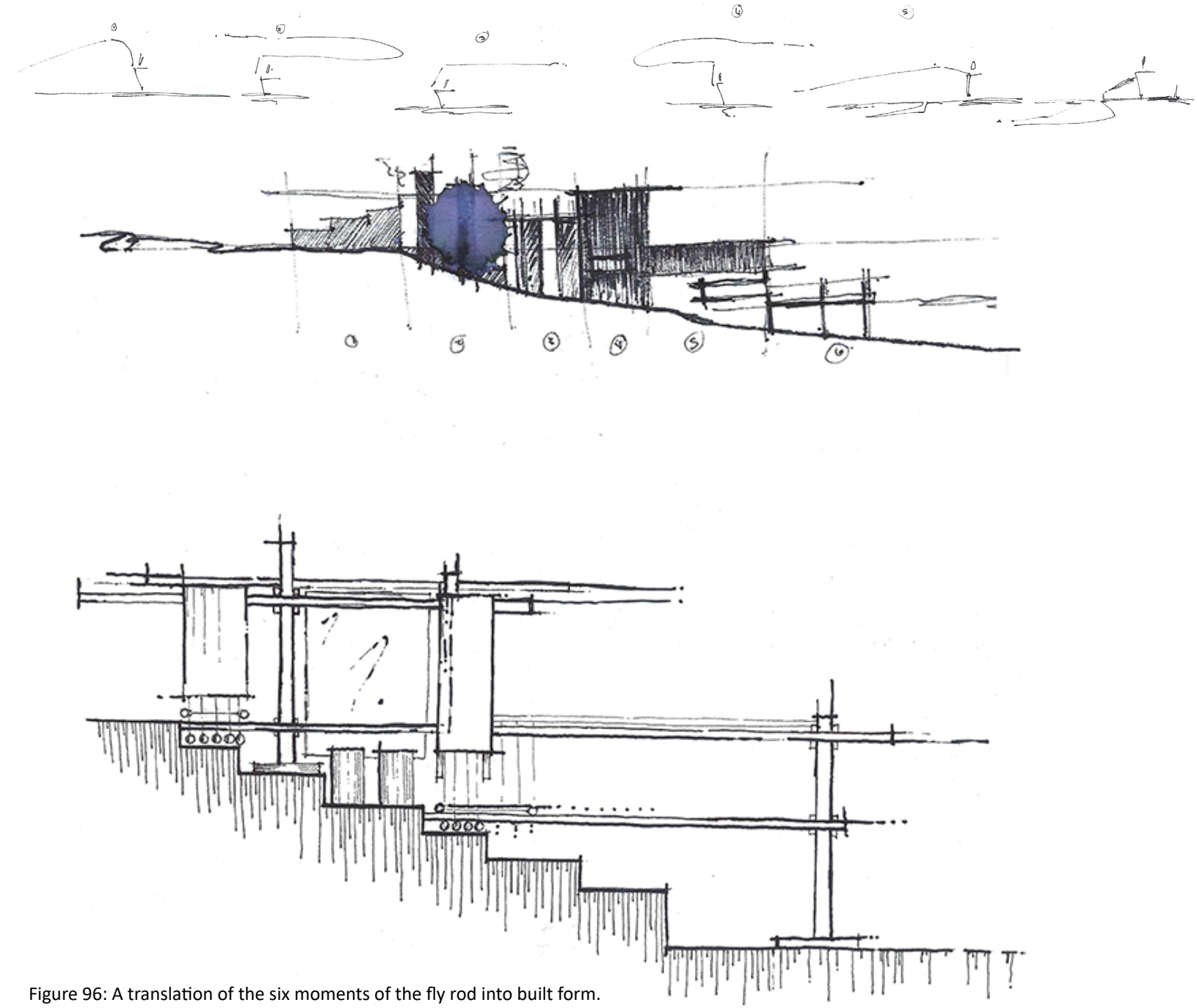


Figure 96: A translation of the six moments of the fly rod into built form.

Build-up of tension; Moment of tension; Release of tension; Buildup of tension; Moment of tension; Transformation of tension.

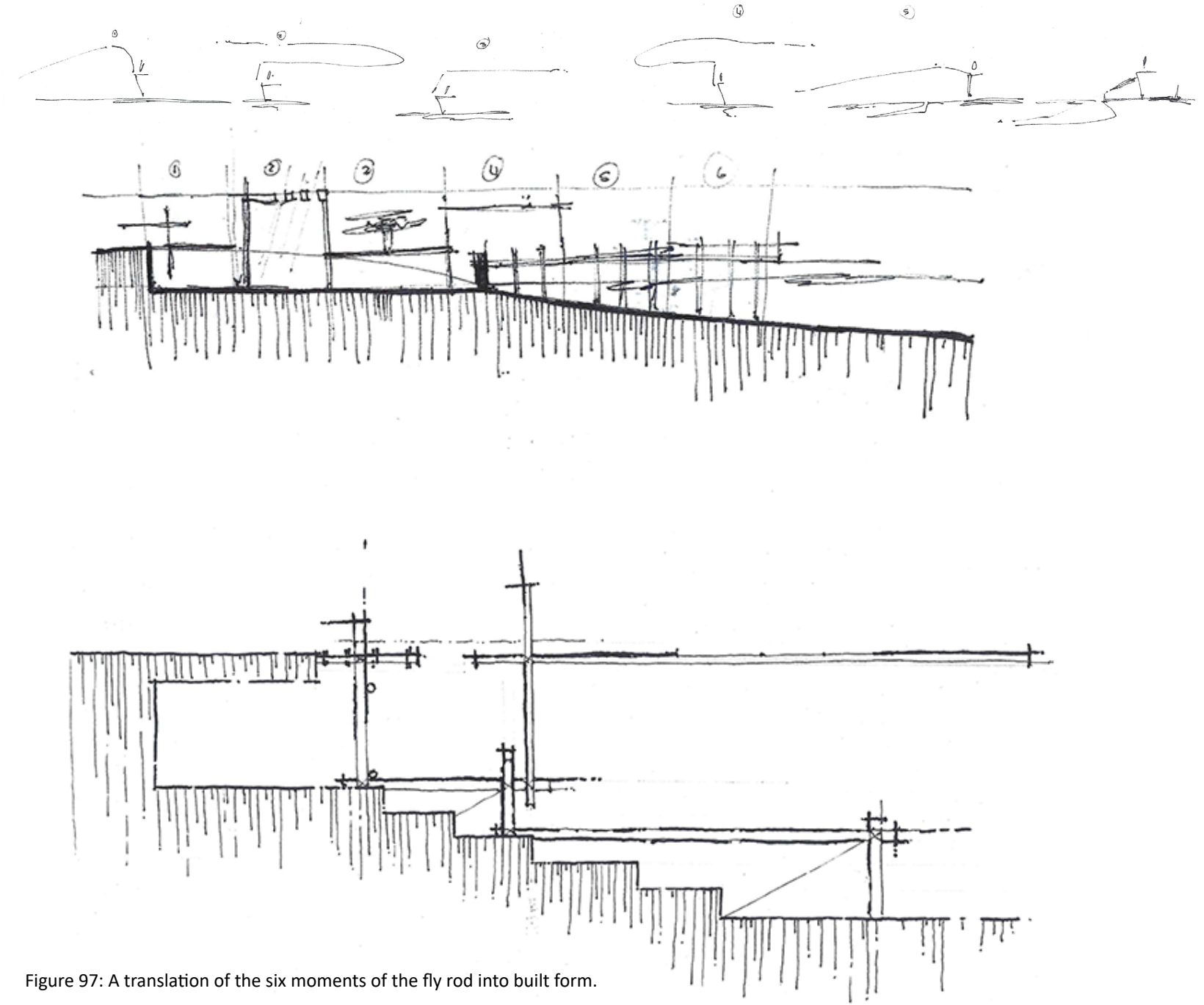


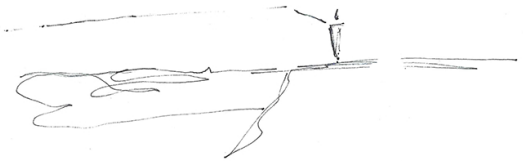
Figure 97: A translation of the six moments of the fly rod into built form.

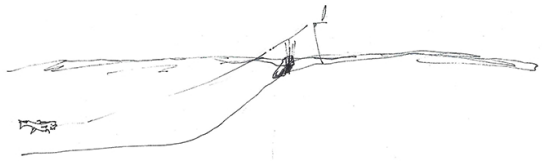
Towards an illustrative conclusion of the interpreted

alternating tensile embodyment materiality | surface tension friction material viscosity | mystery Hidden superstition

The Angler :
Orientation and ordering principals







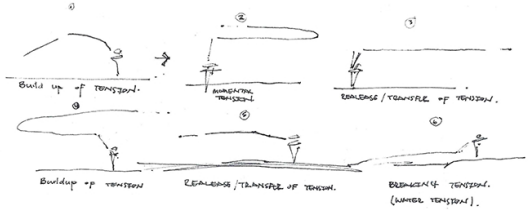
The Fly
Materiality and structure system in accordance to place (character)

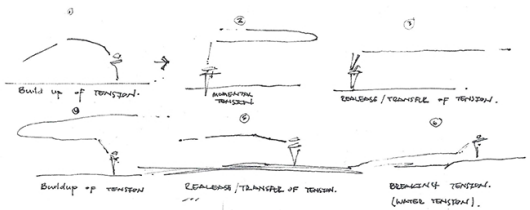


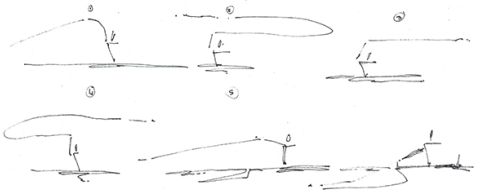




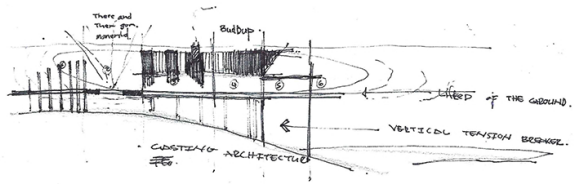
The Fly Rod
Moments that order design

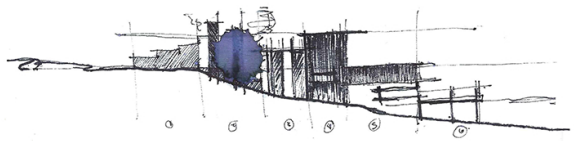


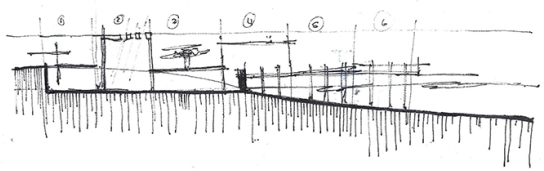




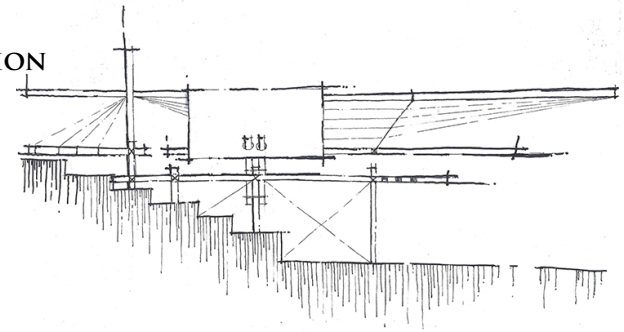
Interpretation

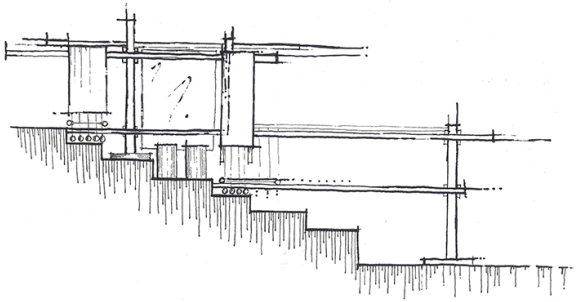






Interpretive Implementation





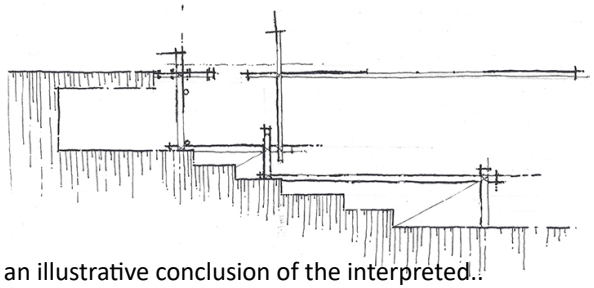
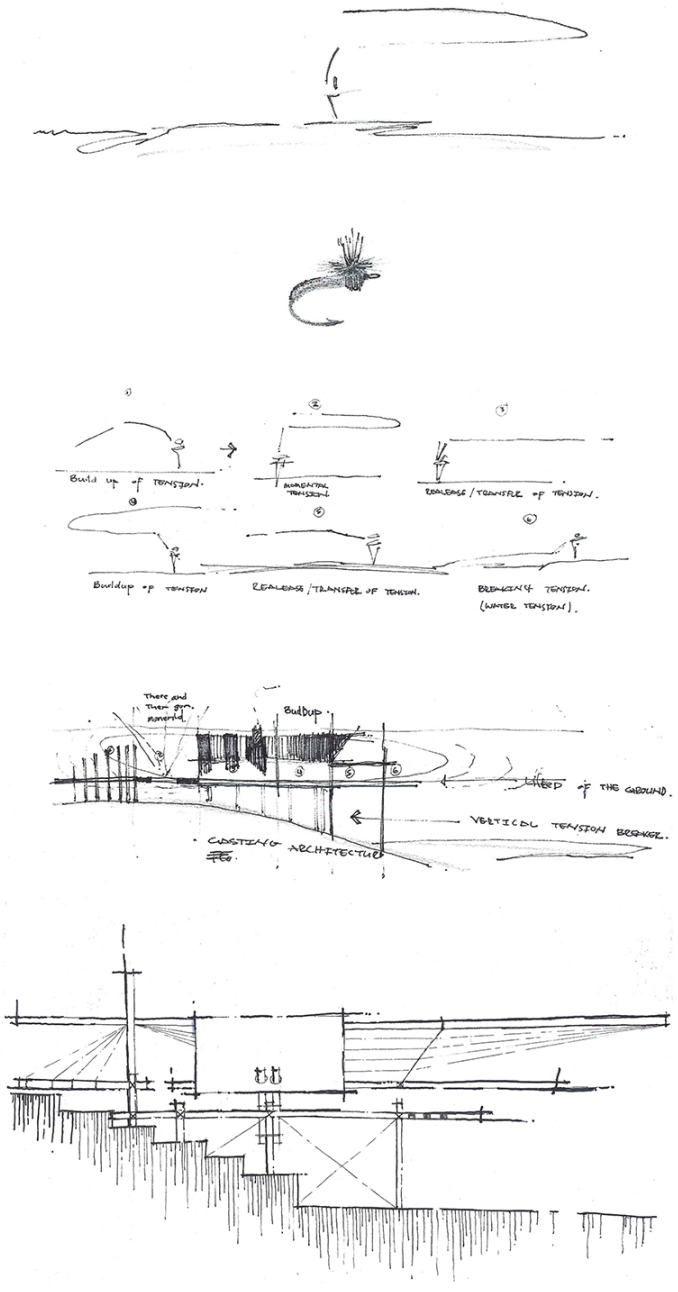


Figure 98: Towards an illustrative conclusion of the interpreted..

Towards an interpretive architectural translation



In this reaction the interpretive architectural translation revealed an architecture that is suspended above the landscape and water with one center coulomb that supports the roof structure as the roof structure suspends from this central vertical beam.

Conceptually the two horizontal planes (earth and sky) are connected by means of a vertical element. The vertical and horizontal planes are dependent on each other.

In this interpretive translation the roof structure is held in place by tensioning the vertical structure and the horizontal platform is held in place by means of the smaller upright support beams.

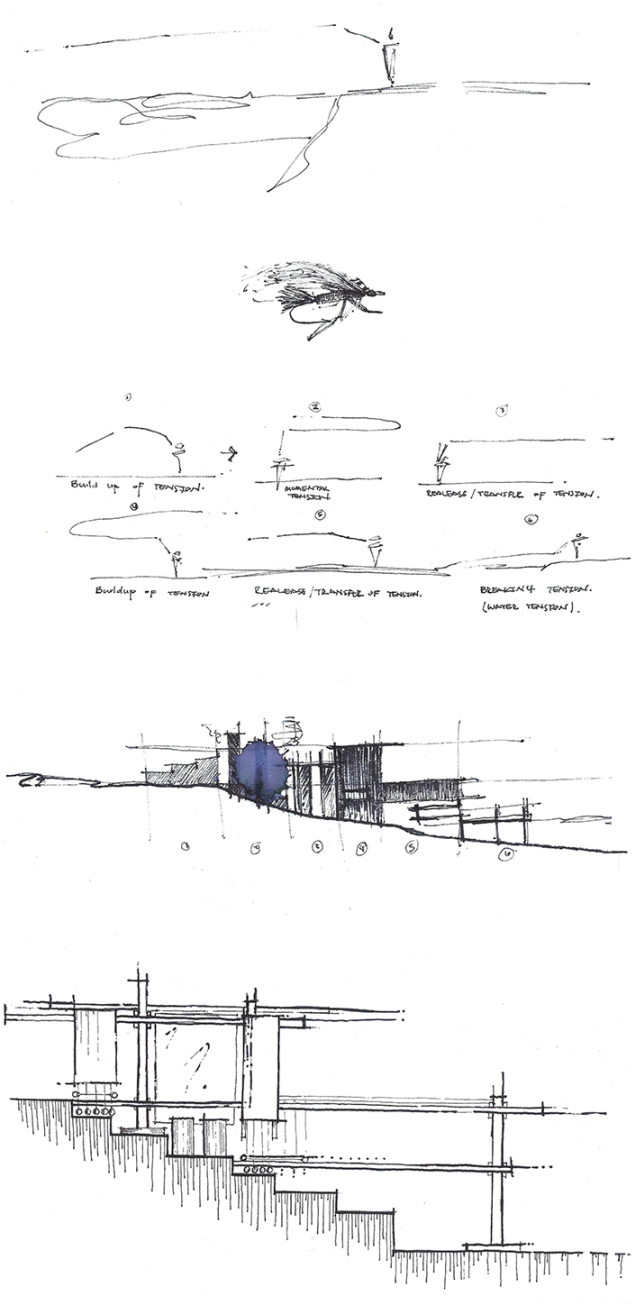


Figure 99: Towards an architectural implementation (Cilliers, 2019: own photos)



Figure 100: Alternating textile embodiment: Towards an amalgamation of orientation, materiality, structural systems and architectural translation. (Cilliers, 2019: own photos)

Towards an interpretive architectural translation



In this reaction the interpretive architectural translation revealed an architecture that makes use of counter weights suspended from the structure and sits flush with the landscape with three center columns that support the roof structure and the floor structure. The horizontal elements are joined to the vertical columns without intersection between the two elements.

Conceptually the two horizontal planes (earth and sky) meet without intersection between the two surfaces.

In this interpretive translation function as a friction joint

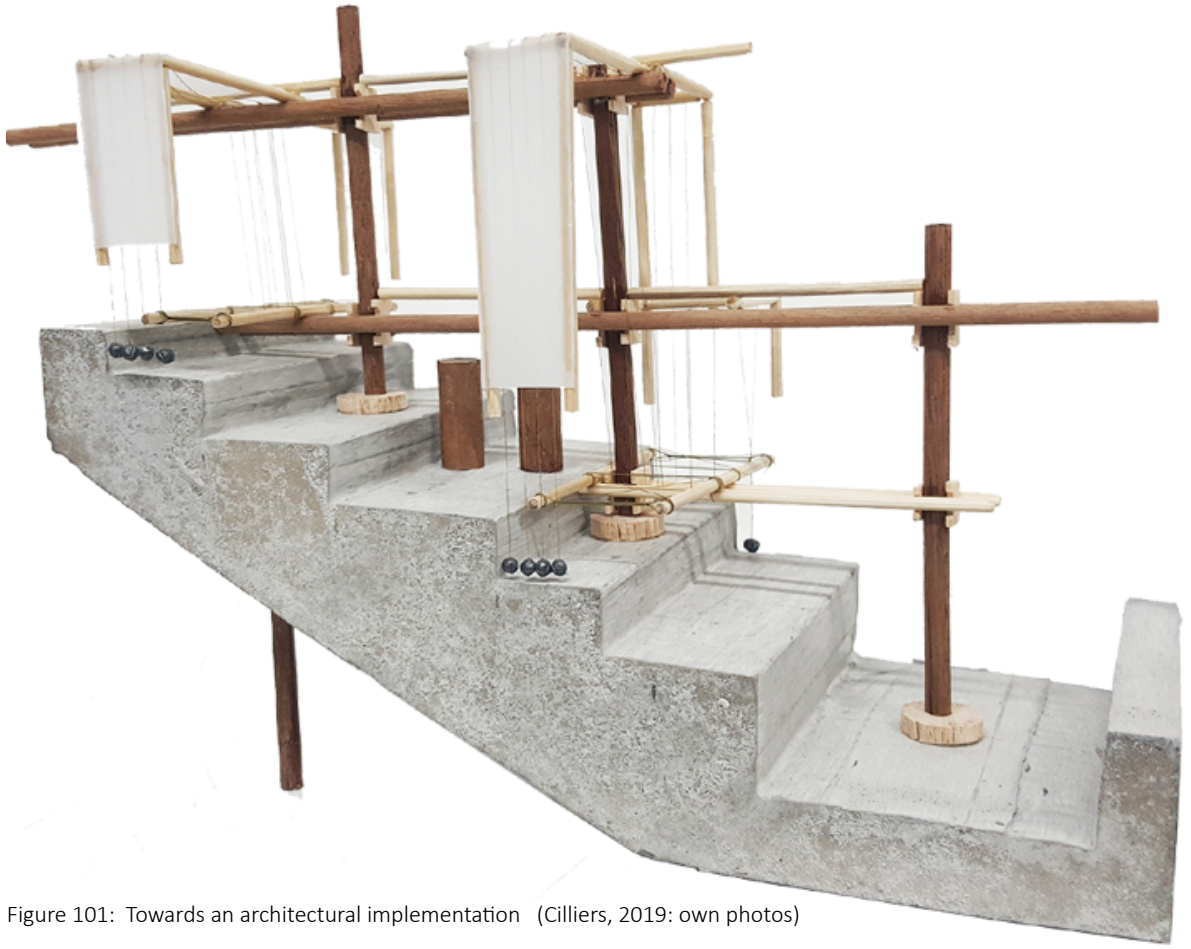


Figure 101: Towards an architectural implementation (Cilliers, 2019: own photos)



Figure 102: Surface tension, friction material, viscosity: Towards an amalgamation of orientation, materiality, structural systems and architectural translation. (Cilliers, 2019: own photos)

Towards an interpretive architectural translation

In this reaction the interpretive architectural translation revealed an architecture that exists in two different planes, submerged in the ground and lifted from it. Executed in such way as to attempt the seamless connection between the two by using the seriocomic element of the design as a structural anchor from which a tectonic structure can be suspended. Which holds the two parts in a tensioned relationship.

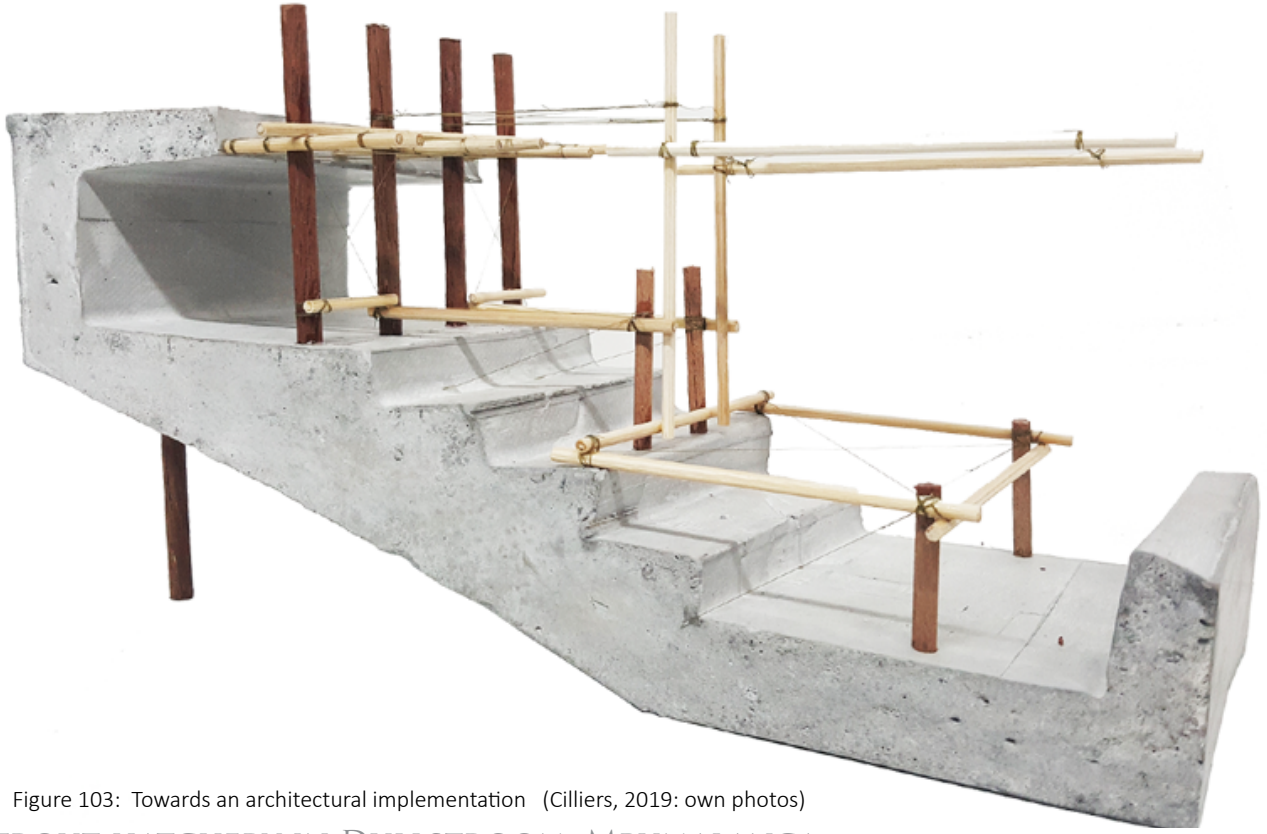


Figure 103: Towards an architectural implementation (Cilliers, 2019: own photos)

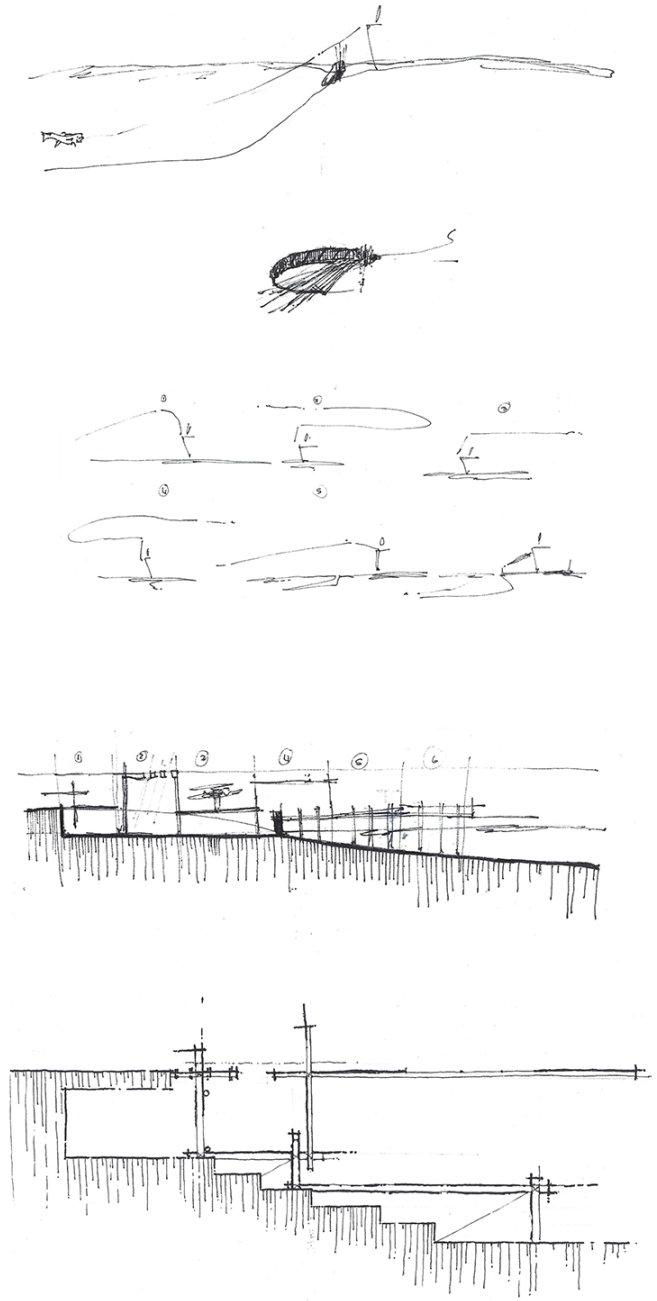




Figure 104: Mystery hidden superstition: Towards an amalgamation of orientation, materiality, structural systems and architectural translation. (Cilliers, 2019: own photos)

The Angler :
Orientation and ordering principals

The Fly
Materiality and structure system in accordance to place (character)

The Fly Rod
Moments that order design

Interpretation

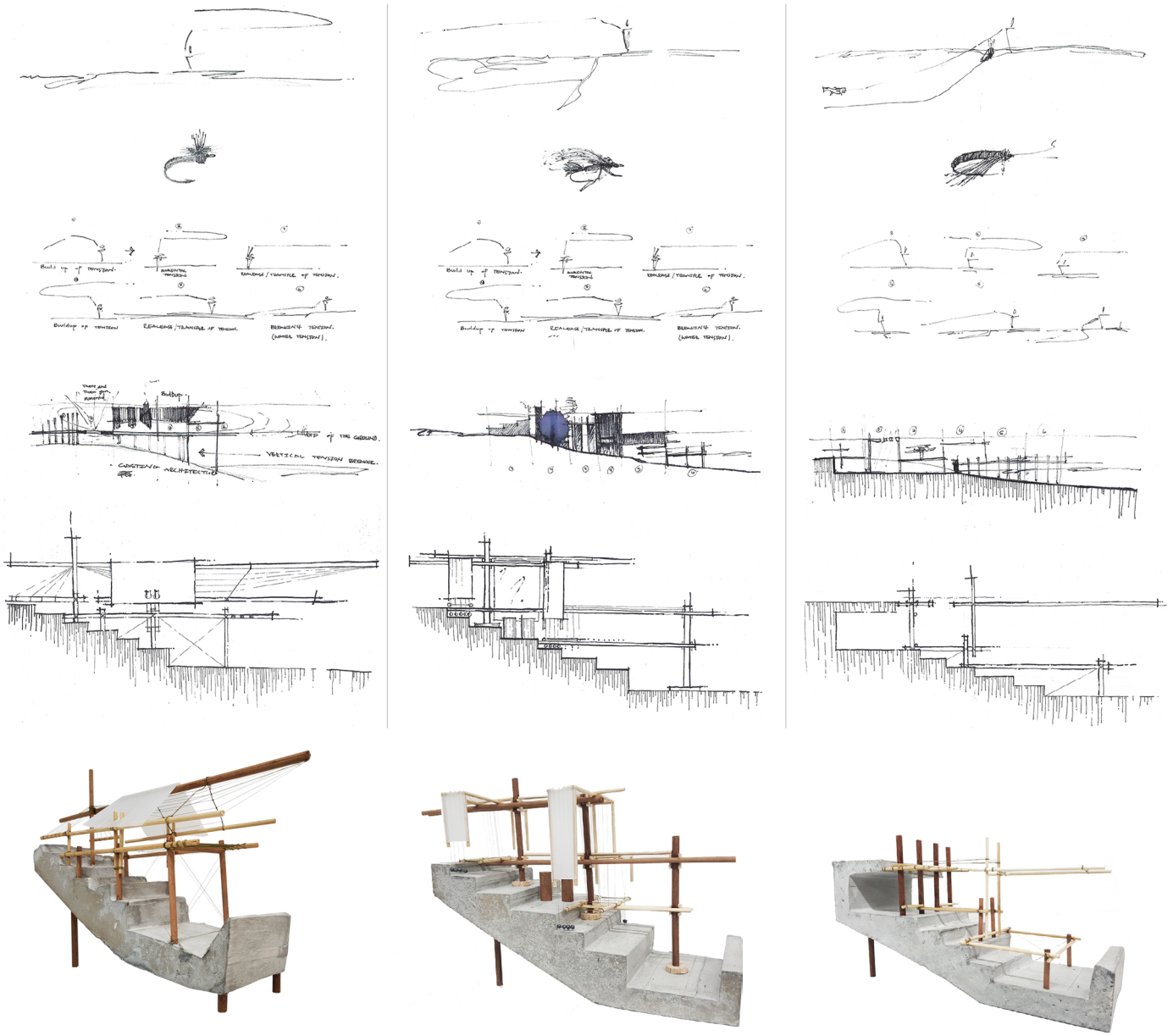
Interpretive Implementation

towards translation

alternating tensile embodyment materiality

surface tension friction material viscosity

mystery Hidden superstition



CONCLUSION

By investigating the angler, fly fishing techniques and the fly rod, it enabled an interpretation of the poetic understanding of the before-mentioned that can be used in the implemented into design solutions and principals. These solutions and principals will be used to engage in the process towards translating the angler's world of life in accordance to place.

Chapter 5
Towards implementing a poetic translation

Introduction

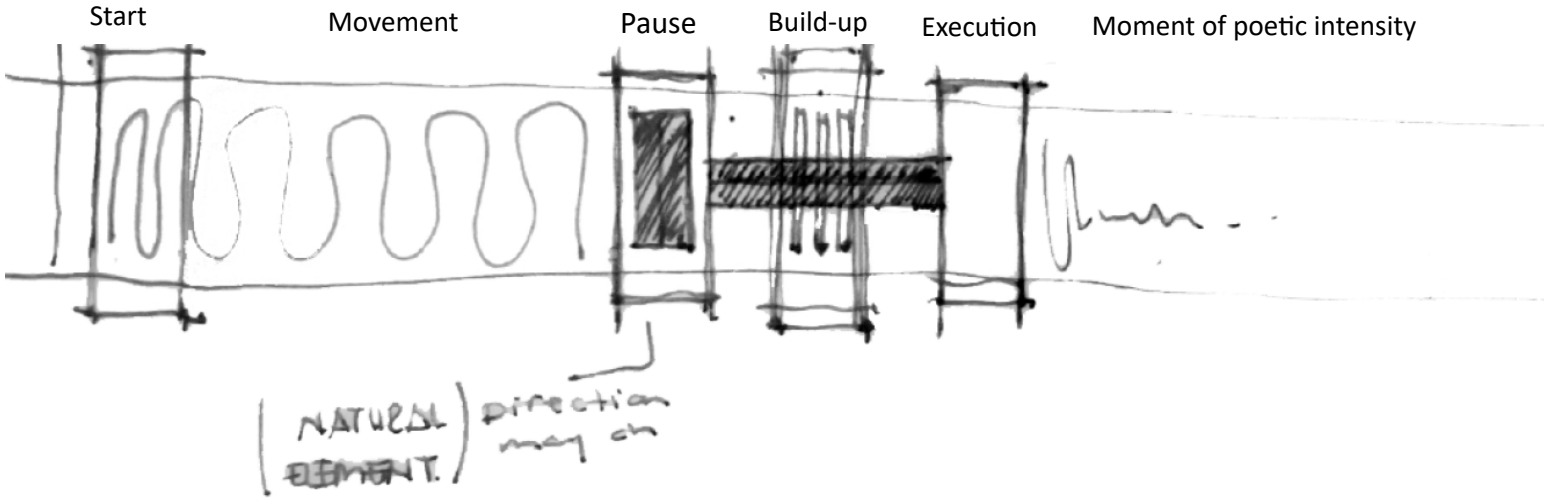
By investigating the angler, fly fishing techniques and the fly rod, it enabled an interpretation of the poetic understanding of the above-mentioned to be implemented into design solutions and principals. These solutions and principals will be used to engage in the process towards translating the angler's world of life in accordance to place.

ORIENTATION & CIRCULATION

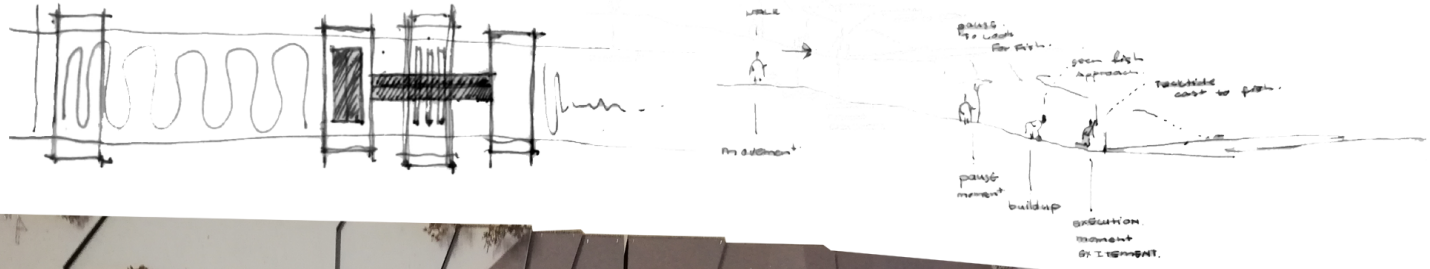
The understanding of the casting angler and his relationship with the natural environment lead to the understanding of how the built form should be orientated.

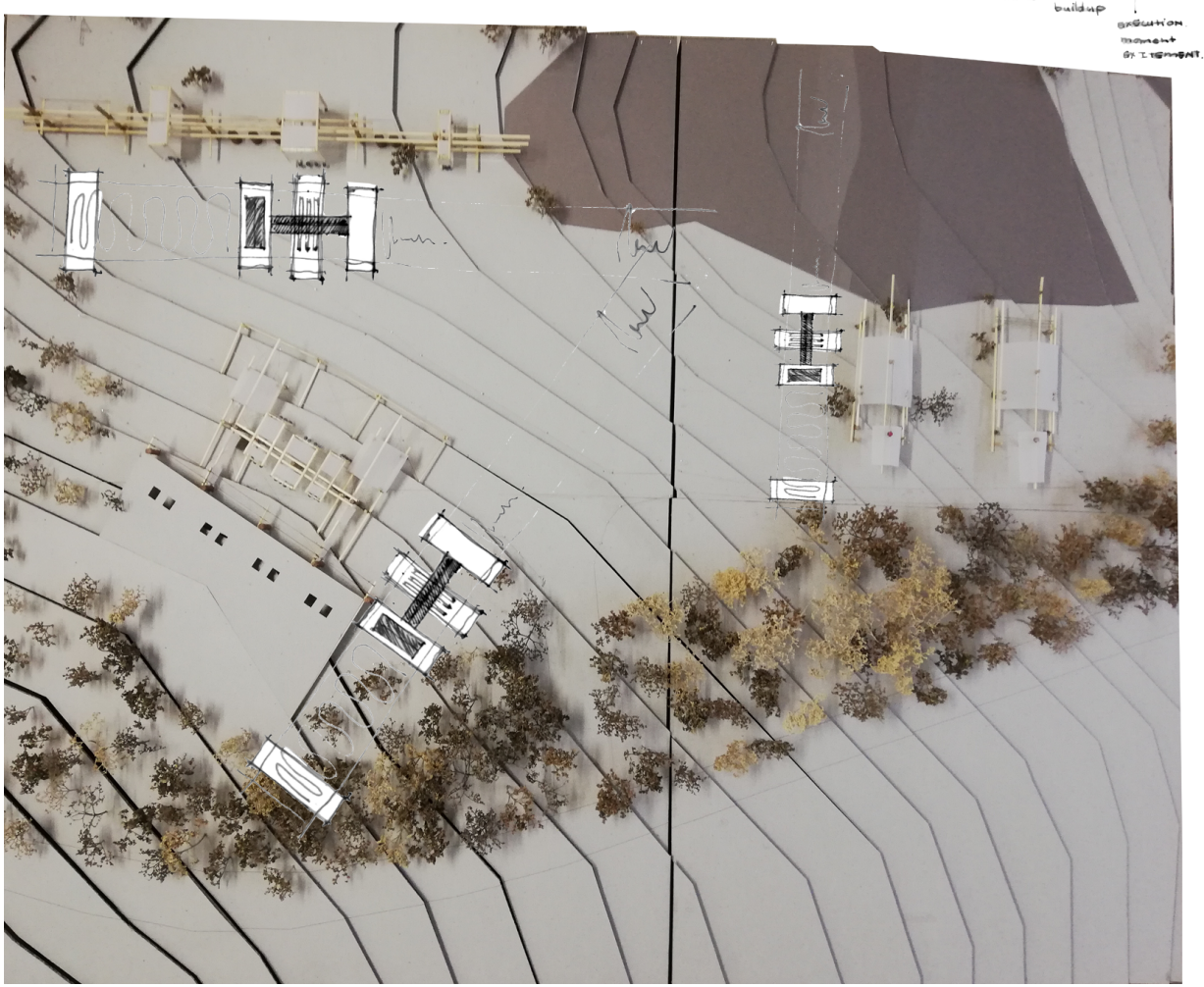
In this understanding, it was confirmed that the built form should be orientated in terms of:

Movement, pause (natural element) and an execution. It was also understood that the built form's relationship towards the landscape should be an amalgamation of the angler's 3 relationships. This suggested an architectural translation that is submerged in the landscape, meets with the landscape and is suspended above the landscape. The following explorations illustrates the process aimed at this translation.



Towards the first translation





In this attempt of translation, the three buildings were scattered and individually placed without amalgamation between them, as a singular building task.

The following design principals were disregarded in terms of the furthered translation:

- The isolated placement of the buildings in regard to one another.

- Theoretically, the movement of the angler was not yet captured through the design.

- The lodge building did not share connection to the water.

The following design principals were visible in the final translation of the design:

- The manner in which the built form settled in the landscape.

- The steriotomic anchor and tectonic detailing to wards the water's direction.

- The submergence of the buildings within the tree line.

Towards the second translation

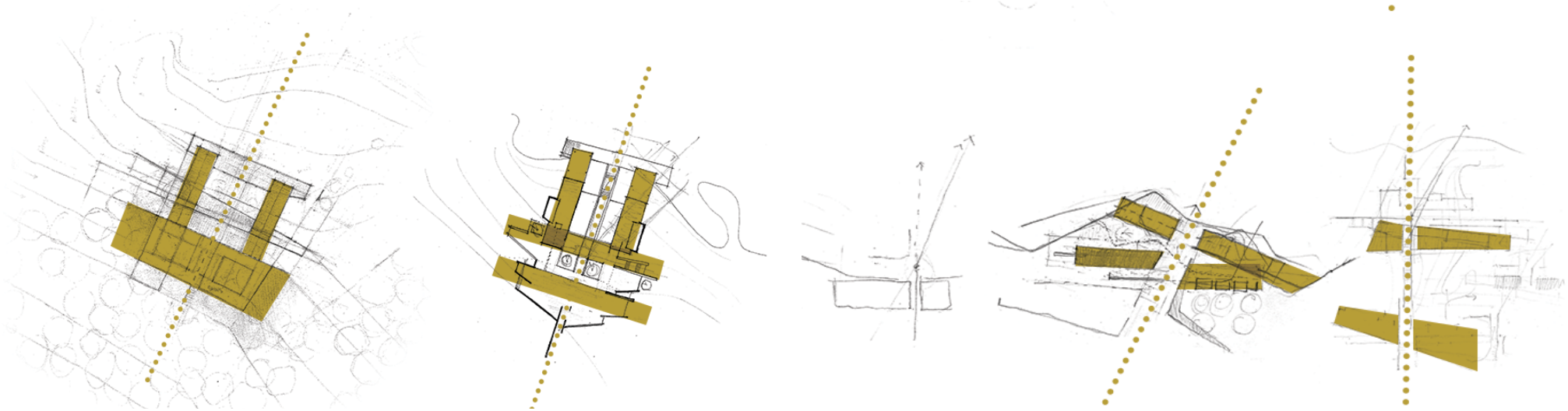
ORIENTATION & CIRCULATION

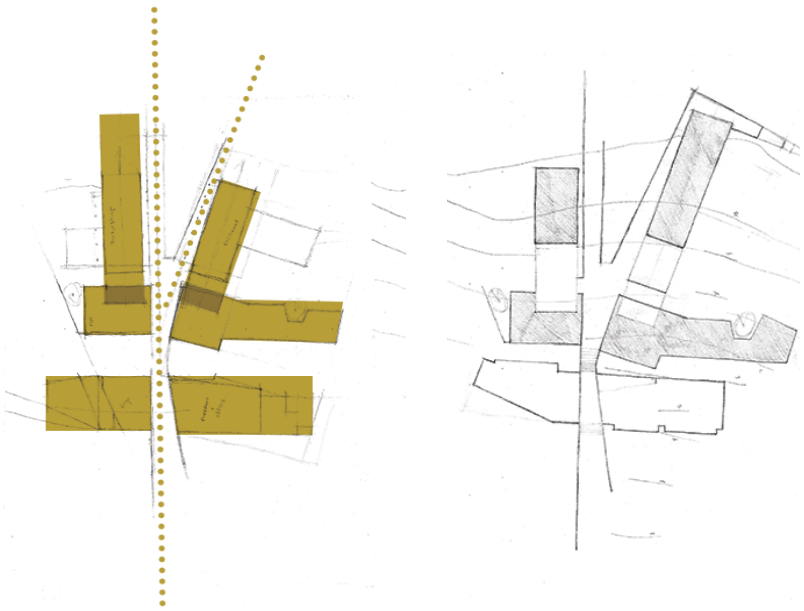
These design implementations illustrate the progression in interpreting the 6 ordering principles.
In these explorations the implementations addressed, are:

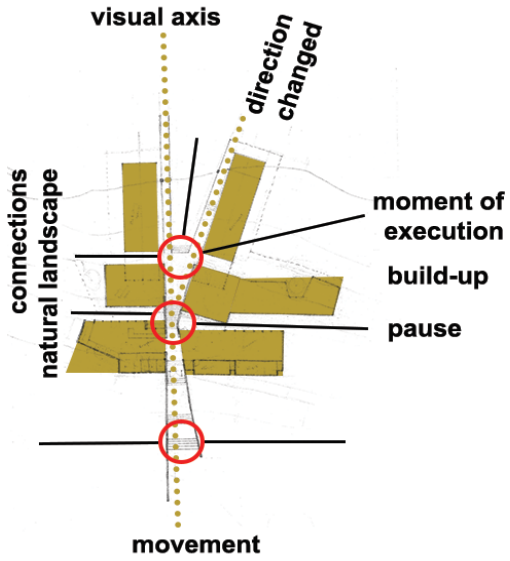
- Linear layout of built form after meeting with natural element.
- The linear layout stressed a connection with the water as the angler's second ordering principal.
- Here the implementation of the design entailed of three thresholds, horizontally orientated in the landscape.
- The building mass was split through the centre and the entrance of the building submerged within the ground, to illustrate:

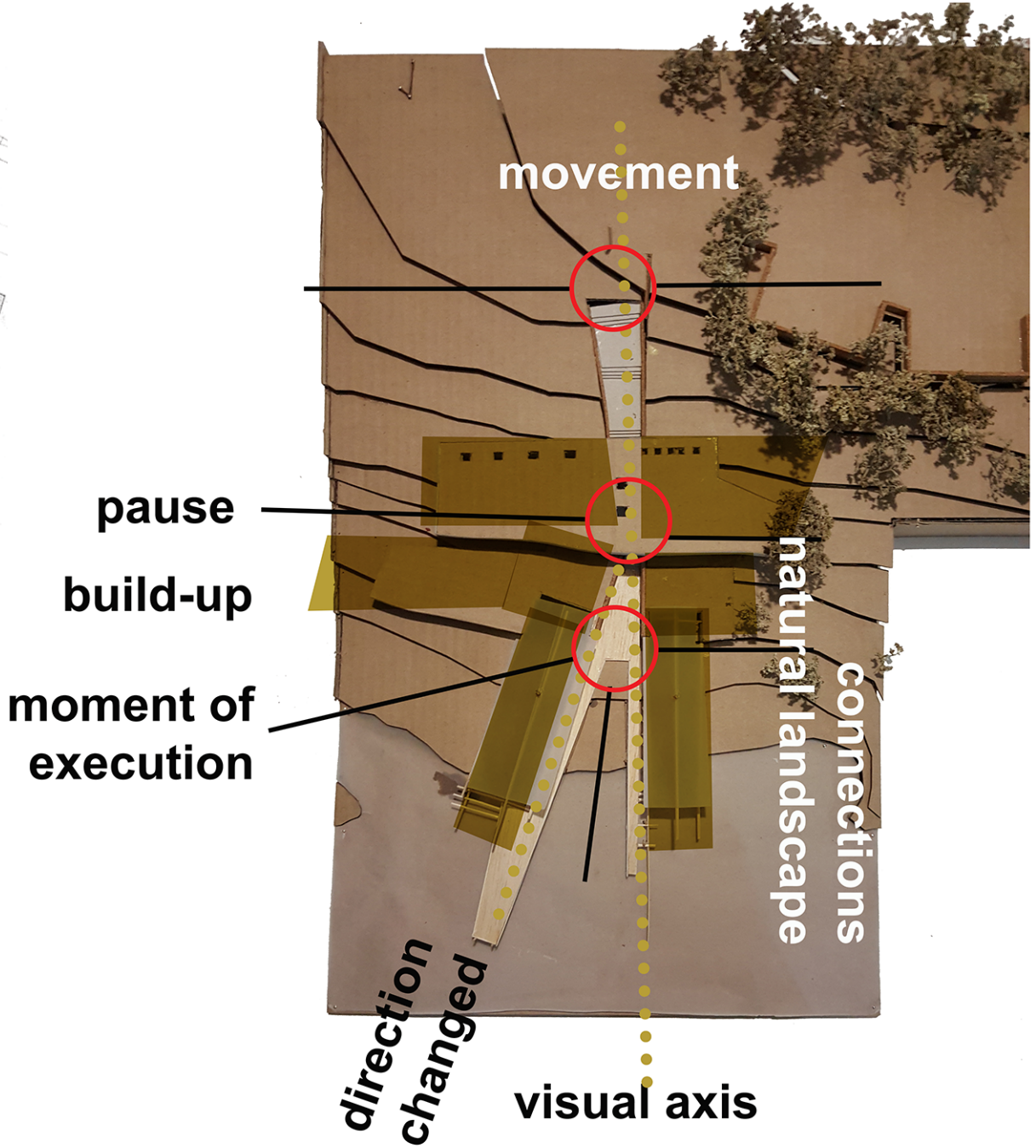
  • Firstly, now the angler's movement is directed towards the water and shares a constant visual connection with the water.
  • A linear access used to emphasise this connection.
  • The main axis of the building is supplemented with a secondary axis as a response to the change in direction the angler has after choosing where to fish.
  • A build-up of moment between when the angler pauses (at the natural element) and his progression to the perceived location, and is engaged by creating various thresholds that create connections with the natural landscape.
  • As the angler reaches the water, casts the fly rod over the water and releases the line, the line floats on the water. Here the design implementation signifies a deck floating above the water.

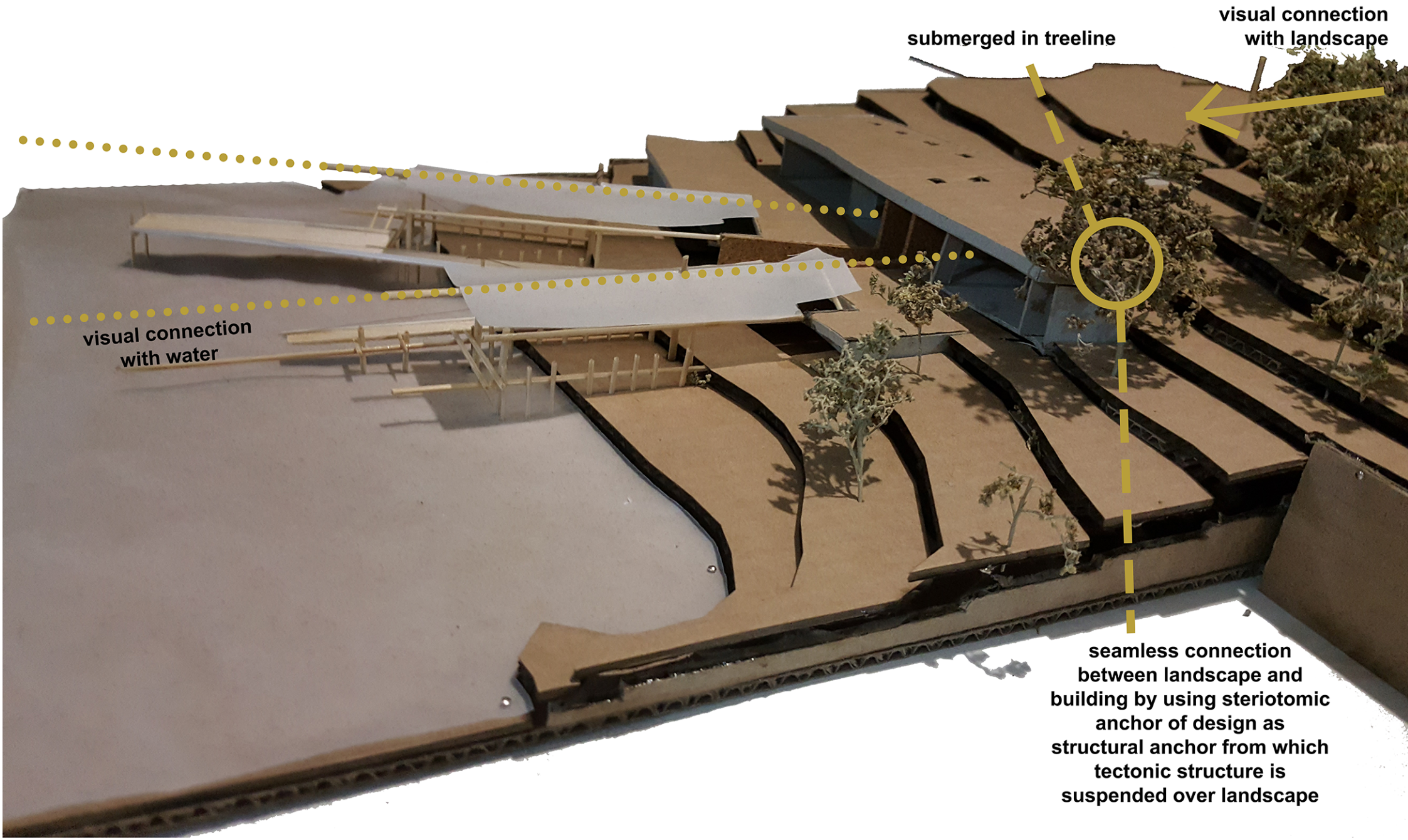
Thus, the angler's orientation within the landscape is interpreted into the circulation of the design by incorporating the moments the angler has within the fly fishing process into the implementation.






visual axis
direction changed
connections
natural landscape
moment of execution
build-up
pause
movement


movement
pause
build-up
moment of execution
connections
natural landscape
direction changed
visual axis

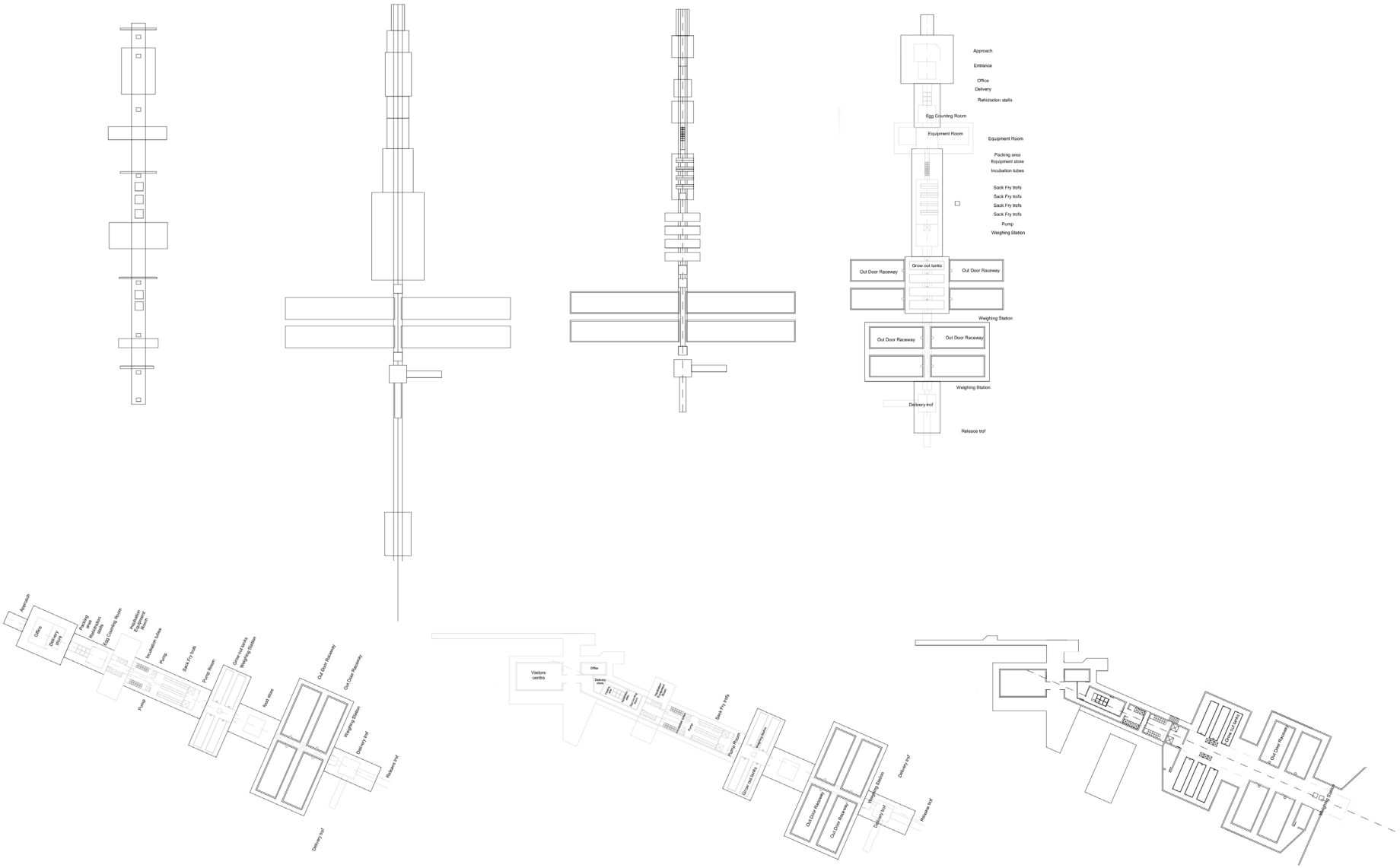

submerged in treeline
visual connection with landscape
visual connection with water
seamless connection between landscape and building by using steriotomic anchor of design as structural anchor from which tectonic structure is suspended over landscape

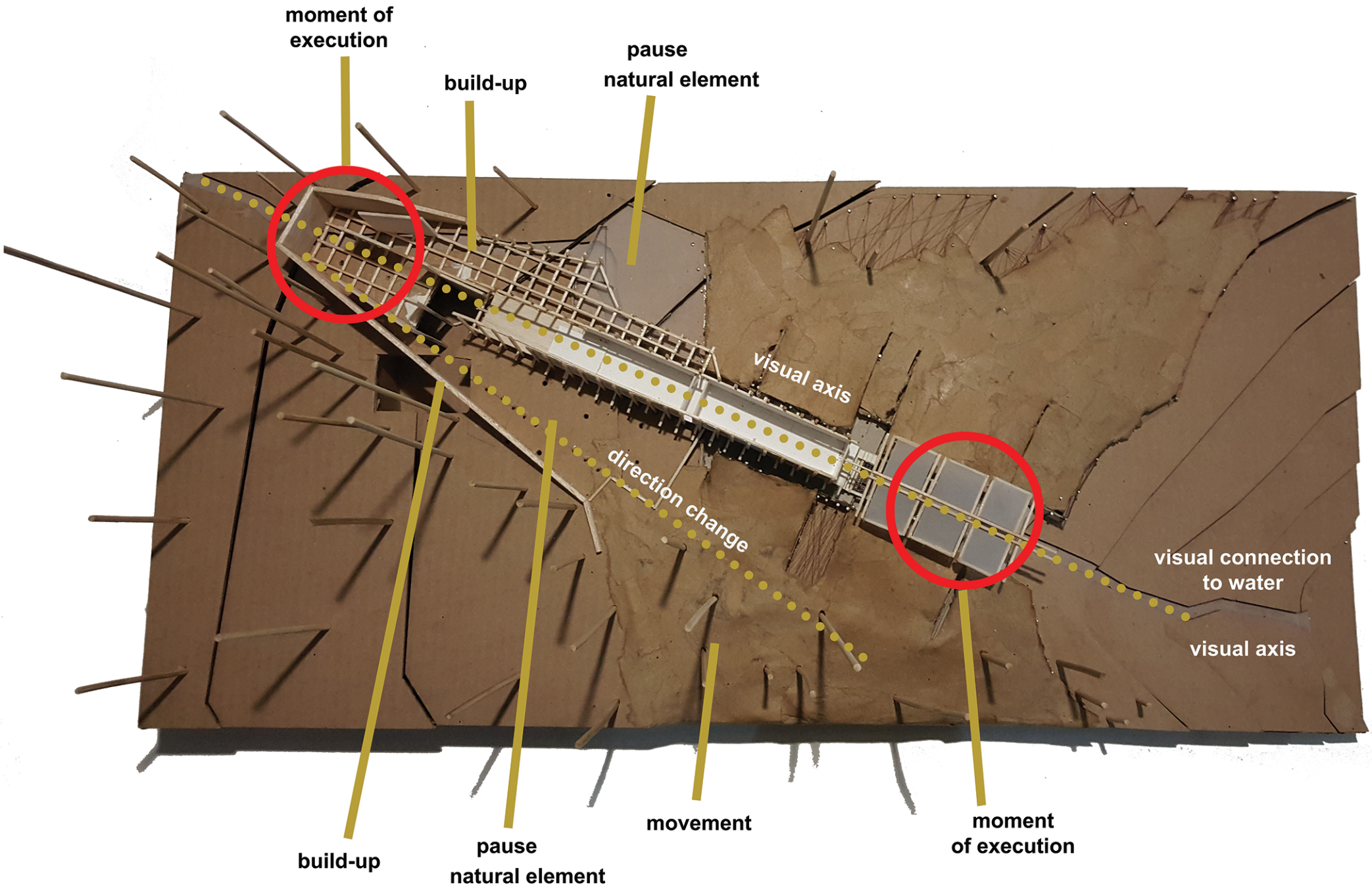
Towards the second translation
ORIENTATION & CIRCULATION

The Hatchery:

The following illustrations show the progression in the layout and design of the hatchery:

- The initial implementations was based on the interpreting of the 6 principals identified from the angler's life.
  The following principals were disregarded in the further implementations:
- The strong geometric form gained from the systematic understanding of the process of the trout farming.
- In terms of the understanding of the 6 ordering principals, the initial implementations failed to incorporate the moment where the design was to suggest a movement towards a pause, followed by a build-up and an execution.
- These implementations did not address the amalgamated relationship of the angler and the environment.
  The following design applications are visible in the final translation into built form:
- The linear understanding of the process of trout farming.
- The manipulated geometric form.
  Towards the final implementation: Incorporating the six principals into the design
- By integrating the built form into the landscape, creating a seamless connection towards the landscape

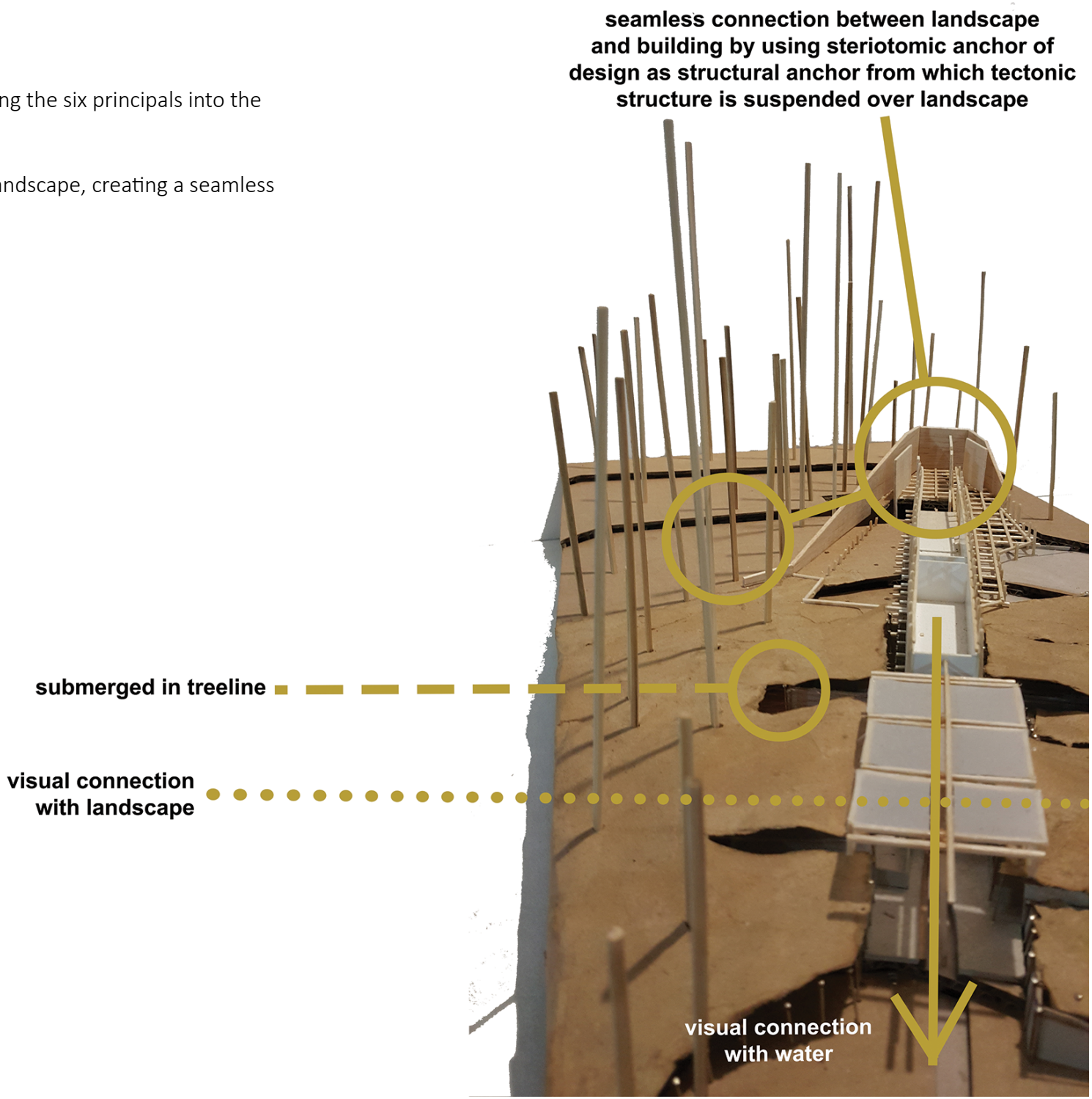

Approach
Entrance
Office
Delivery
Rehidration stalls
Egg Counting Room
Equipment Room
Equipment Room
Packing area
Equipment store
Incubation tubes
Sack Fry trofs
Sack Fry trofs
Sack Fry trofs
Sack Fry trofs
Pump
Weighing Station
Out Door Raceway
Grow out tanks
Out Door Raceway
Weighing Station
Out Door Raceway
Out Door Raceway
Weighing Station
Delivery trof
Release trof
Approach
Office
Delivery store
Packing area
Rehidration stalls
Egg Counting Room
Incubation tubes
Pump
Sack Fry trofs
Parent Room
Grow out tanks
Weighing Station
Out Door Raceway
Out Door Raceway
Weighing Station
Delivery trof
Release trof
Delivery trof
Visitors centre
Office
Delivery store
Pump
Sack Fry trofs
Parent Room
Grow out tanks
Weighing Station
Out Door Raceway
Out Door Raceway
Weighing Station
Delivery trof
Release trof
Delivery trof
Parent Room
Out Door Raceway
Weighing Station


moment of execution
build-up
pause natural element
visual axis
direction change
visual connection to water
visual axis
build-up
pause natural element
movement
moment of execution

The Hatchery:

Towards the final implementation: Incorporating the six principals into the design

- By integrating the built form into the landscape, creating a seamless connection towards the landscape.



The Hatchery:

Towards the final implementation: Incorporating the six principals into the design

- By integrating the built form into the landscape, creating a seamless connection towards the landscape.

Towards the three translations: Understanding techniques of the angler.

- The understanding gained from the fly fishing techniques dictating that the location of the build form implies a specific material use and structural system. This, in amalgamation with the three relationships between the casting angler and the landscape, led to the understanding of the three relationships of built form.

Towards the Forth translation: Understanding the Techniques of the angler: The Anglers art is artifice.

By understanding the interpretations gained from fly tying it became clear that materials used in the design of this implementation must be drawn from the built form's location and that the materials used in the specific locations had to be a translation of the three different artificial flies (translation devices).

Material and structural system:

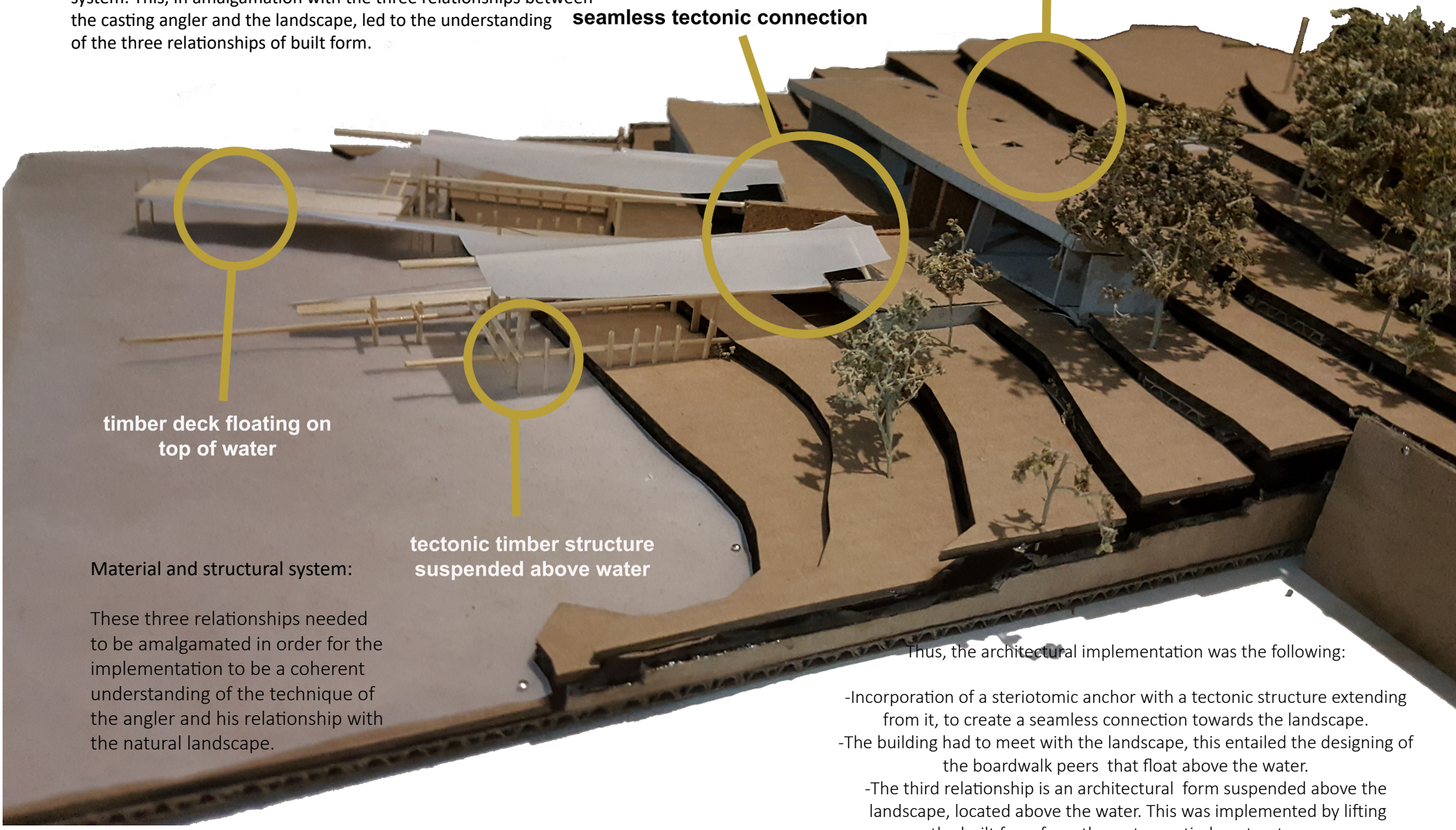
These three relationships needed to be amalgamated in order for the implementation to be a coherent understanding of the technique of the angler and his relationship with the natural landscape.

Thus, the architectural implementation was the following:

- Incorporation of a steriotomic anchor with a tectonic structure extending from it, to create a seamless connection towards the landscape.
- The building had to meet with the landscape, this entailed the designing of the boardwalk peers that float above the water.
- The third relationship is an architectural form suspended above the landscape, located above the water. This was implemented by lifting the built form from the water on timber structures.

Towards the three translations: Understanding techniques of the angler.

The understanding gained from the fly fishing techniques dictating that the location of the build form implies a specific material use and structural system. This, in amalgamation with the three relationships between the casting angler and the landscape, led to the understanding of the three relationships of built form.



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-The building had to meet with the landscape, this entailed the designing of the boardwalk peers that float above the water.
-The third relationship is an architectural form suspended above the landscape, located above the water. This was implemented by lifting the built form from the water on timber structures.

In terms of understanding the techniques of fly tying, the following was investigated:

- The use of tension-based relationships within the design.
- The use of an inverted bowstring truss was introduced into the building's roof structure.
- The design of a counterweight façade system.







FINAL TRANSLATION:



The final translation:

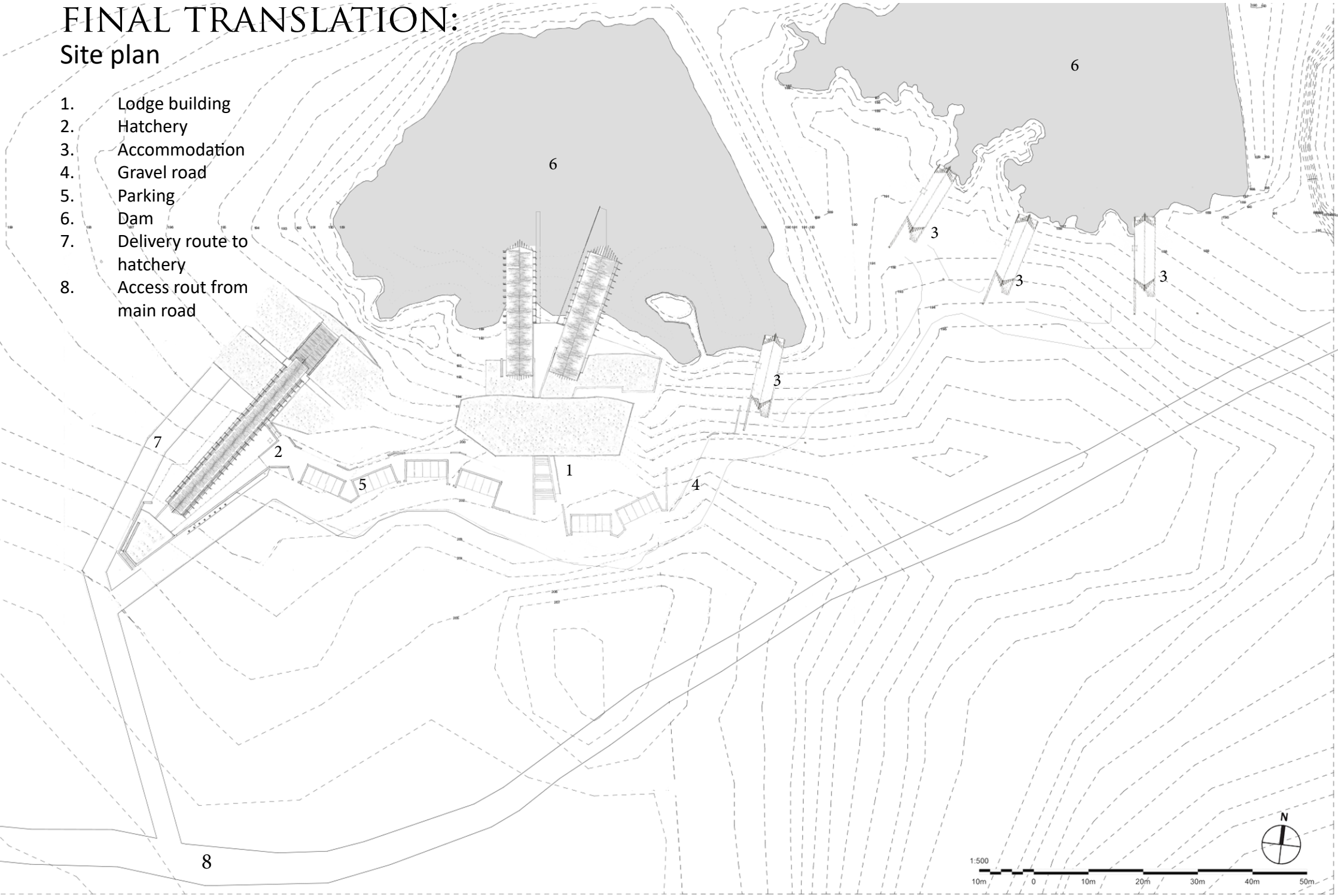
In this translation the dweller will arrive at the parking are submerged behind the tree line from there the dweller will continue on the gravel path towards the building and share a continuous visual connection with the water.
Once the dweller enters down the steps into the building a moment of poetic intensity is experienced as the robust rock walls a moment of direct connection with the water. Here the dweller is drain to a pause and arrives at the reception.
There after as the dweller moves through the building the moment is continued. Here the designs main axis is supplemented with a secondary aces providing a specific route towards either the Restaurant or the Angling Shop.

Various connection with the natural landscape are threaded together in the build-up towards the building. As the dweller reaches the chosen location the percent relationship with the built form is changed as the building becomes suspended above the landscape or additionally floats in the landscape. Creating a continuous osculation of connections with the natural environment.

FINAL TRANSLATION:

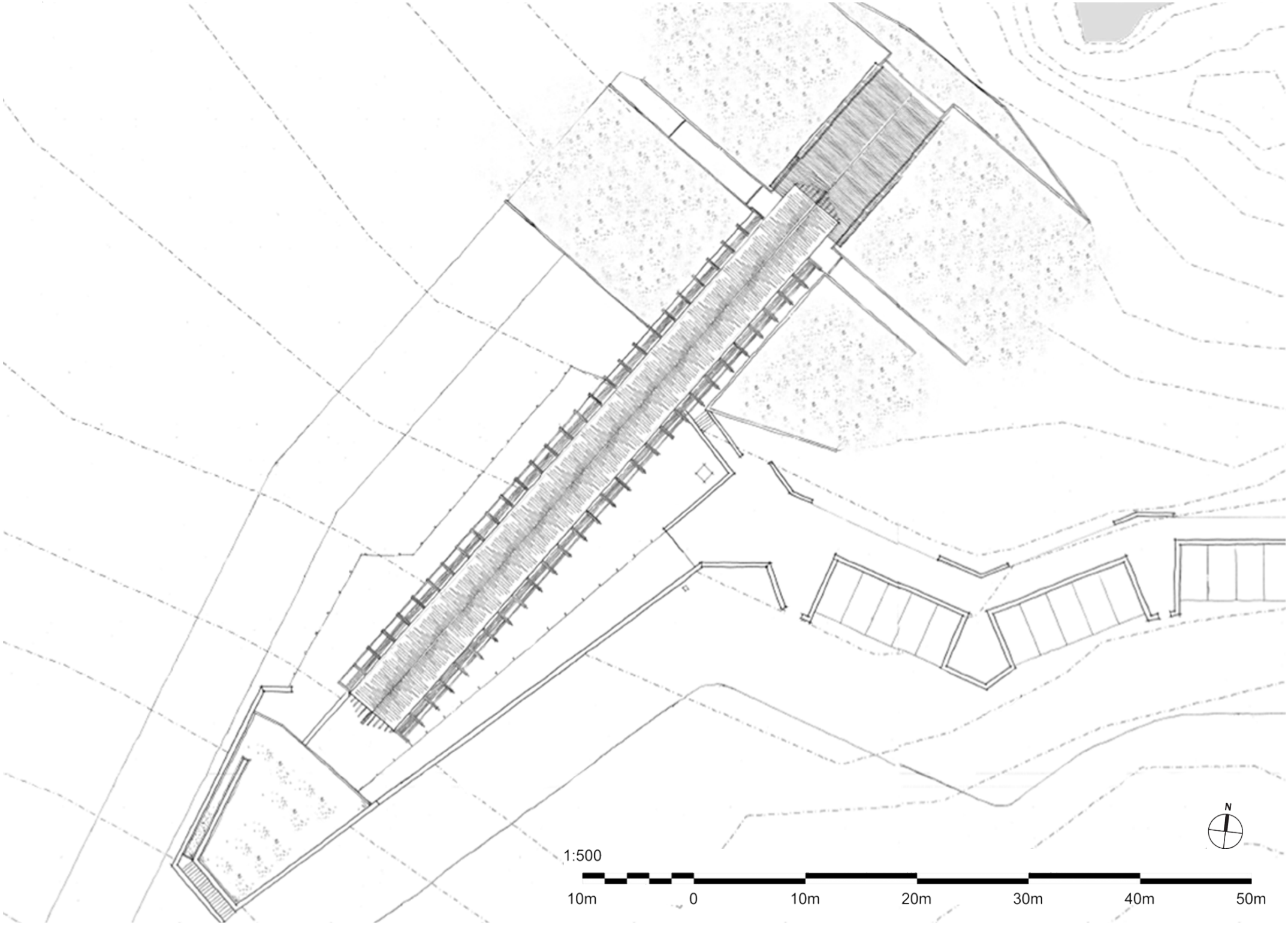
Site plan

1. Lodge building
2. Hatchery
3. Accommodation
4. Gravel road
5. Parking
6. Dam
7. Delivery route to hatchery
8. Access rout from main road



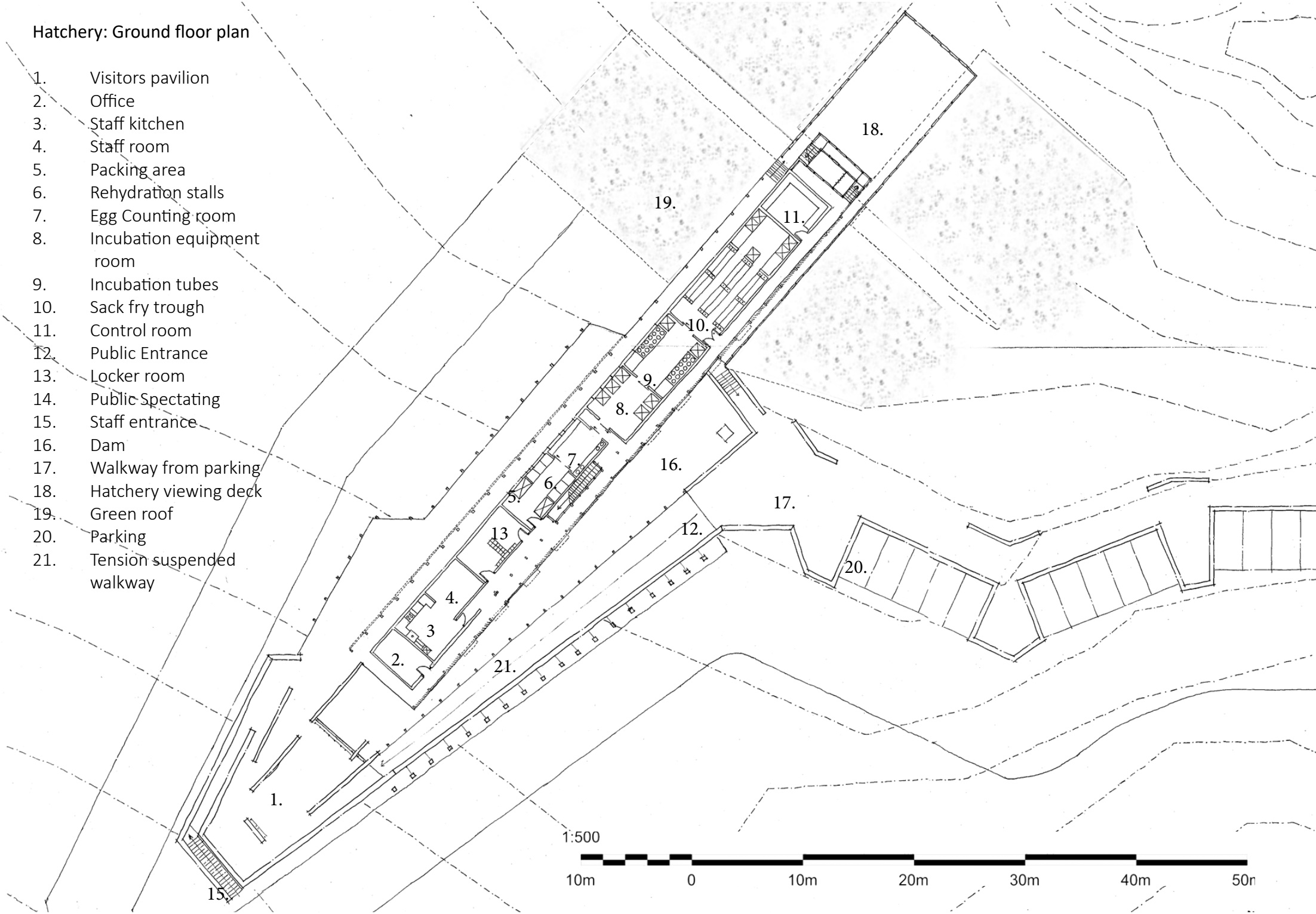
The hatchery submerged within the tree line and the landscape creating moments of intense connections with the natural landscape The hatchery submerged within the tree line and the landscape creating moments of intense connections with the natural landscape. The building incorporates the steriotomic mass by submerging it into the landscape



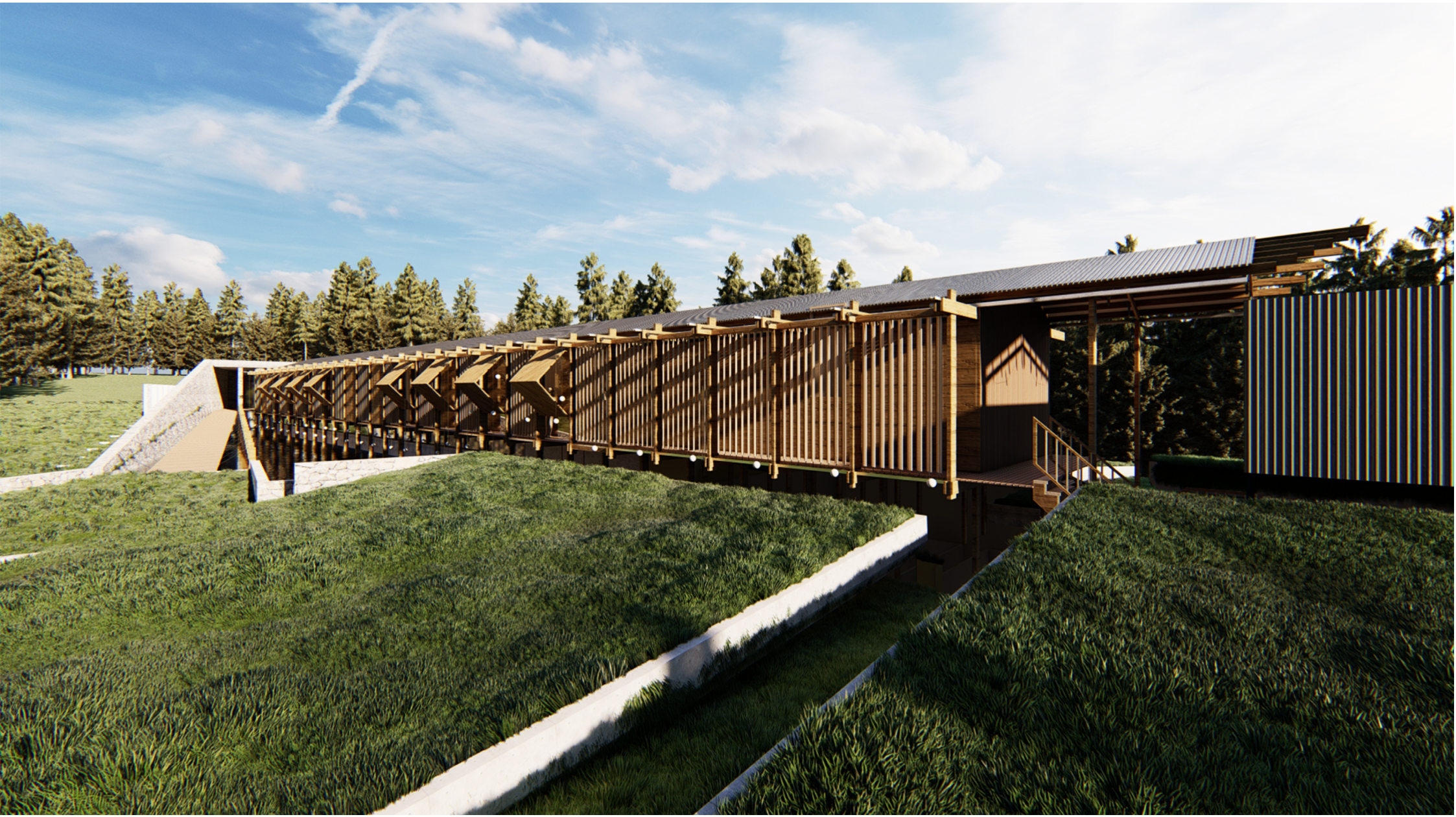

N
1:500
10m
0
10m
20m
30m
40m
50m

Hatchery: Ground floor plan

1. Visitors pavilion
2. Office
3. Staff kitchen
4. Staff room
5. Packing area
6. Rehydration stalls
7. Egg Counting room
8. Incubation equipment room
9. Incubation tubes
10. Sack fry trough
11. Control room
12. Public Entrance
13. Locker room
14. Public Spectating
15. Staff entrance
16. Dam
17. Walkway from parking
18. Hatchery viewing deck
19. Green roof
20. Parking
21. Tension suspended walkway

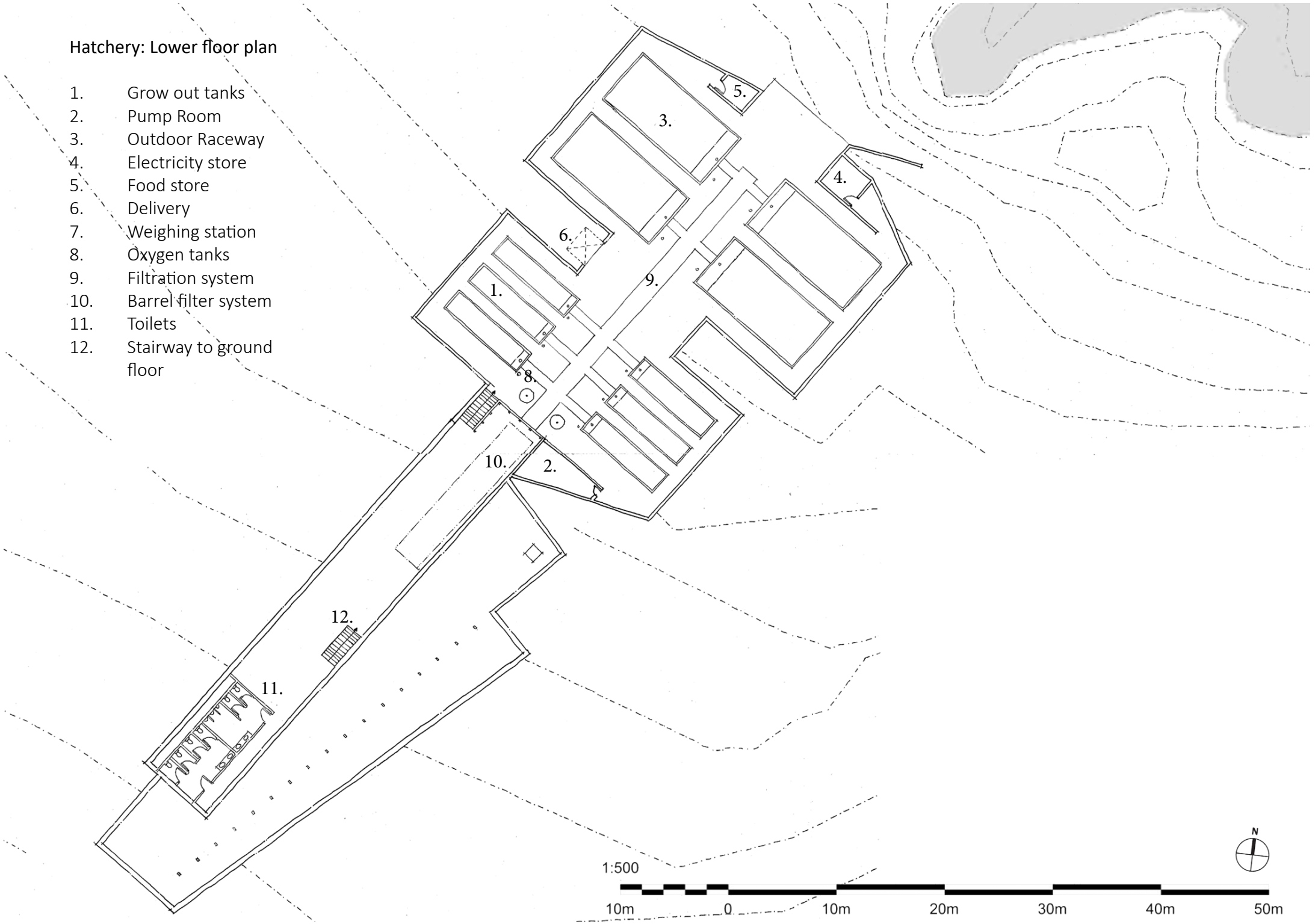


The hatchery submerged within the tree line and the landscape creating moments of intense connections with the natural landscape

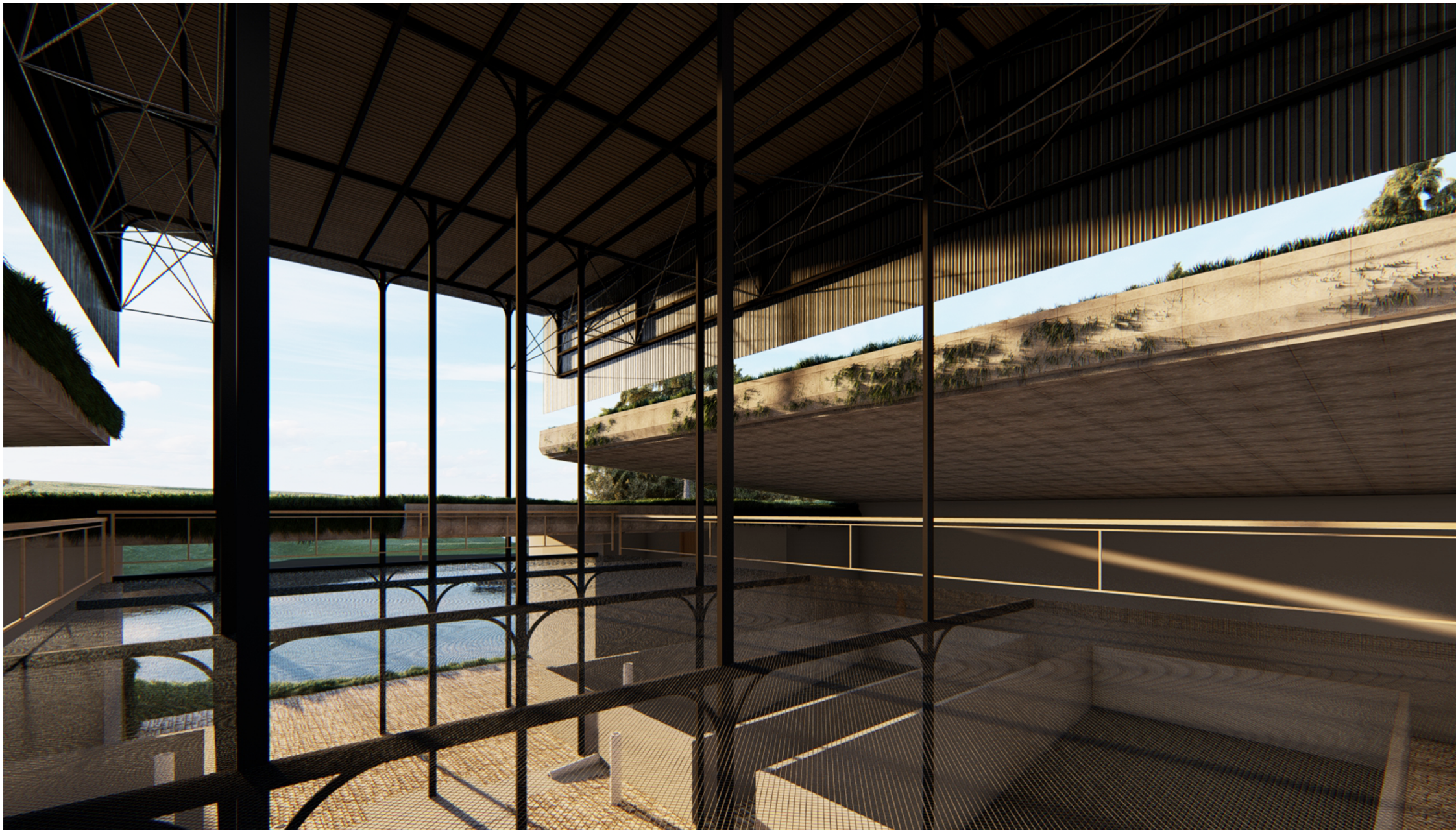


Hatchery: Lower floor plan

1. Grow out tanks
2. Pump Room
3. Outdoor Raceway
4. Electricity store
5. Food store
6. Delivery
7. Weighing station
8. Oxygen tanks
9. Filtration system
10. Barrel filter system
11. Toilets
12. Stairway to ground floor



The hatchery submerged within the tree line and the landscape creating moments of intense connections with the natural landscape.
The building incorporates the steriotomic mass by submerging it into the landscape



Walk way to the hatchery suspended in tension cable structure





Cross-section of hatchery

1:100

2m 0 2m 4m 6m 8m 10m



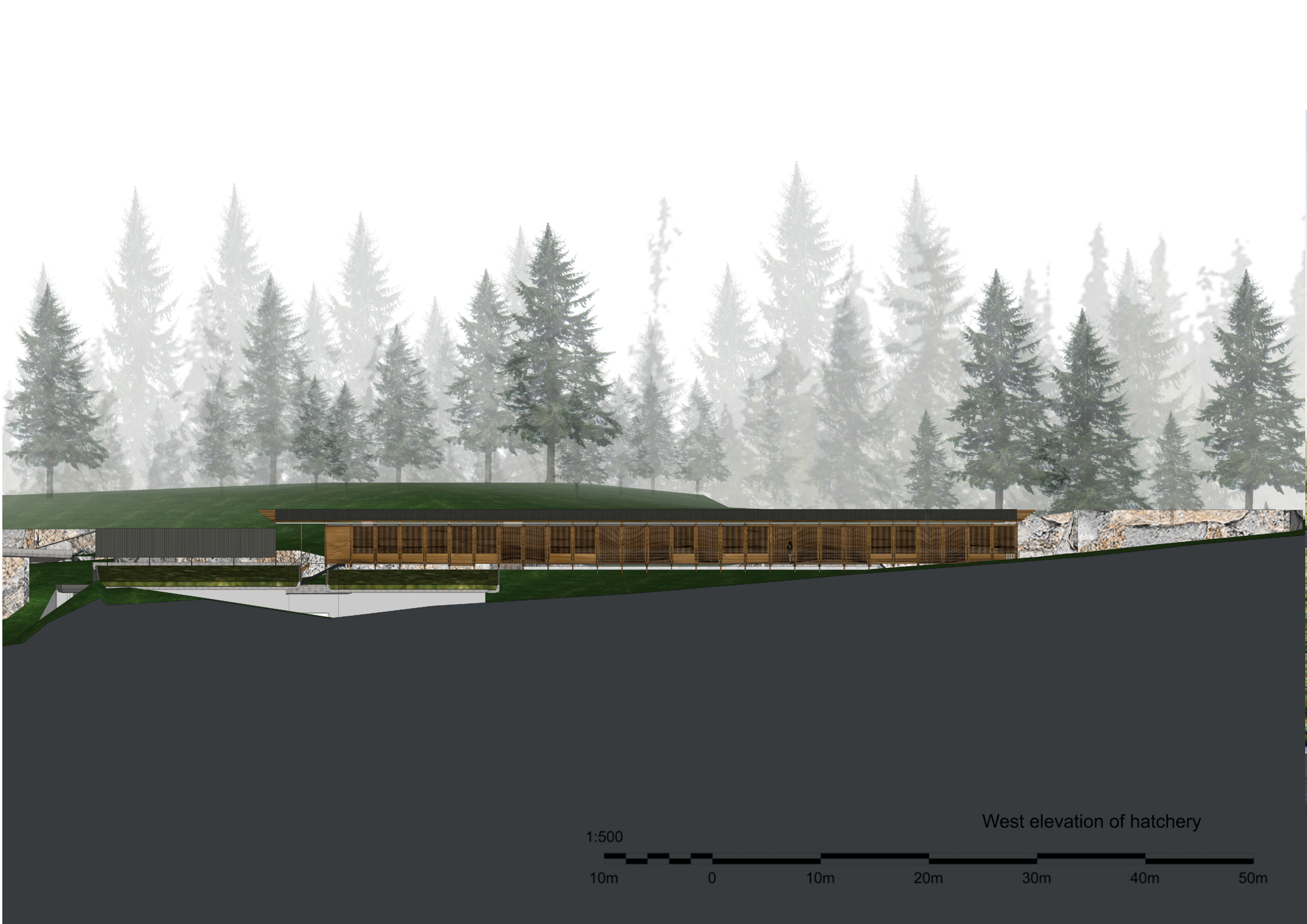
North elevation of hatchery

1:100

2m 0 2m 4m 6m 8m 10m

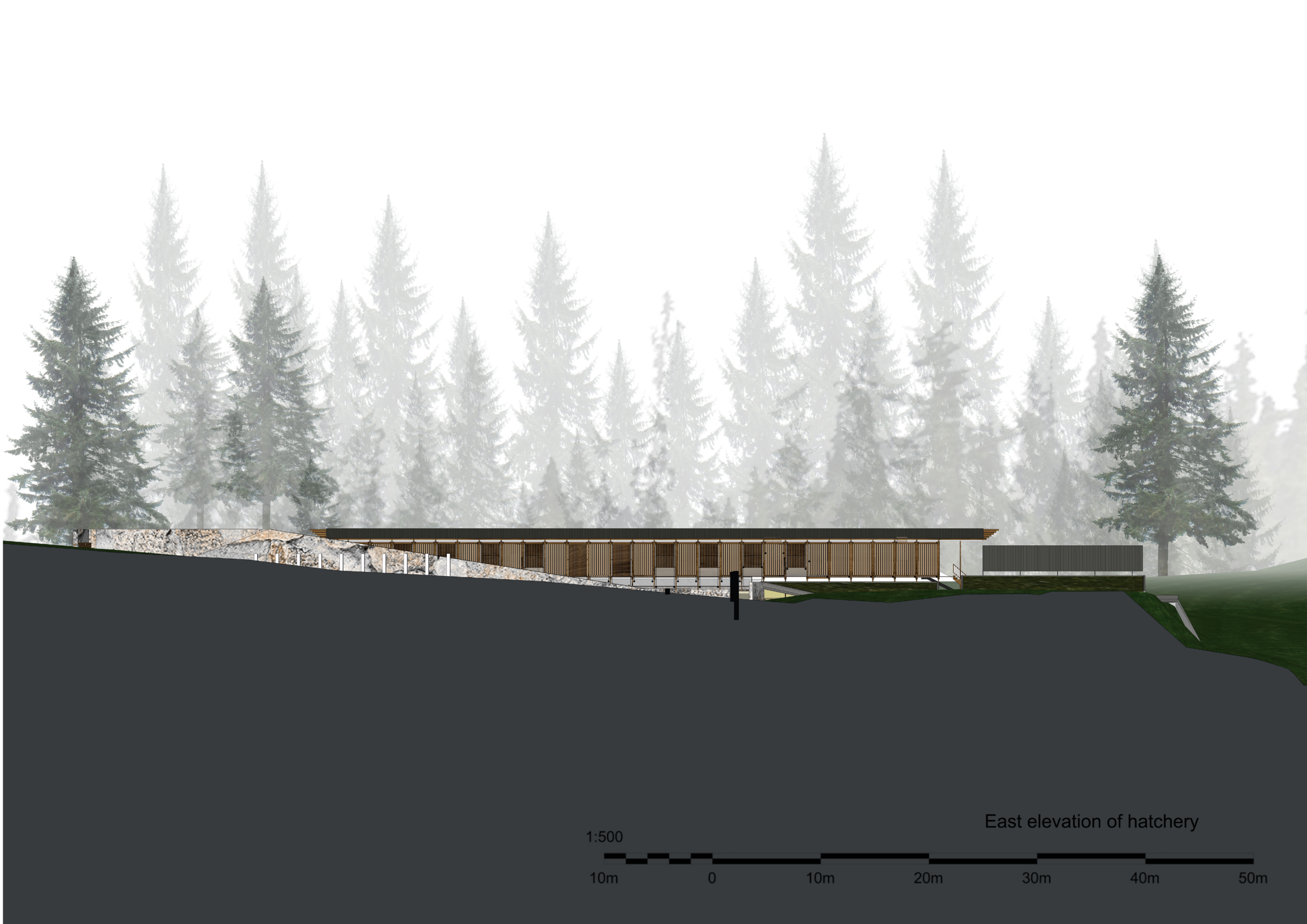


A fly fishing retreat and trout hatchery in Dullstroom, Mpumalanga

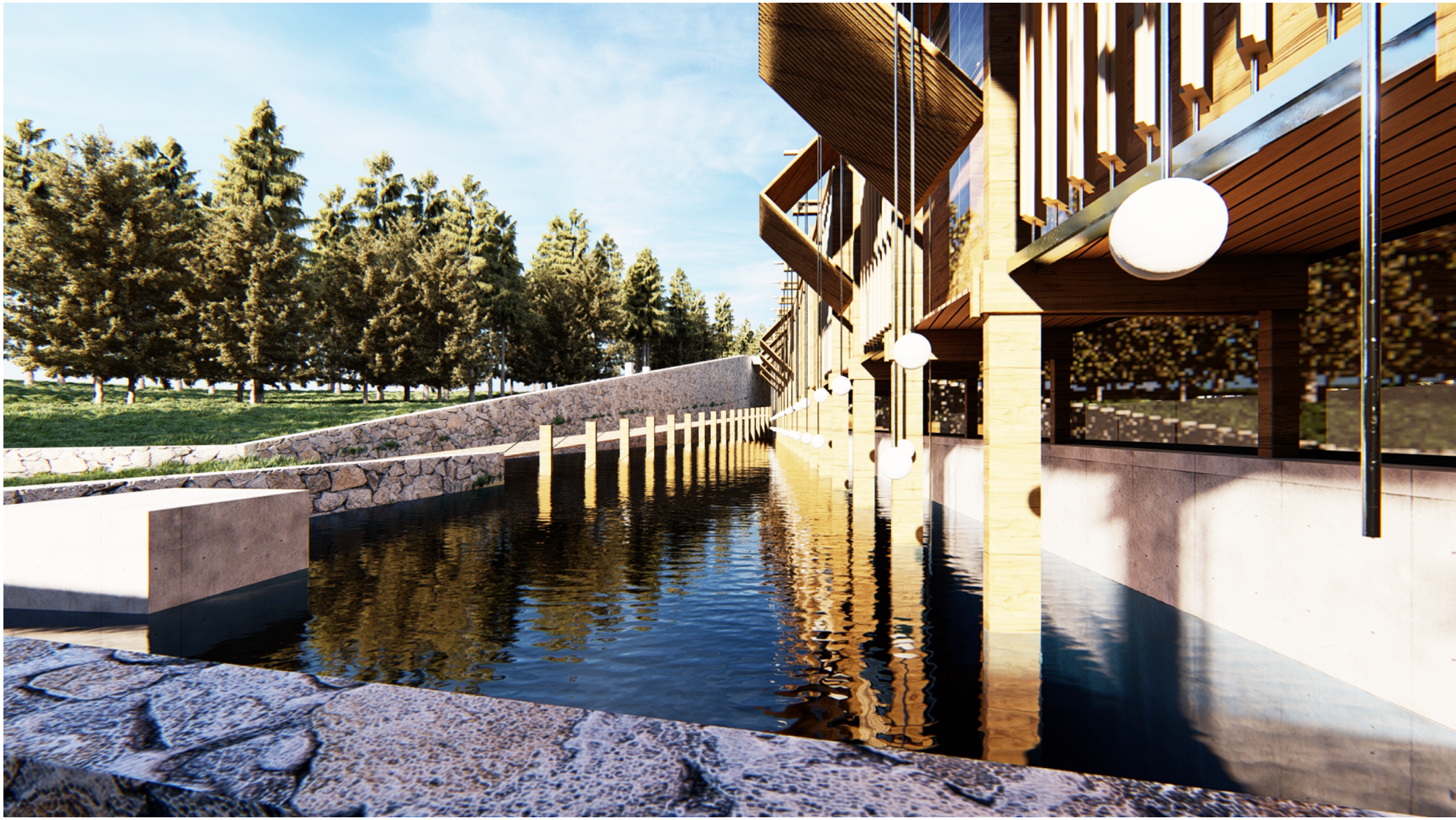

West elevation of hatchery
1:500
10m
0
10m
20m
30m
40m
50m

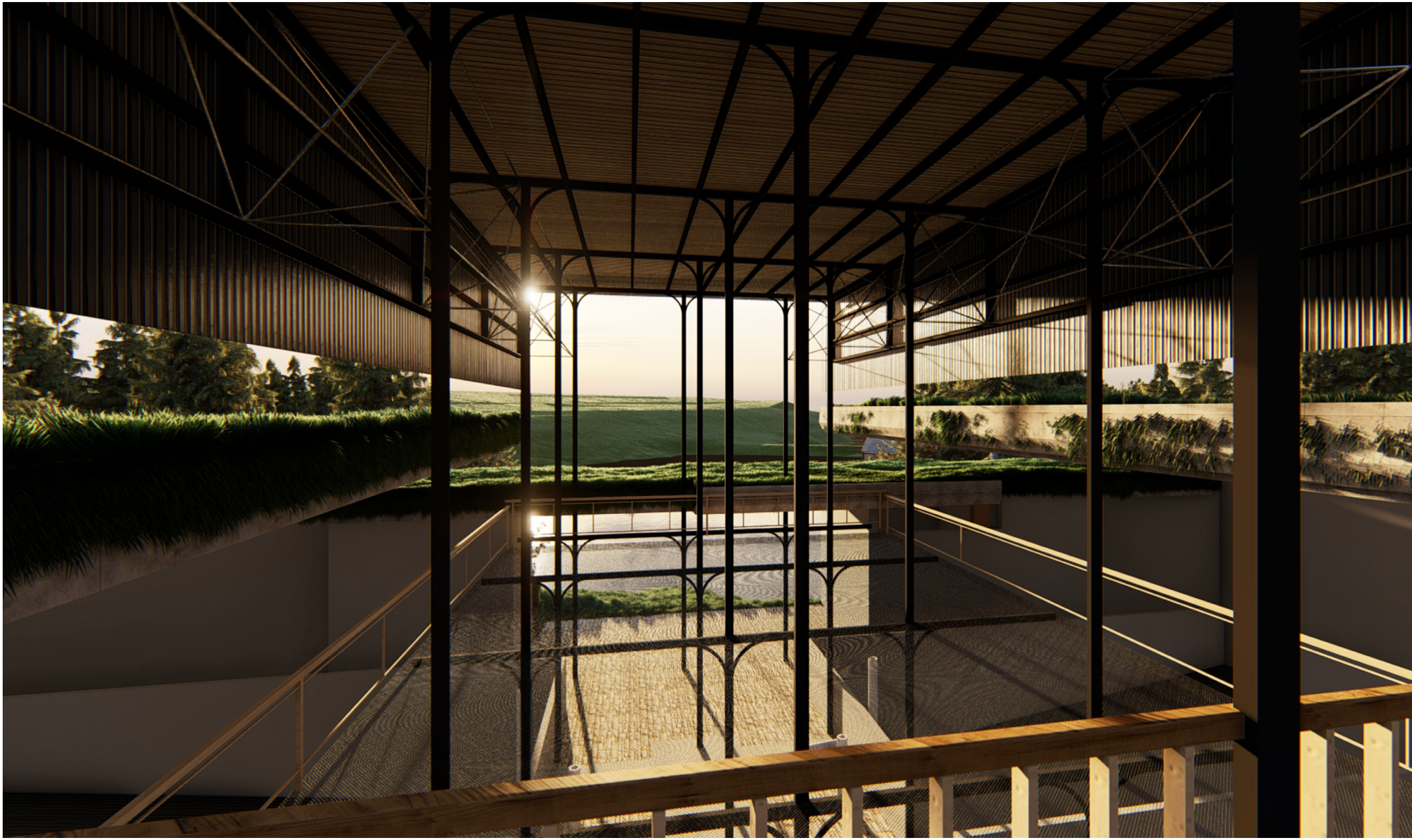
Adjustable façade system creating a depth in façade on western elevation.




East elevation of hatchery
1:500
10m
0
10m
20m
30m
40m
50m

Intersection between manmade and natural

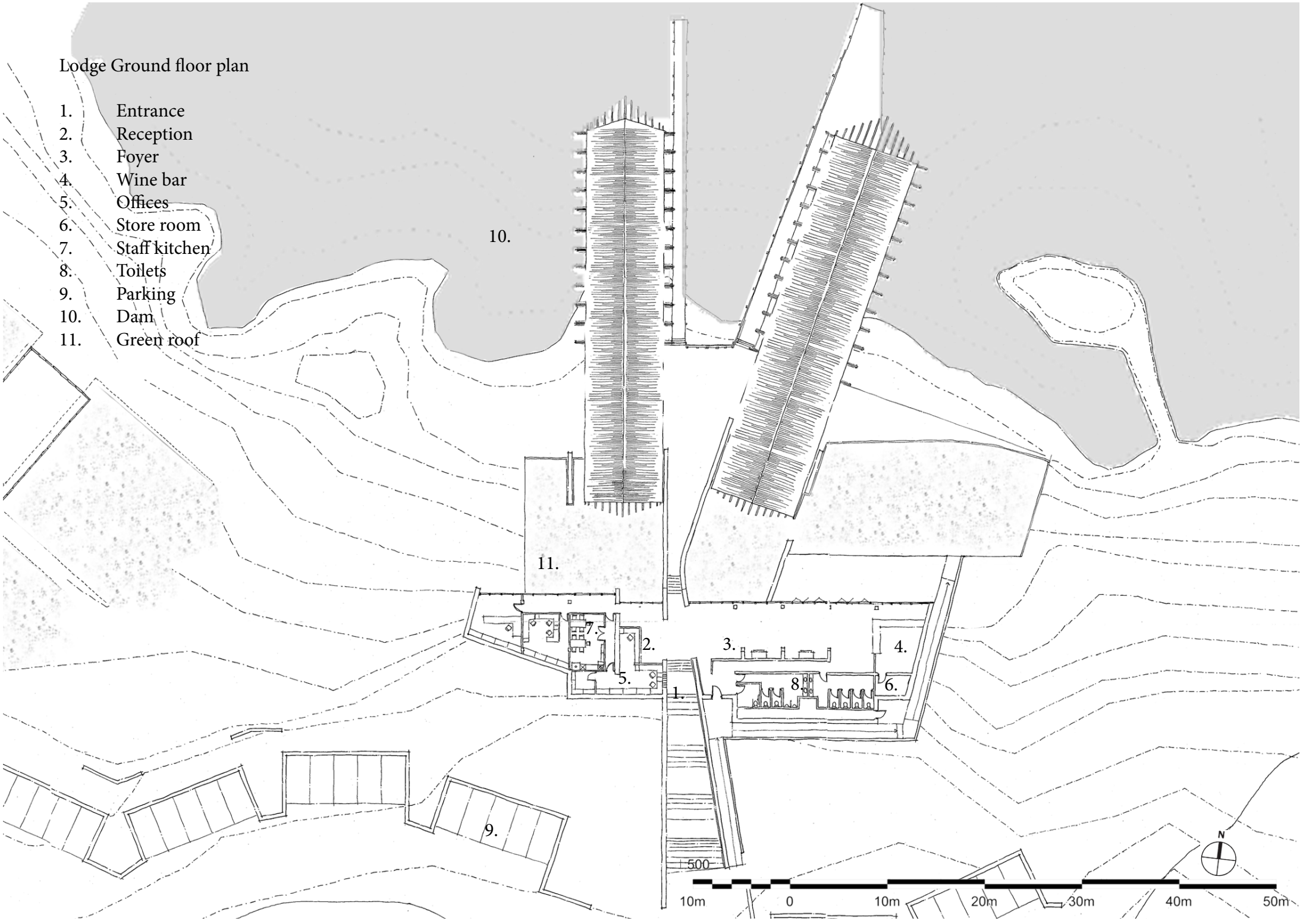




A fly fishing retreat and trout hatchery in Dullstroom, Mpumalanga



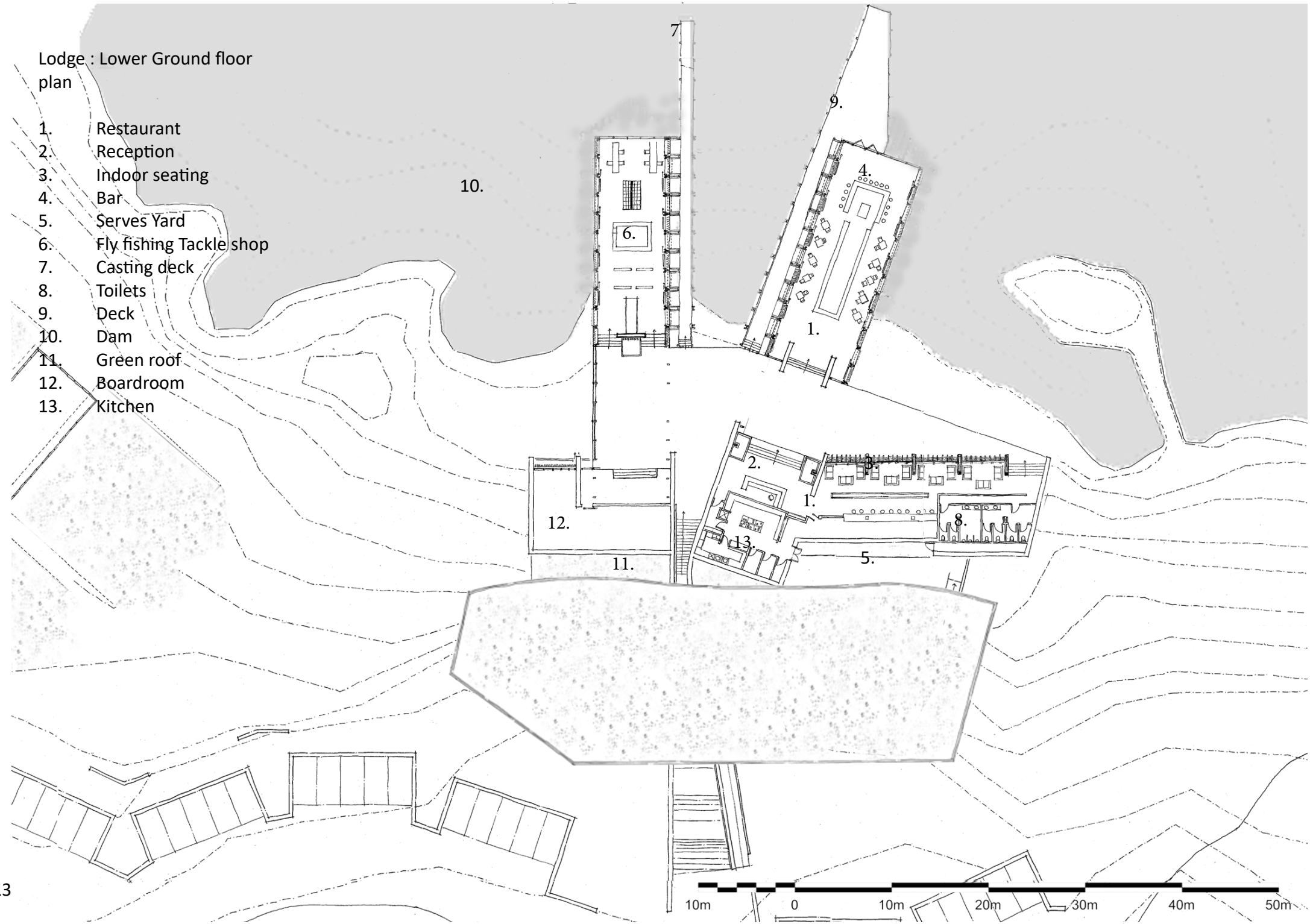
Lodge Ground floor plan


Lodge Ground floor plan
1. Entrance
2. Reception
3. Foyer
4. Wine bar
5. Offices
6. Store room
7. Staff kitchen
8. Toilets
9. Parking
10. Dam
11. Green roof
10.
11.
7.
2.
3.
4.
5.
8.
6.
1.
9.
500
10m
0
10m
20m
30m
40m
50m
N









Lodge : Lower Ground floor plan

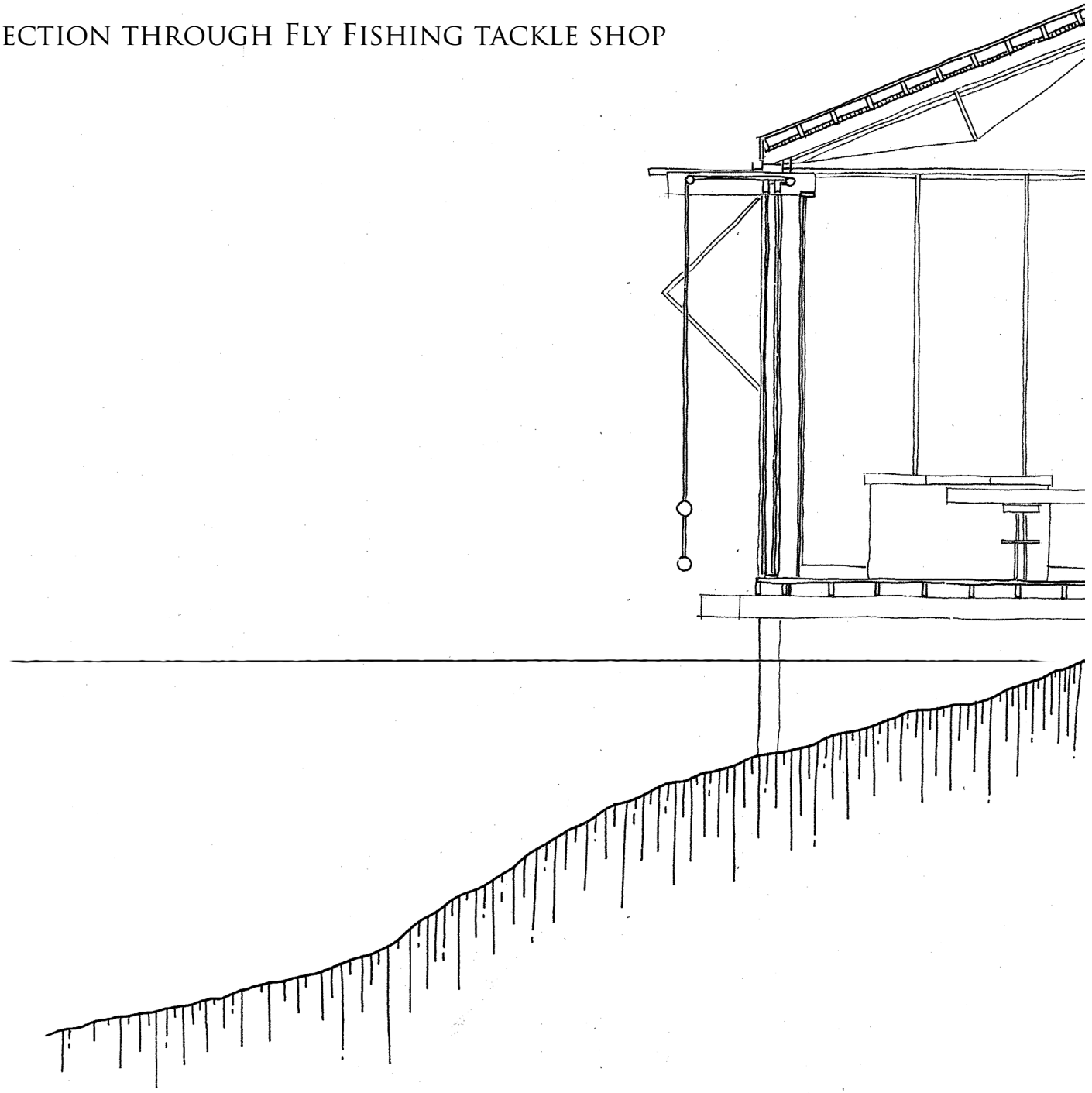
1. Restaurant
2. Reception
3. Indoor seating
4. Bar
5. Serves Yard
6. Fly fishing Tackle shop
7. Casting deck
8. Toilets
9. Deck
10. Dam
11. Green roof
12. Boardroom
13. Kitchen




East elevation of lodge
1:500
10m
0
10m
20m
30m
40m
50m



Skin section through Fly Fishing tackle shop






West elevation of lodge
1:500
10m
0
10m
20m
30m
40m
50m

The Restaurant façade




Cross section through lodge building
1:500
10m
0
10m
20m
30m
40m
50m

Interior perspective of tackle shop





Moment of poetic intensity



ACCOMMODATION



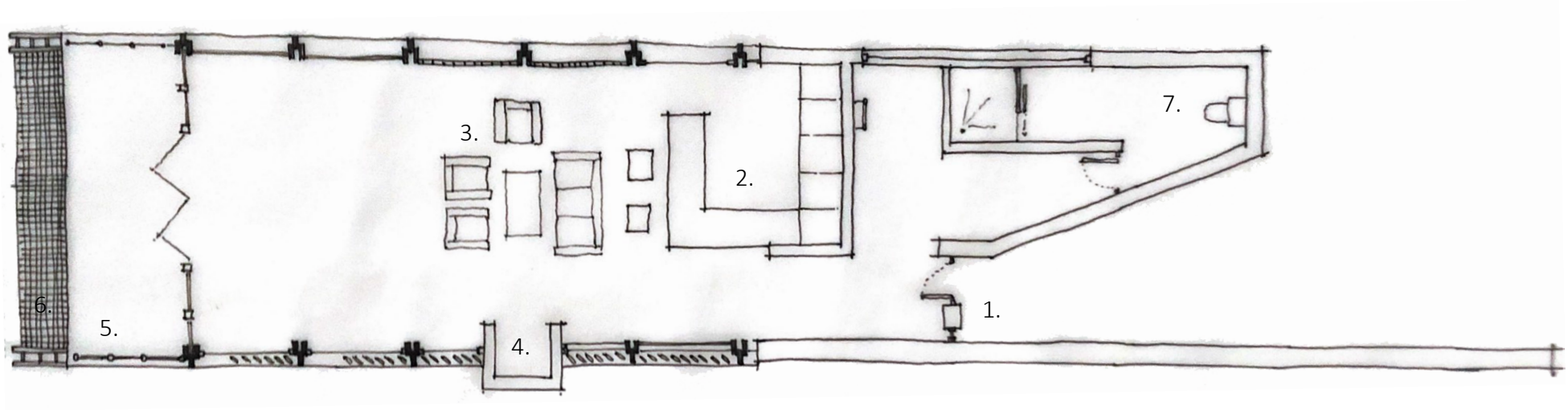


East elevation of accommodation unit

1:100

2m 0 2m 4m 6m 8m 10m


West elevation of accommodation unit
1:100
2m
0
2m
4m
6m
8m
10m



Accommodation : floor plan

1. Entrance
2. Kitchen
3. Lounge
4. Fire place
5. Outside deck
6. Mesh Hamok
7. Toilet



A fly fishing retreat and trout hatchery in Dullstroom, Mpumalanga

CHAPTER 6
A Fisherman's tale
Technical report: Fly fishing retreat and hatchery:

Dullstroom, Mpumalanga, South Africa.

Towards rationalizing the poetic translation

Introduction

In this chapter, the composition of the poetic translation is investigated. Marco Frascari (1984) defines architecture "as the result of the design of details and their resolution and substation" and suggests that "the detail is the minimum unit of signification within the architectural production of meaning" (Frascari, 1984 :498 in Nesbitt 1996). As a result, this report will focus on the meticulous definition of detailing as Gregotti explains, when referring to the work of Carlos Scarpa that "each detail tells us the story of its making, of its placing, of its dimensioning" (Frascari 1984: 498). Thus, this understanding of the technical investigation will allow an interpretation of the angler's world of life to be poetically translated into build form as an act of poetic revealing (making) of architectural that follows Ruskin's notion of architecture as "a science of feeling" (Ruskin, 1905: 1-2).

Additionally, the proposed Fly Fishing retreat and hatchery will be analysed according to design, program and function. Through research and the observation of tested technical solutions, effective materials, construction methods and detailing a responsible architectural interpretation can be generated.

Chapter 6
Towards rationalizing the poetic translation. Poetic understanding of the site

Site information : 1. Location, town planning / development framework and legal influences

In chapter 2 of this dissertation the site has thoroughly been discussed and can be referred to on page 5 of this dissertation. Thus this segment of the document will only address how the technical understanding has been translated into built form.

Figure : Map of South Africa.
(Google Maps,2019:online)

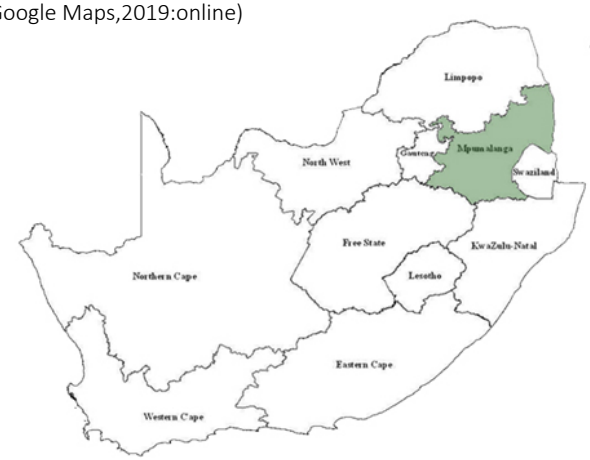




Figure : Location of Dullstroom in Mpumalanga.
(Google Maps, 2019: online)



Location

The location for this Fly fishing retreat and hatchery is situated on the Pines Farm which forms part of the existing farm called The Wickham's retreat (Morgenzon portion 8)

The location for this Fly fishing retreat and hatchery:
Dullstroom, Mpumalanga, South Africa: The Pines farm premise -
S 25°23'43.34";E30°10'10.35"

Access:

The farm is located approximately 2,5km north of Dullstroom on the R 540 (Dullstroom main road), turn right at the Hartfell Farm board onto an unpaved road (known as Kruisfontein Road but not indicated from the road). Travel for approximately 8.5km to reach "The Pines" farm premise (north-western boundary of the farm).

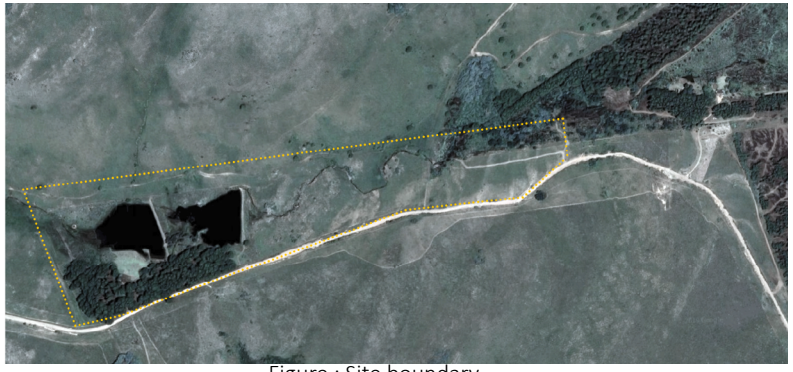
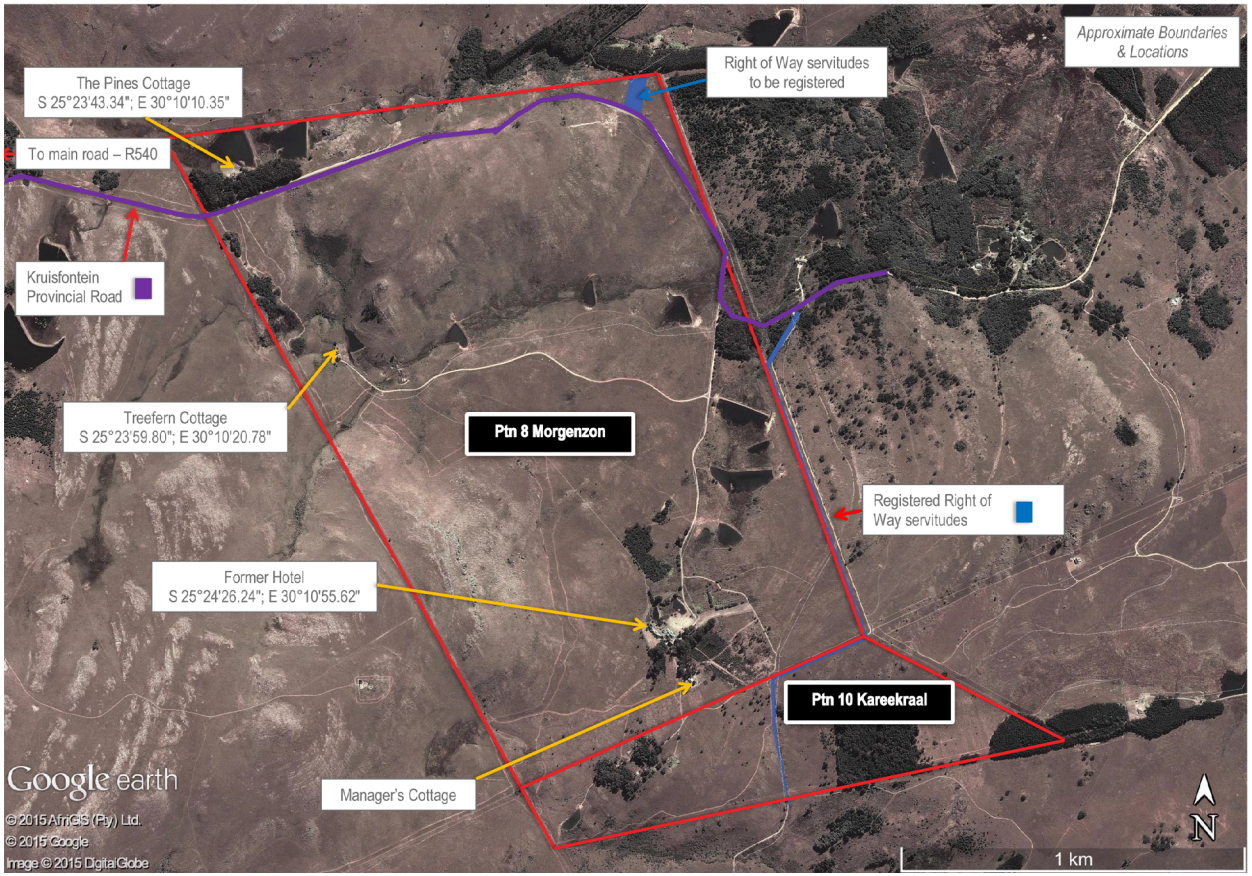


Figure : Site boundary

Site information : 1. **Location, town planning / development framework and legal influences**

Elevation
The farm's elevation is between ± 1,850m and ± 2,050m above sea-level.

Additional Location features
Animals other than trout.
Several small antelope species such as Duiker and Steenbok traverse the subject and neighbouring farms.



Fencing
The perimeter sections of the farm to the provincial road are mostly cattle fenced.

Electricity
Electricity is supplied by Eskom. Electricity supply is three-phase.

Water and Sewerage
Water is supplied by means of two boreholes.
Sewerage is treated by way of septic tanks.
Water use registration and certification
See Appendix 2

Climate

See Chapter 2 Understanding the poetics of the environment.

Cadastral information.
SG diagrams

Chapter 6

Towards rationalising the poetic translation. Poetic understanding of the site

Site information : 1. Location, town planning / development framework and legal influences

Title deed information
See Appendix 2

- Title Deed Number :
  Morgenzon Farm – T55235/1984; Kareekraal Farm – T 87378/93
- Registered Owner:
  Wickham's Retreat (Pty) Ltd
- Title Deed Description:
  Portion 8 (a portion of portion 3) of the farm Morgenzon 122, Registration Division JT; & Portion 10 (a portion of portion 2) of the farm Kareekraal 135, Registration Division JT
- Registered Land:
  Size Morgenzon – 238.2492 ha;
- Servitudes / Title Deed Conditions:
  See page 10 of appendix 2 for an illustration of the servitudes, and copies of the Title Deeds attached for additional information.

Municipal and Rights Information

- Municipality:
  Emakhazeni Local Municipality (previously Highlands Local Municipality)
- Property Use Rights:
  Agriculture - The property has no special commercial (i.e. hotel) rights. There is no liquor licence.
- Water Use Registration:
  Water use is registered by the Department of Water Affairs for storing water and (Morgenzon) engaging in a stream flow reduction activity. The farm portions fall under the Inkomati-Usuthu Catchment Management Area. Note that water use registration is not an acknowledgement of an entitlement to the registered water use by the authorities.

Site information : 1. Location, town planning / development framework and legal influences

Topography
The terrain is hilly and has a steep slope from the South to the North, towards the dam. The property has a total of 2 dams situated in the valley. The dams at The Pines Farm premises are stocked with Rainbow and Brown trout.

The steep slope towards the water provideds a challenge in terms of how the proposed buildings will be constructed in terms of how the site will have to be excavated in order for foundations to be constructed. These excavated areas will need to be supported with retaining walls in order to ensure that the walls of the excavations do not collapse.

The proposed site for this intervention provides the challenge of a steep slope towards the water. This provided a challenge in terms of how the proposed buildings will be constructed in terms of how the site will have to be excavated for foundations to be constructed. These excavated areas will need to be supported with retaining walls in order to ensure that the walls of the excavations do not collapse.

Vegetation
The land is covered by a combination of grasses and shrubs with small conifer tree forests/plantations in places. Rocky outcrops are visible at the steeply sloped areas. There are no invasive Alien Plants on the property as far as the engaged researched source could provide.

Soil Conditions
The proposed site has clay over basalt soil formation and is in the Mpumalanga Highveld basalt and andesitic Grassland Biome. These basalt rock formations are hard to penetrate and so regular strip foundations will be costly and labour intensive to construct. Instead, pile footings that are easier to construct are used. The clay topsoil layer is relatively thin and will have little to no effect on the building construction, but where necessary the topsoil will be removed and replaced with gabion building pads on which the superstructure will be secured.

River as Datum
Due to the nature of the project, proximity to the dam is fundamental for the functioning of the fish hatchery, and because of this the dams specifically played a pivotal role in the design and structural composition of the buildings located beyond the water line that accommodates the restaurant and fly fishing tackle shop.

Chapter 6

Towards rationalising the poetic translation.

Poetic understanding of the site

Site information : 1. Location, town planning / development framework and legal influences

Additional benefits on site include:

- Dullstroom and the site itself have an abundance of pine trees which could be used in refining it into pine timber.
- The site also has an abundance of rock which can be procured from the topsoil. The rock excavated from the ground during excavations can also be reused in the construction of the rear walls that are submerged in the building complex.
- The site also has the added benefit of a borehole that could be used to service the building.
- As the chosen site has a river (a tributary of the Crocodile River) that flows through it the implementation of a hydroelectric generator will be beneficial. The electricity generated can then be used to provide electricity to the proposed design

Problem identification



kruisfontein access road to site

The site can only be reach it by traveling on a dirt road that often needs repair as seasonal rains cause damage to it.

In chapter 2 of this dissertation the site has thoroughly been discussed and can be referred to on page 5 of this dissertation. Thus this segment of the thesis will only address how the technical understanding has been translated into built form.

Orientation
The orientation of the proposed buildings on site is based on an understanding of how the angler orientates himself within the natural landscape and an understanding of what the ideal orientation of built form on the site would be.

The proposed site receives sunlight from the North East that allows for a North-East orientation to be ideal to maximise the infall of light on the northern facades.

The angler orientates himself by drawing reference to natural elements such as the threes and the water.

The interpretation of these ideal orientations leads to a translation of a northern orientation of the proposed buildings maximising Northern exposure and placing the buildings within the tree line facing the water. Maximising protection from the wind and creating a visual link to the water.

Chapter 6
Towards rationalising the poetic translation. Poetic understanding of the site

Understanding the relationship between Dullstroom's built environment and the landscape: The relationship between man and environment.

The site analysis reveals that Dullstroom has a demanding climate with climatic temperature extremes that alternate between 30 degrees Celsius in summer and -7 degrees Celsius in winters. Because of these extremely cold winters, excessive amounts of energy are spent to try and maintain a constant, comfortable temperature within the buildings. Thus implementing a climatic strategy that addresses temperature fluctuations becomes essential.

Sustainable climatic implementations

Interpreting the way the existing buildings in Dullstroom were constructed, allowed an understanding of how the architecture made use of multiple thresholds between the built form and the natural environment that creates a depth in the façade of the buildings. In addition to this, the architecture was also constructed with materials utilied from the environment such as seriocomic rock and tectonic materials such as wood (pine). This understanding accompanied with understanding the angler's three relationships towards the water enables a translation into an architecture that incorporates natural building materials and must sunken into the landscape, suspended above the landscape and meats with the landscape.

Sustainable climatic implementations

This translation leads to the sustainable climatic implementation of a layering of façade in terms of adjustable louvre systems that can be opened allowing for cross-ventilation, large roof overhangs, the use of natural accruing building materials and the use of thermal mass as a means to regulate the temperature fluctuations in a sustainable method.

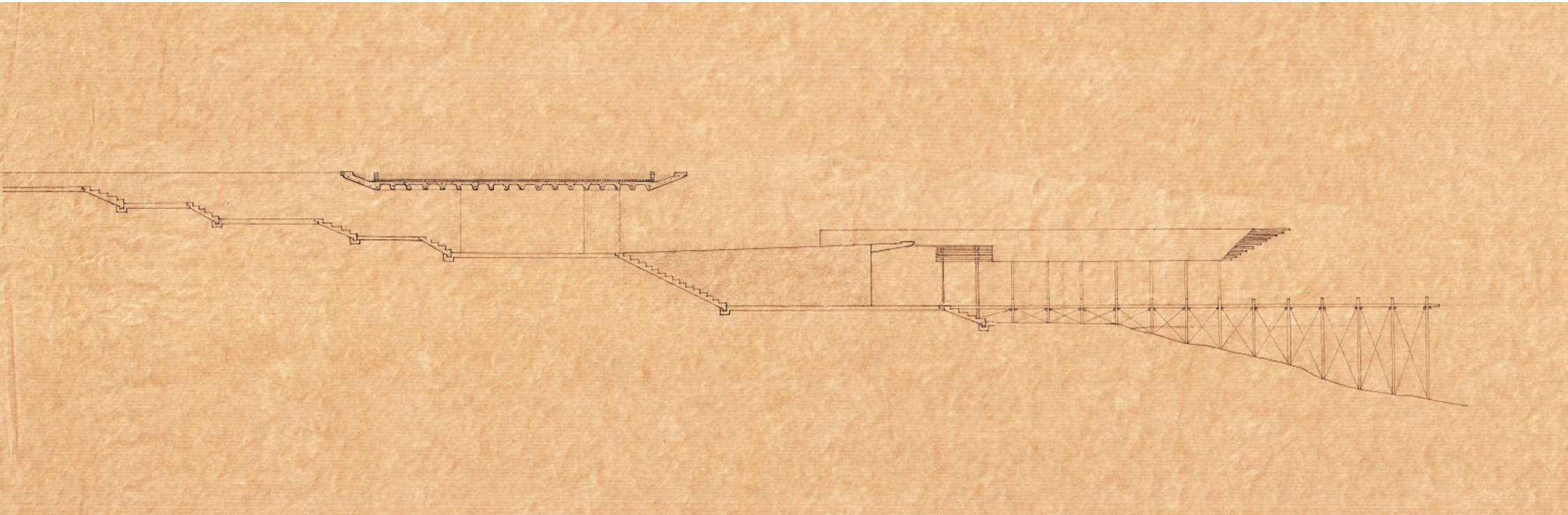
Thermal mass

Thermal mass can be understood as the ability of a material to absorb and store heat energy. During the day the specific material (such as rock, masonry and or concrete) absorbs heat energy, and at night this energy radiates from the material causing a heat exchange. If one could have the correct ratio of thermal massing within a building, temperature fluctuations can be minimised to 2-4 degrees. Thus the building mass absorbs the sun's radiation during the day (keeping day time interiors cool) and releases the absorbed radiation during the evening (keeping interiors warm and with minimal fluctuation from daytime temperature).

In the proposed building, the climatological understanding of thermal mass accompanied by understanding the topological challenge of the steep slope is translated by:

- Submerging building within the landscape.
- Constructing the building with materials that have high thermal absorption qualities such as rock and concrete.
- The implementing a planted roof system.

Figure : Section through the main lodge building.



This allows:

- Hiding the overall volume of the building to the existing natural geography minimising the visual impact that the buildings have on the natural landscape.

- By submerging the building in the landscape, one not only addresses the climatic aspect of how to protect against the sun but also the sustainable as pect. As the rear wall that is anchored to the excavated hill creates a cooling effect within the building known as thermal inertia. This effect is caused by a basic physical reaction. "The temperature of a body of lesser volume equals that of a greater volume when these two bodies are in contact." Thus the temperature fluctuation within the building is kept to a minimum because the larger body of volume (the soil) absorbs heat at a very low rate and radiates that heat in the same way casing a stabilised interior temperature.

- The building to absorb radiation from the sun during the day, which keeps day time temperatures cool and release the absorbed radiation during the evening and results to warm interiors at night.

- Building to be more insulated in terms of how to direct heat transfer (radiation) from the sun is engaged as planted roofs absorb radiation at a very low pace.

The result of the use of this method of construction and design enables the buildings to function without mechanical cooling systems.

In addition to the previously mentioned, the use of planted roofs (green roofs) have additional benefits regarding sustainability:

- Unlike traditional black tar roofs, green roofs reduce energy costs by absorbing heat instead of attracting it and providing natural insulation for buildings. According to a study conducted by the National Research Council of Canada, even a six-inch extensive green roof can reduce summer energy demands by more than 75 %. By lowering air conditioning demand, green roofs decree the production of associated air pollution and greenhouse gas emissions.

- Green roof plants remove air particulates, produce oxygen and provide shade. Additionally, the planted vegetation protects the roof structure against extreme heat which enables green roofs to last twice as long as traditional rooftops.

- Another important benefit of green roofs is their ability to reduce and slow stormwater runoff in urban environments. The ability a green roof has to absorb (and filter) water significantly lowers the risk of flash flooding. In the summer, green roofs retain up to 90 per cent of the precipitation that falls on them and up to 40 per cent in the winter.

PRECEDENTS

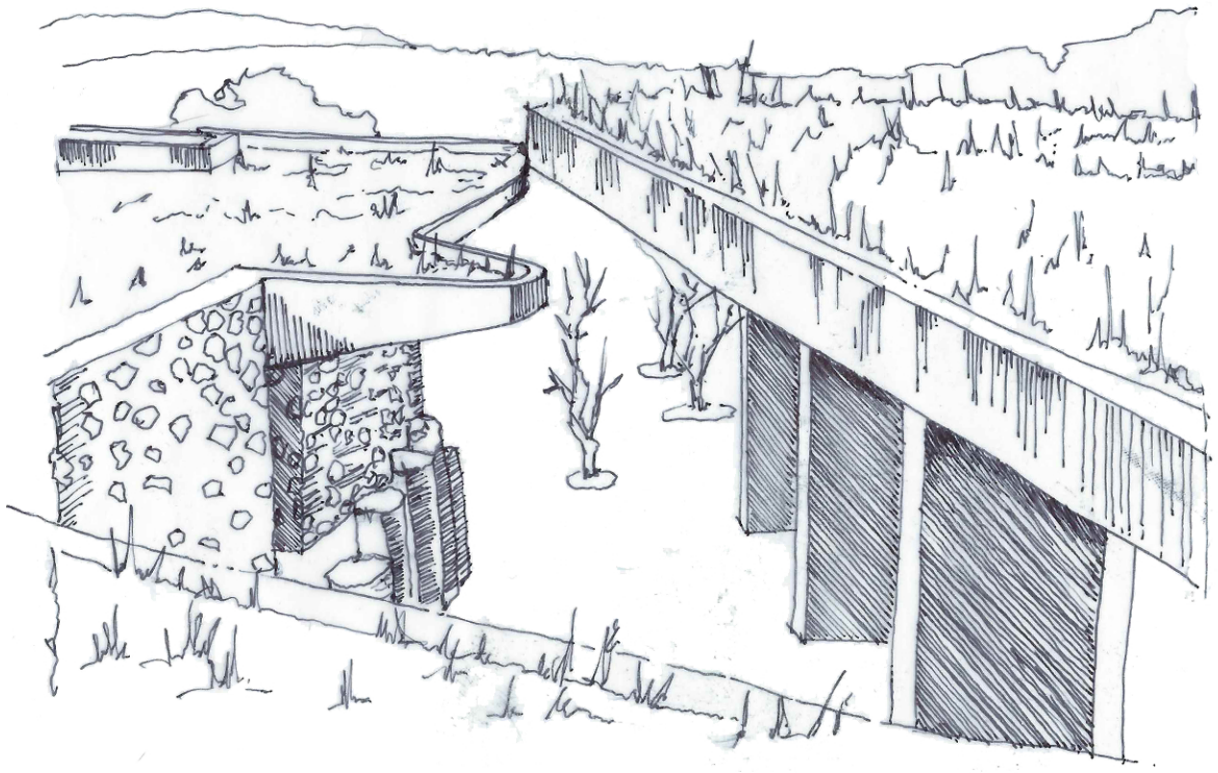
Forum Homini Boutique Hotel

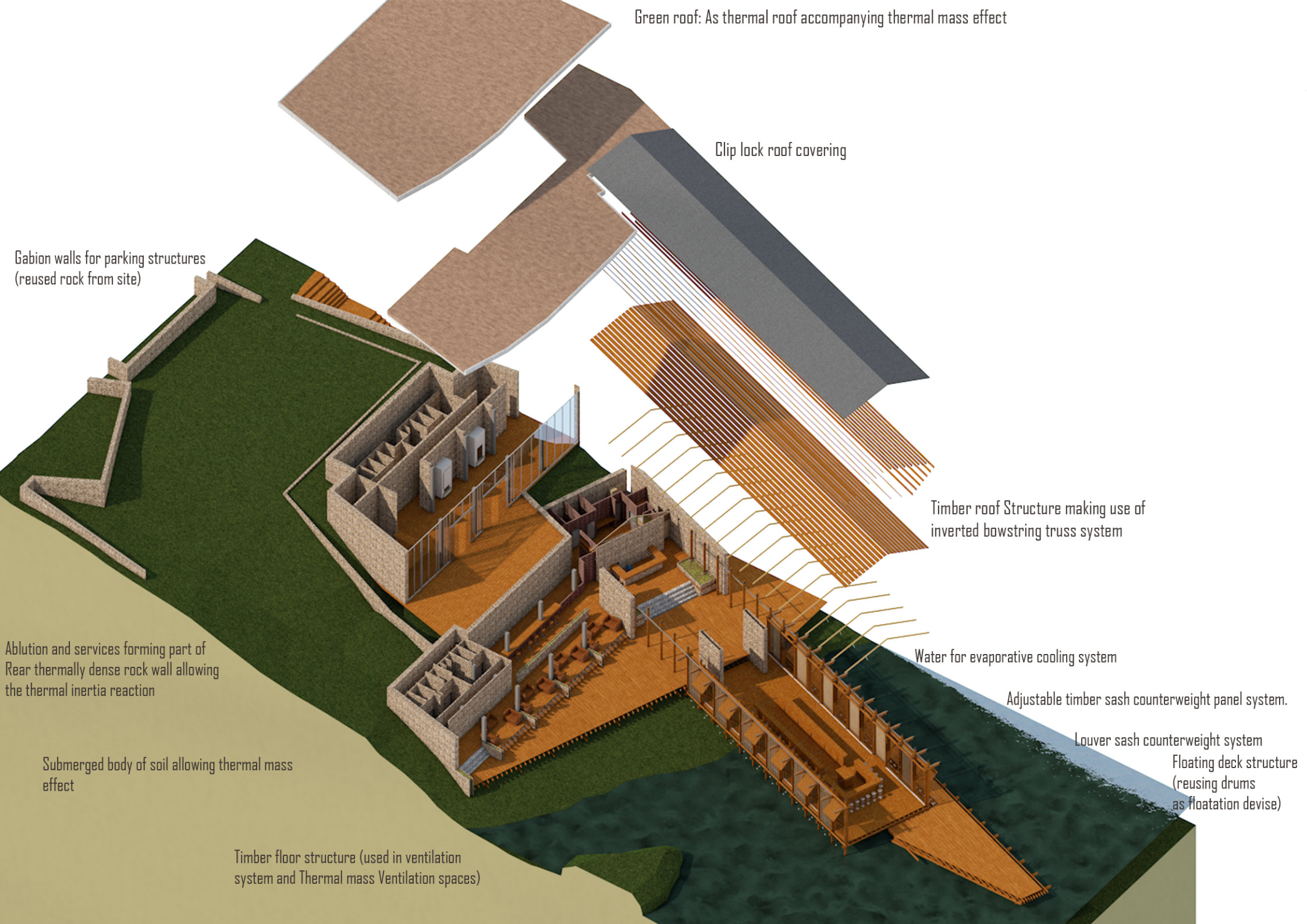
Activate Architects

2005

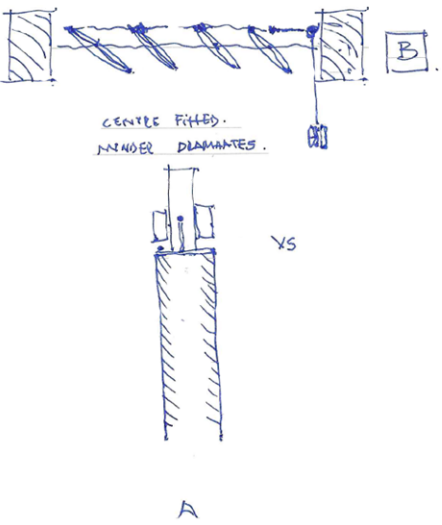
Cradle of Humankind Precinct, South Africa

This project is an ideal example of how a building complex makes use of the topography to inform its entire layout. It is for this reason that I chose it as a topological precedent; to better understand the design of a building in and with the natural landscape. This building was not only moulded by the landscape, but also embraces the natural vegetation by means of green roofs and terraces.

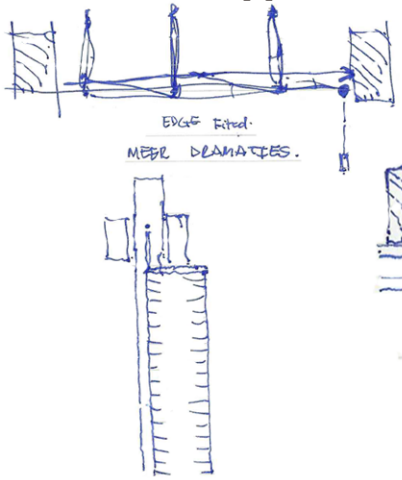


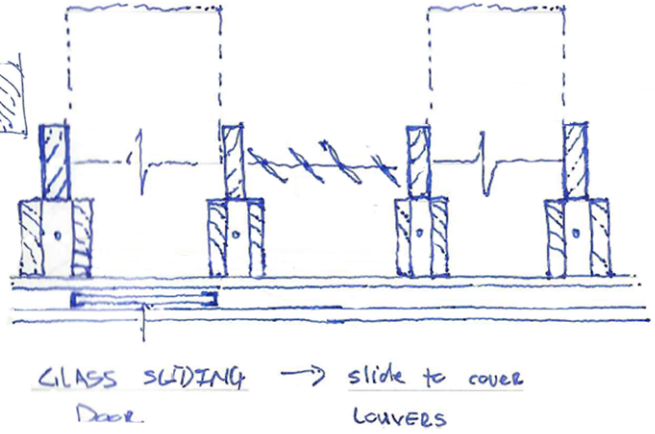

Green roof: As thermal roof accompanying thermal mass effect
Clip lock roof covering
Gabion walls for parking structures
(reused rock from site)
Timber roof Structure making use of
inverted bowstring truss system
Ablution and services forming part of
Rear thermally dense rock wall allowing
the thermal inertia reaction
Water for evaporative cooling system
Adjustable timber sash counterweight panel system.
Louver sash counterweight system
Floating deck structure
(reusing drums
as floatation devise)
Submerged body of soil allowing thermal mass
effect
Timber floor structure (used in ventilation
system and Thermal mass Ventilation spaces)

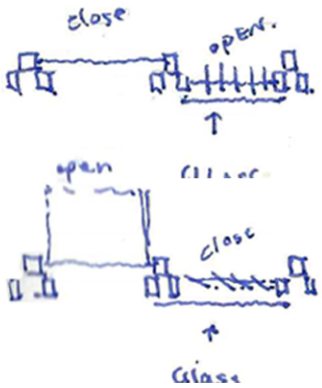
Eastern Façade engagement



Western Façade engagement









Based on information obtained from: Malan Vorster Architects









Chapter 6
Towards rationalising the poetic translation.
Poetic understanding of the site
Understanding the relationship between Dullstroom's built environment and the landscape:Using the knowledge and material of the place

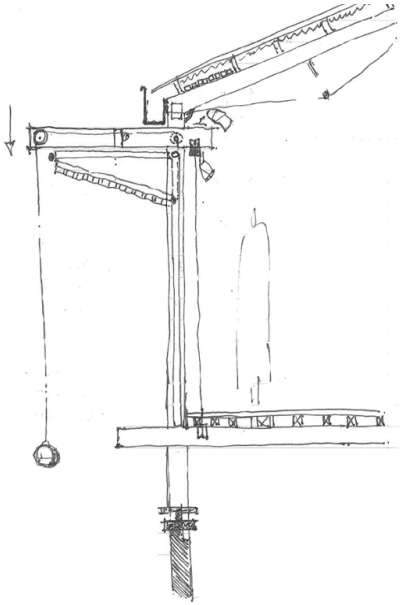
The natural environment plays a significant role in both the life of the angler as well as in the Dullstroom built environment.

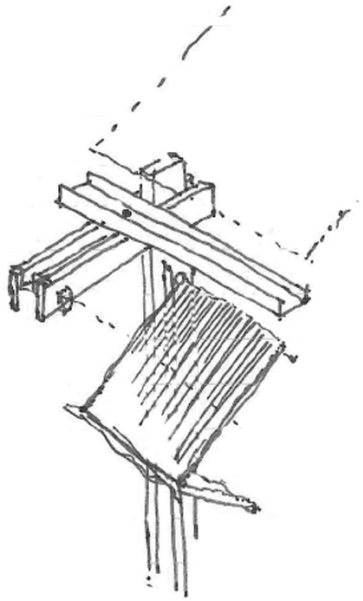
- Use of timber as a construction material: There is a pine tree plantation located between Belfast and Dullstroom from which most of the timber for the project can be procured with the exception of the specialise laminated structures that need to be specified by specialists such as the engineer. These materials can be transported from SA pine in Johannesburg, which is only two and a half hours drive from Dullstroom.
- The dams on the site create an ideal opportunity for an evaporative cooling system.
- The site has an abundance of rock located on the topsoil, and the excavations will also provide an additional source of rock to be introduced in the design.
- The site has an abundance of pine needles which has high isolative properties.

By using the available resources, an effective climatic response can be created that will be suited to the region

Evaporative cooling systems.

The dam as a source of water enables the opportunity to incorporate an evaporative cooling system within the building.This system can be utilised in the buildings situated on the water such as the Hatchery, the restaurant and the fly Fishing tackles shop. These buildings all incorporate adjustable timber sash counterweight panel system that can be opened up entirely allowing free-flowing air from the water's surface to enter into the buildings. As a result, the air flowing into the building gets cooled by the evaporation coming from the water mass allowing cool air to circulate through the building passively cooling the buildings throughout the day.





Using the knowledge and material of the place

Existing stone from the site is used in the gabion parking structures as well as in the rock walls to the sides of the excavated walls and allowing the approach and entrance of all the buildings to have a seamless connection to the site. Additionally, rock walls are also introduced in the main transitions from the reception towards the restaurant and tackle shop, to enable the movement through the building to feel like travelling through the natural landscape.





Figure : Existing render of building showing intergration of natural materials on site



Figure:Rock from site

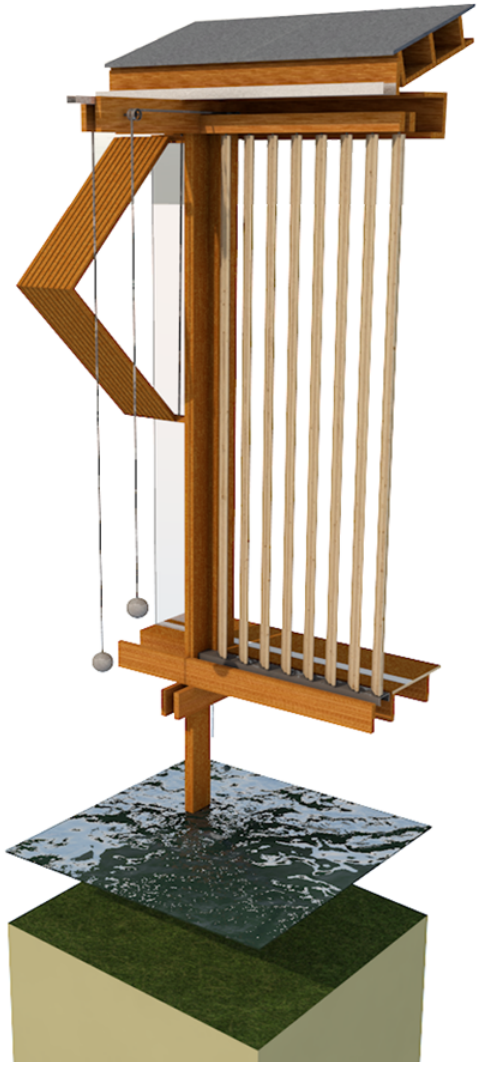


Figure :Finer gravel and stone

Chapter 6
Towards rationalising the poetic translation. Poetic understanding of the site

Understanding the relationship between Dullstroom's build environment and the landscape: Adjustability of the structure

The adjustability of the structure
The nature of this translation of the building system is twofold. It addresses the understanding of the angler's relationship towards the landscape as the angler must constantly adjust his position within the natural landscape to obtain the best position possible to engage the trout. Additionally, the challenging climatic variations of the site implicate that an adjustable façade system is a necessity to allow for a consistent interior temperature within the buildings.



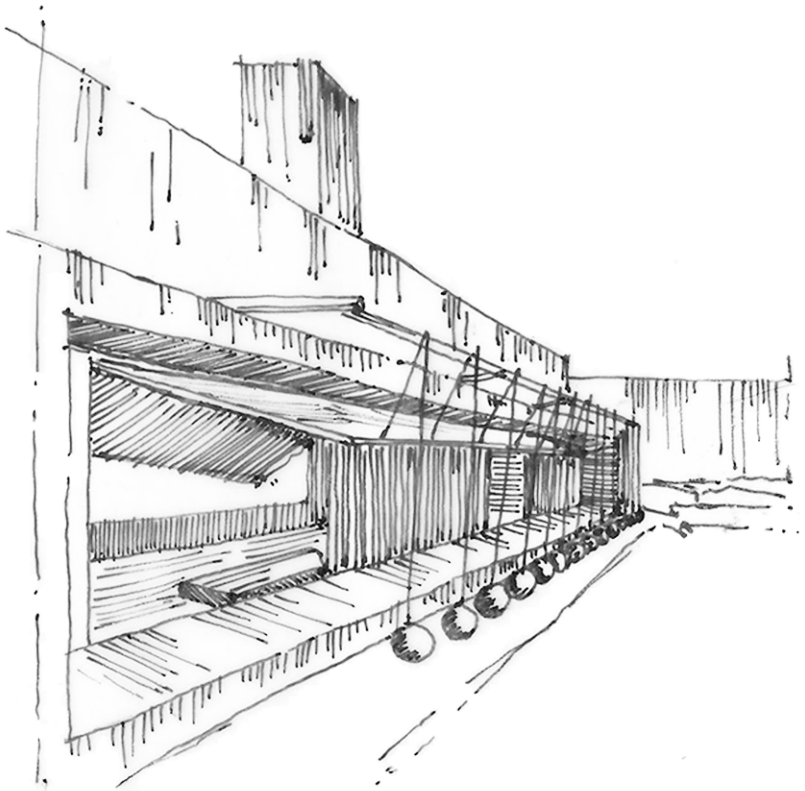


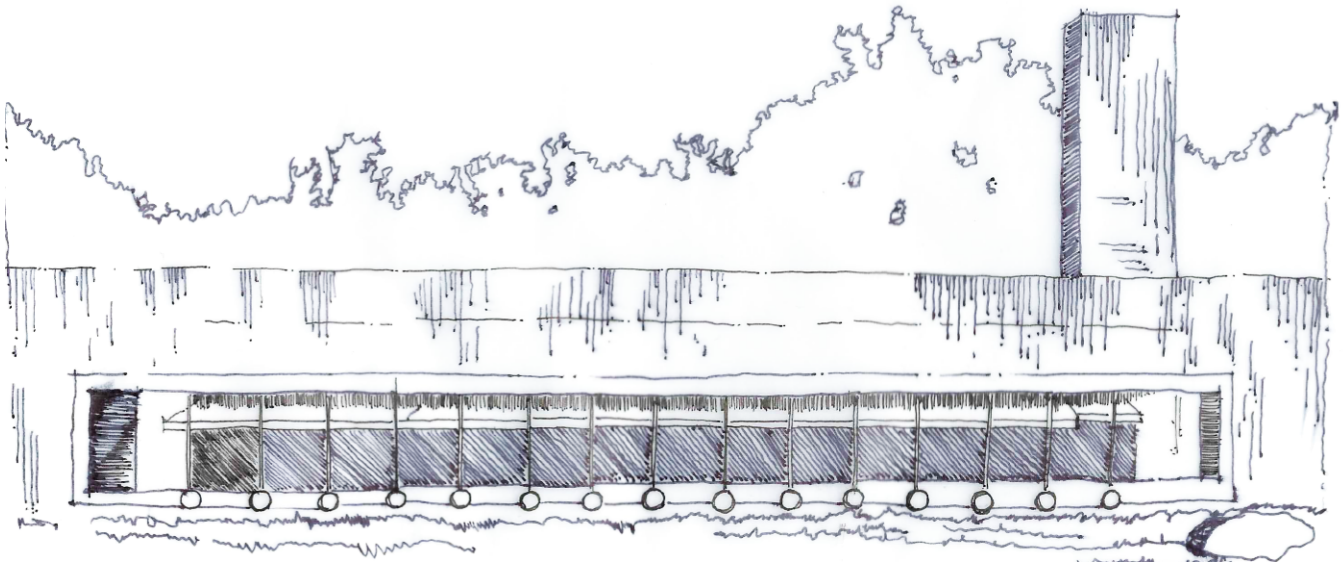


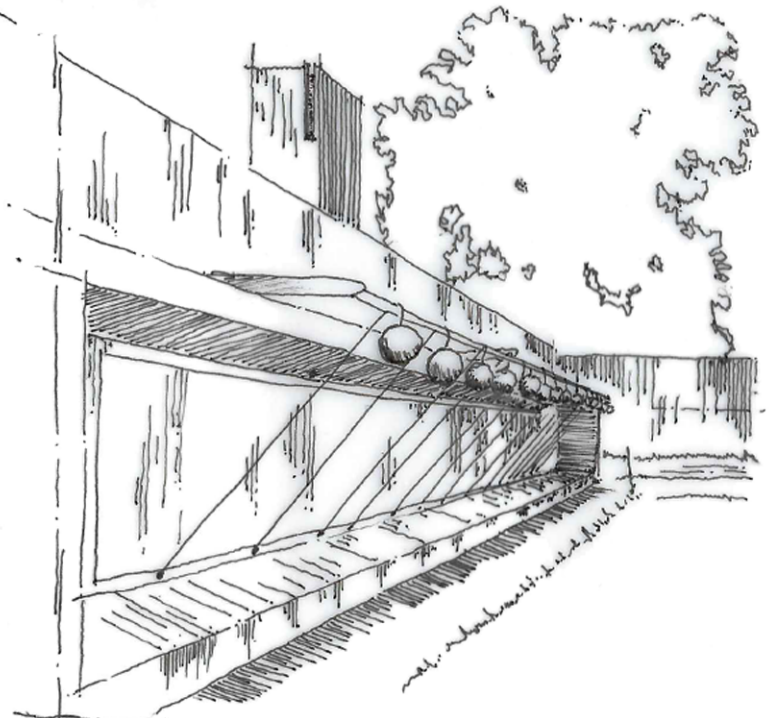
Chapter 6
Poetic understanding of the site

House for a fish breeder
Matharoo Architects Associates
2003- 2004
Ahmedabad, Gujarat India

The Building serves as a precedent in terms of adjustable façade system as it uses a scientific approach to enable an adjustable façade by the incorporation of a counterweight to open and close the facade. Additionally, the building allows an ideal understanding of how a horizontal layout and form of the design can be integrated within the natural environment.







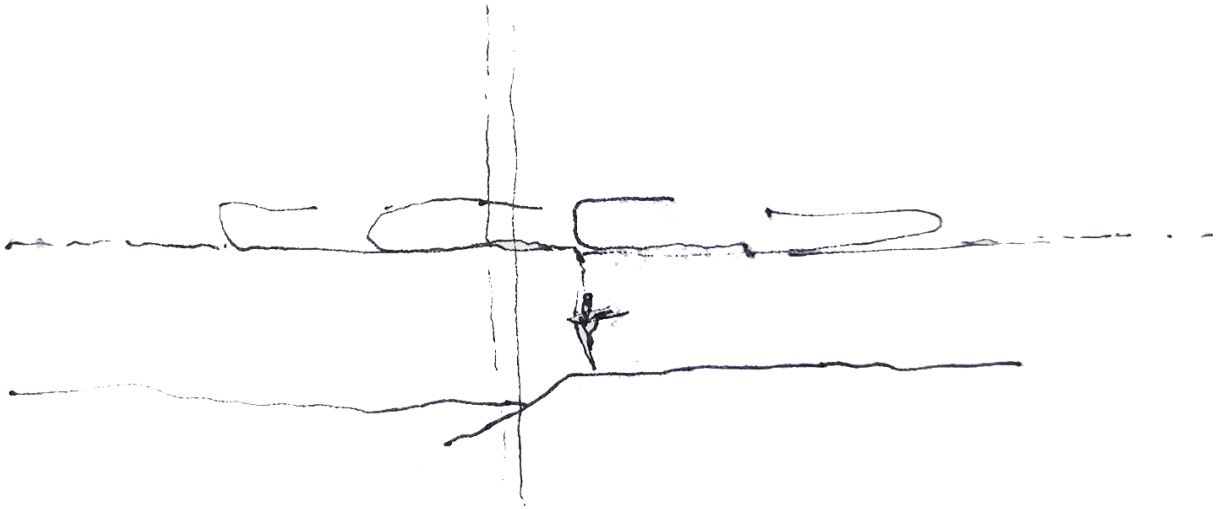
Poetic understanding of the site

Towards rationalizing the poetic translation :

Understanding the relationship between Dullstroom's build environment and the landscape:
Understanding the Fly rod as Mechanism

When investigating the relationship the fly rod has towards the angler and simultaneously the environment it can be understood as a mechanism that the angler uses to rhythmically overcome the divide between him and the trout. As a mechanical mechanism the fly rod can be understood as a device that functions as the result of continues tension between the line and the rod in order to produce a cast that enables the bridging of the afore mentioned divide by. The Fly rod has a reel that houses the line and enables the reaction (the cast) to be repeated. This understanding of the fly rod can be translated into an architectural application that allows an intersession between the build form and the natural landscape that is works as the result of a continuous tension.







Adjustable timber sash counter-weight panel system closed with counterweights visibly suspended in midair.

Chapter 6
Poetic understanding of the site

Towards rationalizing the poetic translation :

Understanding the relationship between Dullstroom's build environment and the landscape:
Understanding the Fly rod as Mechanism



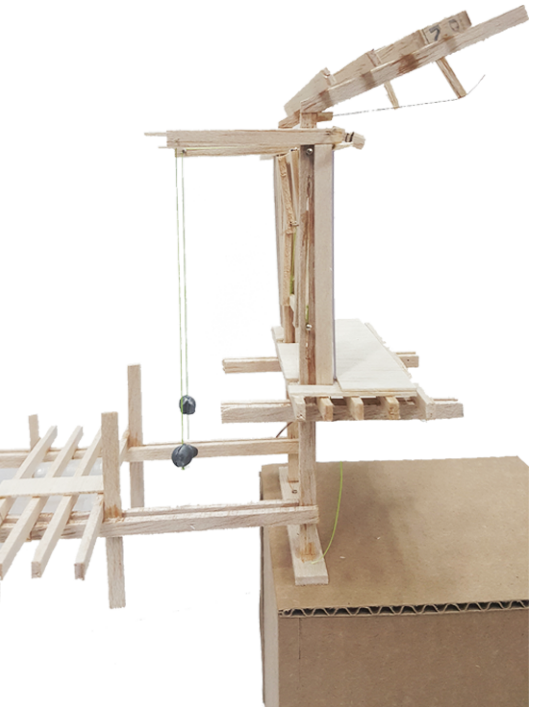
Adjustable timber sash counterweight panel system open with counterweights subnerged in water.

The following models illustrate how the proposed Adjustable timber sash counterweight panel system works.

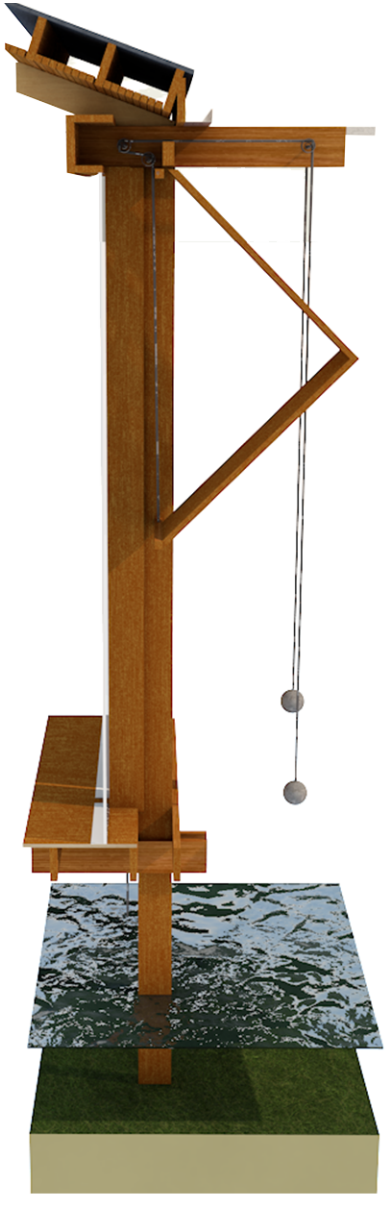
There are two reactions that appear when the system is in use:

When the panels are opened by lifting the timber panel in a upward direction the concrete counterweight will lower in to the water enabling unobstructed views towards the landscape and the ability to control the interior temperature by opening or closing the panels to such an extent to suit the specific climatic experience at that time and as the timber panels are closed by moving the timber panel in a downward direction the concrete counterweights are lifted out of the water. This system can work as a result of the continuous tension that exists in the 5 mm galvanised steel cable bolted to the precast concrete counterweight and operated with a galvanised steel pulley system fixed to the timber panel.

If the cable were to break the concrete counterweight will fall into the water, and the panel system would not open properly. The connection with the environment is lost and along with it the previously discussed climatic control opportunities related to the proper functioning of this system.





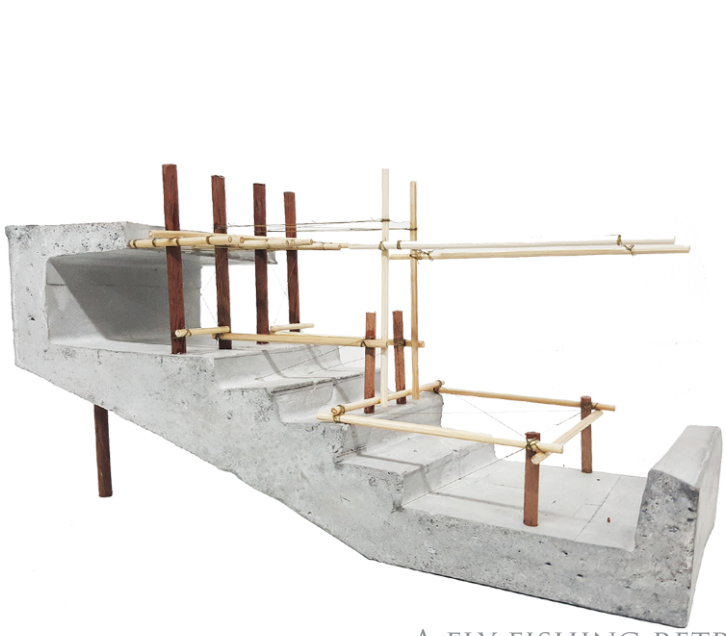




Chapter 6
Towards rationalising the poetic translation. Poetic understanding of the site

Understanding the relationship between Dullstroom's build environment and the landscape: Understanding the Fly rod as Mechanism

Structural Typology, Topology and Morphology







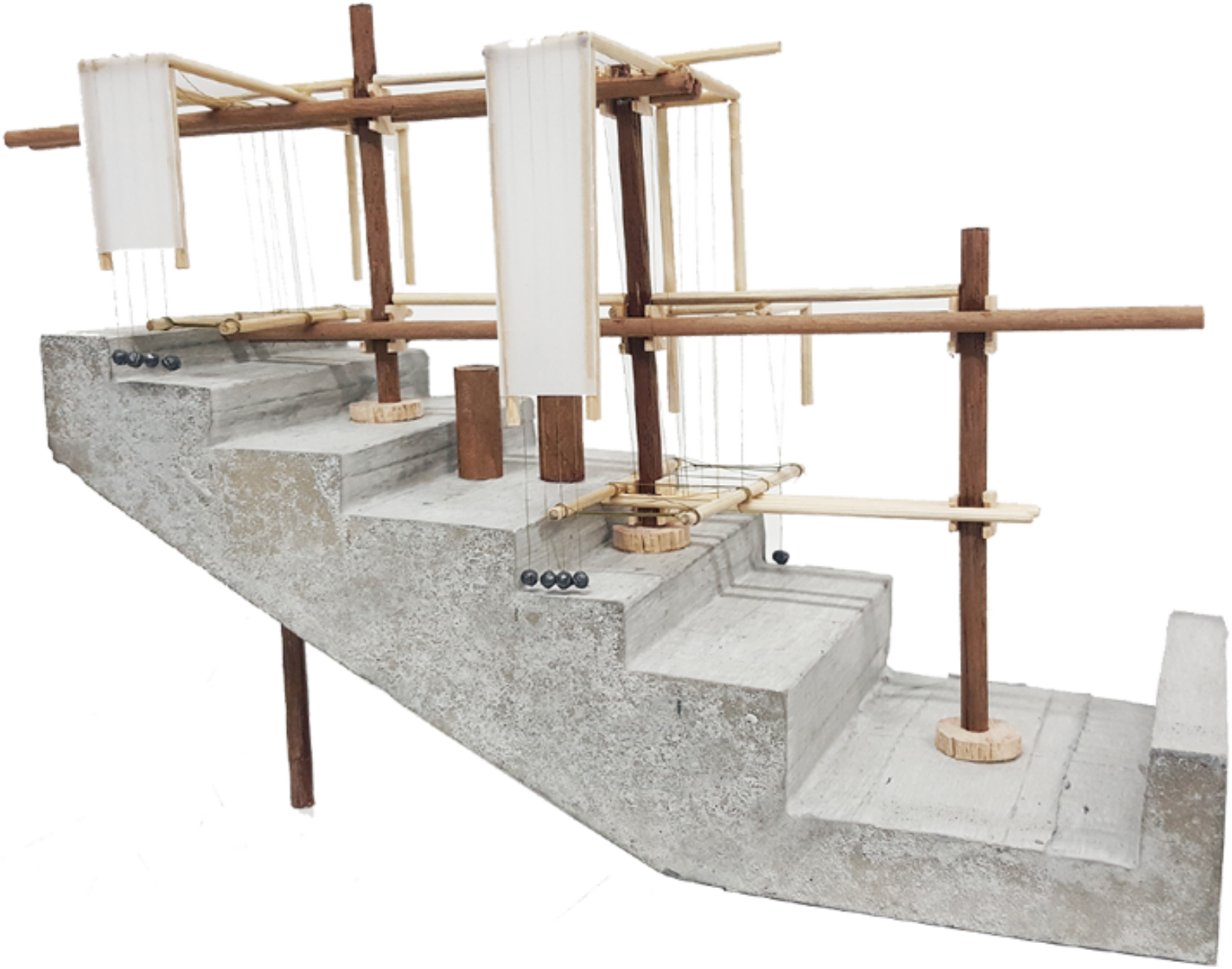
Concept one

In this reaction the architectural form adapted the character of an architecture that is suspended above the landscape with one centre column that supports the roof structure as the roof is suspended from this centre vertical beam.

Conceptually the two horizontal planes (earth and sky) are connected by means of a vertical element. The vertical and horizontal planes are dependent of each other.

In this concept the roof structure is held in place by tensioning the structure and a horizontal platform is held in place by means of the smaller upright support beams.





Concept two

In this reaction the architectural form adapted the character of an architecture that makes use of counter weights suspended from the structure and sits above the landscape with three centre columns that support the roof structure as the roof is suspended from this centre horizontal beam.

Conceptually this was an investigation into how the fly line floats on the water without breaking the surface tension of the water. Furthermore looking at the material qualities that enable this action (viscosity).

In this conceptual exploration it became apparent that the instillation should function as a friction joint, as there are similarities as to how the line does not alter the materiality of the water, but uses it to stay afloat.

Towards rationalizing the poetic translation :
Towards a poetic translation of the fly fishing techniques:

Fly tying is the process of producing an artificial fly used by fly fishing anglers to catch fish. In its most basic form fly tying is the proses of binding a wide variety of materials gathered from the natural environment such as feathers with a wide variety of texture and various animal hide to a steel hook with thread. These materials are held together by the thread kept in tension binding the material to the hook. The thread is then tied off with a knot, and an adhesive is applied to the thread to finish the fly. These materials are held together by the tension applied by the thread if the knot were to come lose the materials would come apart.

This understanding can be translated into an architectural application that stresses the use of a wide variety of natural textures held together by a tensile structural system.

This architectural translation of fly fishing technique leads to the investigation of tensile structures that relies upon this tension for its structural integrity.







Precedent Study: Lightweight timber structure

The Sawmill Shelter was designed and built by students En-Kai Kuo, Evgenia Spyridonos, Eleni McKirahan, Rolando Madrigal, Trianzani Sulshi, Paolo Salvetti, and Diego Saenz Penagos. In addition to serving as the 2016-2017 Design + Make project, the experimental pavilion is also a prototype for structural systems planned for the new campus lecture hall and library. The structure was built atop an existing 50-square-meter concrete slab on which the campus sawmill is placed.

The students built the Sawmill Shelter using 38-by-38-millimeter laths of Western Red Cedar sourced from Hooke Park (is this nearby) and assembled from shorter sections held together with glued finger-jointed scarfed splices. “The structure adjusted, each lath carries up to two tonnes of tension, demonstrating the remarkable strength of wood under tension,”(source) reads the project description. The laths were tensioned to create a “stiff net of wood” clad in CNC-milled aluminium panels for a striking and lightweight anticlastic timber net roof spanning nearly
11 meters







Truss and ceiling structures.

In these applications, the truss makes use of a steel cable that is drawn into tension by the load from the roof structure supported by the truss. The steel cable enables places the timber truss in tension, enhancing its structural integrity and enables the distribution of the load throughout the truss.



Long span Membrane structure

n these structures in a membrane is held by cables, allowing the distribution of the tensile stresses through its form.



Wire mesh and cable membrane tensioned structures

These are structures in which a mesh of cables carries the intrinsic forces, transmitting them to separate elements that carry the load. In these structures, the cables are drawn into tension and support the weight of the roof by being fixed to an additional structure that will support the load.

Concept model of accommodation units.

These tensioned structural systems lead to the investigation of an inverted bowstring truss that could be used in the roof structure of the restaurant and the fly fishing tackle shop.



Structural system

There are two basic structural systems apparent in the design:

The first being a lightweight timber structure and the second a reinforced concrete column and beam structure.



Structural system

Lightweight timber structure:
This structural system is used in the restaurant and the fly fishing tackle shop.
The roof system is made up of GRS Klip-lock 406 roof cladding: roll-formed from steel with three trapezoidal ribs at 203mm centres giving a nett cover of 406mm. The male rib shall have spurs to ensure a positive double interlocking action at side-laps incorporated with two stiffener ribs. Fixed to 70x166mm timber rafters @750mm supported by 70 x 233 timber inverted bowstring truss @ 2000 with 40 mineral fibre thermal insulation fixed to 38x38mm timber batters
The inverted bowstring trusses are bolted to a metal plate and fixed to 80x 228 timber column which is connected to an concrete footing.

Floor
4900x 150x19mmPoxburghii pine
Planking spacing 5mm apart nailed to 38x100mm timber floor joist fixed to 45x231mm timber bearer

The column and beam structure

The column and beam structure supporting the green roof comprised of a 350 x350mm reinforced concrete beam on a 2500x 5000mm grid with 250 mm reinforced concrete pile foundation



The column and beam structure

Chapter 6

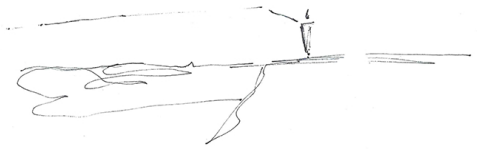
Towards rationalising the poetic translation.

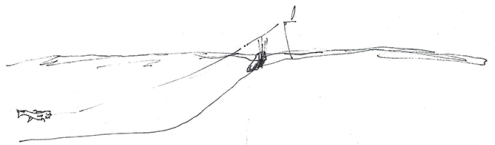
Architecture of translation

alternating tensile embodyment materiality | surface tension friction material viscosity | mystery Hidden superstition

The Angler :
Orientation and ordering principals







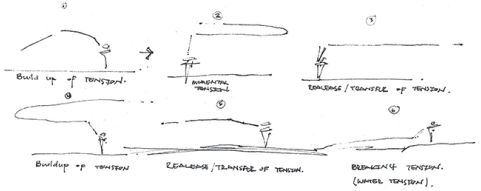
The Fly
Materiality and structure system in accordance to place (character)

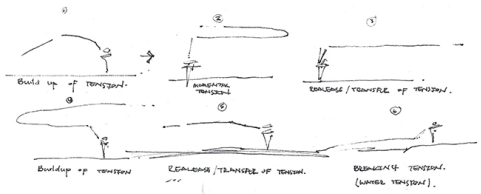


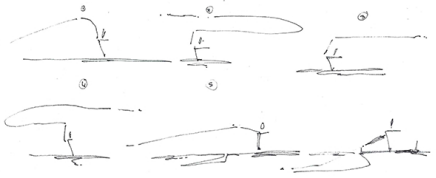




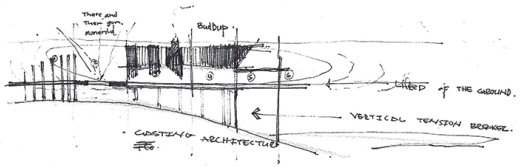
The Fly Rod
Moments that order design

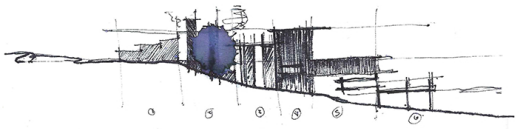


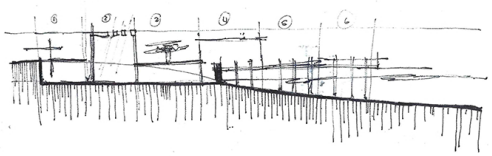




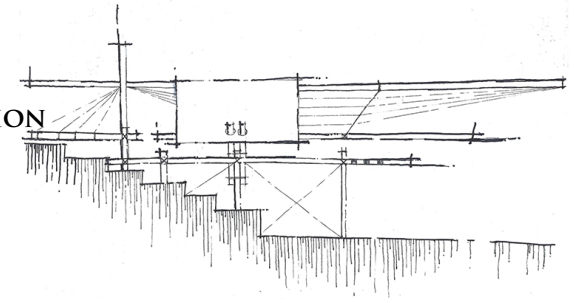
Interpretation

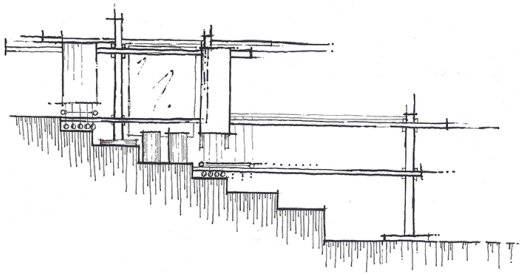


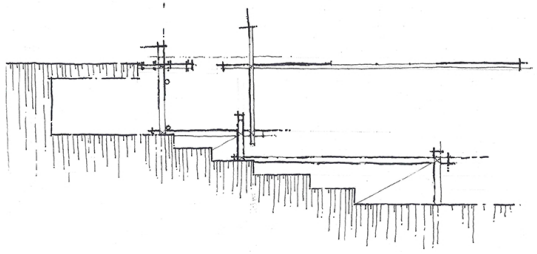


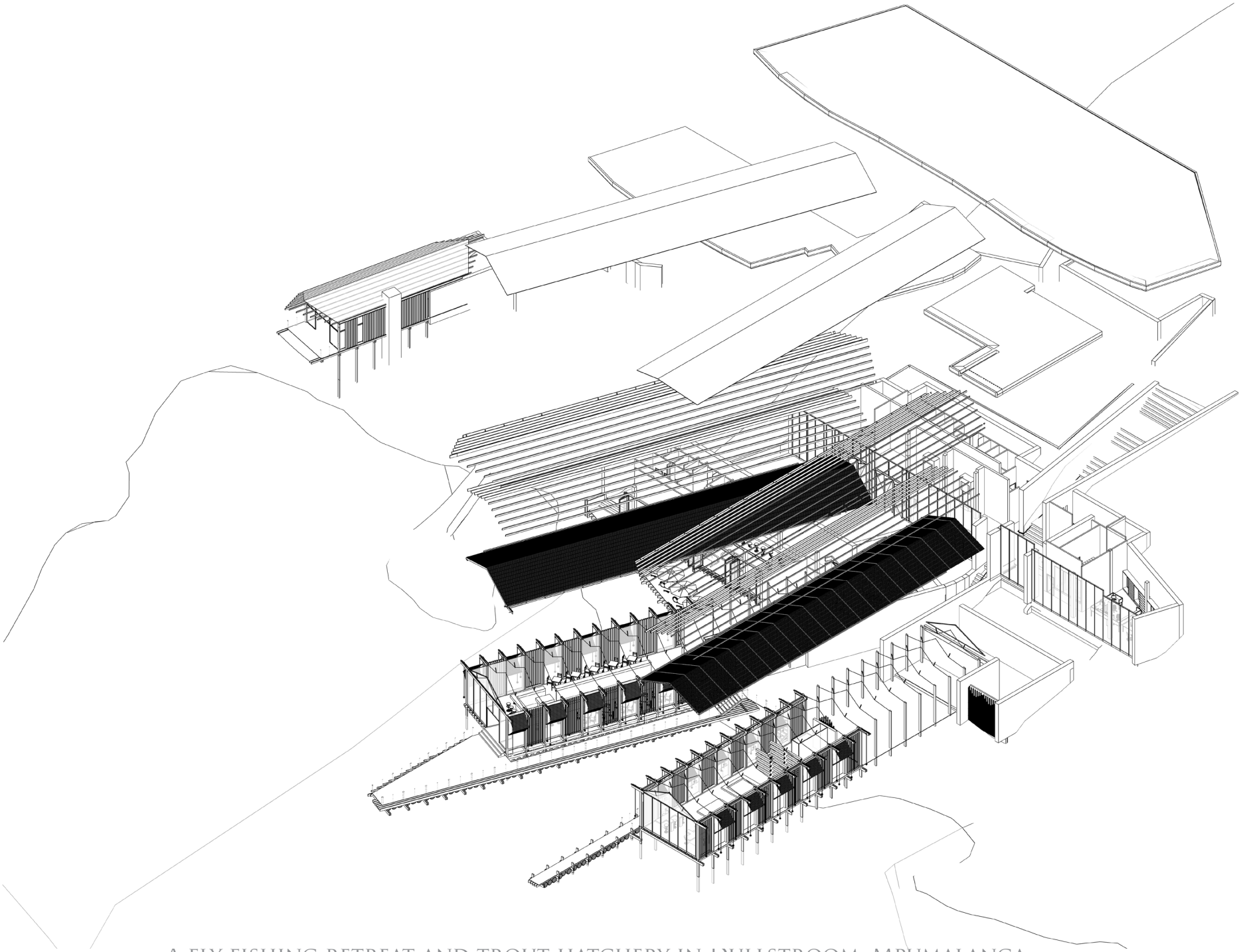


Interpretive Implementation

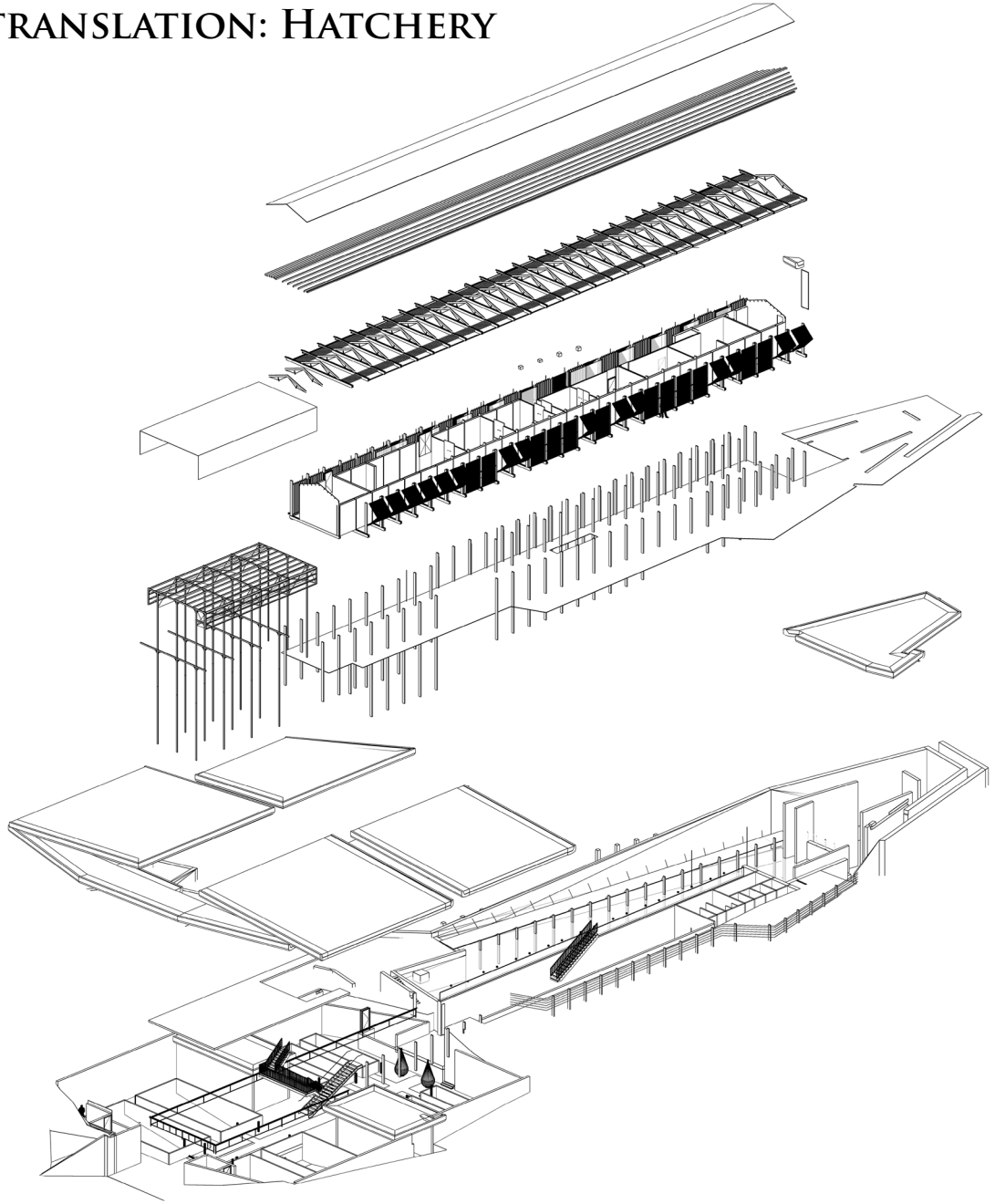








Architecture of translation: Hatchery



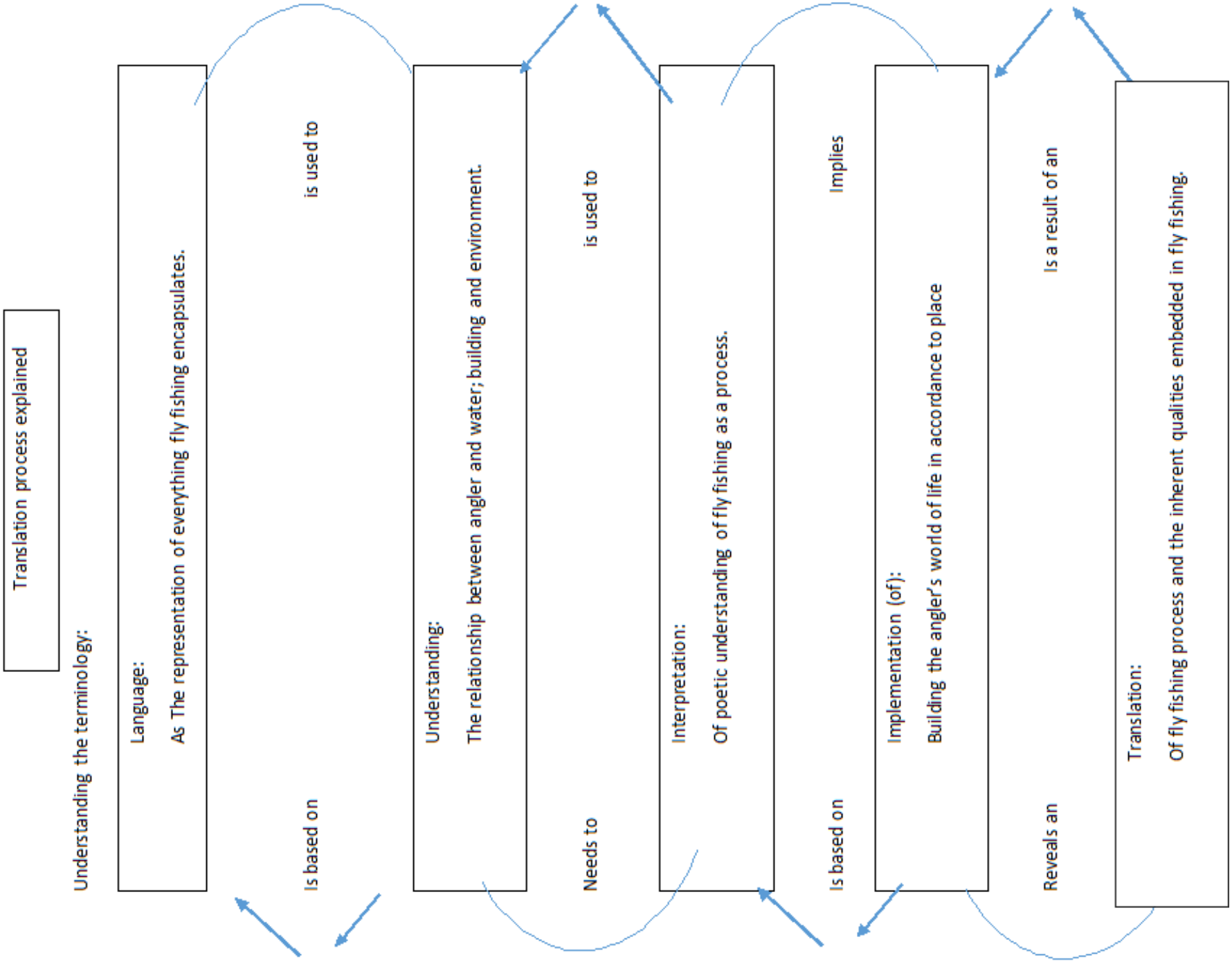


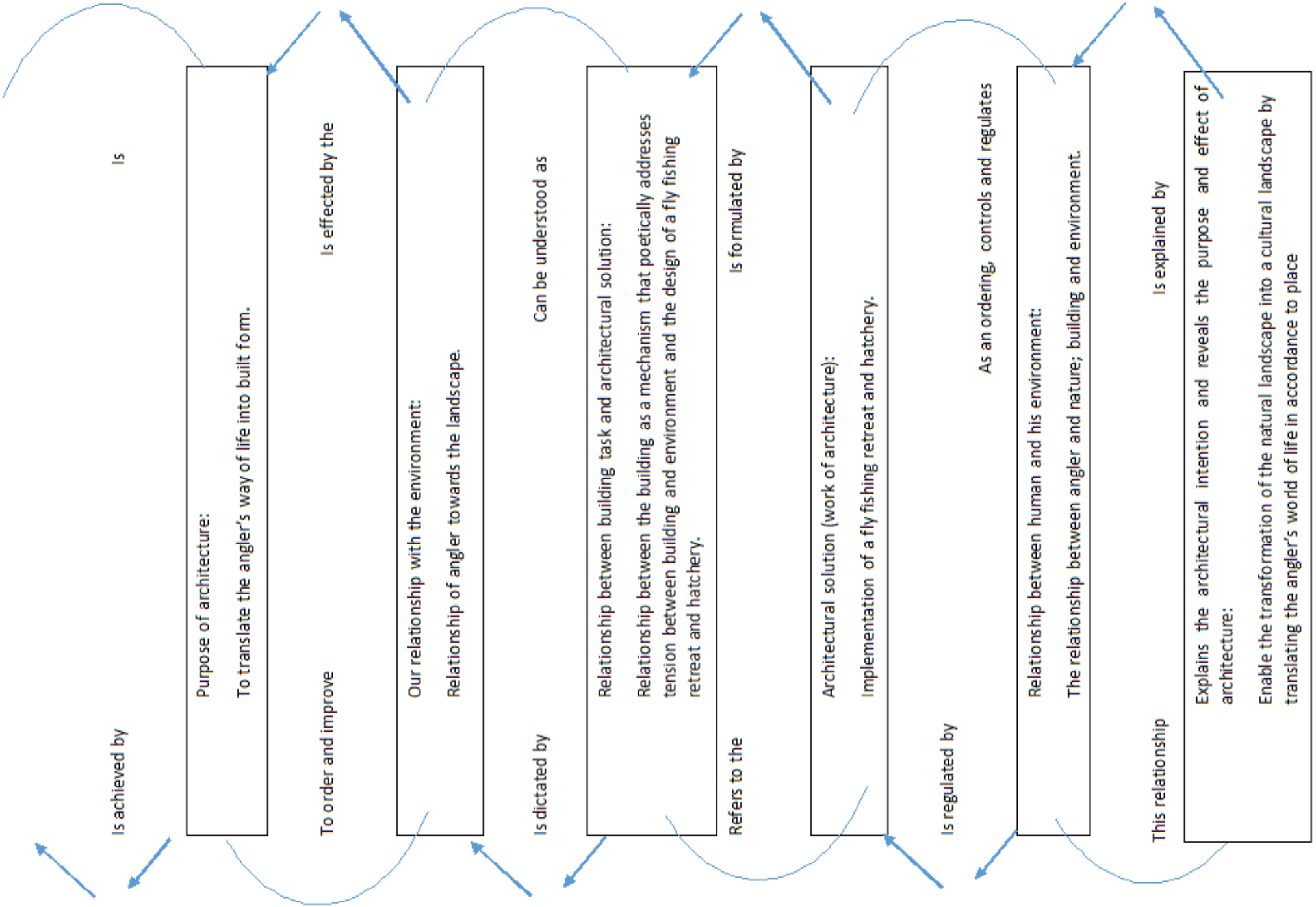




CONCLUSION

This dissertation is an attempt to translate the angler's world of life into built form as a means to address the tensions that exist between built form and the natural landscape – as angler and trout: man and nature, building and environment. It was understood that the translation of the angler's world of life can only be engaged by means of the poetic a discourse that osculates between thought and feeling in the relationship between man and the environment and angler and trout. And as a result, the poetic was engaged as the voice, in this translation of the angler's life into a fly fishing retreat and hatchery was told. This process of translating engages the poetic as the poetic can only be neared in the process striving towards it. Thus by engaging the poetic translation of the angler's world of life as a means to address the tensions embodied between man and nature illustrates that:


Translation process explained
Understanding the terminology:
Language:
As The representation of everything fly fishing encapsulates.
Is based on
is used to
Understanding:
The relationship between angler and water; building and environment.
Needs to
is used to
Interpretation:
Of poetic understanding of fly fishing as a process.
Is based on
Implies
Implementation (of):
Building the angler's world of life in accordance to place
Reveals an
Is a result of an
Translation:
Of fly fishing process and the inherent qualities embedded in fly fishing.


Is
Purpose of architecture:
To translate the angler's way of life into built form.
Is achieved by
To order and improve
Is effected by the
Our relationship with the environment:
Relationship of angler towards the landscape.
Is dictated by
Can be understood as
Relationship between building task and architectural solution:
Relationship between the building as a mechanism that poetically addresses tension between building and environment and the design of a fly fishing retreat and hatchery.
Refers to the
Is formulated by
Architectural solution (work of architecture):
Implementation of a fly fishing retreat and hatchery.
Is regulated by
As an ordering, controls and regulates
Relationship between human and his environment:
The relationship between angler and nature; building and environment.
This relationship
Is explained by
Explains the architectural intention and reveals the purpose and effect of architecture:
Enable the transformation of the natural landscape into a cultural landscape by translating the angler's world of life in accordance to place

The question still lingers: " Is this building a poetic translation of an anglers life into a building?"

Heiddegger's insights on the measure of the poetics prevails as, he explains that the poetic dimension entails a different sense of measuring, one that does not rely on a scientific way of evaluation."In poetry, the taking of measure occurs. To write poetry is a measure taking" and to this understanding the translation of a poetic understanding of a way of life is also a measure taking. He further says the understanding of this measure taking is "understood in the strict sense of the world by which man first receives the measure of the breath of his being" and concludes by asking "how can that which by its very nature remains unknown ever become a measure".

Thus, to conclude towards an answering of the posed question "Is this building a poetic translation of an anglers way of life into a building?"

The answer is: "immeasurable…"

REFERENCES LIST:

- Baracco, M. 2010. Coexistence of Rational Definiteness and Irrational Oneness: An Investigation of Robin Boyd's Architecture and Theoretical Approach Through a Heideggerian Perspective. Unpublished thesis (B.Arch). Melbourne: RMIT University.
- Butler, G. 2013. An Assessment of the Social and economic Impacts of Tourism Devel opment in Dullstroom, Mpumalanga. Unpublished Project. Johannesburg: University of Johannesburg.
- BeAlive. 2019. Chasing Trout with Maddie Brenneman. [online]. Available from: <https://gobealive.com/video/chasing-trout-with-maddie-brenneman-top-fly-fish ing-guide/> [Accessed 29 September 2019].
- Cock, J., & Fig, D. 2000. From Colonial to Community Based Conservation: Environ mental Justice and the National Parks of South Africa. Society in Transition, 31(1), pp. 22-35, [n.d.].
- Dullstroom Country Estate's Home Owners Association (DCEHOA). 2015. Architectur al Design Guidelines. [online]. Available from: <http://www.dullstroomestate.co.za/ pdfs/arcguide.pdf> [Accessed on 12 August 2019].
- du Preez, J. 2014. Fish Farming at Semonkong in the Kingdom of Lesotho: Towards symbiosis through the exploration of the fourfold. Tuyhesis (MArch). Bloemfontein: University of the Free State.
- Ferreira, S.L.A. 2006. Communities and Transfrontier Parks in the Southern African Development Community: The Case of Limpopo National Park, Mozambique. South African Geographical Journal, 88(2), pp. 166-176, [n.d.].
- Giedion, S. 1958. Architecture, You and Me: The Diary of a Development. Cam bridge: Harvard University Press.
- Griffen, A. 2016. The Question Concerning (Fishing) Technology: Heidegger and Fly Fishing. [online]. Available from: <http://web.colby.edu/en238-giallen/2016/01/25/ the-question-concerning-fishing-technology-heidegger-and-fly-fishing/#more-54> [Accessed on 27 September 2019].
- Heidegger, M. 1971. Poetry, Language, Thought. New York: Harper & Row Publishers.
- Knight, J. 2017. The Philosophy of Fly-Fishing. [online]. Available from: <https:// www.theparisreview.org/blog/2017/10/10/philosophy-fly-fishing/> [Accessed 30 September 2019].
- Loon, R.M. & Polakow, D. 2001. Ecotourism Ventures: Rags or Riches?, Annals of Tourism Research, 28(4), pp. 892-907, [n.d.].
- Mazibuko, S. 2007. Leakages and Costs of Eco-tourism: The Case of AmaZizi in the Northern Drakensberg. Africa Insight, 37(1), pp. 150-168, [n.d.].
- Myburgh, E. & Saayman, M. 2002. Ecotourism in Action: Guidelines and Principals. 2nd edition. Potchefstroom: Institute for Tourism and Leisure Studies.
- Morris, S. 1992. Fly Tying: Made Clear and Simple. Portland: Frank Amato Publica tions.
- Mpumalanga Happenings, [n.d.]. Dullstroom Information and History. [online]. Avail able from:http://www.mpumalangahappenings.co.za/dullstroom_homepage.htm [Accessed on 3 April 2019].
- Nesbitt, K. 1996. Theorizing a New Agenda for Architecture: An Anthology of Archi tectural Theory 1965-1995. New York: Princeton Architectural Press.
- Norberg-Schulz, C. 1975. Meaning in Western Architecture. London: Cassell & Cillier Macmillan Publishers Ltd.
- Norberg-Schulz, C. 2000. Architecture: Presence, Language, Place. Milan: Skira editore
- Norberg-Schulz, C. 1963. Intentions in Architecture. Cambridge: The MIT Press.
- Norberg-Schulz, C. 1980. Genius Loci: Towards a Phenomenology of Architecture. 2nd edition. New York: Rizzoli.
- Norberg-Schulz, C. 1981.The earth and sky of Jörn [sic] Utzon. In: Norberg-Schulz, C.(ed.). 1986. Architecture: Meaning and Place. New York: Electra/Rizzoli.
- Norberg-Schulz, C. 1980. Genius Loci: Towards a Phenomenology of Architecture. 2nd edition. New York: Rizzoli.

- Prosek, J. 2015. Trout Fishing, a Taut Line to Our Past. [online]. Available from: <https://www.nytimes.com/2015/04/19/sports/trout-fishing-a-taut-line-to-our-past.html?_r=0> [Accessed on 2 October].
- Ruskin, J. 1888. The Poetry of Architecture: Cottage, Villa, Etc. New York: John Wiley & Sons.
- Saayman, M., Saayman, A., & Ferreira, M. 2009. The Socio-economic Impact of the Karoo National Park. Koedoe, 51(1), pp. 158-168, [n.d.].
- Spenceley, A. 2005. Nature-based Tourism and Environmental Sustainability in South Africa.
- Snyder, S. 2007. New Streams of Religion: Fly Fishing as a Lived, Religion of Nature. Journal of the American Academy of Religion [online], 75(4), 896-922. Available from: <http://www.jstor.org/stable/40005968> [Accessed 25 September 2019].
- Journal of Sustainable Tourism, 13(2), pp. 136-170, [n.d.].
- Spenceley, A. & Goodwin, H. 2007. Nature-based Tourism and Poverty in South Africa. Current Issues in Tourism, 10(2&3), pp. 255-277, [n.d.].
- Walton, I. & Cotton, C. 1903. The Complete Angler. Oregon: George Bell & Sons
- World Weather Online (WWO), [n.d.]. Dullstroom Monthly Climate Averages. [online]. Available from: < https://www.worldweatheronline.com/dullstroom-weather-averages/mpumalanga/za.aspx> [Accessed on 12 March 2019].

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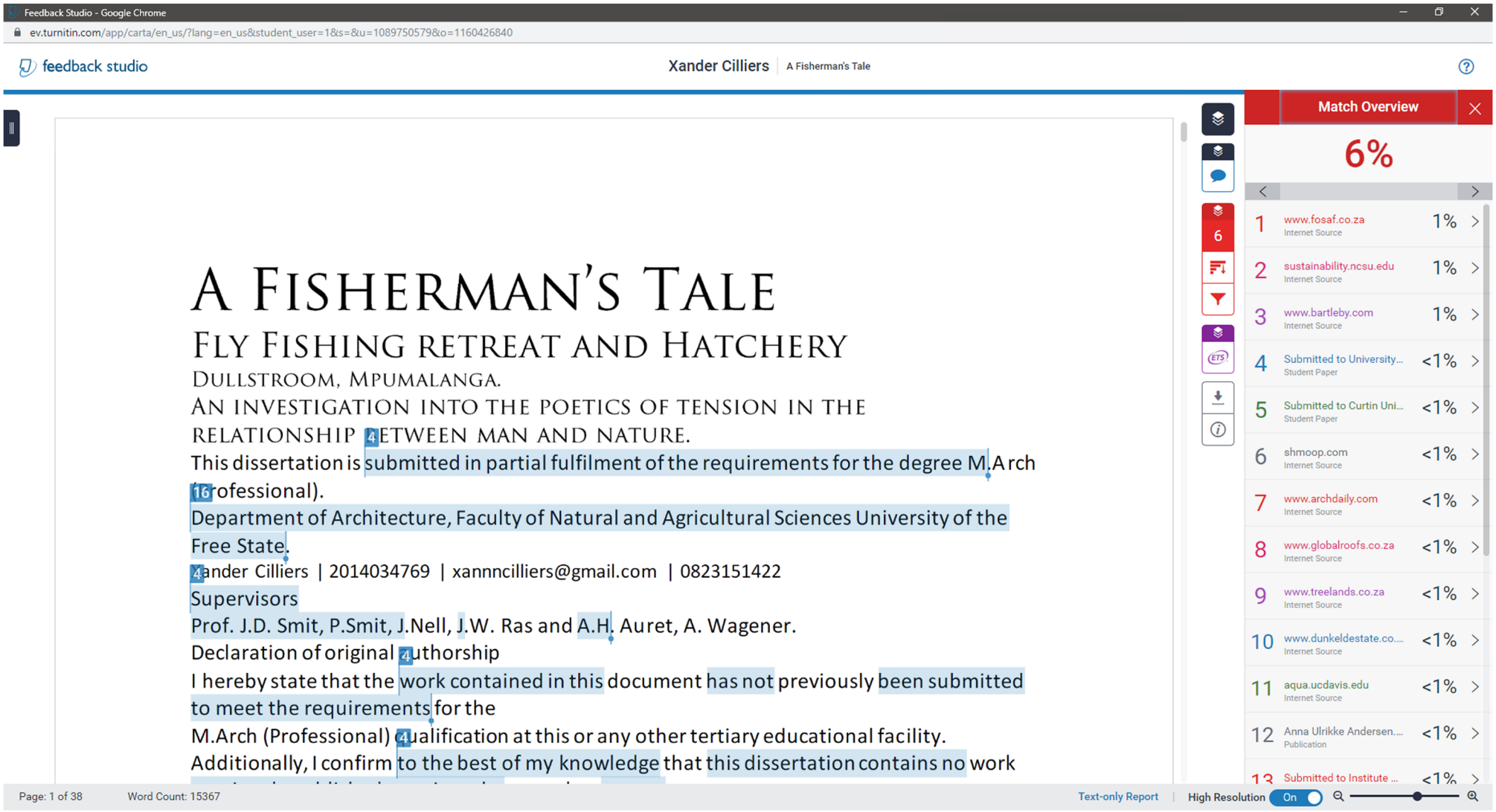
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feedback studio
Xander Cilliers | A Fisherman's Tale
A FISHERMAN'S TALE
FLY FISHING RETREAT AND HATCHERY
DULLSTROOM, MPUMALANGA.
AN INVESTIGATION INTO THE POETICS OF TENSION IN THE RELATIONSHIP BETWEEN MAN AND NATURE.
This dissertation is submitted in partial fulfilment of the requirements for the degree M.Arch (Professional).
Department of Architecture, Faculty of Natural and Agricultural Sciences University of the Free State.
Xander Cilliers | 2014034769 | xannncilliers@gmail.com | 0823151422
Supervisors
Prof. J.D. Smit, P.Smit, J.Nell, J.W. Ras and A.H. Auret, A. Wagener.
Declaration of original authorship
I hereby state that the work contained in this document has not previously been submitted to meet the requirements for the
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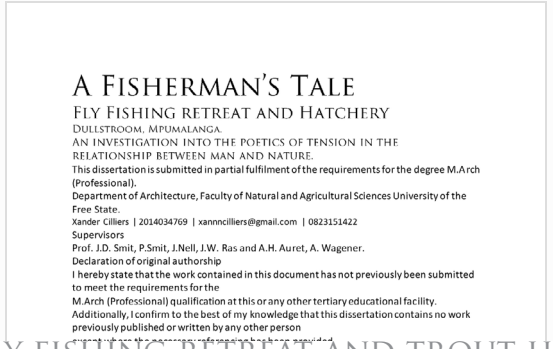

A Fisherman's Tale

Fly Fishing retreat and Hatchery

Dullstroom, Mpumalanga.

An investigation into the poetics of tension in the relationship between man and nature.

This dissertation is submitted in partial fulfilment of the requirements for the degree M.Arch (Professional).

Department of Architecture, Faculty of Natural and Agricultural Sciences University of the Free State.

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Additionally, I confirm to the best of my knowledge that this dissertation contains no work previously published or written by any other person

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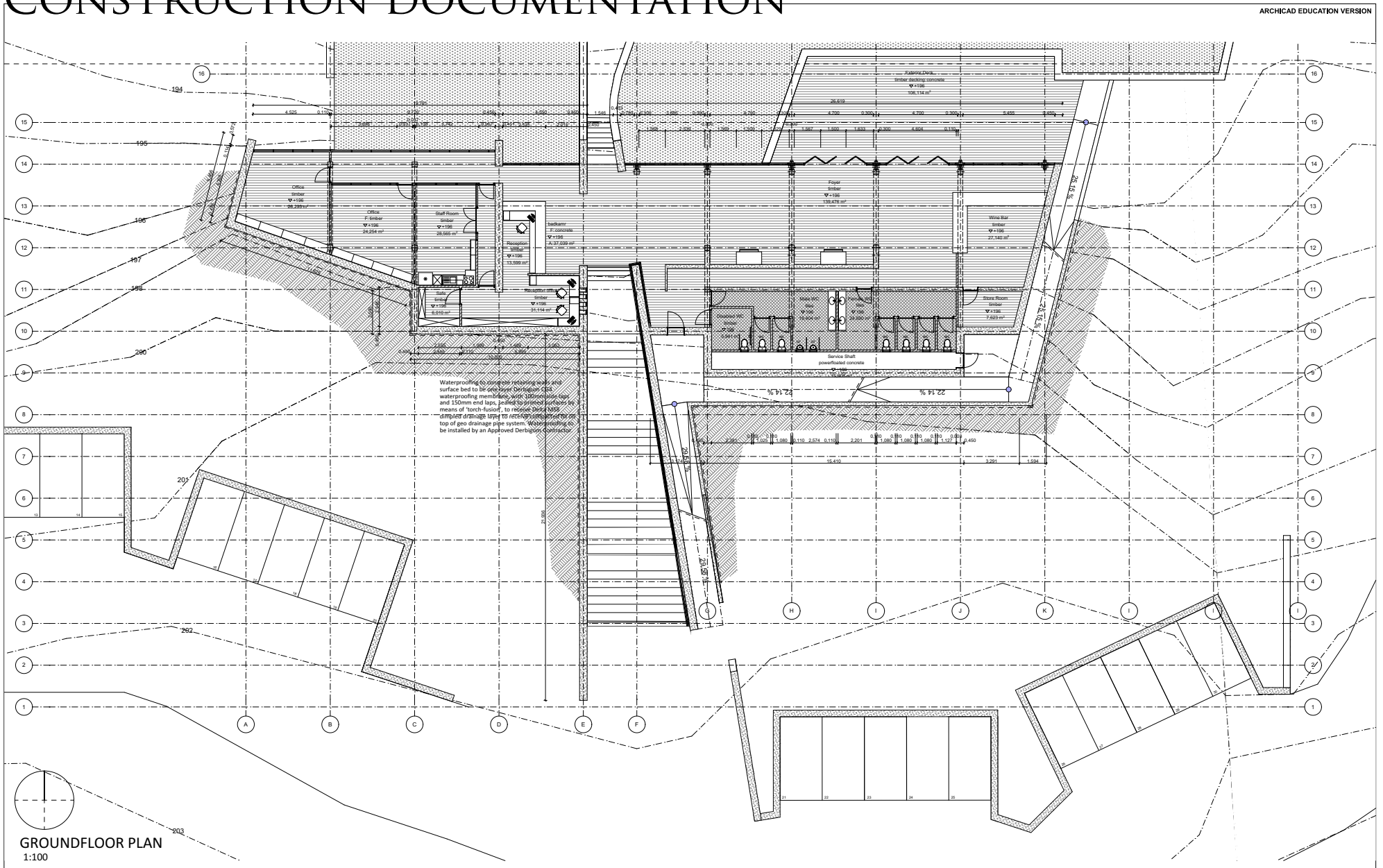

GROUNDFLOOR PLAN
1:100

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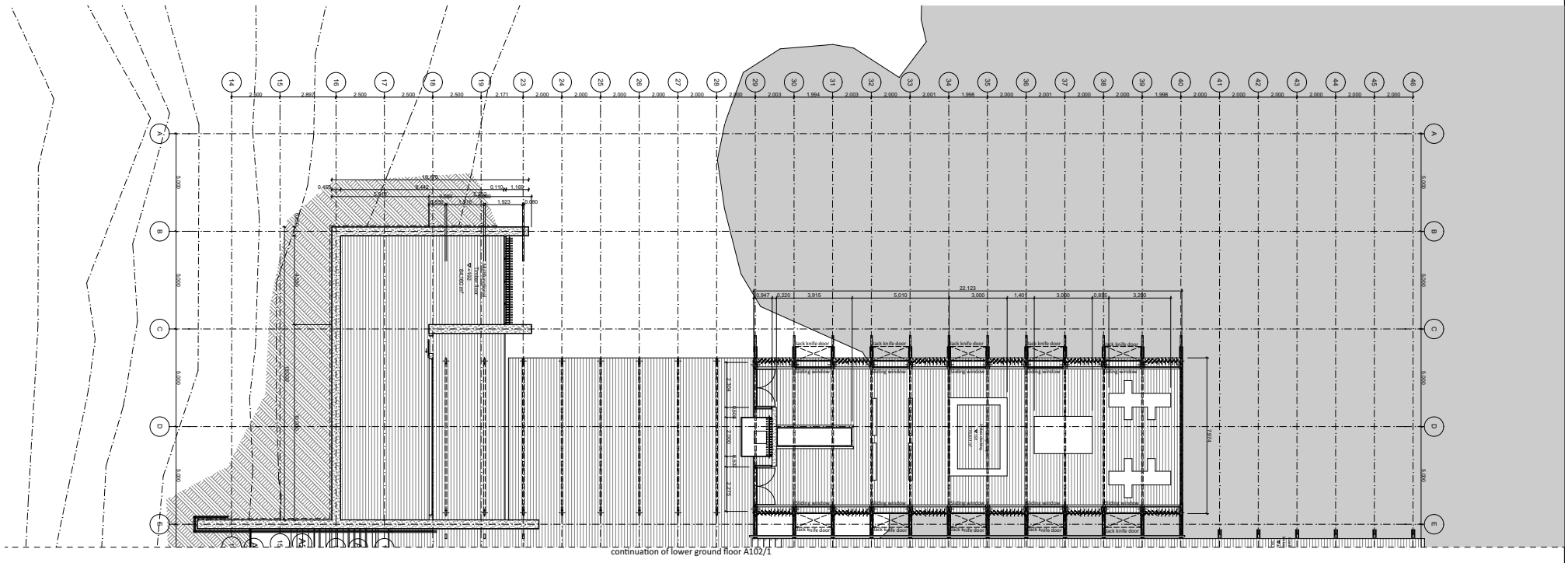

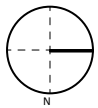

LOWER GROUND FLOOR PLAN /1

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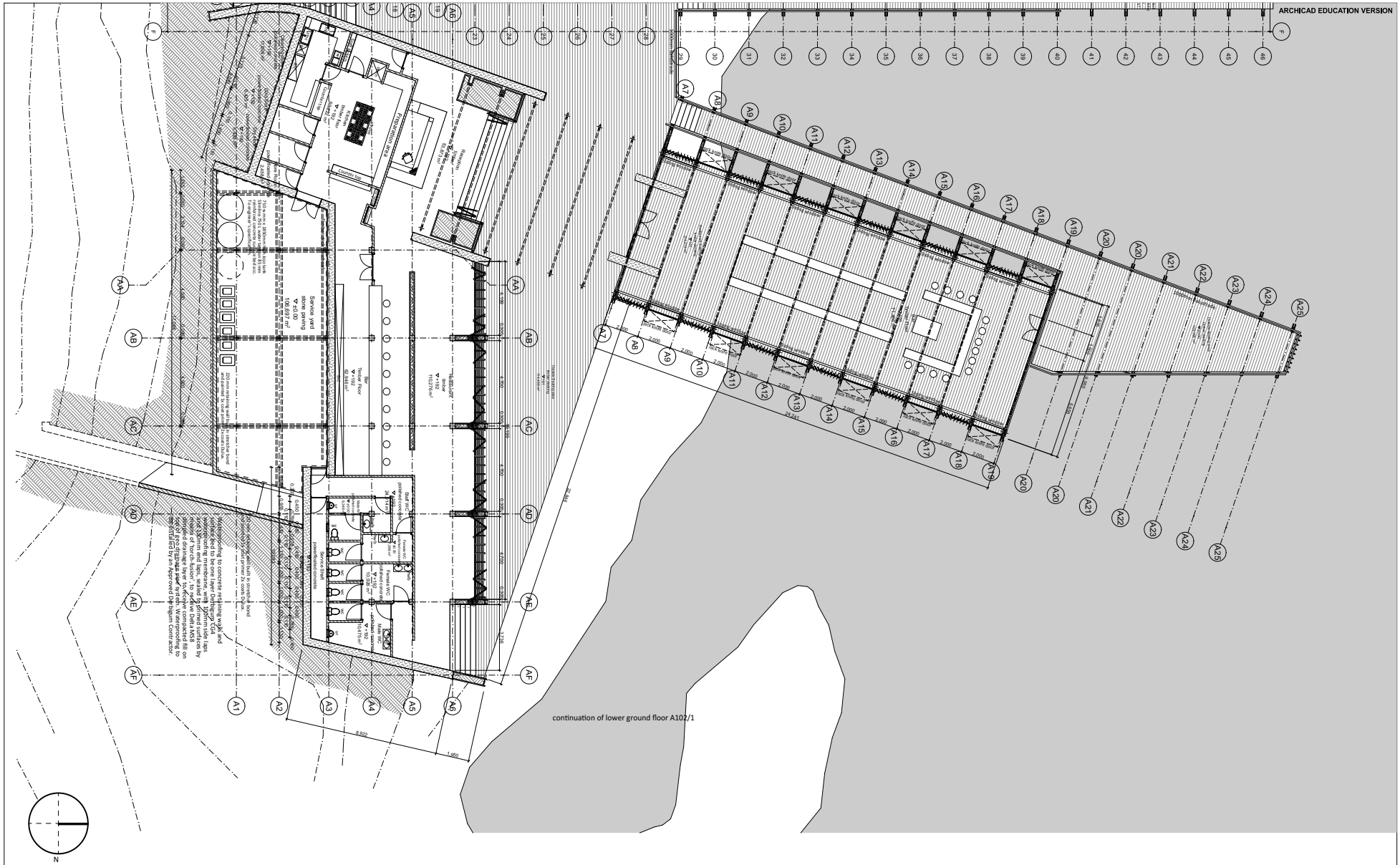

LOWER GROUND FLOOR PLAN /2

SCALE 1:100

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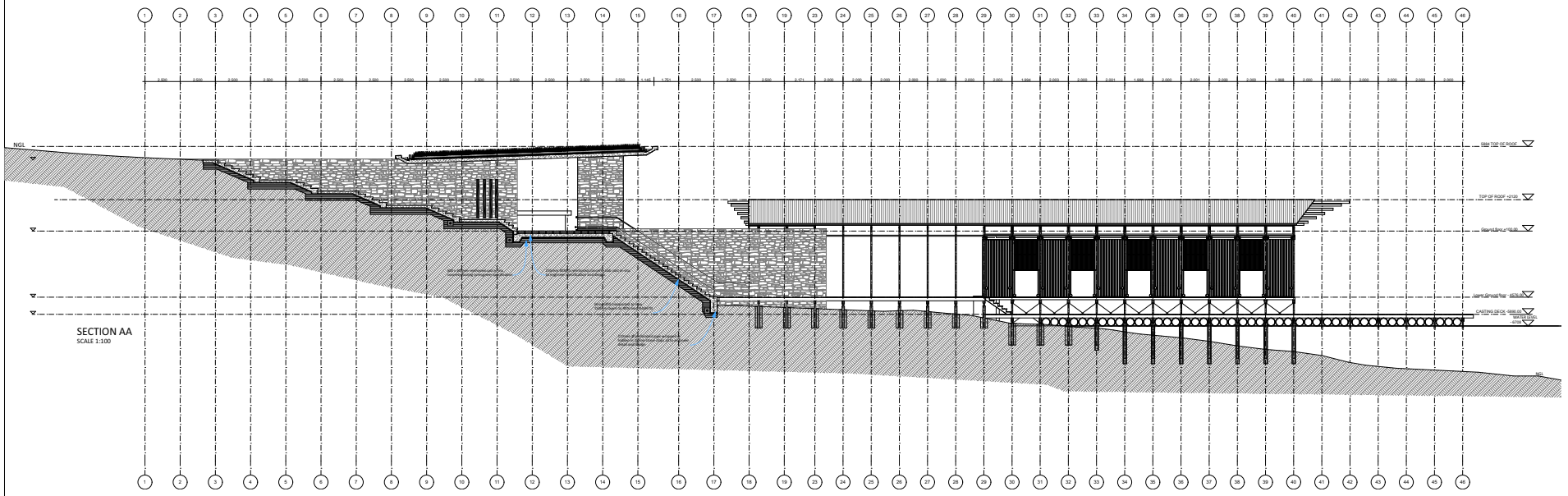

SECTION AA
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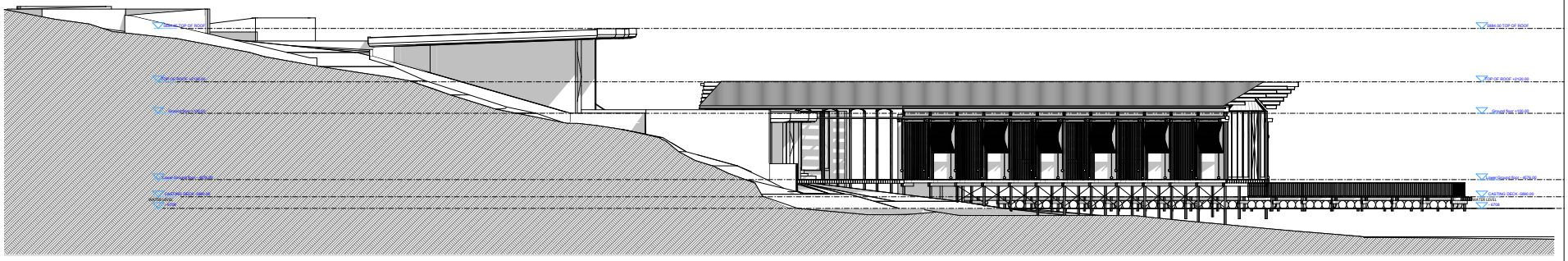
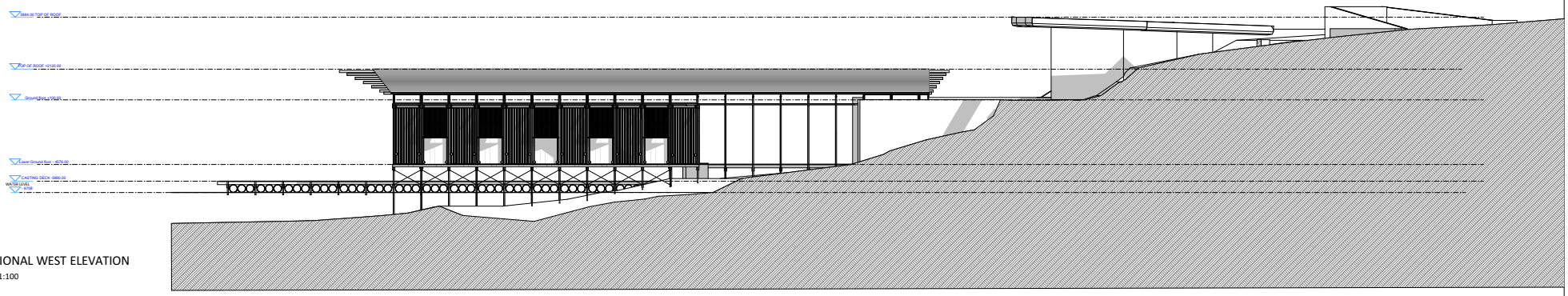


SECTIONAL EAST ELEVATION

SCALE 1:100



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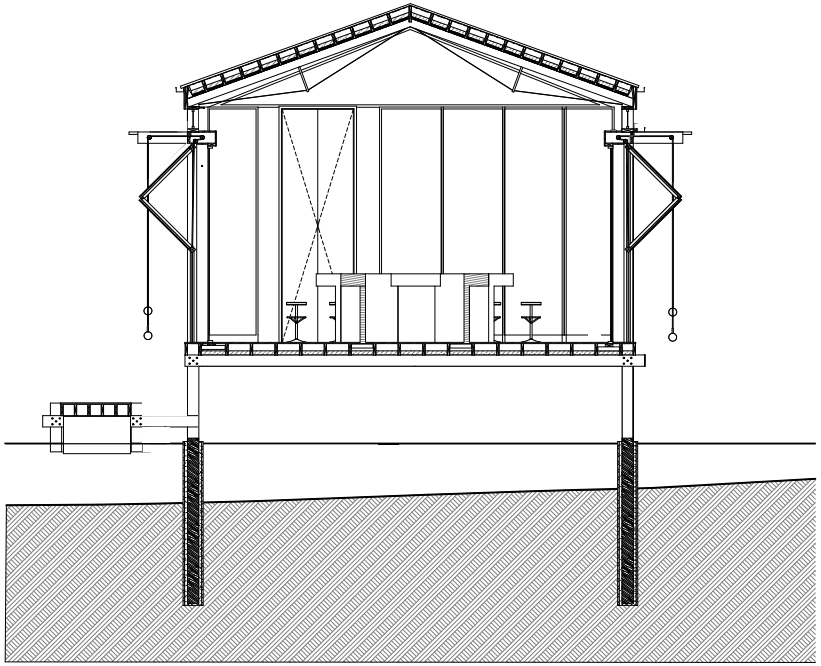

SECTION BB
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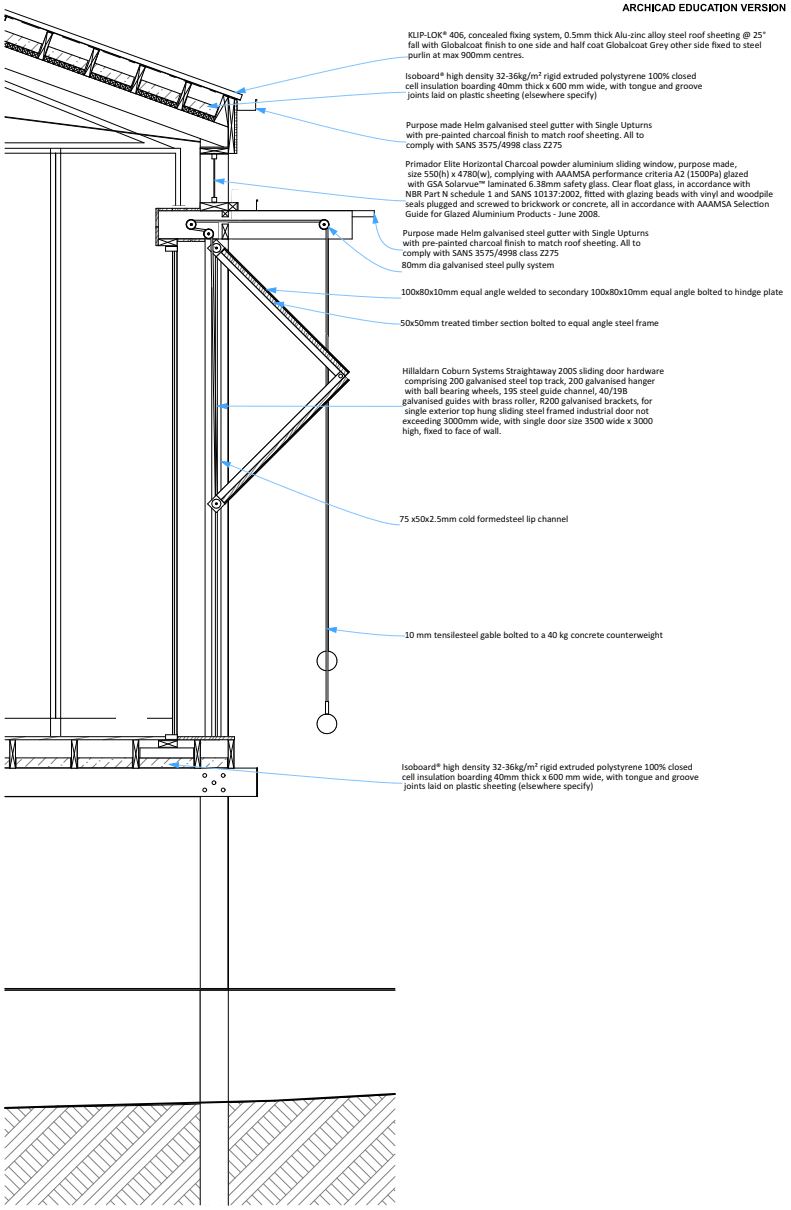

SKIN SECTION BB
SCALE 1:20

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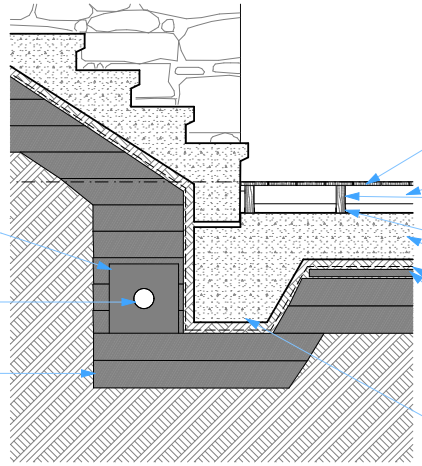
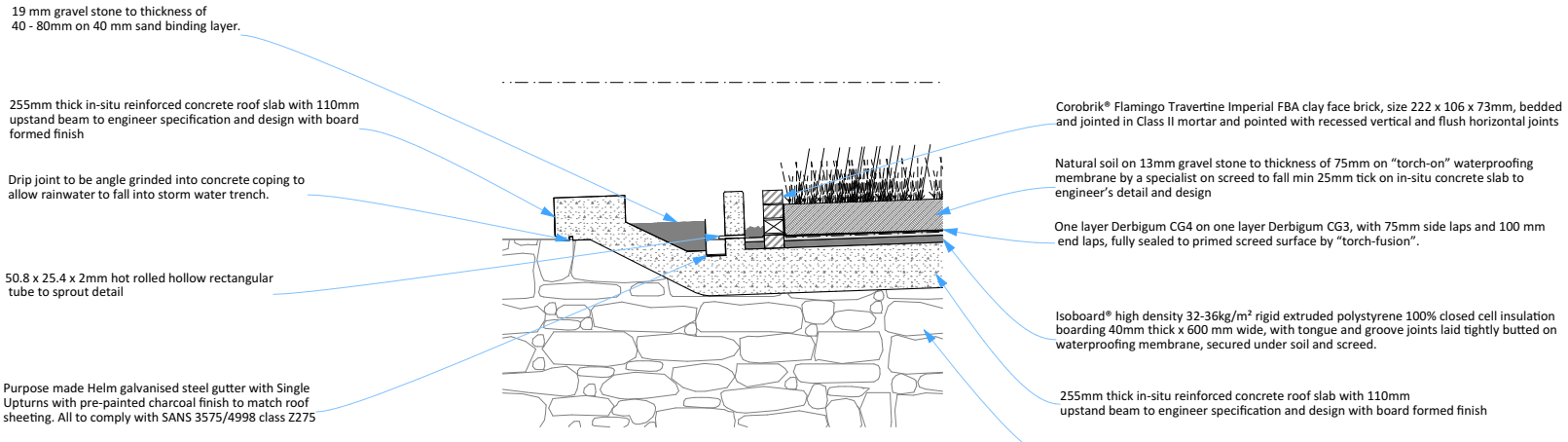


TIMBER SPRUNG FLOOR DETAIL (RECEPTION)

SCALE 1:50



GREEN ROOF DETAIL (RECEPTION)

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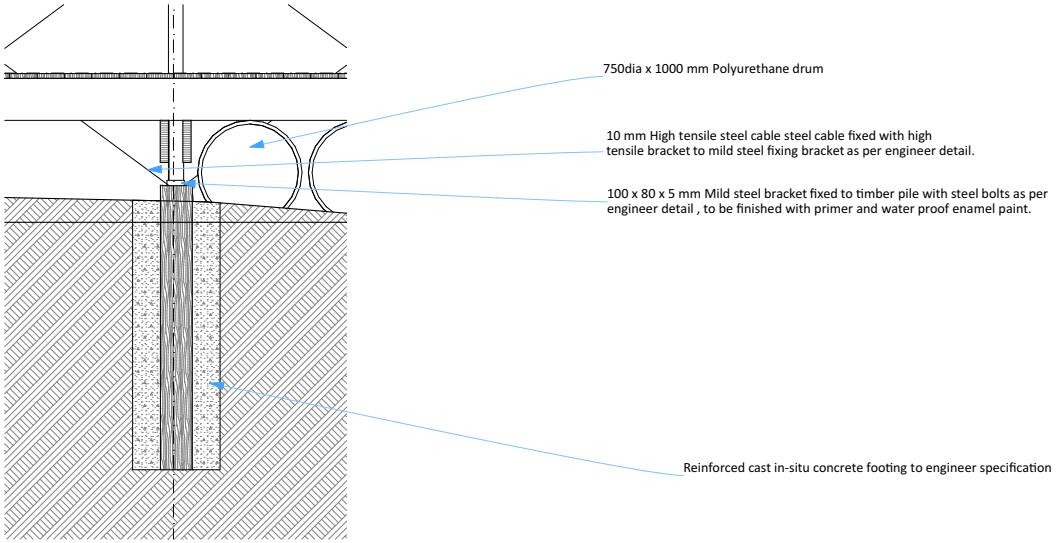
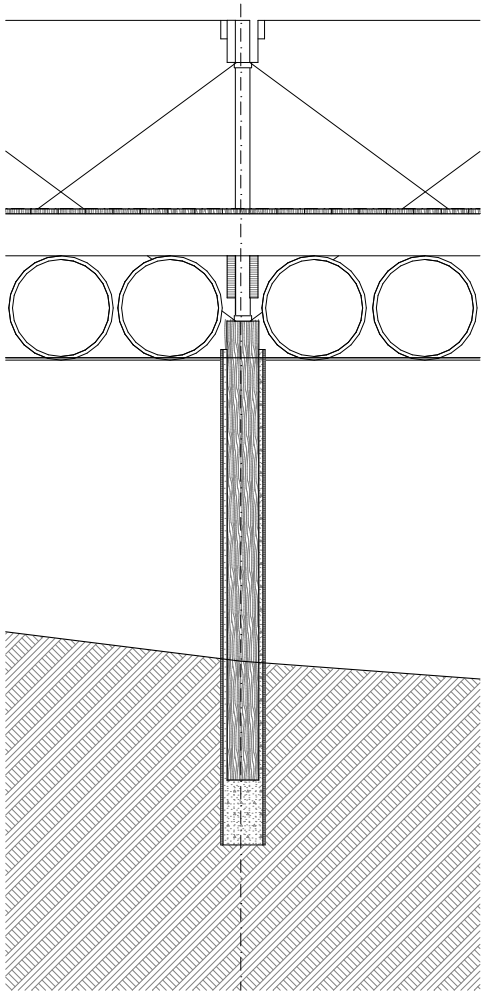
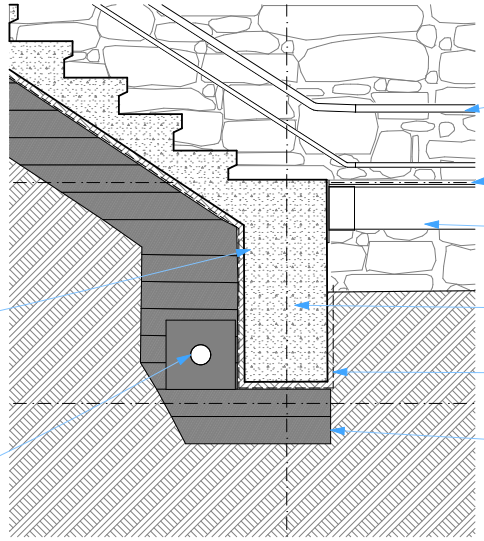


PILE FOUNDATION DETAIL
(EXTERIOR DECK)
SCALE 1:50



OFF SHORE PILE FOUNDATION DETAIL
(FLY FISHING SHOP)
SCALE 1:50



STAIR TO TIMBERDECK DETAIL

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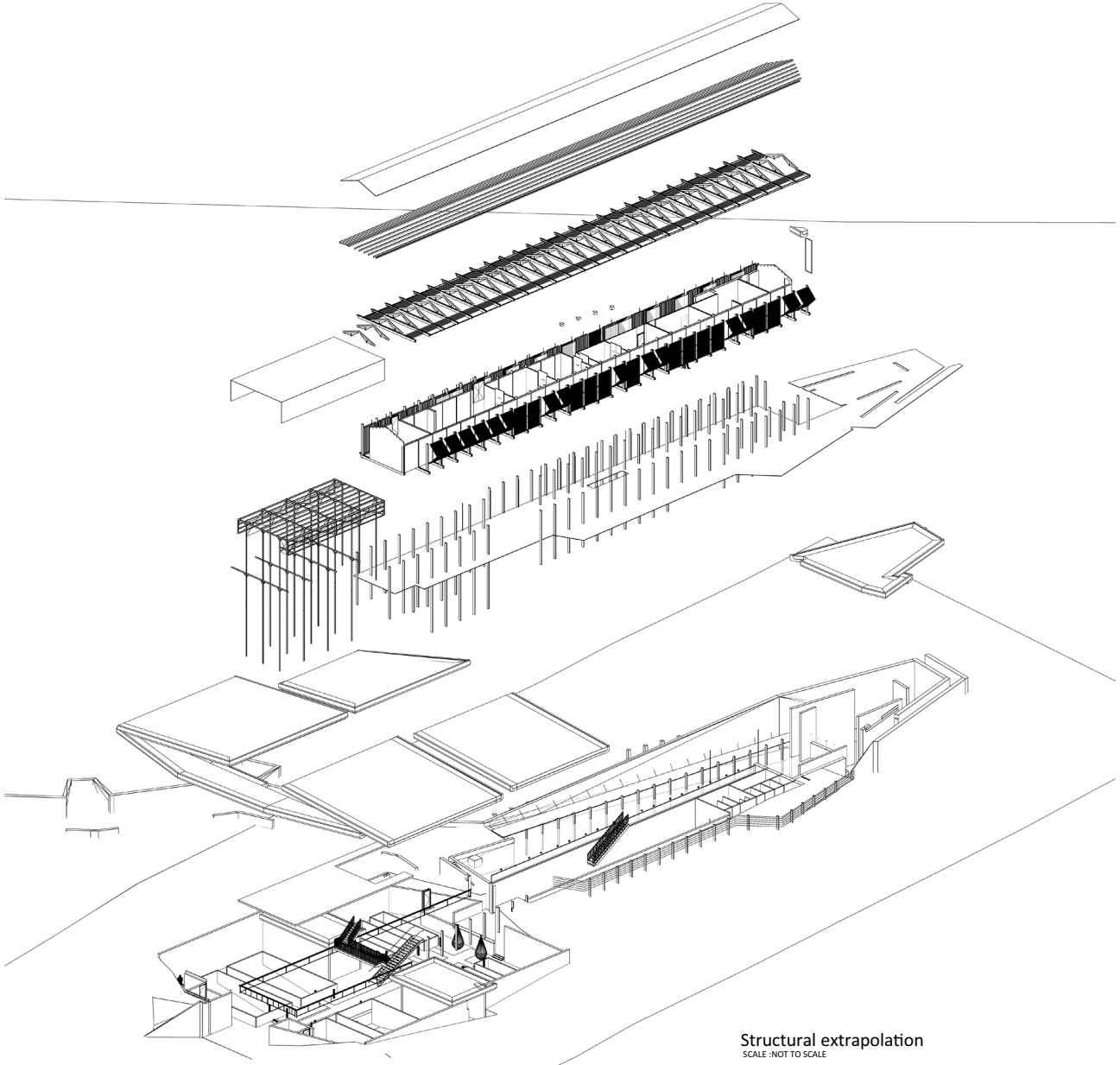

Structural extrapolation
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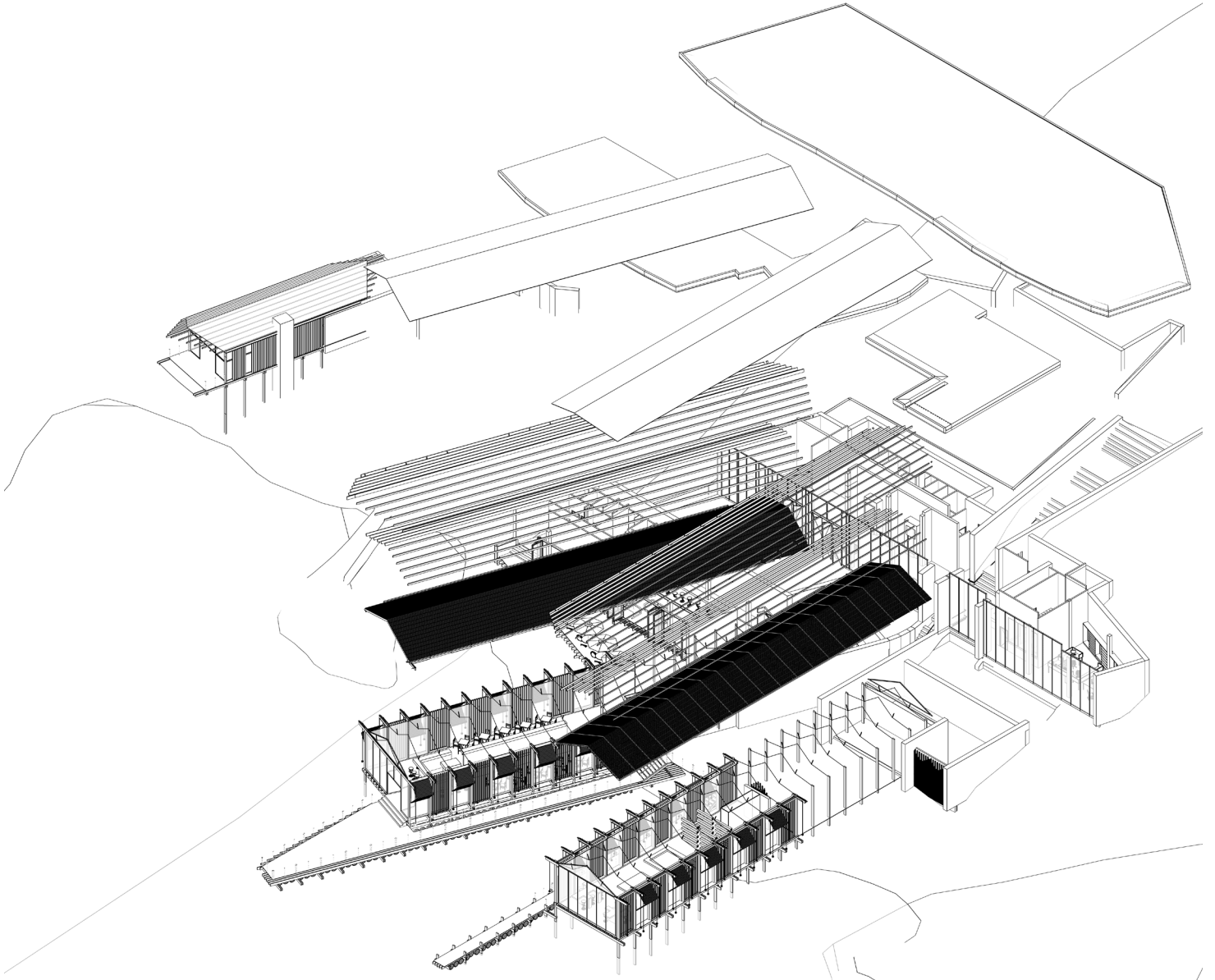

Structural extrapolation
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