AT THE DEAD TREE.

Marion M. Mayfield

Henry Hanson IV Studio
Faculty of Architecture- CVUT

Winter Semester 2021-2022

Contents

The Brief

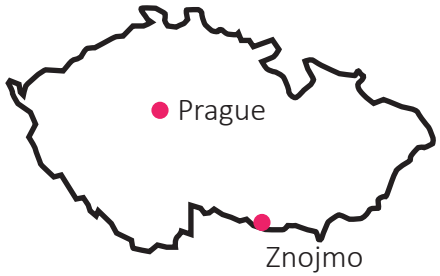
To create a small-scale and privately owned winery in the southern Moravian wine region of Znojmo.

A comprehensive study of the areas terrain morphology and geology. Which conditions promote a good wine?

Analysis and data collection prior to trip to Znojmo.

A sustainable approach.

The areas of focus were, but not limited to, the immediate surroundings of Znojmo, Konice, Popice, and Havraniky


Prague
Znojmo

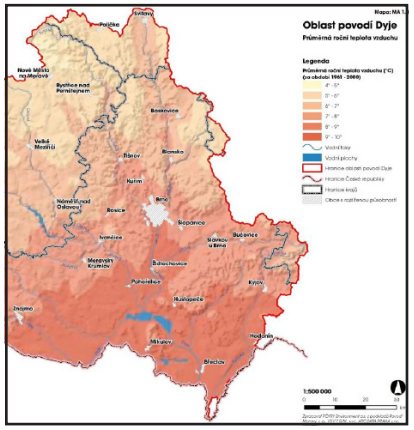

Znojmo
Konice
Popice
Havraniky

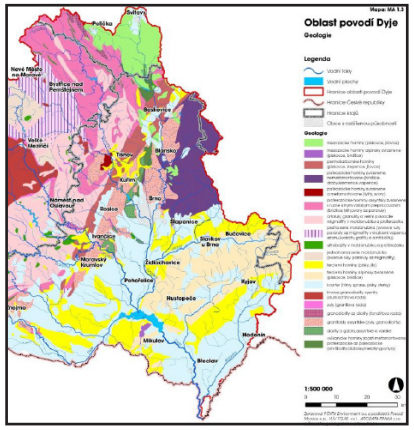
History and Analysis

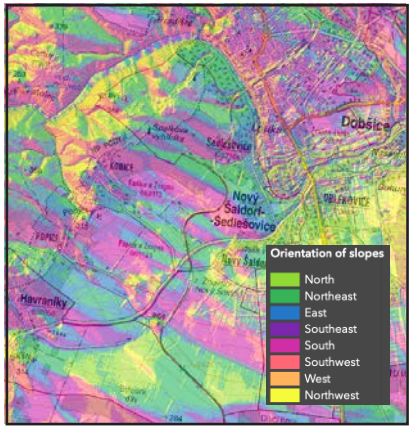
Moravia accounts for approximately ninety-six percent of the vineyards within the Czech Republic which is why Czech wine is often called Moravian wine.

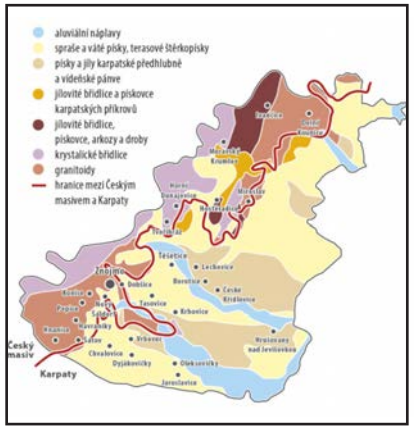
Znojmo was founded by King Ottokar I of the Premyslid dynasty as a royal town in 1226. The fortress dates back as far as the ninth century. Romanesque, Gothic, and renaissance structures are well preserved. It has survived historic wars such as the Hussite Wars and the Thirty Years war. It is also known as the site for the Armistice of Znaim.

Wine has likely been produced in the area since the 2nd century CE by the Romans. The tradition continued over the centuries as archaeological finds seem to confirm. These practices were interrupted during the communist era when wine production and quality was not optimal. The tradition and quality has significantly improved in recent years with Znojmo obtaining it’s own appellation system (VOC).









Assessment of the geology and climatic conditions of the area.

Soil types and conditions were observed in relation to existing vineyards and compared when searching for new sites for potential new vineyards and wineries. These areas would then be explored during the site visit.

The orientation of slopes and their position in the sun's path were also considered as the vineyard rows need to be oriented in a specific way dependent on site conditions and grape variety. The rows generally should be directed towards the south for optimal sun exposure.

Other investigative subjects included accessibility to potential vineyard areas including vehicular, bus, bike and walking paths.

Areas of interest were collected and mapped for assessment during Znojmo visit.

In Znojmo and the Surrounding Area

Znojmo is exquisite.

Remote research alone of this area would have lacked appreciation for its atmospheric reality.

The visit took place in mid-October. The Autumn sun, with its golden hue, emphasised the areas beauty with its filter.

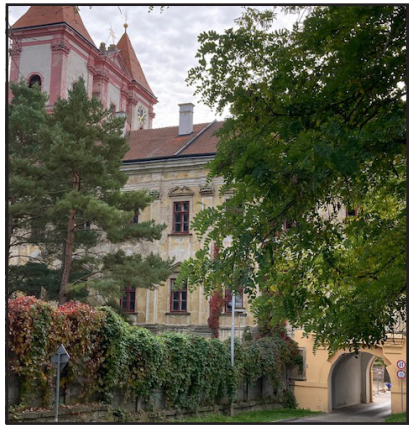
An extensive system of trails connect the satelite towns of which each had their own personality.

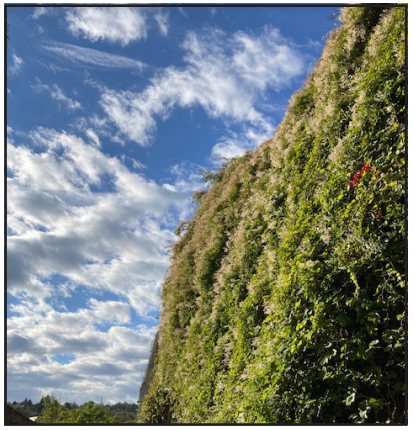
My favourite part of the trip was harvesting the grapes in the early morning. It was also the only time I had some wine, while immersed in the vineyards, the smell of the damp earth and grapes in the air. This moment inspired future elements of the proceeding project.

Znojmo was difficult to leave.










The Plot

It was the last full day of exploration in the area when we approached Konice from the south.

The plot of land of the most interest started to peek from behind the brush and trees and the traditional homes.

And then, it was clearly displayed in the distance. It looked promising.

As we found our way to the site we navigated the back-roads and farming paths.

Along some of these trails were cellars.

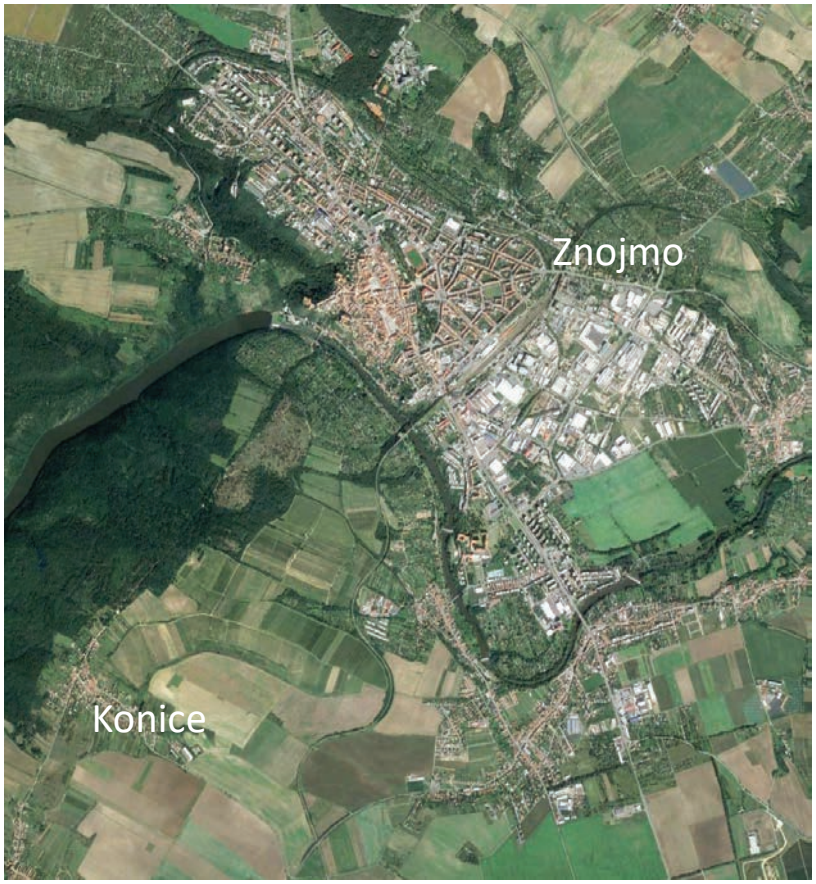
It was a beautiful day, so some the cellars were visited by their owners, doors open and chairs strewn about the threshold.

The trail leading to the site from the north is overgrown with trees and brush, but still navigatable. Cellars line this route as well.

As the view from the site revealed itself through the trees it became clear that it was an optimal location for a winery.

It also has a nice tree, albiet deceased.

Plot Location and Key Elements



Konice is located to the south and west of Znojmo, tucked along the border of Podyjí National Park.

It can be accessed by the shared main vehicular route and bus route, and is easily accessed by bike or by foot along the interconnected trails in the area.

As indicated in the photo on the right, the plot is located to the east of Konice and is currently being utilised for conventional agriculture purposes.

It is surrounded to the north and east by vineyards placed higher on the slope. Conversion of the plot to vineyards would act as a visual extension of these vineyards.

From the entire plot are unobstructed views to the south towards the mountains along the Austrian border.

The towers of Kostel svatého Jakuba are visable from most of the site, except from the north, where it is obstructed by the trees and brush along the hill.


Konice
N

Project Goals + Main Program Connectivity

This project aims to create a winery that is sustainable, organic, and helps to regenerate the ecosystem around it.

This project aims to make wine but most importantly it aims to be an example of what is possible, encouraging others to adopt regenerative agriculture practices with its educational elements.

We aim to provide a community environment for those with the shared interest in reversing our negative impacts on our surrounding environment.

We aim produce our energy needs on site via the magenta solar panels on our greenhouse roofs. We only use electric tractors.

Water is collected on site, recycled and repurposed after use.

We aim to only source locally when unable to produce on our own.

We are plastics-free and aim to be waste-free.

We aim to endure our ever-changing climatic challenges.

Additional Features:

Traditional medicinal herbs and spices grown throughout the site for our teas, restaurant menu, and sensorial experiences.

Bee hives are located on our restored ecological reserves. (up to 20% of the plot)

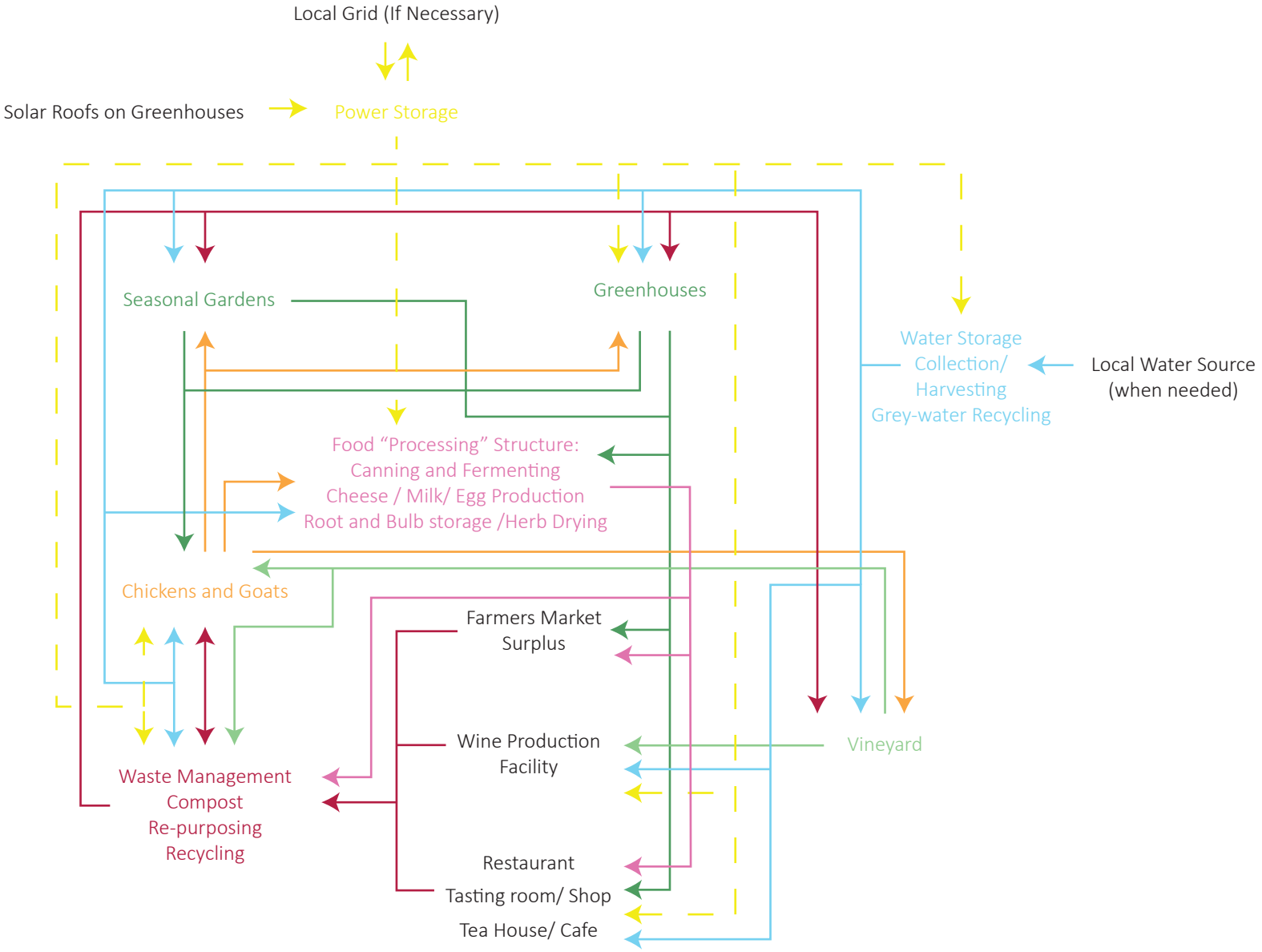
Maintained and improved paths for better circulation through the site and connecting the site with the surrounding areas via bike and hike.

A wine tasting platform (seasonal) immersed within the vineyards.

Surplus of foods produced on site will go to the local farmers market or local food bank. No food is thrown out. it is composted if the chickens don’t want it.

Maintanence of the grounds is provided by our goats.

Scheduled fruit picking times in the orchards. Keep what you gather.


Local Grid (If Necessary)
Solar Roofs on Greenhouses
Power Storage
Seasonal Gardens
Greenhouses
Water Storage
Collection/
Harvesting
Grey-water Recycling
Local Water Source
(when needed)
Food "Processing" Structure:
Canning and Fermenting
Cheese / Milk/ Egg Production
Root and Bulb storage /Herb Drying
Chickens and Goats
Farmers Market
Surplus
Wine Production
Facility
Vineyard
Waste Management
Compost
Re-purposing
Recycling
Restaurant
Tasting room/ Shop
Tea House/ Cafe

Concept + Sketch Collection

19 hectares requires a masterplan and an organising principle to make things interesting. The plot itself is relatively boring without interaction with other structures.

The main visual axis references original plot lines dating back centuries and is anchored at the top At the Dead Tree.

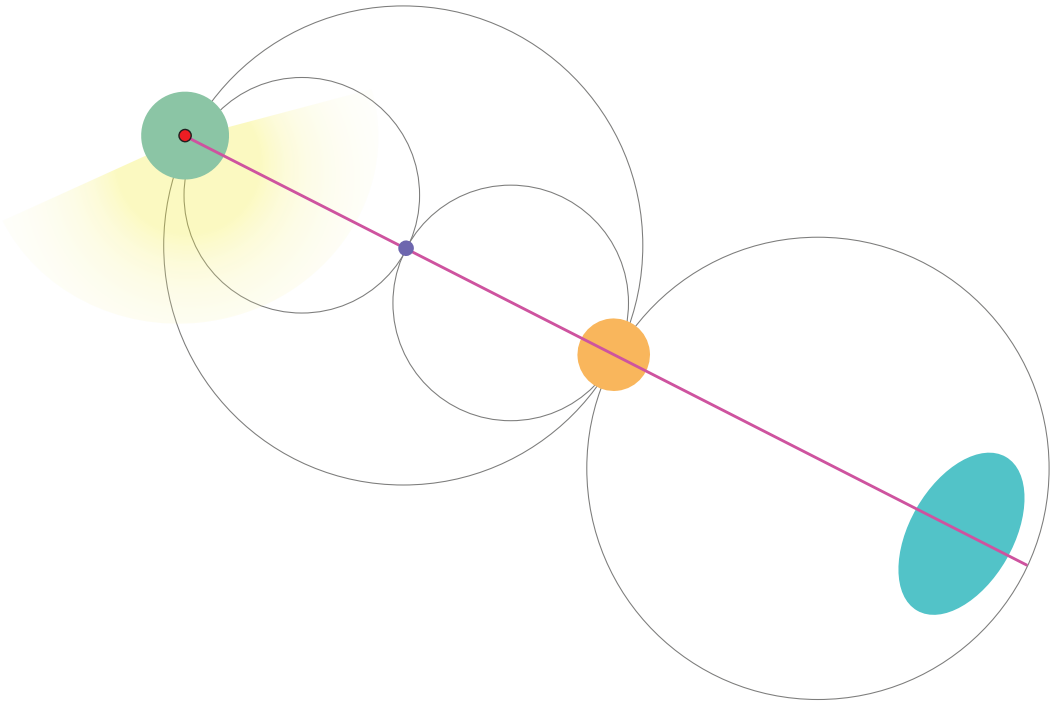
It is proposed to place the winery structure at the northern most point for optimal views of the vineyards and the areas beyond.

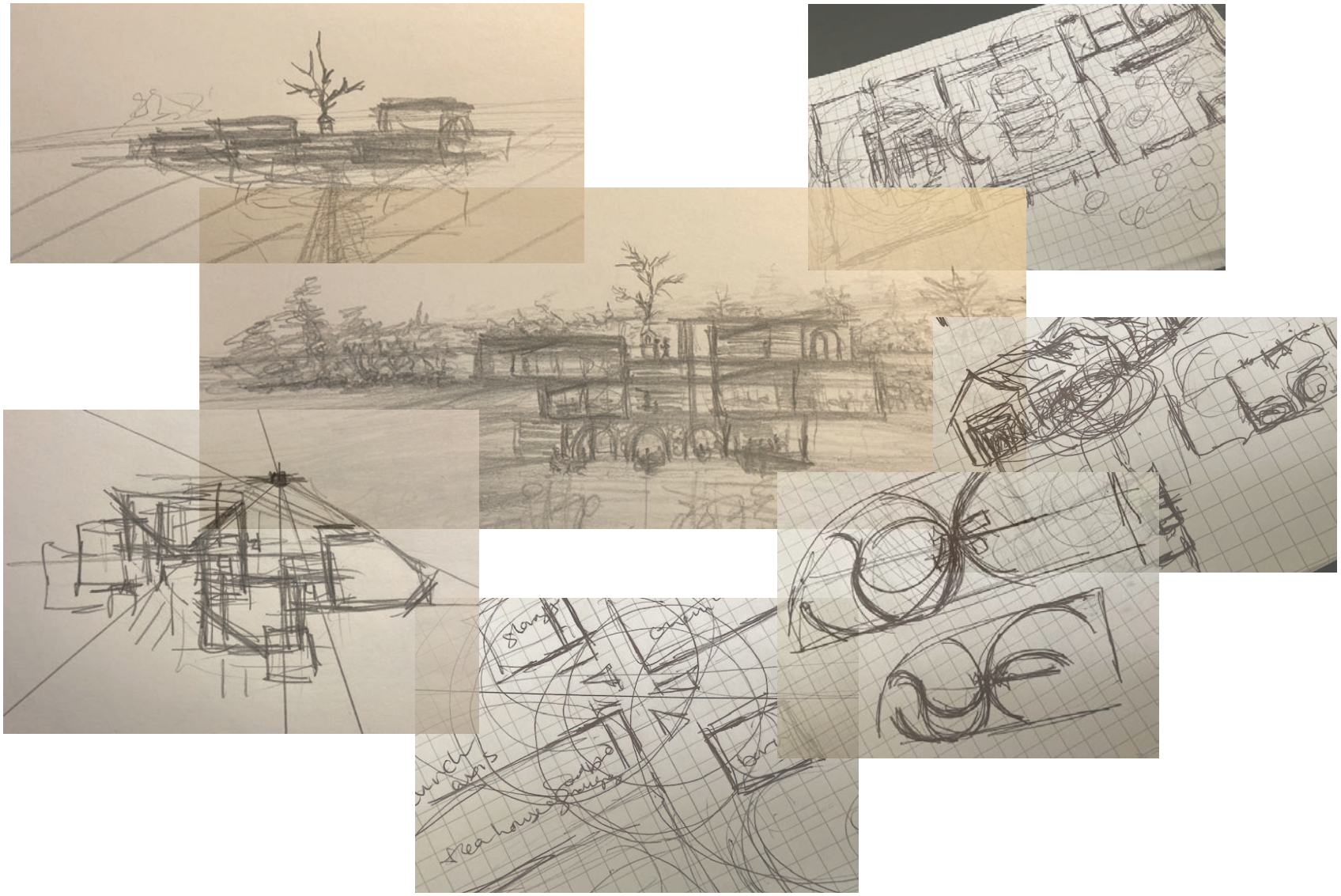
At the center of the visual axis and the site will be the community center, tea house, and food production with livestock areas.

Between the winery and community spaces will be the immersive wine tasting experience situated in the middle of the vineyards.

At the end of the axis is the water collection marshlands/ raingarden and reclaimed land for ecological protection.

Circulation through the site is created by circles connecting these points along the visual axis. It's intent is to bring organic visual composition to the plot at eye-level.





Materiality

Structures and Interiors:

Reclaimed traditional building materials are sourced first.

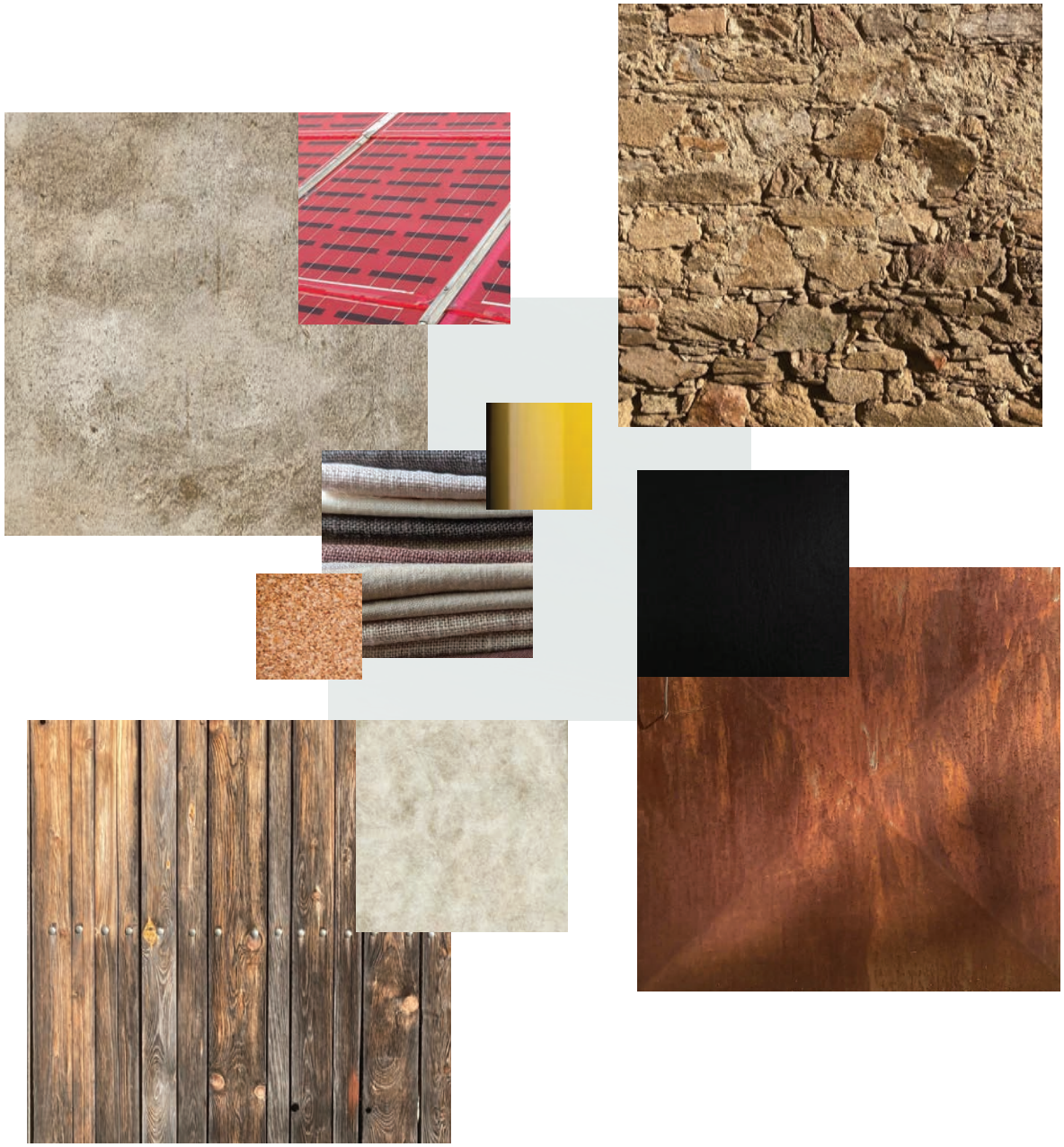
Stone, wood, metals, glass.

Steel beams are used in construction.

Magenta solar panels on the green house roofs as plants thrive on light with this hue.

Natural locally sourced textiles and interior finishes.

Wool insulation.



Rows of vineyards.

Grapes in the sun.

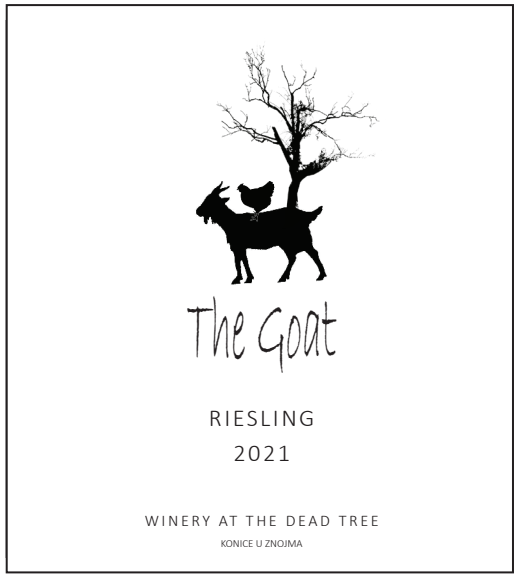
The wild trees and brush that will reclaim the parts of the land.

Orchards of various fruit producing trees intertwined with flowering plants and herbs for teas.

Seasonal gardens provide.

Goats and chickens help maintain and keep the site alive.

The Label


The Goat
RIESLING
2021
WINERY AT THE DEAD TREE
KONICE U ZNOJMA

The Menu

WINERY AT THE DEAD TREE

MENU

An eclectic fusion of seasonal traditional cuisine with the known medicinal properties of herbs and spices from around the world grown locally within our greenhouses. The seasonal menu is artfully arranged and paired with wine from our collection

Fruits and Vegetables

Seasonal and sourced on site from our vast regenerative-organic seasonal gardens and solar energy-producing greenhouses.

Milk, Cheese, and Eggs

Produced with the help of our friends at the barn. Goat cheese and milk products are made in our processing house on site.

Meats

Locally sourced regenerative-organic raised meats, game, and fish.

Breads

Only locally sourced old-world flours are used for our sourdough breads.

Desserts

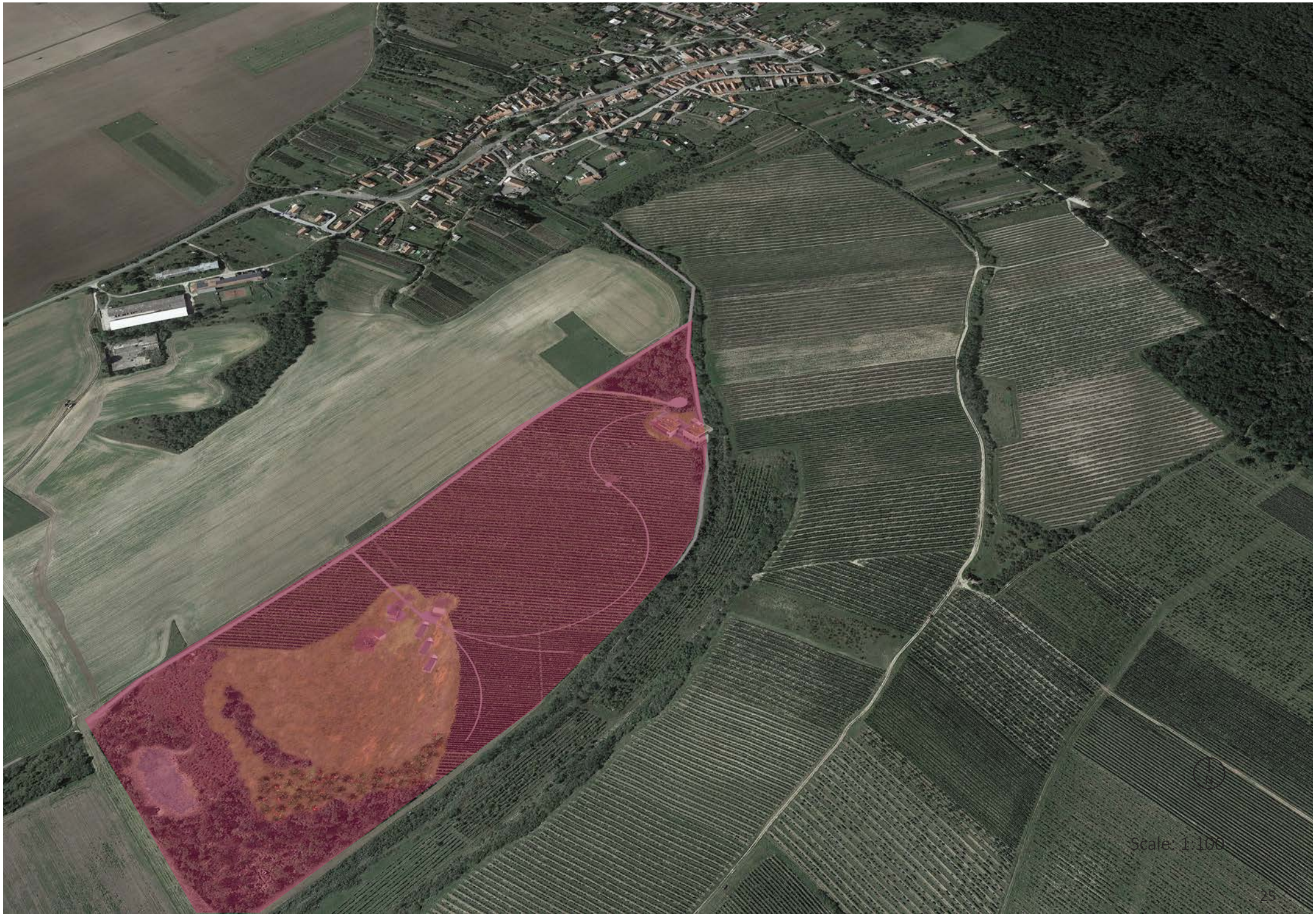
Light cakes and pastries with fruit from our gardens and honey from our hives.

Vegan

If we have to.

Site Situation Axonometric SE

The site as it interacts with Konice, the surrounding vineyards and adjacent plots.



Scale: 1:100

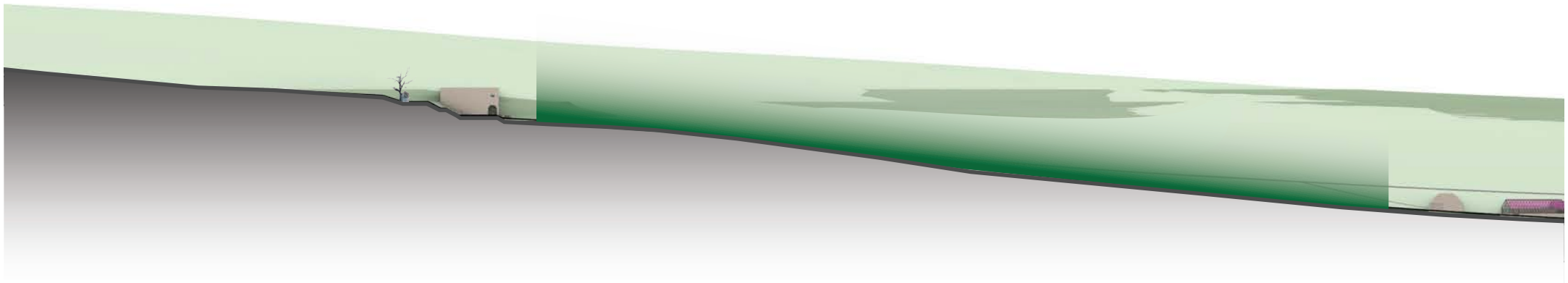
Site Plan

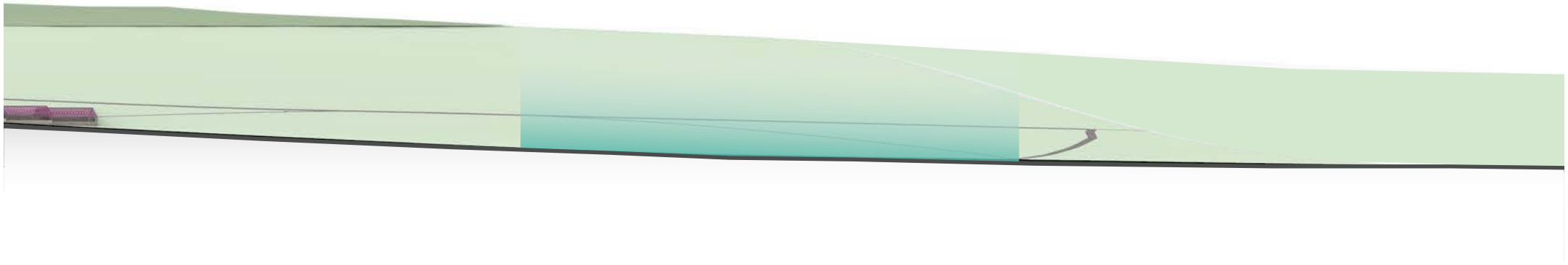

Winery + Cellar
Tasting Rooms + Shop
Restaurant + Kitchen
Parking
Immersed
Wine Tasting
Greenhouses w/
Solar Energy Production
Teahouse + Community Center
+ Food Production
Storage + Parking
Barn
Reclaimed Land for
Ecological Reserve
Vineyards
Seasonal Gardens
Orchards
Beehives
Livestock Grassland
Reclaimed Land for
Ecological Reserve
Marshland/ Raingarden
Water Collection
N
No Scale

Site Section

The vineyards will be placed on the northern half of the site where the slope is more apparent, exposing more vines to the sun for a longer amount of time.

The reclaimed ecological reserve land and water collecting marshland is at the base of the site at its lowest elevation.





Scale: 1:1750

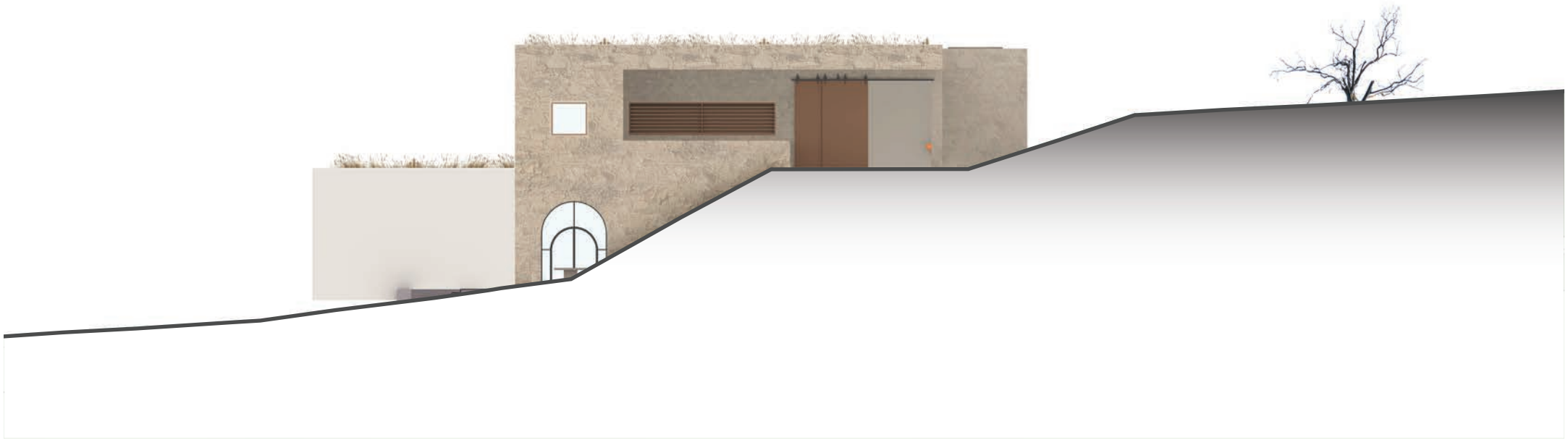
Structures on the Land

The main winery and restaurant overlooks the entire site. The structure is set against the hill, utilising its formation for the starting level of the gravity-flow winemaking.

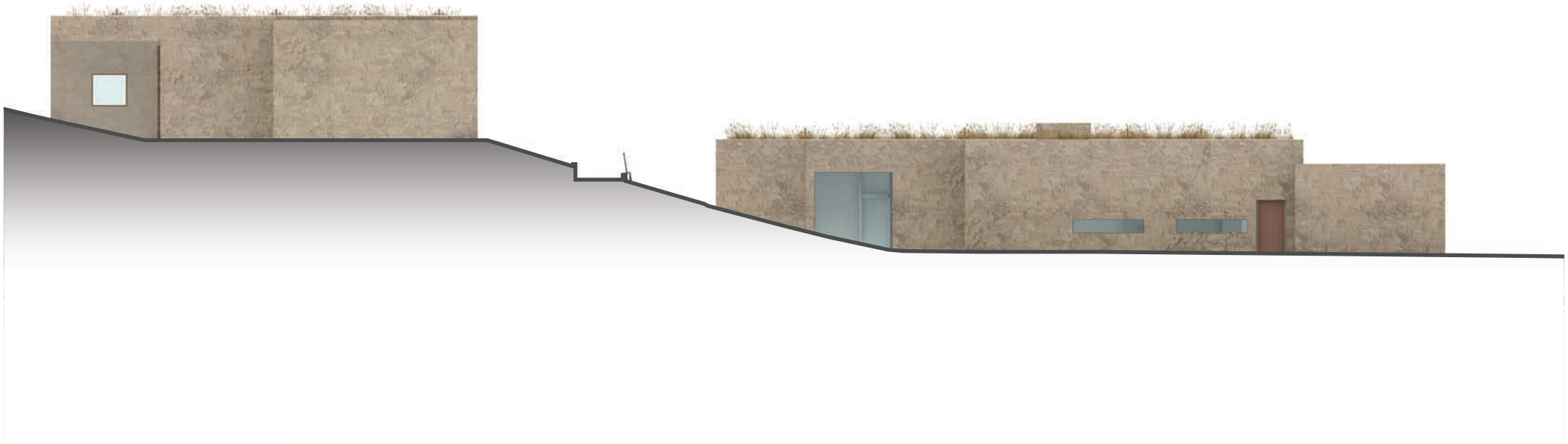
Proposed Structure

Winery + Restaurant

Elevation- SE 1:200



Elevation- NE 1:200

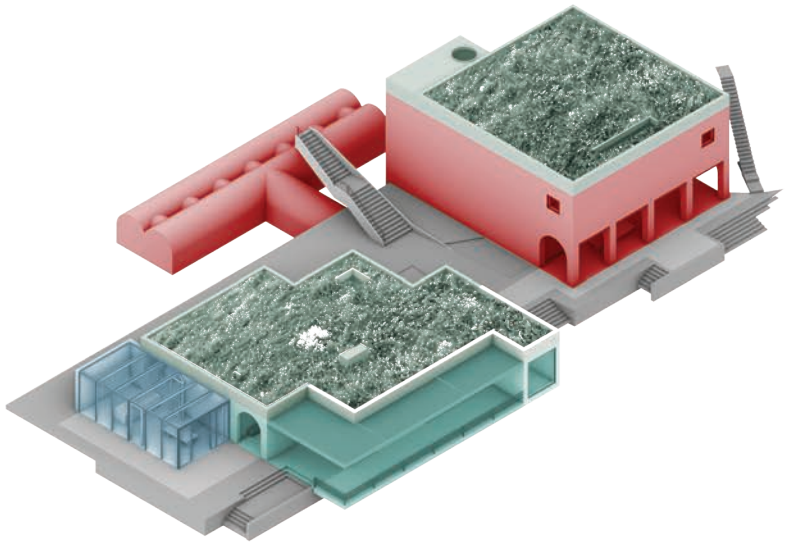


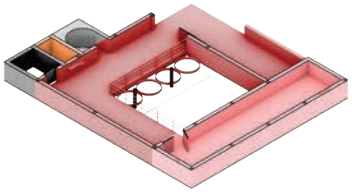
Elevation- NW 1:200

Elevation- SW 1:200

Functions- Exploded Axonometric

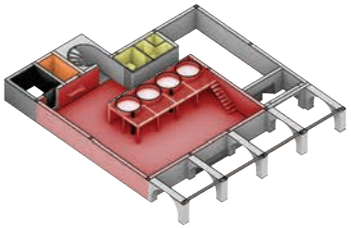
Programmatic Interactions





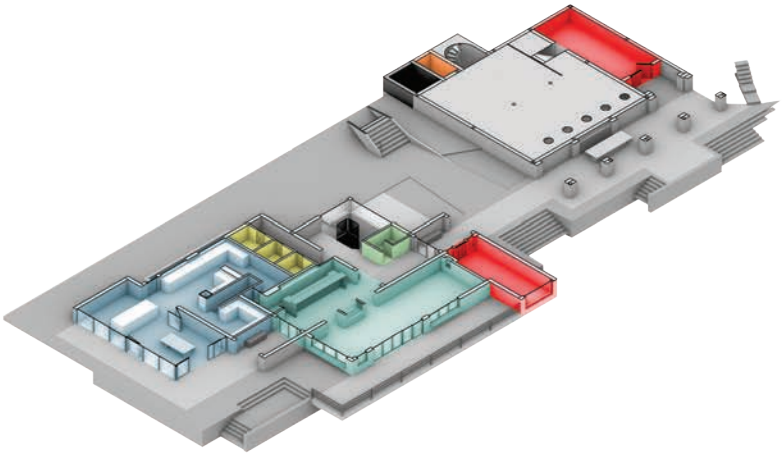
Production- Receiving/ Crush-pad

Office/ Break-room



Production- Fermentation/ Pressing

Employee WC + Shower Room

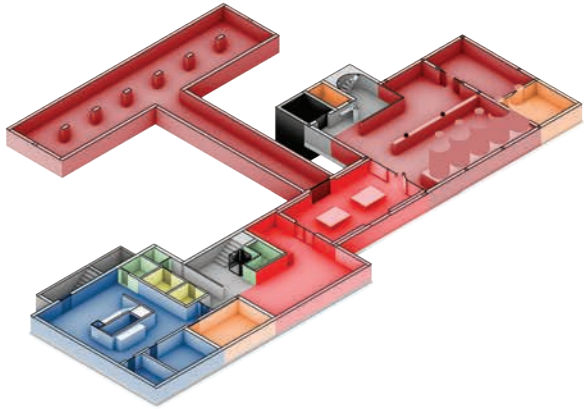


Guest Information/ Shop

Wine Shop

Bar/ Restaurant

Restaurant Kitchen



Wine Cellar Tasting Room

Fermentation/ Settling/ Bottling/ Cellar

Kitchen Cellar/ Storage

WC

General Storage

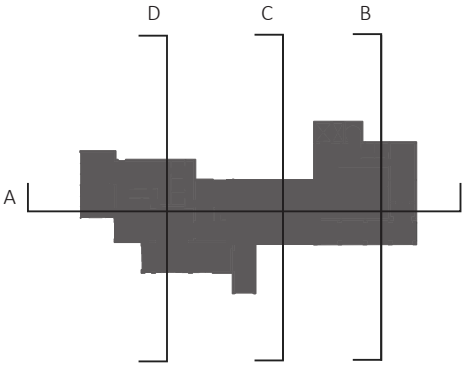
Technical

Elevator

Stairs/ Circulation

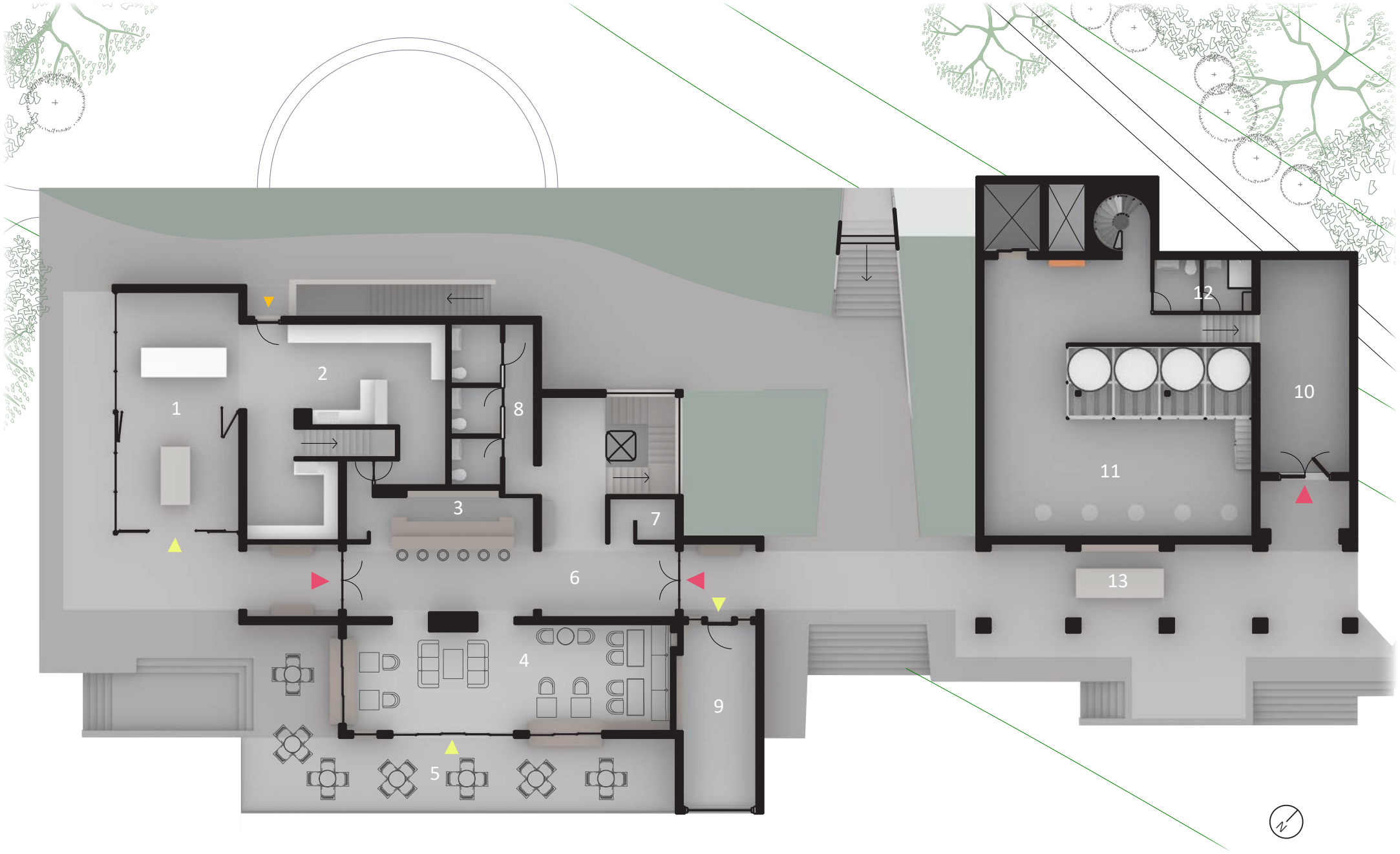
Scale: 1:500

Floorplans + Sections



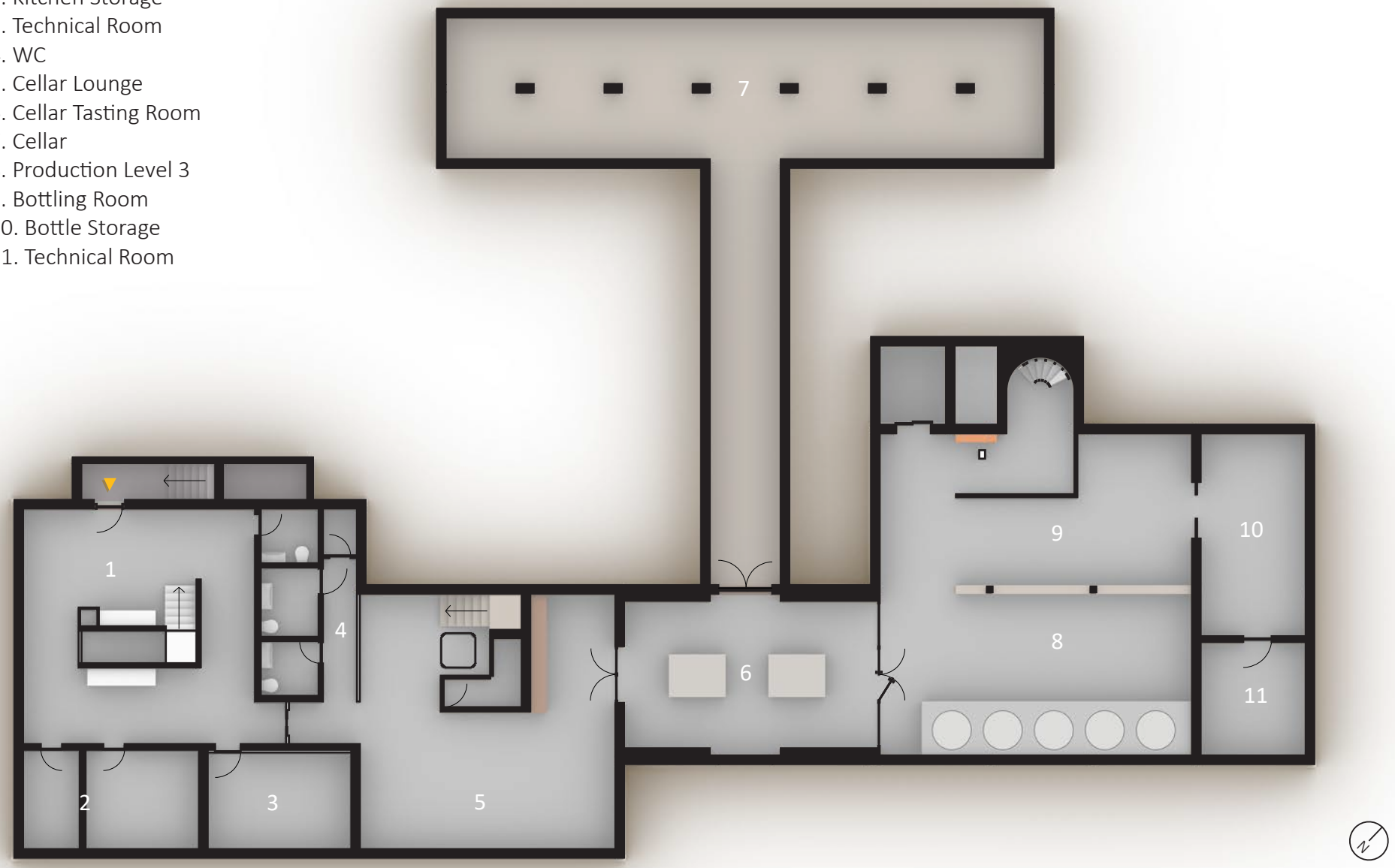
1. Chef’s Greenhouse + Kitchen
2. Main Kitchen
3. Bar
4. Dining Room
5. Outdoor Seating
6. Main Hall
7. Coatroom
8. WC
9. Wine Shop + Tasting

10. Guest Information + Tasting
11. Production Level 2
12. WC + Changing/ Shower Room
13. Outdoor Tasting Space



Groundfloor 1:200

1. Kitchen Receiving + Prep
2. Kitchen Storage
3. Technical Room
4. WC
5. Cellar Lounge
6. Cellar Tasting Room
7. Cellar
8. Production Level 3
9. Bottling Room
10. Bottle Storage
11. Technical Room



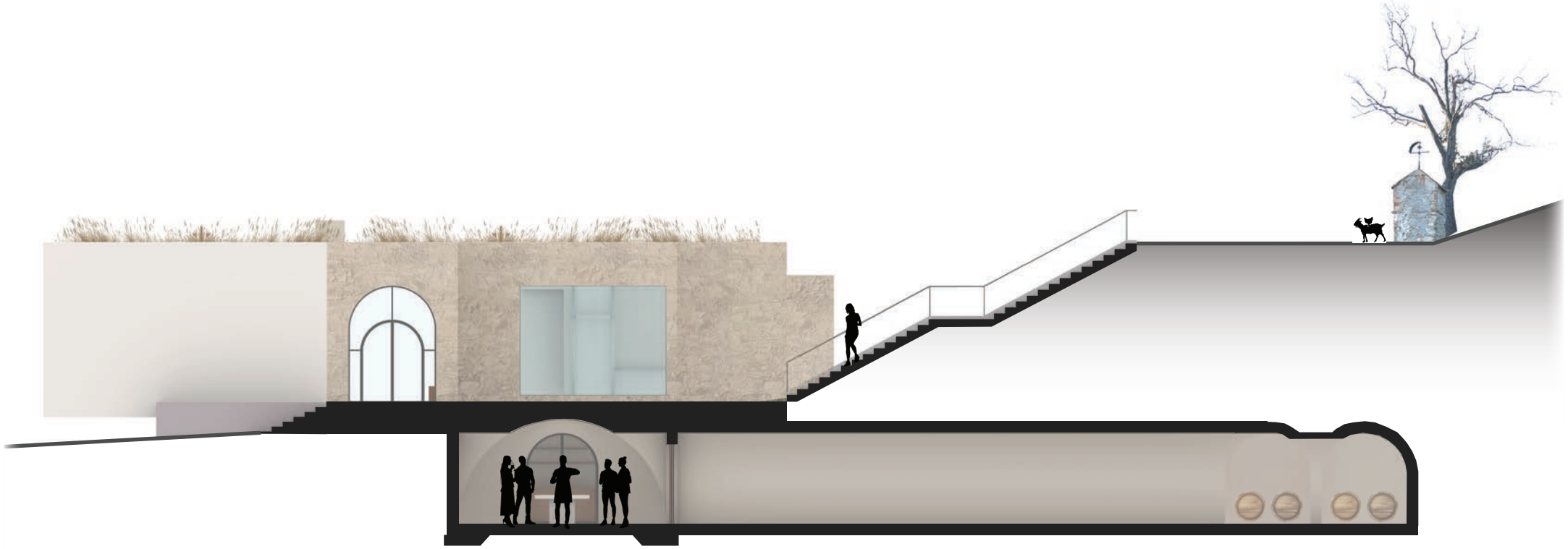
Cellar Level 1:200

1. Grape Receiving + Product Distribution
2. Production Level 1
3. Fermentation
4. Office + Lounge

First Floor 1:200

Section- A 1:200

Section- B 1:150



Section- C 1:150

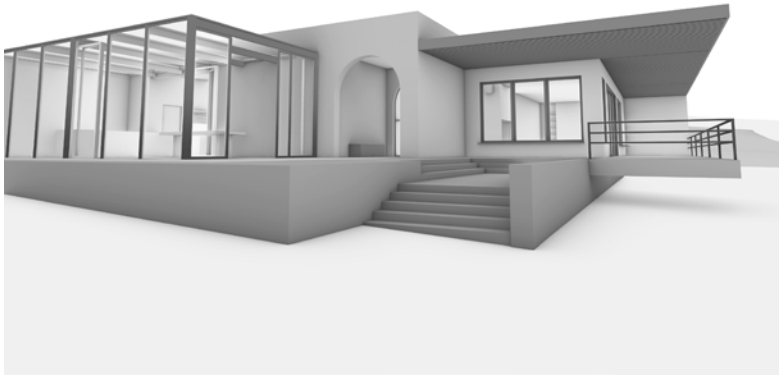
Section- D 1:150

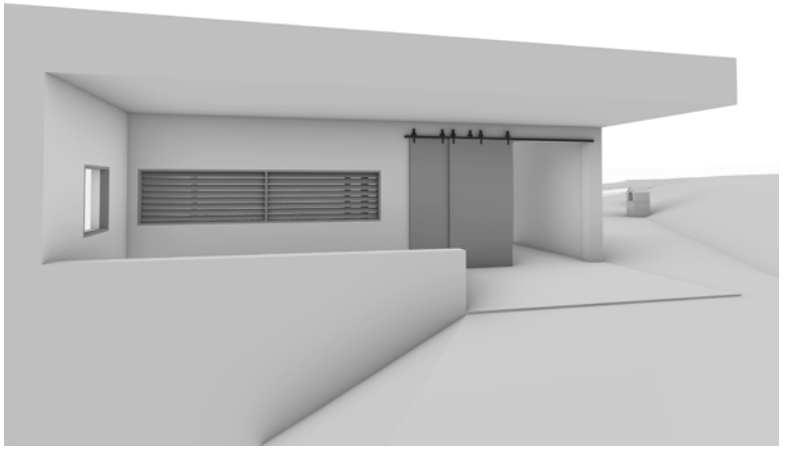
From the Shop

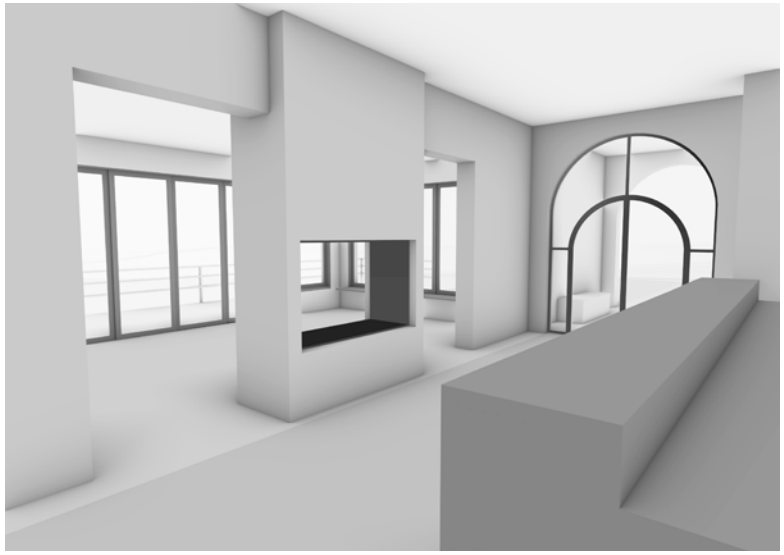
Through the Main Axis

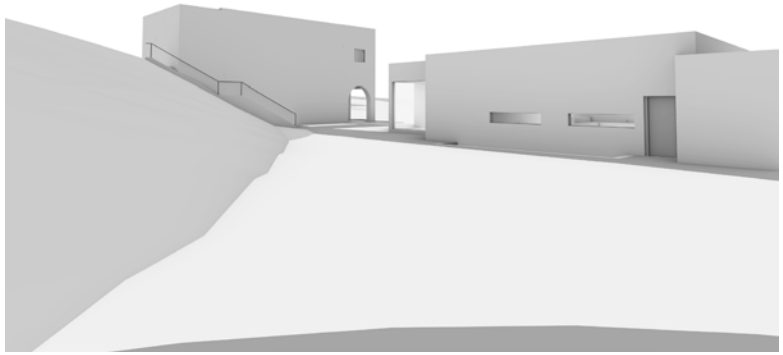
From the Dead Tree

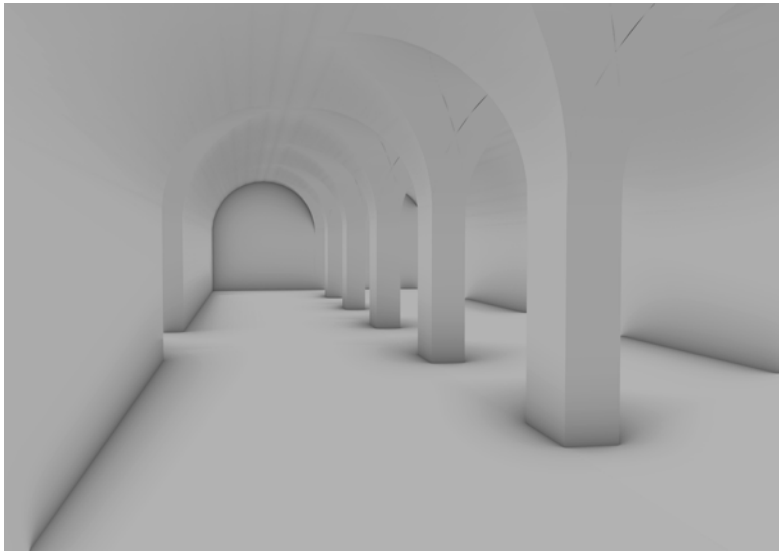
Additional Model Shots

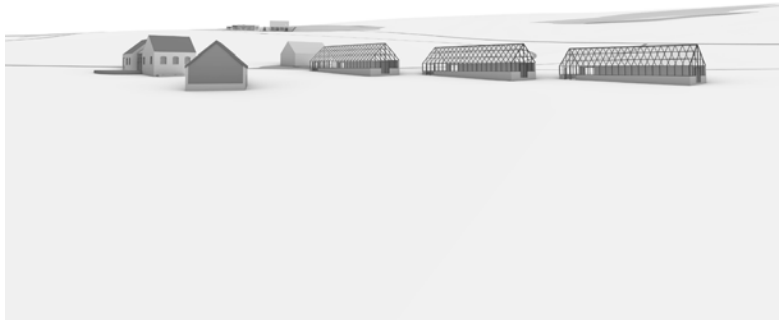


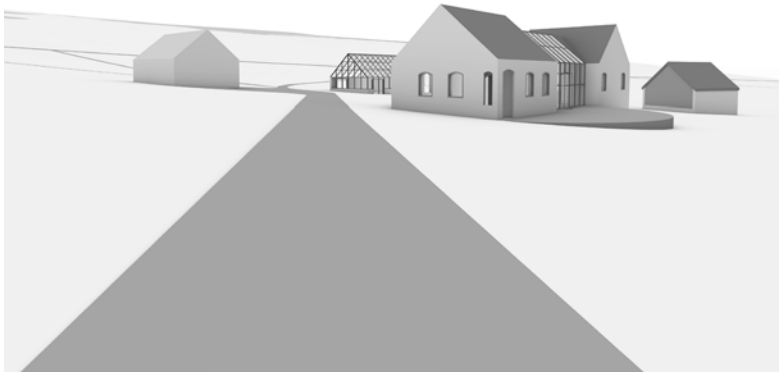












Construction Detail

A- Green Roof

1. Light vegetation
2. Growing medium
3. Filter sheet
4. Drainage layer
5. Water-proofing layer
6. Thermal insulation
7. Vapor barrier
8. Gravel

B- Parapet + Timber wall in Steel Frame

9. Metal sheet
10. Lime render
11. Wood fibre insulation
12. Thermal insulation
13. CLT panel
14. Steel beam
15. Timber framed window
16. Timber structural frame
17. Insulated service zone
18. Plaster board + render

C- Concrete Composite Floor (typ)

19. I-section steel beam
20. Profiled steel decking
21. Light reinforcing bar
22. Concrete w/ concrete top

D- Cellar level foundation

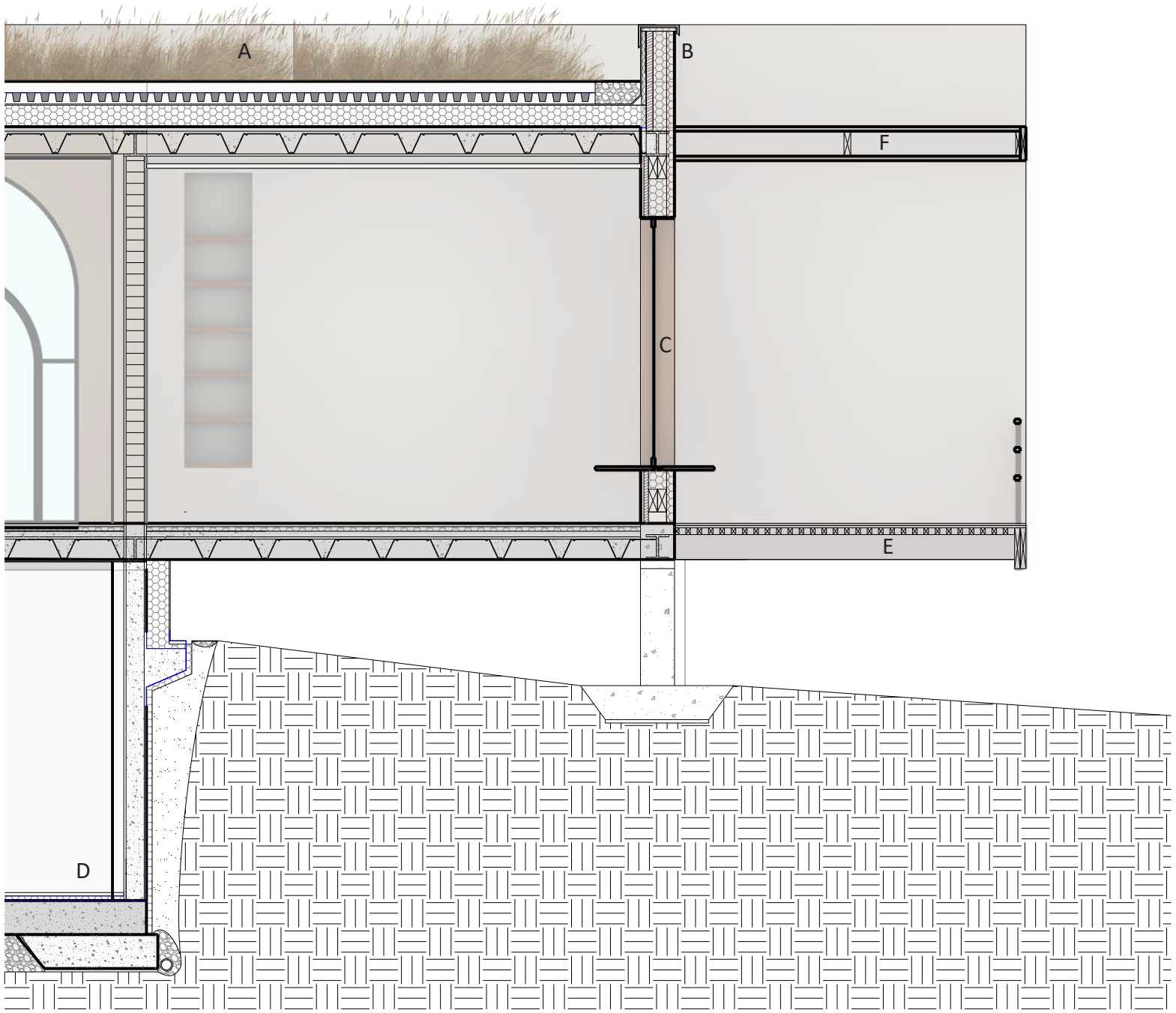
24. Ground
25. Aggregate
26. Soil Back-fill
27. Metal grate- finish
28. Fabric filter
29. Drainage pipe
30. Concrete underlay
31. Concrete footing
32. Concrete slab
33. Damp-proof membrane
34. Thermal insulation
35. Vapor-proof membrane (radon)
36. Stone finish
37. Poured concrete wall

E- Timber Cantilever Deck

38. Steel I-section beam
39. Timber frame
40. Timber cross-battens
41. Timber floor
42. Steel railing

F- Timber Cantilevered Sun Shade

43. Steel I-section beam
44. Timber frame
45.. Timber cross-battens



Scale: 1:50

Resources

https://www.czso.cz/
https://ags.cuzk.cz/geoprohlizec/
https://www.nppodyji.cz/soil-conditions?lang=2
https://www.vinazmoravyvinazcech.cz/en/encyclopedia/climate-topography-and-soil/geological-conditions
https://www.researchgate.net/publication/7963937_The_role_of_soil_chemistry_in_wine_grape_quality_and_sustainable_soil_management_in_vineyards
https://www.nppodyji.cz/
https://nahlizenidokn.cuzk.cz/vyberkatastrmapa.aspx