Permaculture Education Institute
Instructor : Morag Gamble

Assessment Task #3
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content

Introduction and design goals

This work was created as part of the permaculture course at Morag Gamble.

6 years ago, we (2 adults and one child) emigrated to Hungary and bought this property with an older house.

One year later, we were able to acquire a piece of land. Until then, this part was used as conventional arable land.

The property was fenced off to keep boars away. Smaller animals like rabbit and fox can enter the property.

The property has an area of about 2 acre.

It was clear that we do not want to use artificial fertilisers and pesticides and we have consistently been doing so for 6 years. The former corn field was largely left in peace to give the soil a chance for regeneration. Only larger trees were planted and the marginal planting started with bushes.

We want to grow healthy vegetables and fruits for our family and create our own paradise.

But we also want to demonstrate that growing vegetables and fruits without pesticides is possible. Through our contact to the Waldorf-school in the next town, the idea arose to make this experience possible for the children.

We hope that in 2 years we will have a garden in which we can invite children and adults and demonstrate to them that a garden where healthy vegetables grow is also a wonderful place of relaxation and adventure.

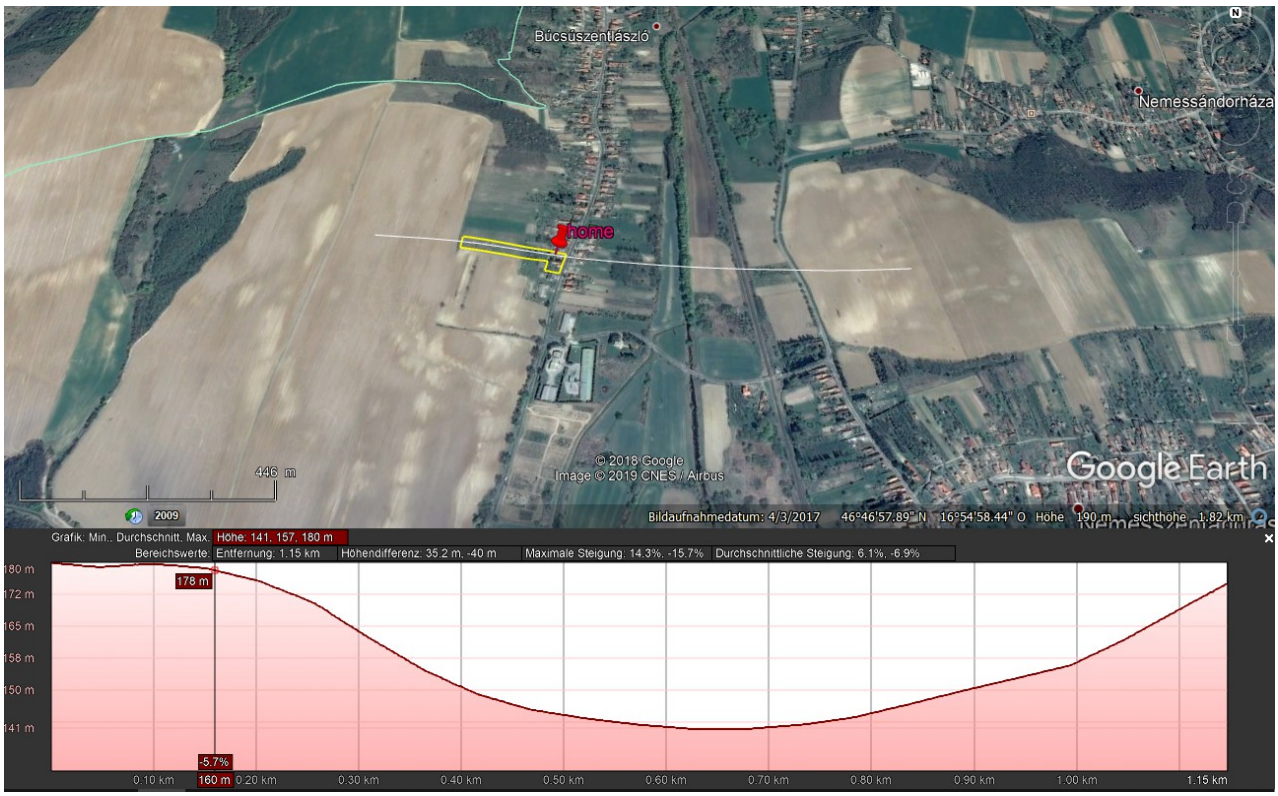
In the last few years, we did many things at once and found that there were too many projects at the same time. Now, in the spirit of permaculture, we have started to look after the area directly in front of the house. All other areas are only marginally maintained. Nevertheless, we try to realize individual projects (like a pond and a stream). From the employment with the existing trees, soil and climatic conditions always new possibilities arise.

For many years I have been involved in permaculture and organic farming. The reason to take a permaculture course was to learn permaculture from start to finish. Knowing that learning has no end. This course has now also led me to measure the plot and the essential elements and draw a plan that can serve as a basis for further projects. It was and is a tremendous effort to measure a 2 acre large piece of land. Thanks, because without the course that would have probably taken some time ;-)

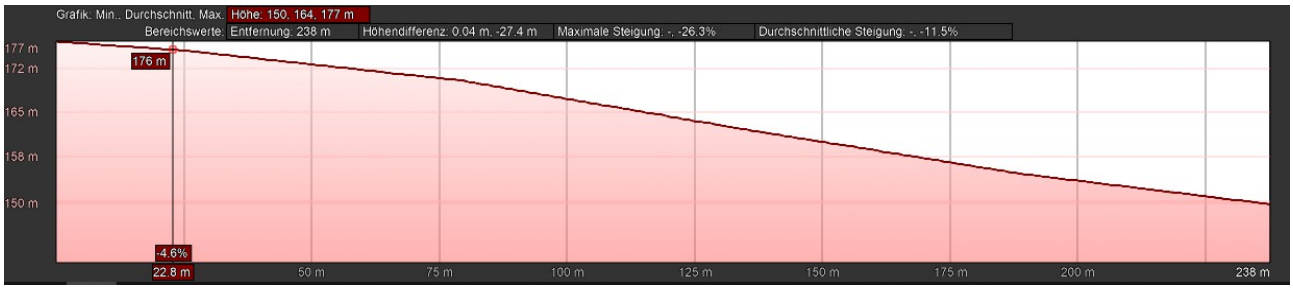
The property

(north always up)

The site is located in Hungary.

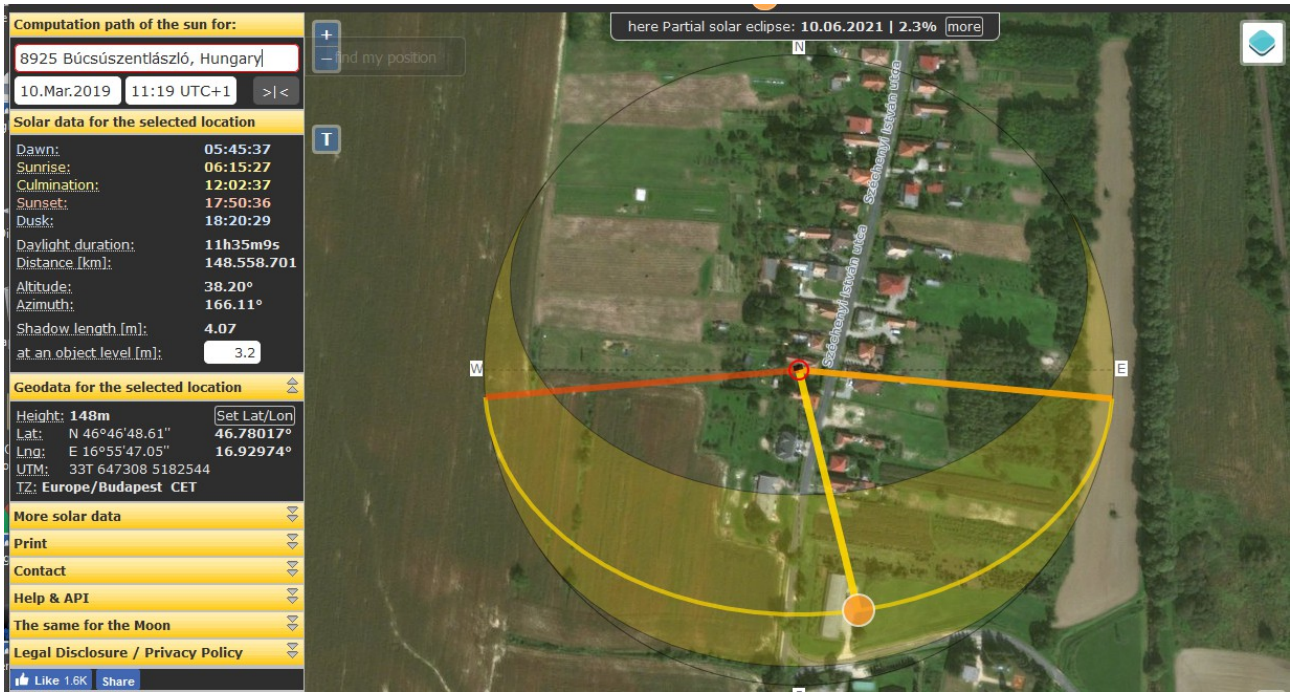


slope



The high difference is 27 m. The slope has an average of 11,5% with a max of 26 %

sun calc

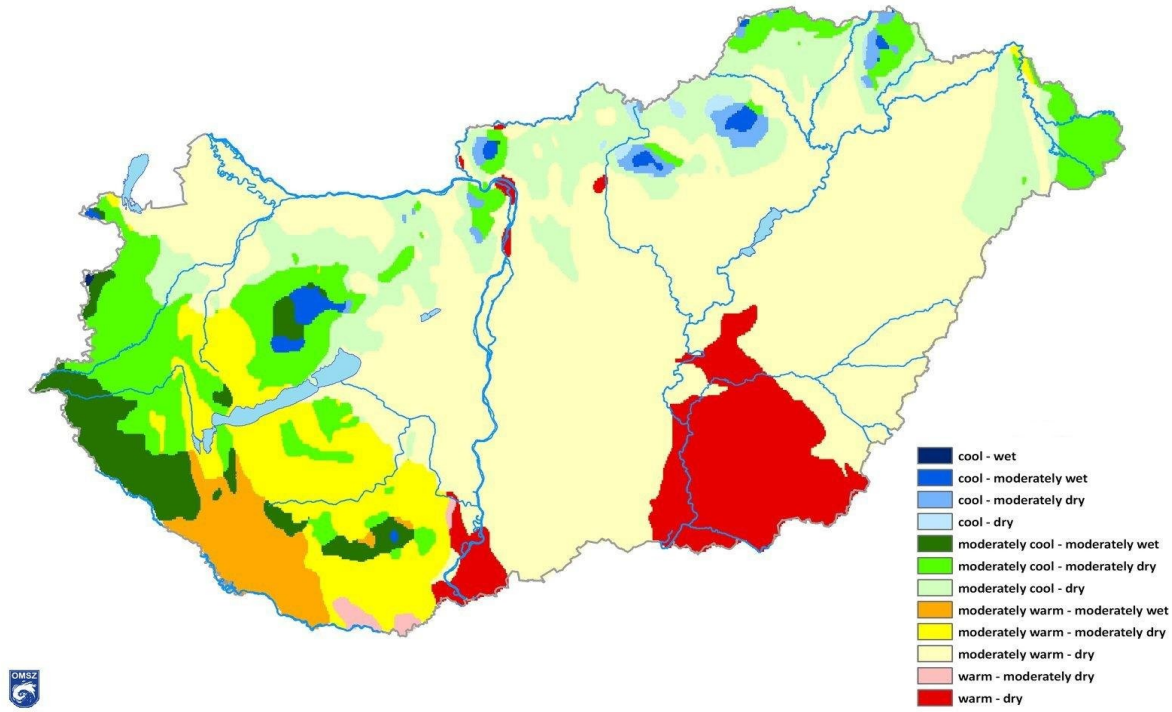


The sunlight is influenced by several high spruces (about 8 m high) on the south side.

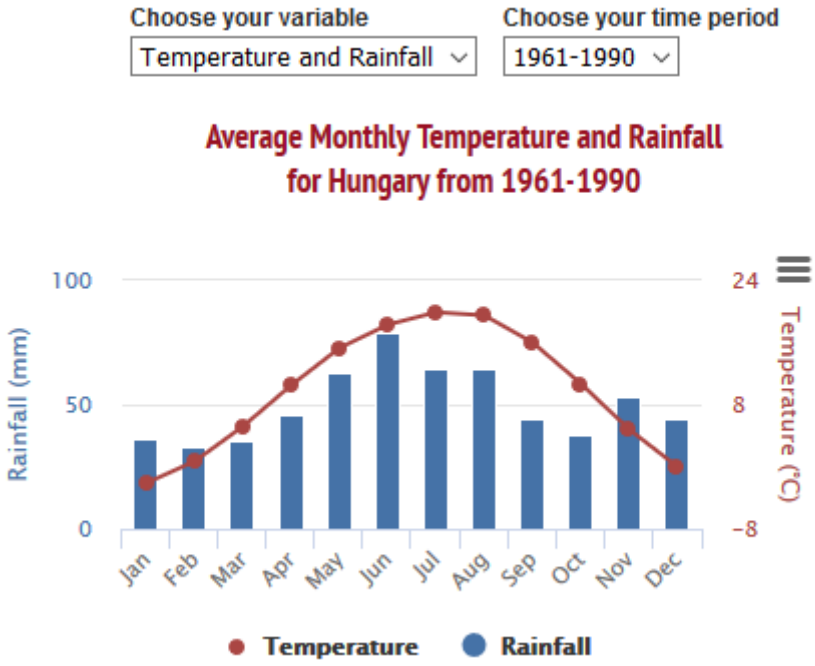
These trees and the neighbouring house create a permanent shadow area at the southern border of the lower garden area.

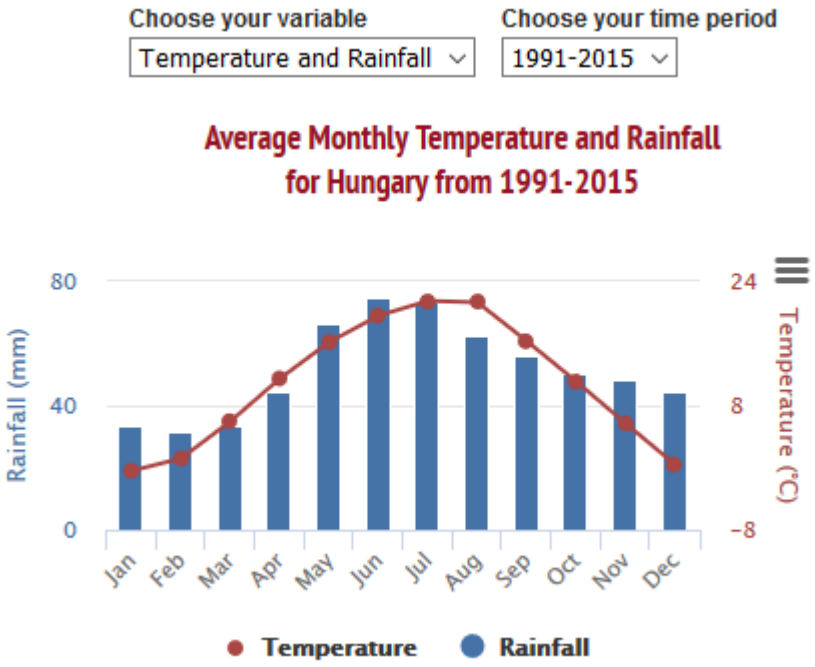
weather

It is warm and dry in the summer. In the summer here are weeks without rain and sometimes heavy rainfall which leads to erosion problems.



In the last years we notice that the summer is getting more and more dry.



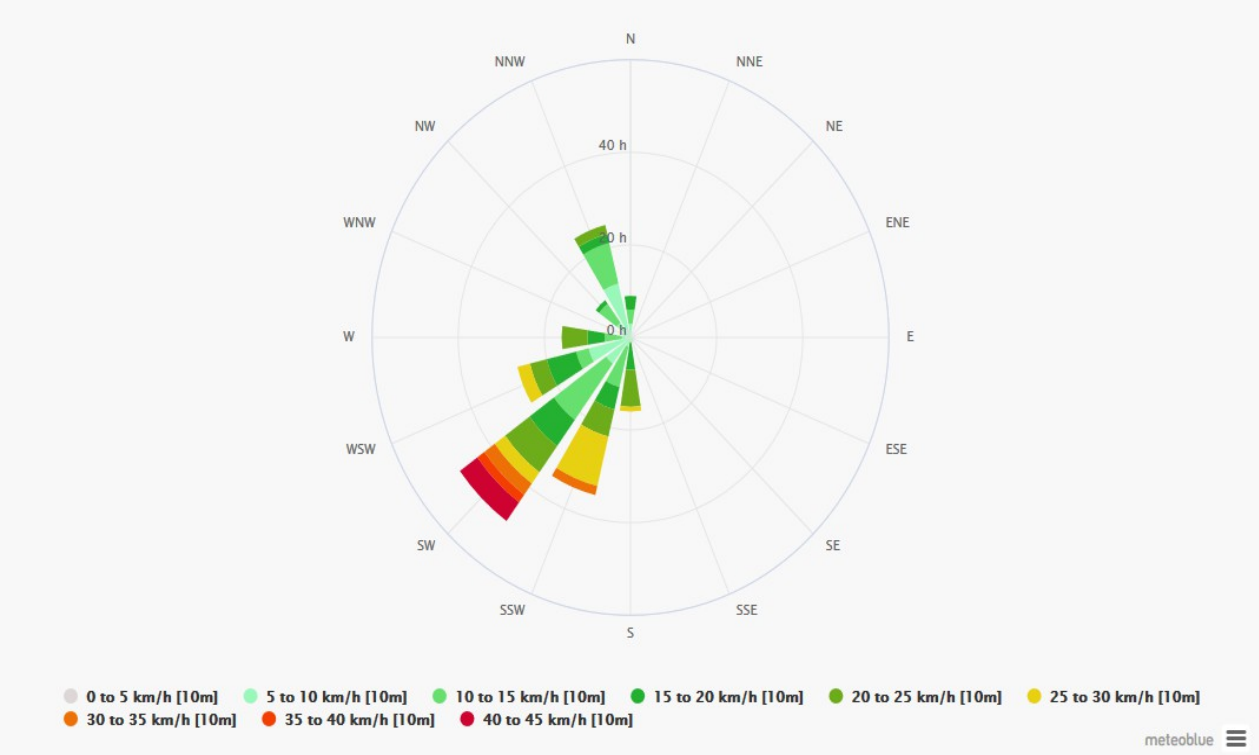


We live in a 4 season region. Normally cold winter and mild spring. Hot summers with less rain – during the last years summers become hotter and dry. Normally frost starts in december. Til mid of may frost is possible so we plant our vegetables end of may.

The region is very breezy. There is no dedicated storm season.

Snow is possible from november to april. But winter becomes more and more warm and this year we had only 1 week snow.

Wind


N
NNE
NE
ENE
E
ESE
SE
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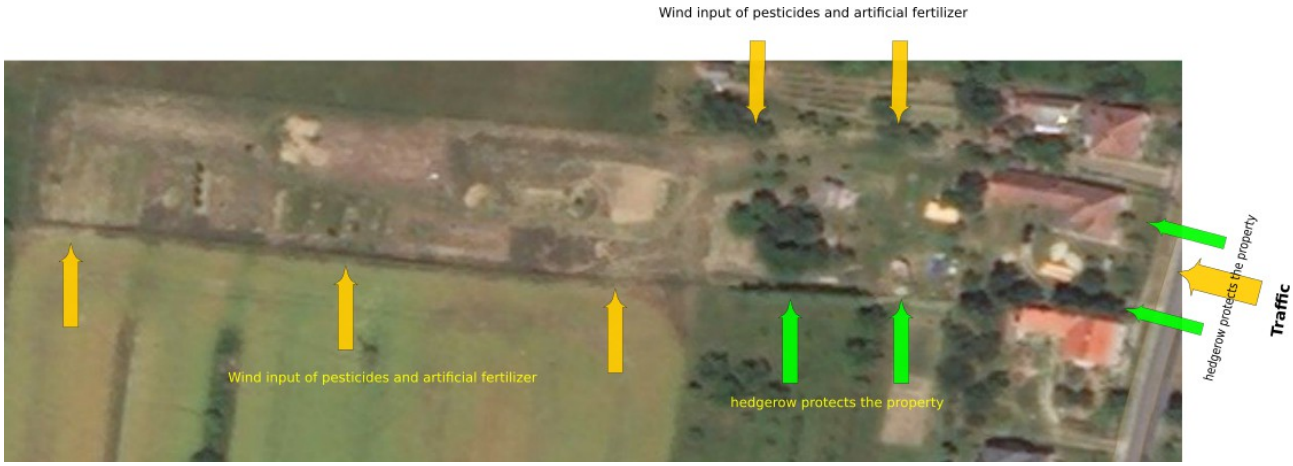
S
SSW
SW
WSW
W
WNW
NW
NNW
40 h
20 h
0 h
0 to 5 km/h [10m]
5 to 10 km/h [10m]
10 to 15 km/h [10m]
15 to 20 km/h [10m]
20 to 25 km/h [10m]
25 to 30 km/h [10m]
30 to 35 km/h [10m]
35 to 40 km/h [10m]
40 to 45 km/h [10m]
meteoblue

Environmental conditions

The majority of the property is surrounded by fields. Conventional arable land means pesticides and artificial fertilizers. To protect the property, a natural hedge is to be created. Some bushes are already planted but it will take years until the hedge is tight enough.

In the lower part of the vegetable garden, a high and dense hedge protects from the burden of (low) traffic.

The location of the buildings protects the garden from the pesticides of the neighbours



water

The property has mains water supply. But the most valuable element is its own water source. This water has drinking water quality and we use it for garden irrigation.
The second source of water is water harvesting and store in tanks. This is not realised yet. But it is on the agenda.
As third source of water, we have a well so we can use groundwater.

Soil

This picture shows the different areas of the side. The earlier corn field is still not fertile and the most plants have to be watered.
In this area we plant trees and shrubs, started with the natural hedge and make the earthworks (still in progress). The grassland we use to make mulch. The trees here are apple trees which are old and give a lot of fruits.
The trees in the forest are old apple trees and big walnut trees also some birch which are growing well the reason is the water from the water spring. Also quince is growing here. The soil is more like in a forest.

According to a simple soil test - the results according to the soil pyramid -> ***loam***

Through the earthworks we found, at a depth of 50 cm and more, areas with clay and areas with almost pure sand.

To improve the soil we started one year ago a worm farm and we do composting since we live here. We are mulching the vegetable garden but have not enough mulch at the moment.

We focus to improve and develop the garden near the house and then go forward.

Zones

The division of the zones may seem strange, but results from the existing elements and the intended use.

This is a classification that takes into account the current wishes and needs.

But it is in the discussion to build an off grid house on the property and to inhabit it as well. Then an additional zone 0 and an additional zone 1 would result.

Trees and shrubs on the property

These trees are located on the property

- spruce
- walnut tree
- quince
- birch
- lime wood
- willow
- acacia (as nitrogen fixer)
- ash-tree
- Scots pine
- pine
- chestnut
- olive
- cherry
- apple

- pear
- plum
- apricot
- peach
- quince
- Indianerbanane/ PawPaw (Asimina triloba)
- chokeberry (Aronia)
- mulberry

Shrubs with edible fruits

- raspberry
- blackberry
- hazelnut
- currant
- blueberry
- honey berry (Lonicera kamtschatica)
- fig
- Kiwi

Elements.

The elements which we build so far are:

- raised beds
- terrace and porch
- a trellis for climbers
- a worm farm
- a compost pile (which has to be placed somewhere else)
- a shed

Elements we will install are:

- Water tanks for catching rainwater
- raised beds from stone
- clothe line
- perennial vegetables
- flowers
- a swimming pond with natural cleaning through a pond which is a refugium for nature and also a storage for rainwater and a place of pleasure

List of the plants we (will) grow.

- tomato's (different types)
- salad (different types)
- kale (different types)
- cucumber (different types)
- beans (climbers)
- spice plants (different types)
- onion
- garlic
- potato (in bags) (different types)

What we try to plant is, perennial plants, in either case

- Knollenziest (Stachys affinis)
- Wilde Rauke (Diplotaxi tenuifolia)
- Topinambur (Helianthus tuberosus)
- Rhabarber (Rheum rhabarbarum)
- Luftzwiebel (Allium x proliferum, Allium cepa v. Proliferum)
- Ewiger Kohl (Brassica aleracea var. Ramosa)
- Erdmandel (Solanum betaceum)
- Bärlauch (Allium ursinum)
- Baum Spinat (Fagopyrum cymosum)
- Französischer Sauerampfer (Rumex x acetosa)
-

This is a list I made from various sources. These are plants we can satisfy the requirements.

Future development

As an example of imaginary enhancements, Plan 3 has a tiny home on the “zukünftige Bauten (further buildings)” layer. Since it is to be created as a permanent homestead, a new zone 0 and 1 would be the result, because this tiny home should also get a small garden.

From the beginning we had in mind that we would like to live with other people. Unfortunately, we have met no one yet, who wanted to enter this adventure with us. But we did a lot of the basic infrastructure so that several people can live and work here.

In the near future, however, we will take care of the food forest and the further expansion of the vegetable patches. An important part will also be to improve the soil so that crops can be grown again.

plan(s)

These are separate files. They are made with Inkscape, a open source vector program. You can download it at https://inkscape.org

Since I wanted to draw in the scale and I can only print DIN A3, the plot was divided into several plans.

The focus was directed to having base plans in which the corresponding elements could be drawn into the various layers.

Using open source software makes it possible for everyone to read and modify plans.

Inkscape is not easy to use for making plans but more easier than CAD programs.

The plans were drawn with several layers that can be made visible or invisible. For example, some zones or planned buildings were moved to their own layers.

As a help, the plans were converted to PDF. Unfortunately, some details are lost during export

A walk through the garden

Raised beds

trellis for climbers

worm farm and compost

mixed culture

This is an example of the interaction of different element. About the zucchini is the spout for the chickens. The fences of the chickens are rinsed in the rain in the zucchini-bed. There it serves as a fertilizer.

Seating in front of the garden kitchen

garden kitchen

View of the greenhouse and shed 3

bed with suntrap

entrance small greenhouse

inside small greenhouse

apple trees

walnut tree

Building site chapel

the small planted forest

Entrance to the first terrace / campsite

pond

Water storage at the highest point. The solar panels are used to pump the water from the pond into a stream. The stream serves as a cleaning element for the water