



TWO BIRDS, ONE STONE

What is the potential that lies in abandoned agricultural building? Buildings that have lost their initial function and use, and their need to transform to stay "alive". Keeping the notion of the cultural history while applying modern standards.



Critical areas

Before any transformation can be executed, the structure needs to be secure. After thorough examination the following critical areas were discovered:

1. The concrete wall

The room that previously housed the cows and sheep has an insulated concrete wall surrounding it. As seen in the picture to the left the wall has started to fall out. It is common in abandoned barns that these walls quickly decay, due to variation in temperatures. The conclusion is that it should be removed in its entirety and be replaced by a new structure that can support the structure above.



2. Loadbearing beams

The movement of the concrete wall has allowed water to enter the structure. As a result the loadbearing wooden beams show signs of rot. Only the ends of the beams seem affected. One could try to mend the damage or change the beams completely.



3. Concrete floor

The barn has partially a concrete floor, primarily in relation to the animal rooms. It is not insulated and has visible cracks in a number of places. The preferred solution is to remove the existing floor and replace it with a new insulated floor.



4. The brick wall

The brick wall in the stables is crumbling with large visible cracks. It is not considered a loadbearing wall, but it is possible that water may have reached the constructive wood in between the brick layers. The wall should be torn and replaced.



The rest of the structure.

Apart from the areas mentioned above the rest of the structure has been well protected from weather and water. Though the timber frame is rough there are little signs of rot. There may be some damage on the sills.

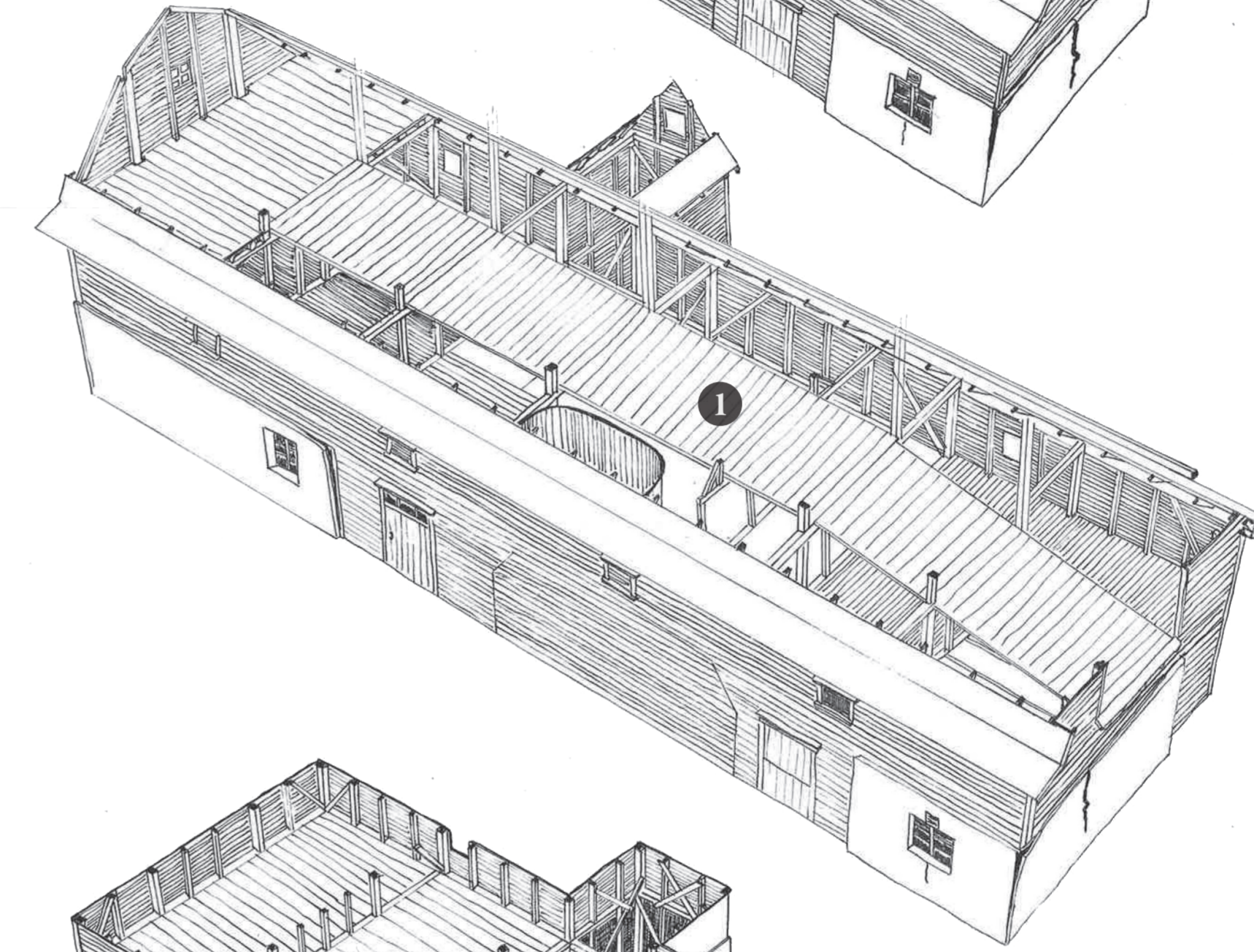
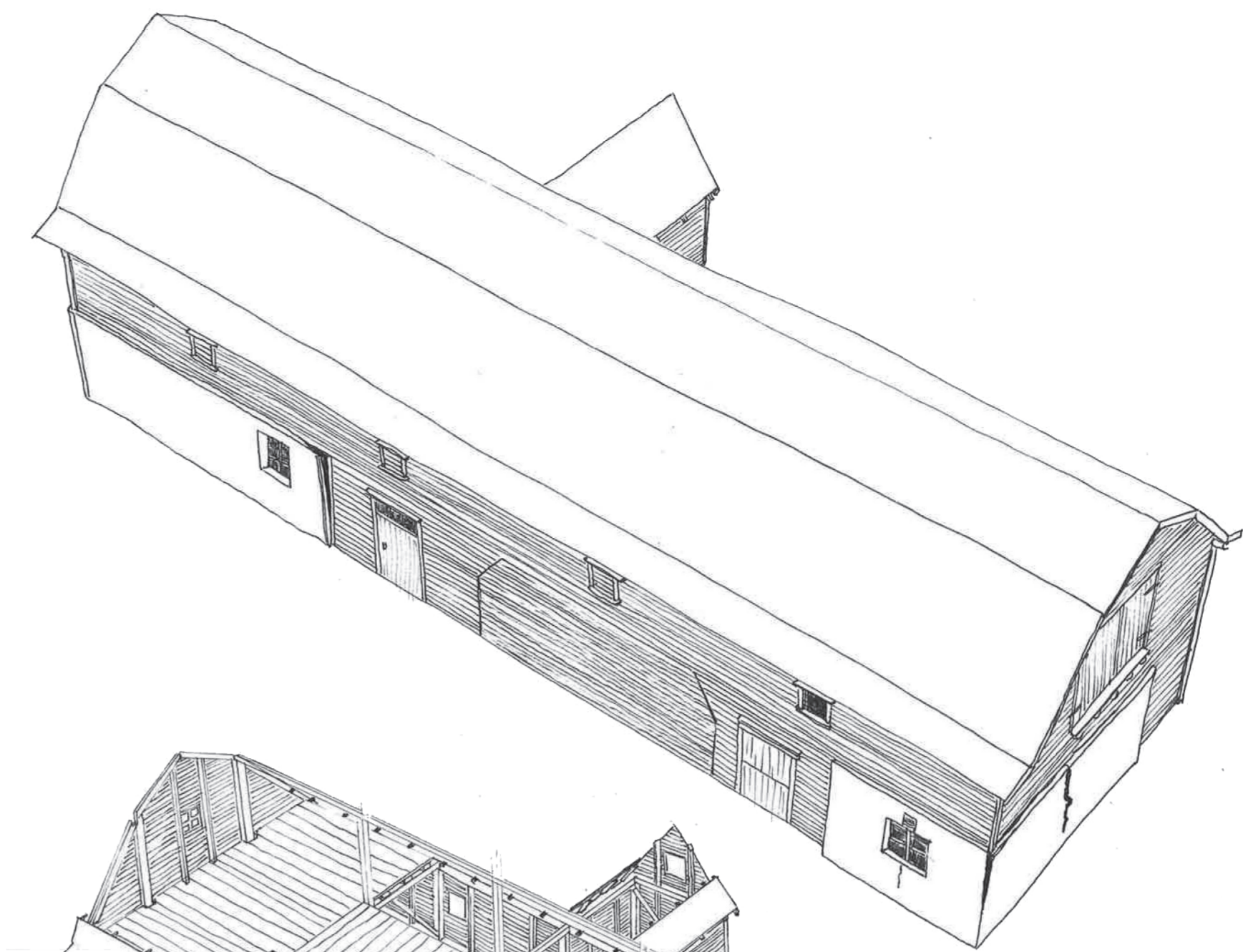
Case: KRONMOGARDEN

The Kronmo farm lies in the municipality of Tolga, only 20 minutes from "the Mountain Capital" Røros. The town was founded when a smelter in relation to the mines at Røros was built close to Toljefossen, the local water fall. Since the primary industry was related to this, small farms were built around the smelter.

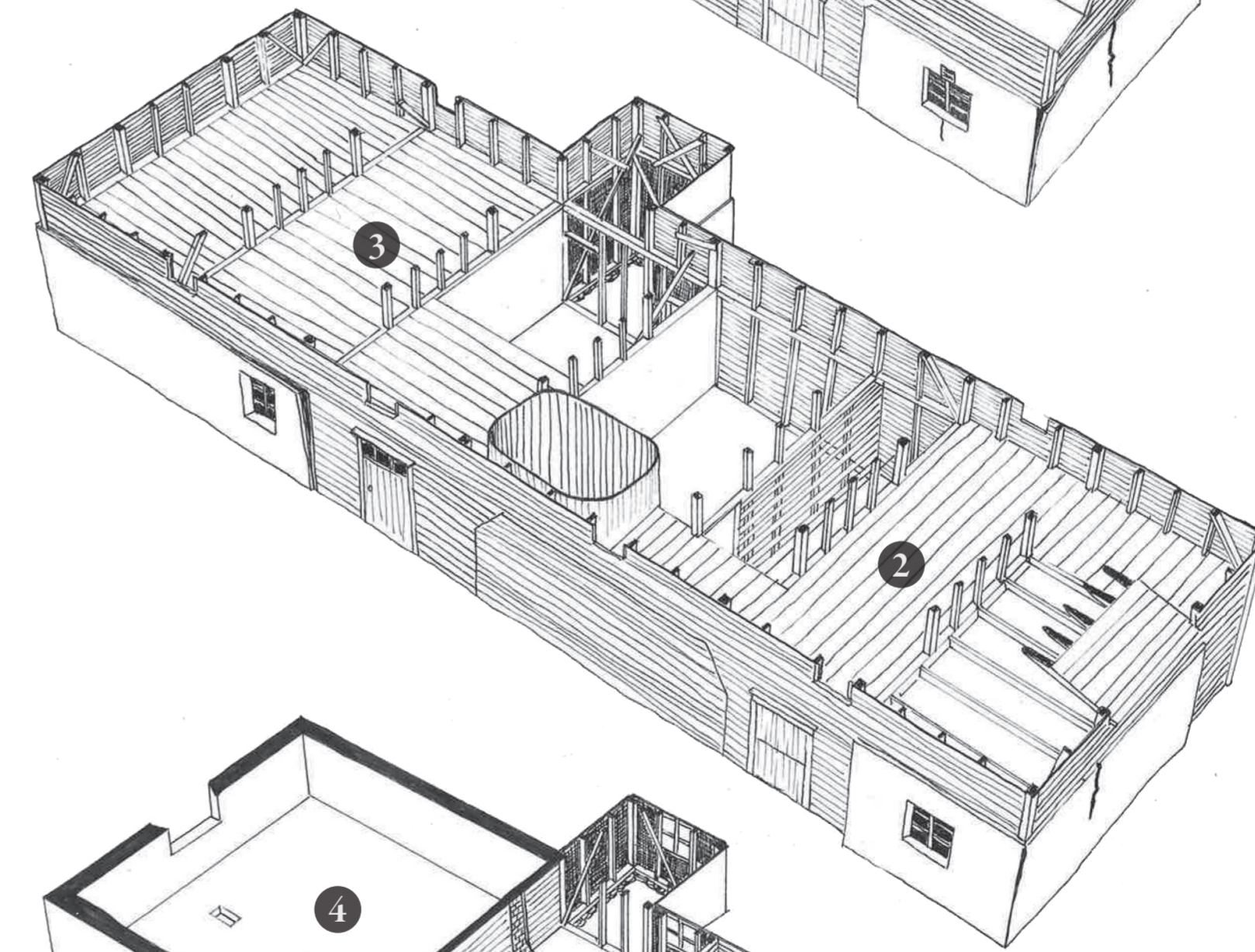
This makes the Kronmo farm interesting. The houses have a typical layout, but are unusually close to the town center. A small path crossing the outskirts of the town is the main travel route for pedestrians moving between the town center and the residential area.



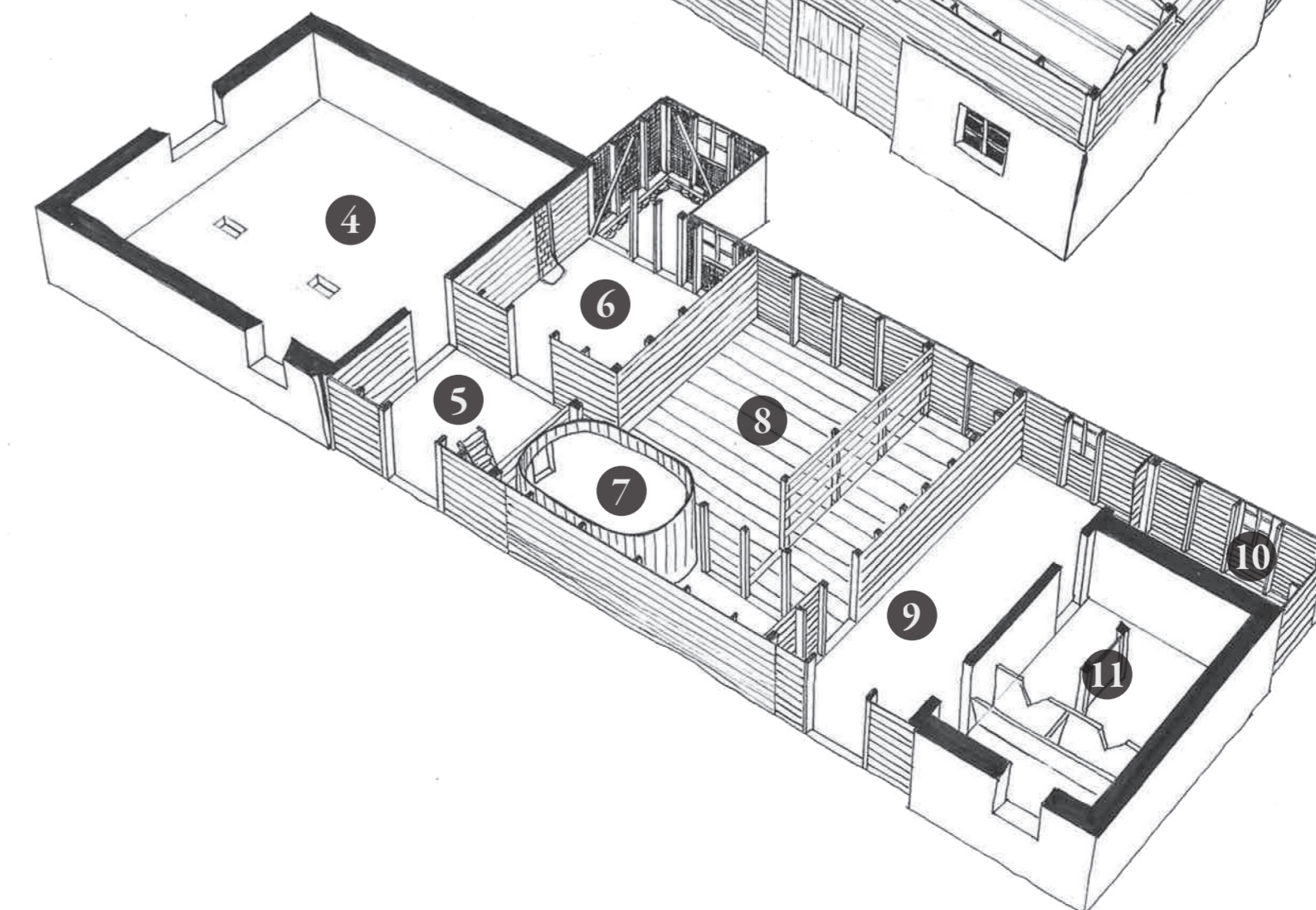
Sections of existing barn layout. 1:100



Second floor:
1) Barn bridge 77 m²



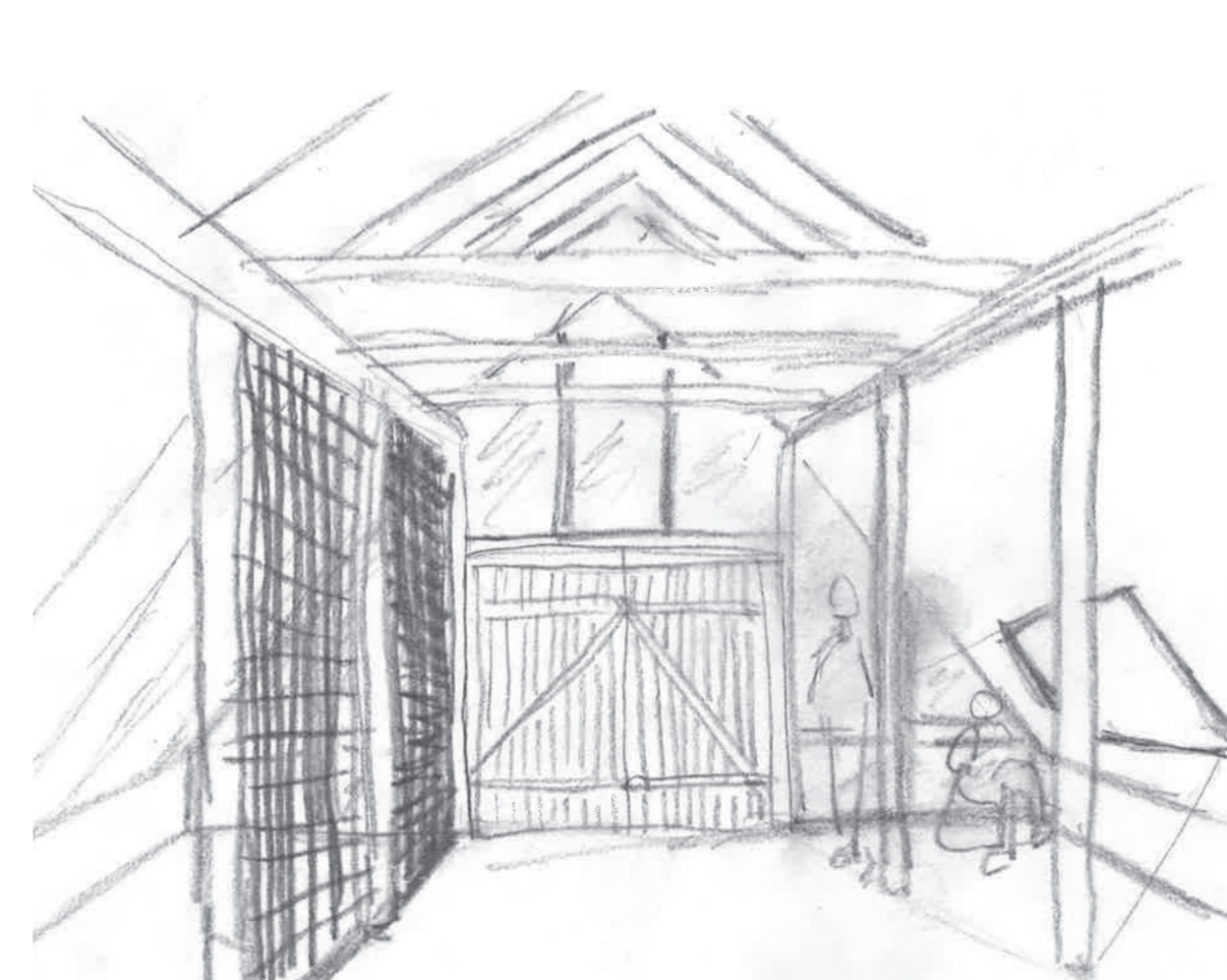
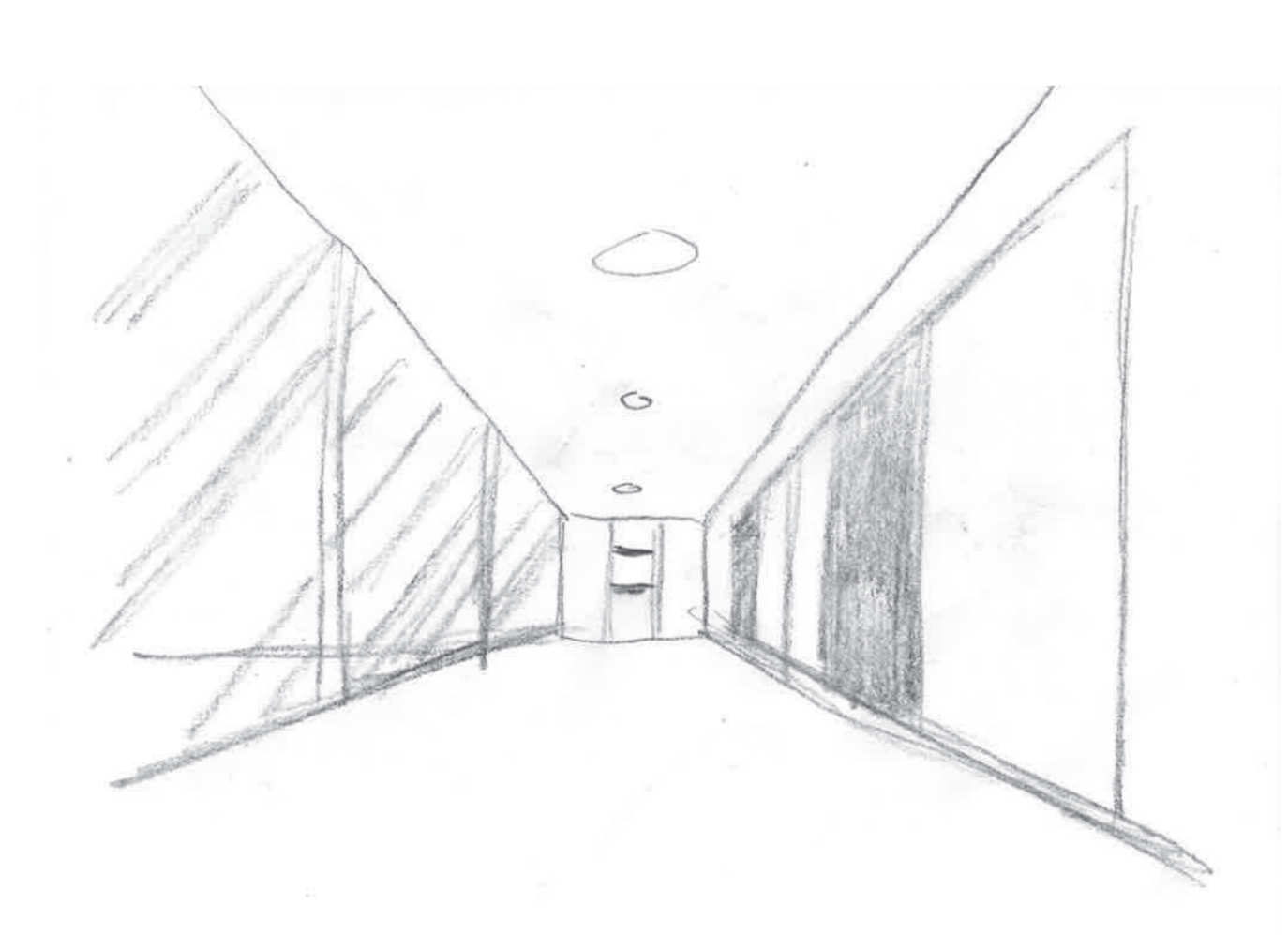
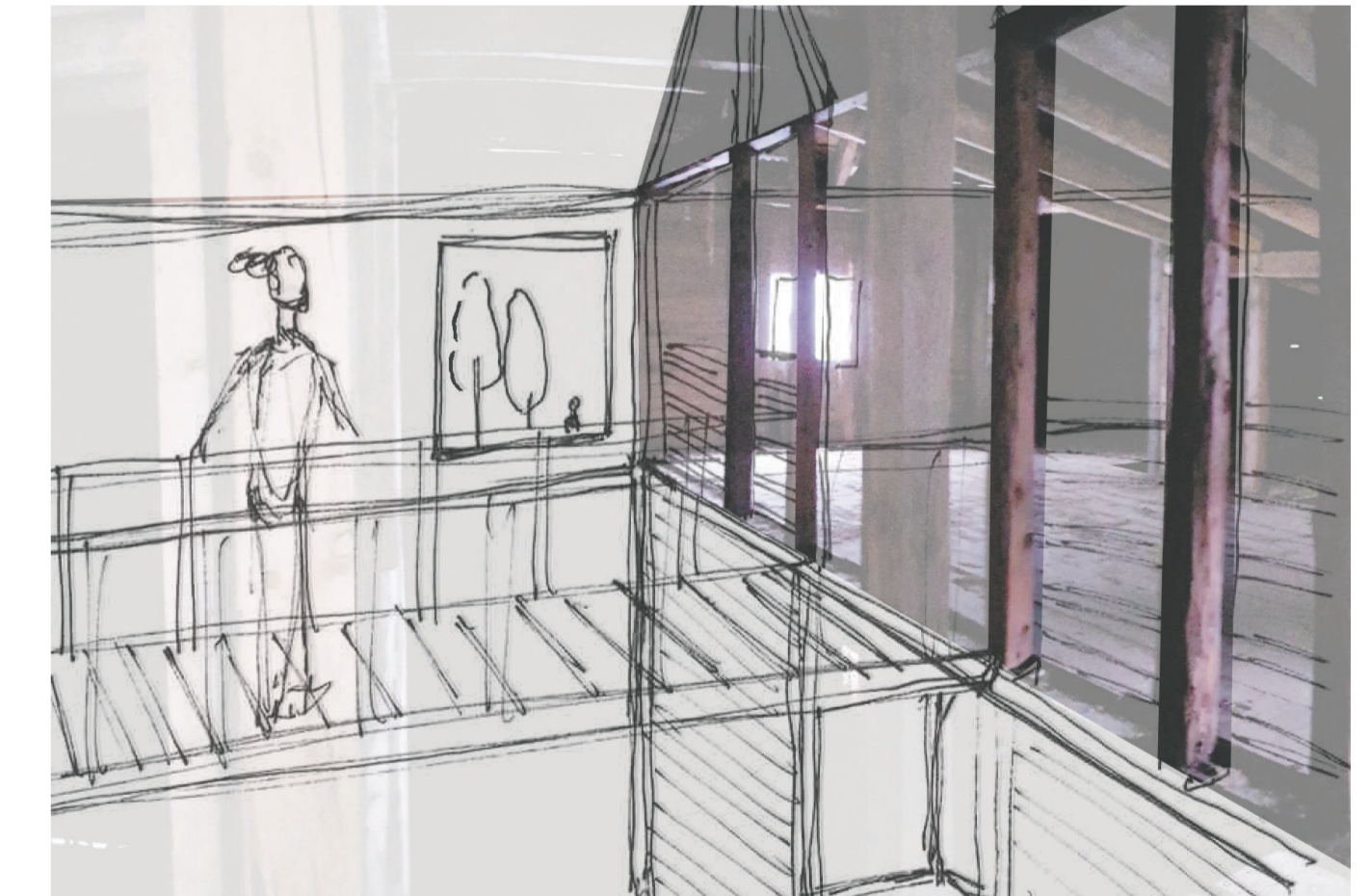
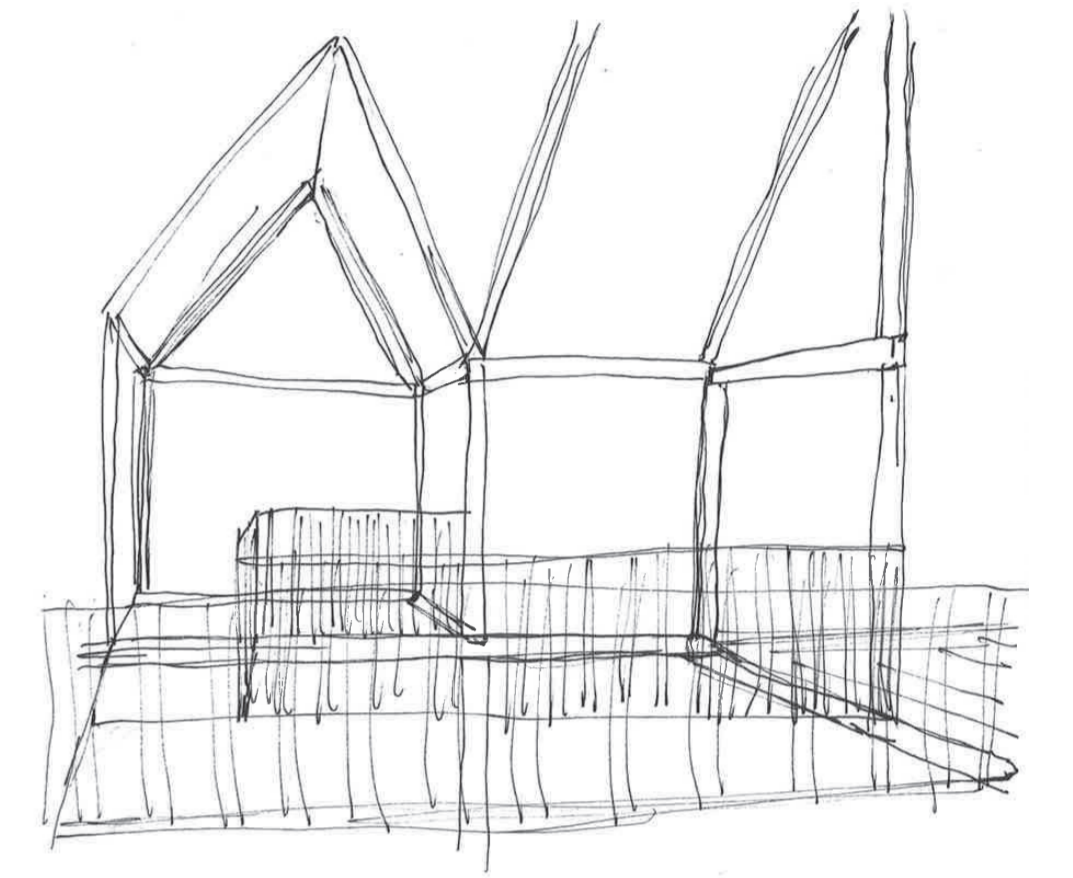
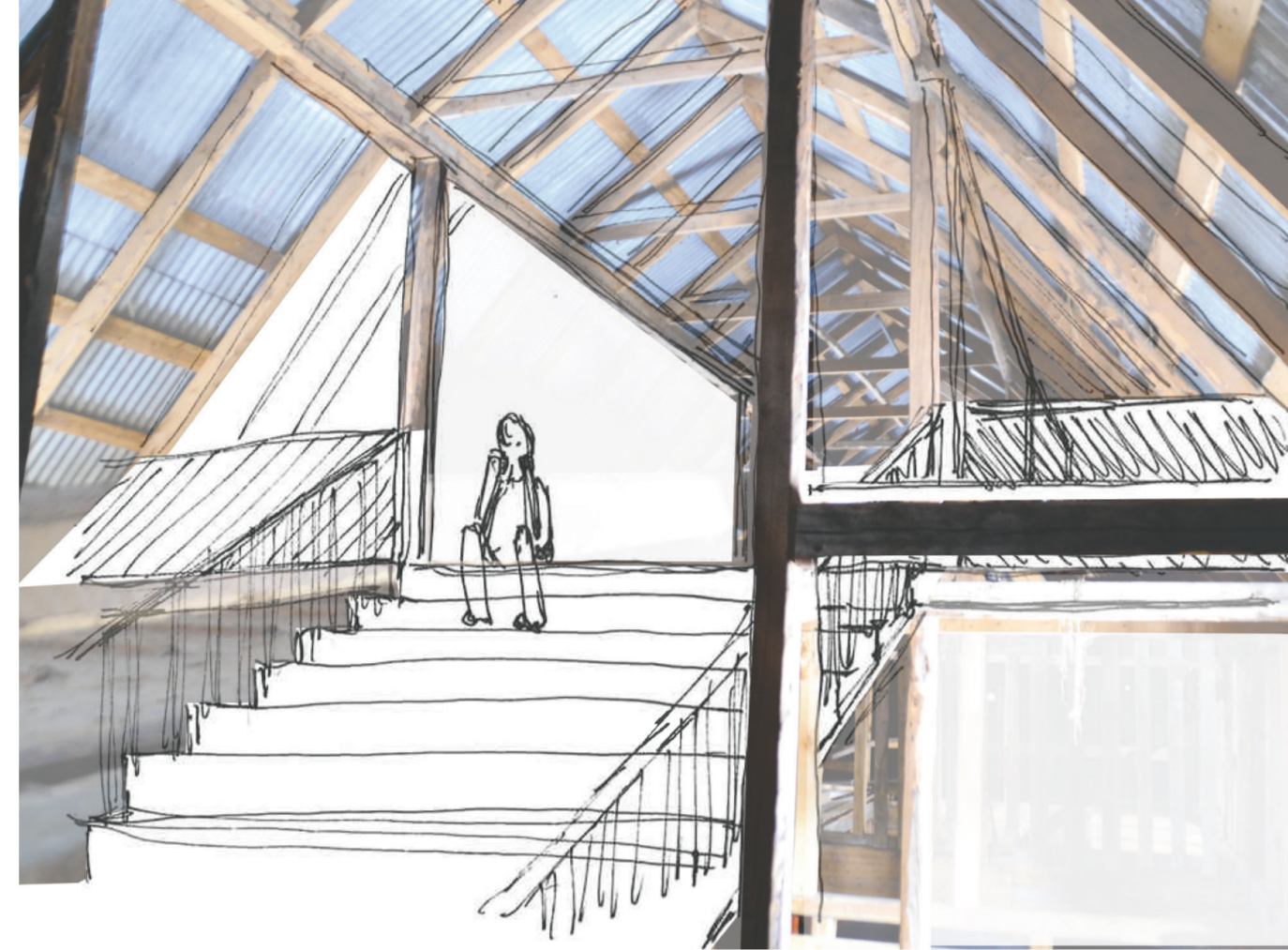
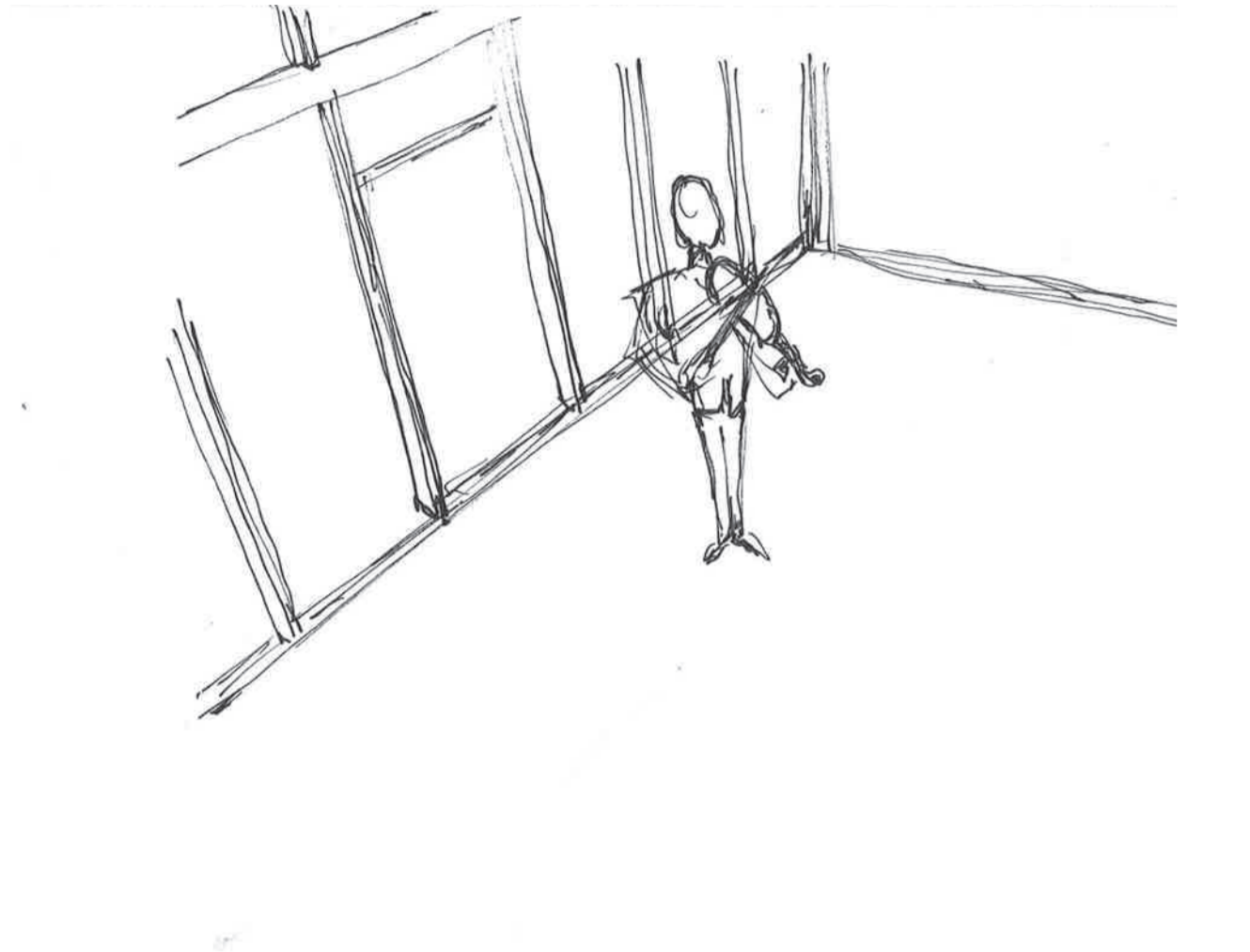
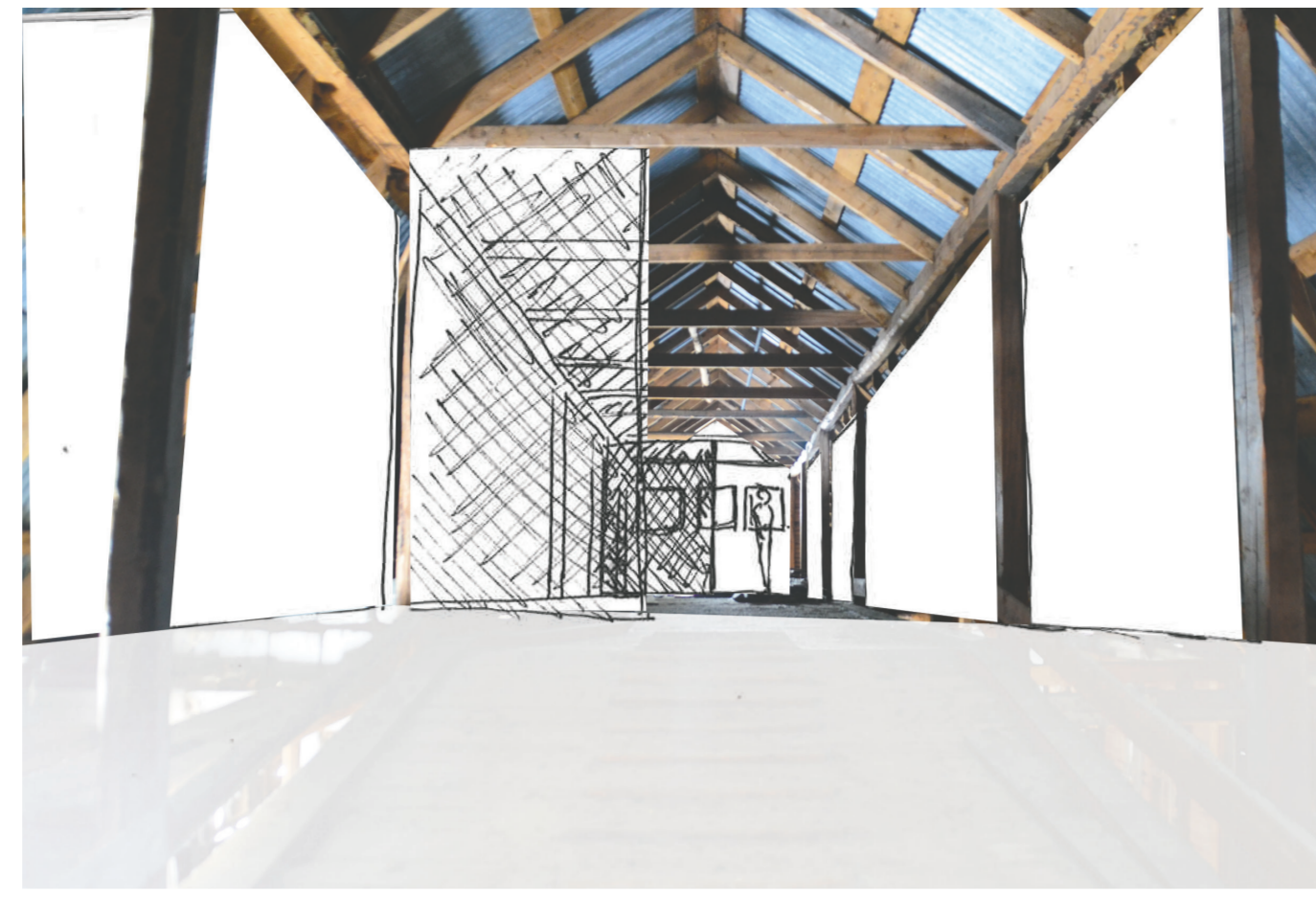
First floor:
2) Hayloft 1, 19 m²
3) Hayloft 2, 24 m²

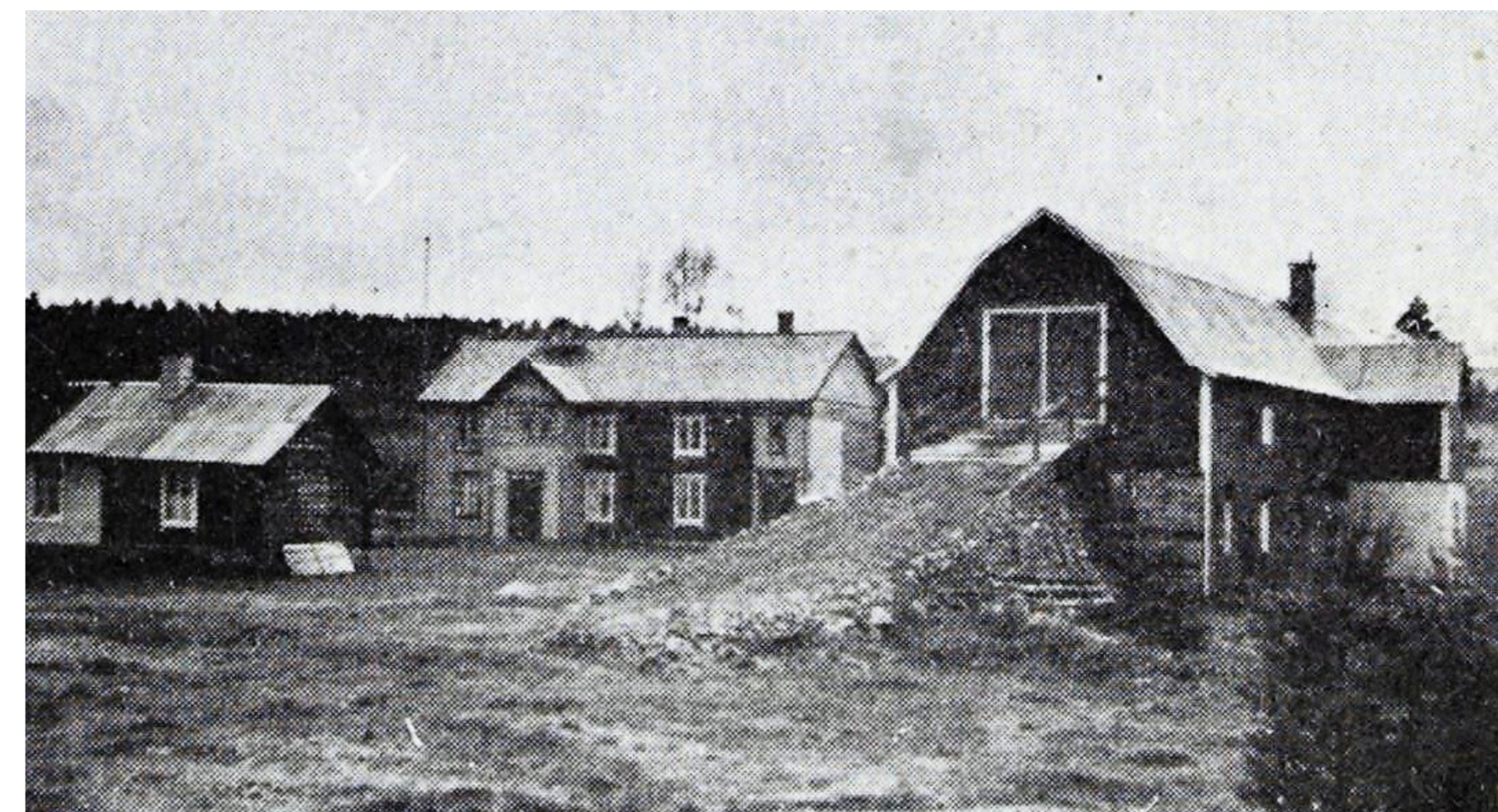


Ground floor:
4) Cow/sheep stalls, 42 m²
5) Entrance, 8 m²
6) Storage, 22 m²
7) Silo, 5 m²
8) Storage, 32, m²
9) Stable entrance, 17 m²
10) Stable storage, 5m²
11) Stable, 16 m²

Room investigations

The picture shows how a transformation of this barn may appear.
The solution tries to keep some of the barn's openness while still being able to close off the individual rooms.





- 1 Town hall and police
- 2 Grocery store and offices
- 3 Library
- 4 Local Bank (TOS)
- 5 Health Clinics
- 6 Primary school
- 7 Vidarheim community house
- 8 Dølmotunet farm museum
- 9 Tolga station, train and buses
- 10 Industry area
- 11 Tolga nursinghome
- 12 Sætersgård Stafium

Program : No program

The decision of having no specific program is based on the farm's location and imagined future use. The farm is privately owned and it is likely that the owner would need some sort of income to benefit from the restoration/transformation. Because of this the main focus has been to figure out how one can create a flexible solution to the building, allowing the barn to change room sizes after what space is needed.

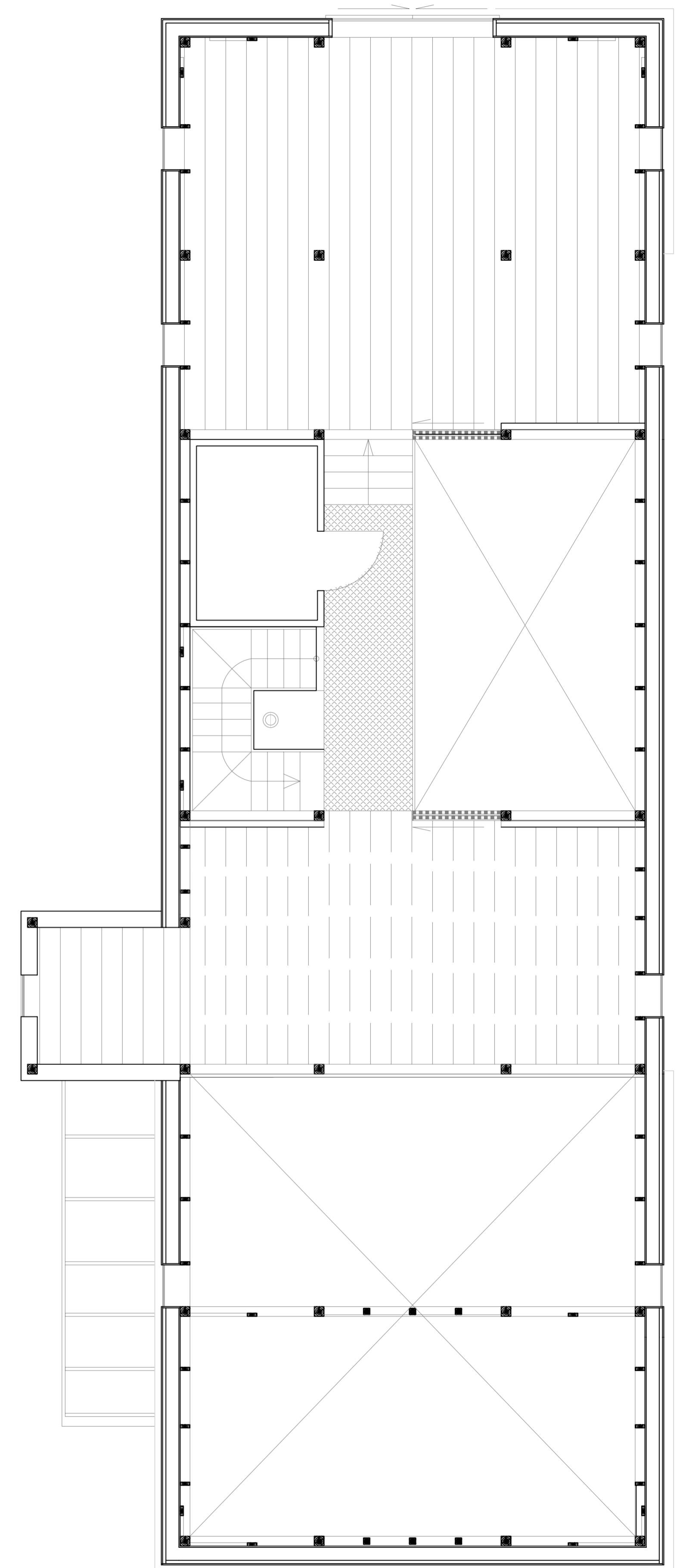
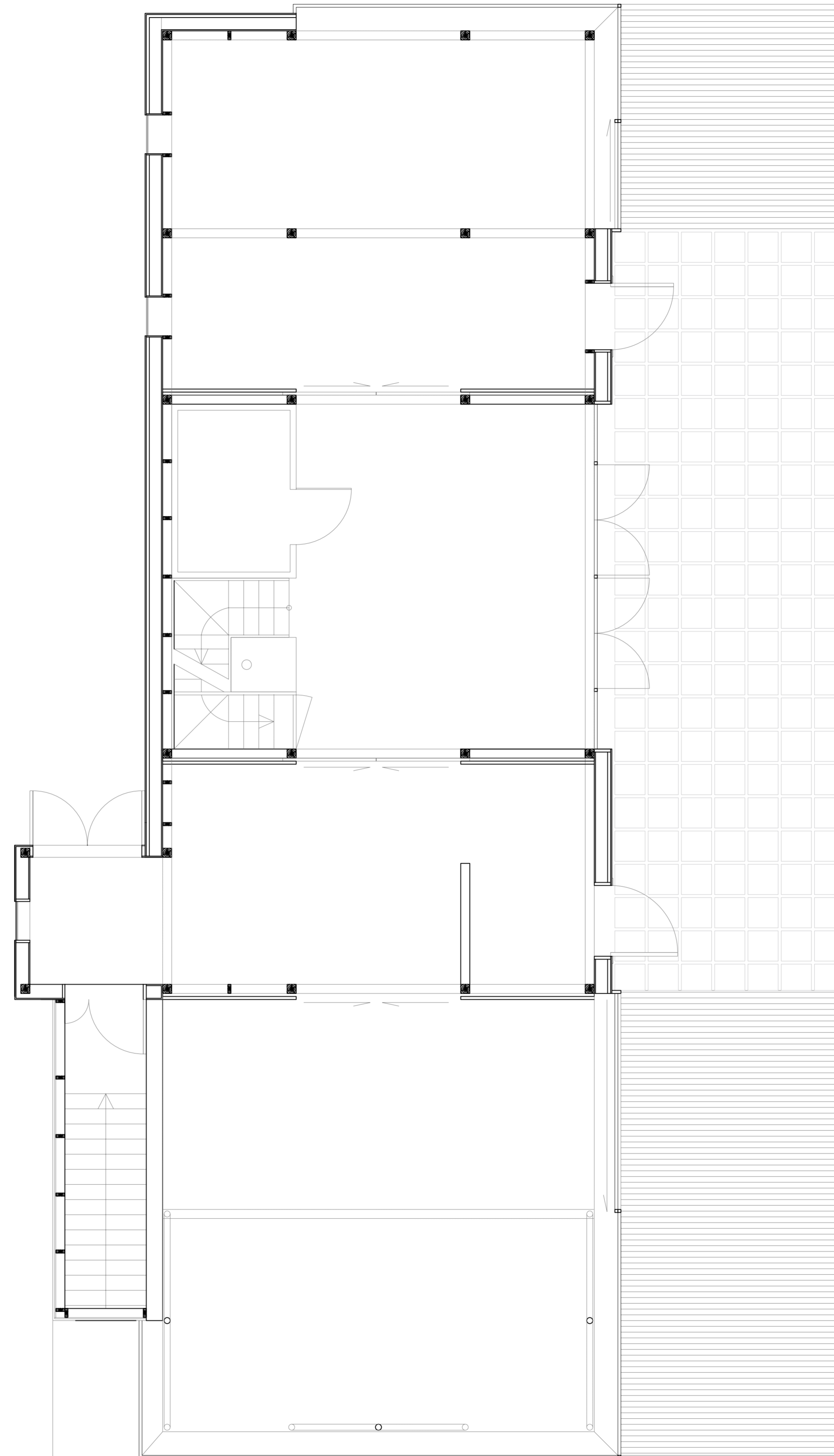
This is also a benefit if the goal is to rent out the barn to local businesses. In a small place like Tolga, it is hard to get an establishment going and many face the need of closing their business. If the barn had been tailored to the need of one specific program, say a music studio, it could be costly to refurnish the barn for the new next user. The key to a building's survival is being able to adapt to new uses.

This building has already lost its main purpose, it is a goal trying to prevent it from happening again.

The new layout tries to keep the traditional tone in the building while applying the modern standards.

The main goal is to preserve the construction, but the visual appearance on the outside concerns the people living around the farm.

To be able to open up as much as possible sliding doors are introduced in the middle axis of the building. Placing the non-flexible necessities central but towards the closed side of the building allows large open spaces to face the exterior "tun".



Before



After



Solutions

The picture shows how a transformation of this barn may appear. The solution tries to keep some of the barn's openness while still being able to close off the individual rooms.

After



Before

