

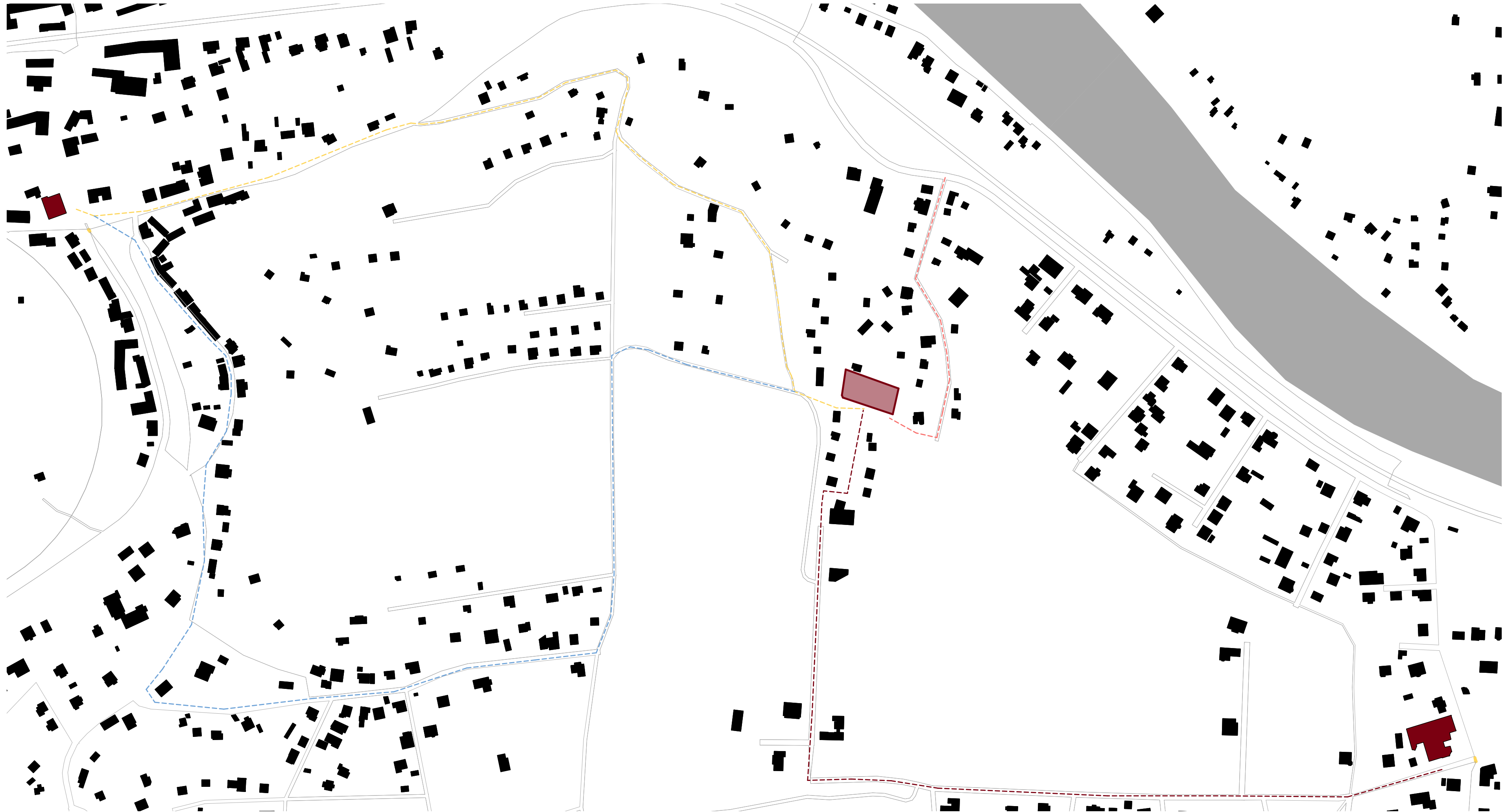


FAMILY HOUSE ZADNÍ TŘEBAŇ

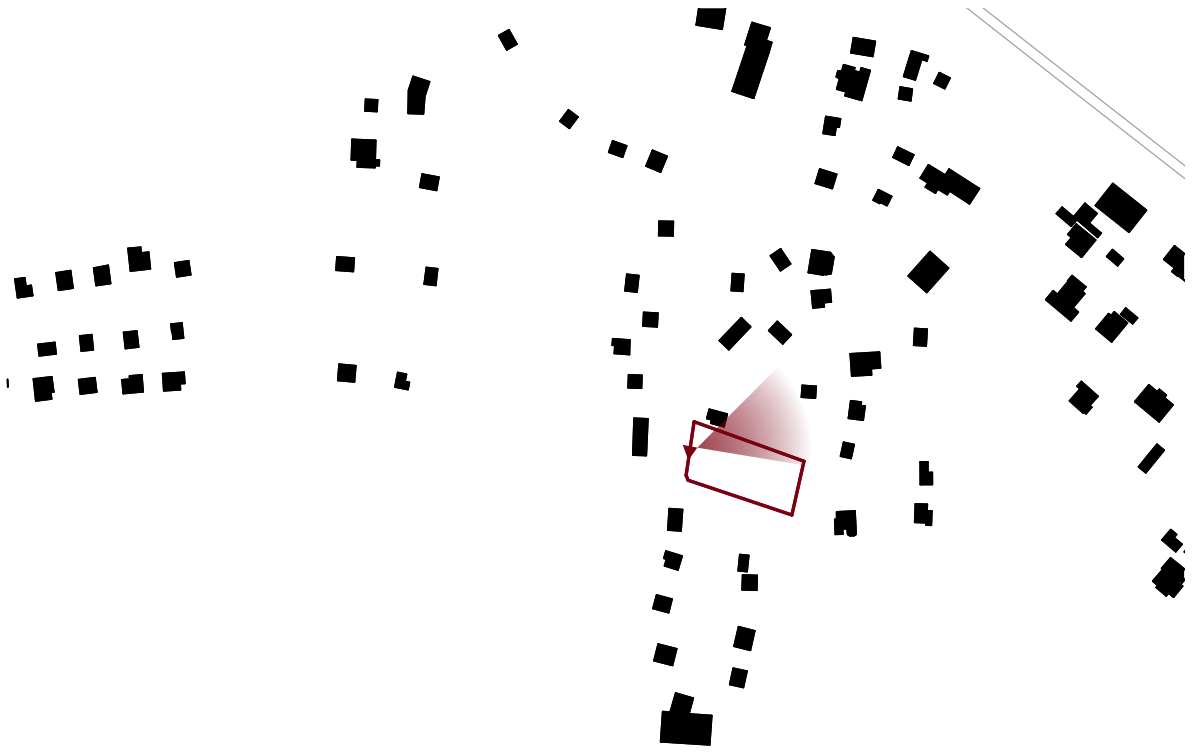
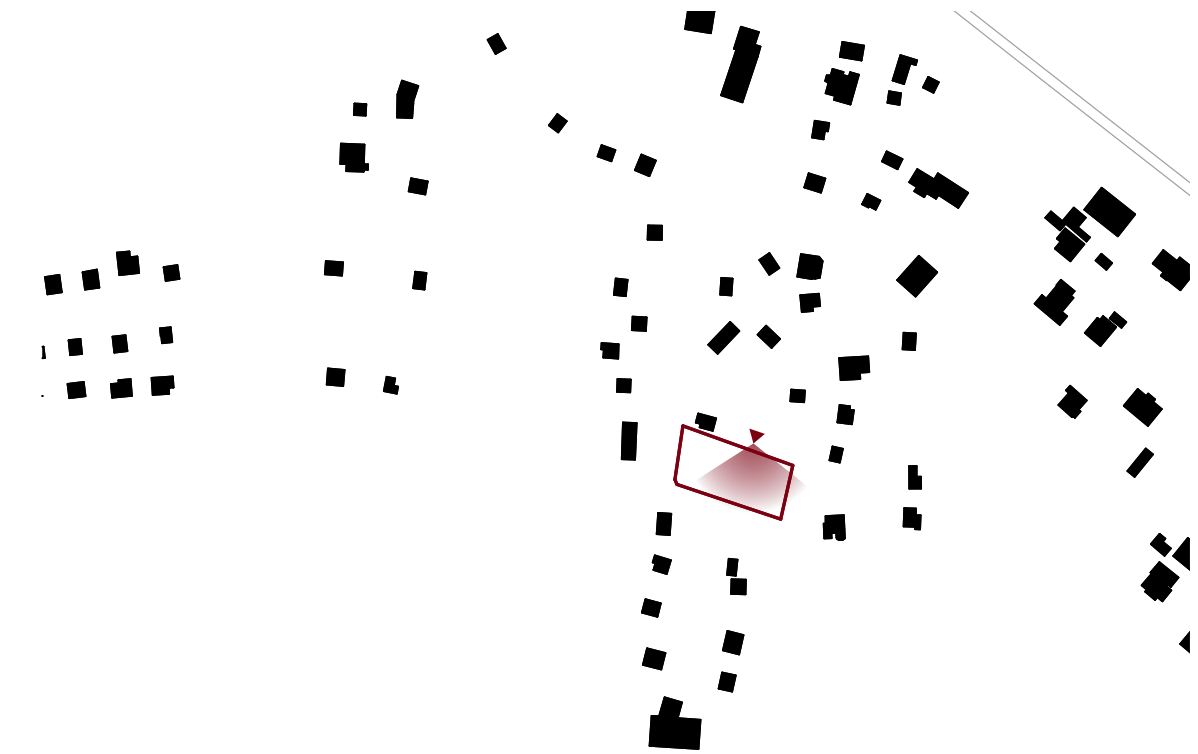
BEROUN DISTRICT

project by Zuzana Hartová
supervisor Ing. arch. Jakub Zoula

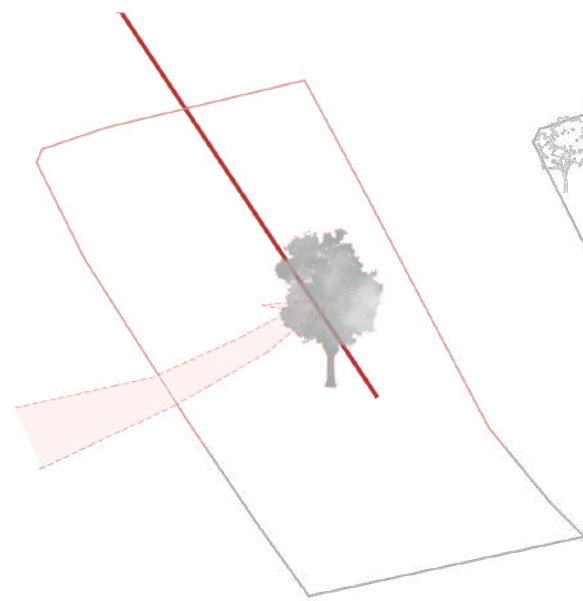




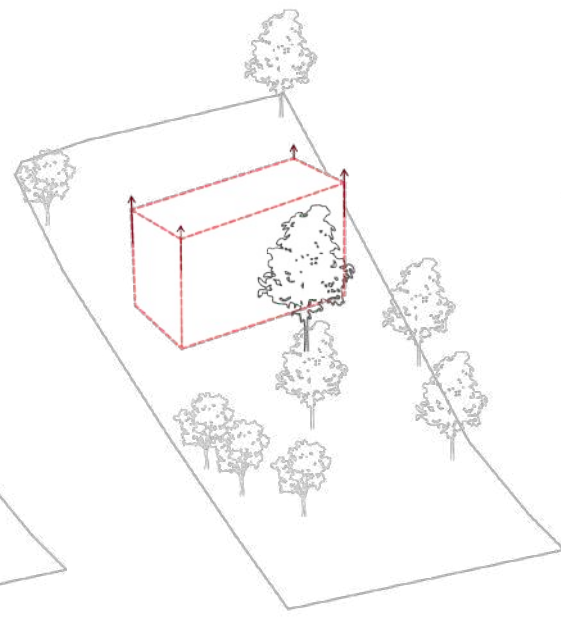




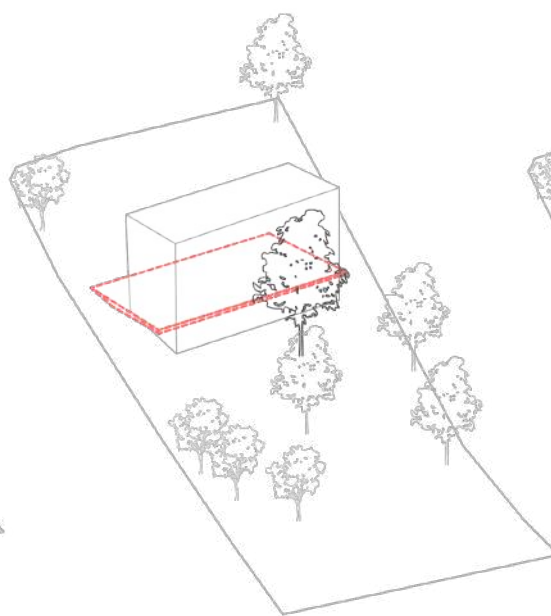




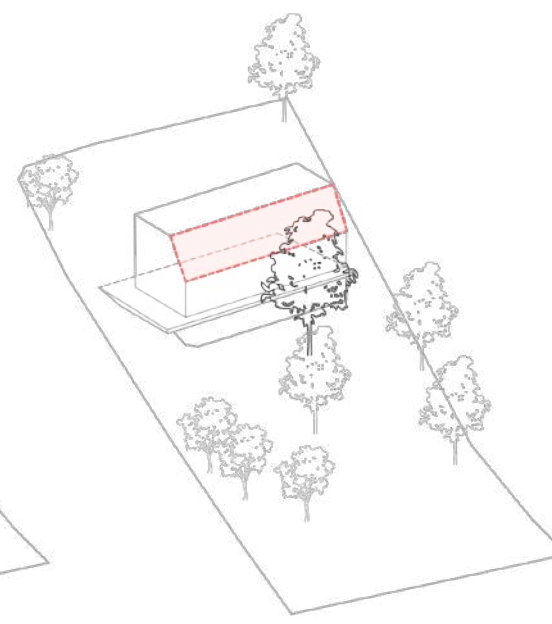
placement on the site
axis: parents/walnut tree



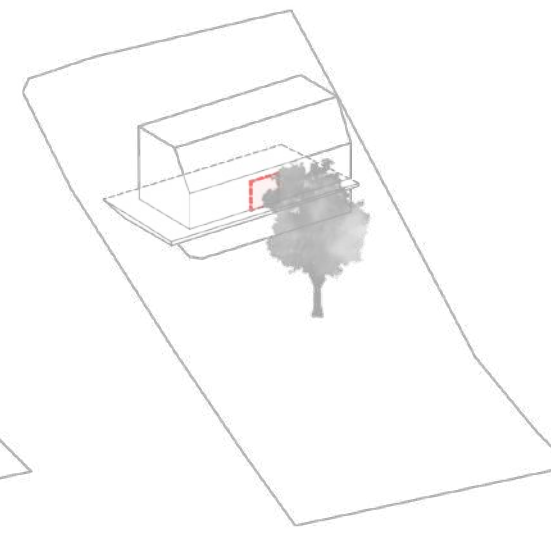
connection towards the views



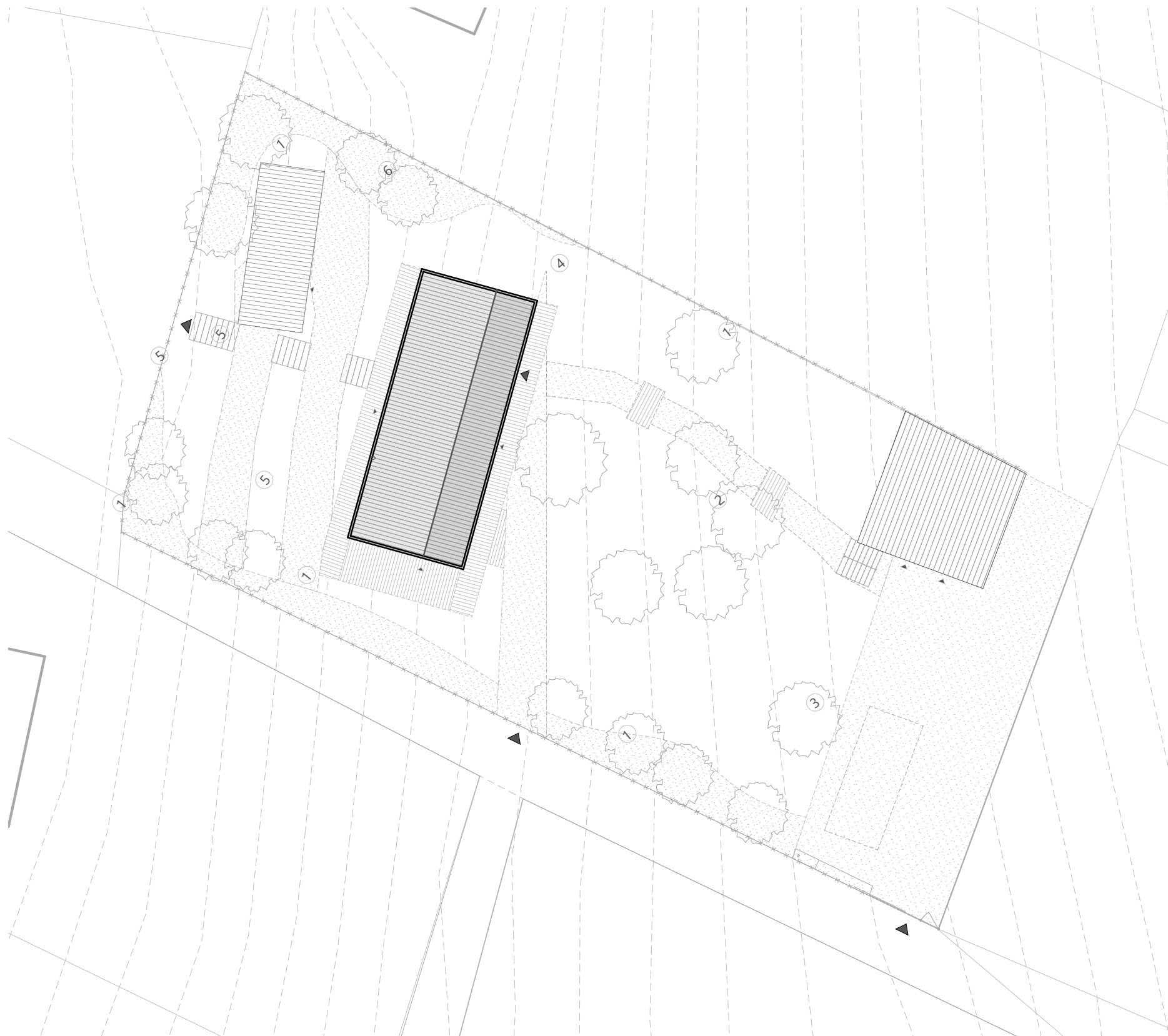
response to the topography
connecting interior with exterior



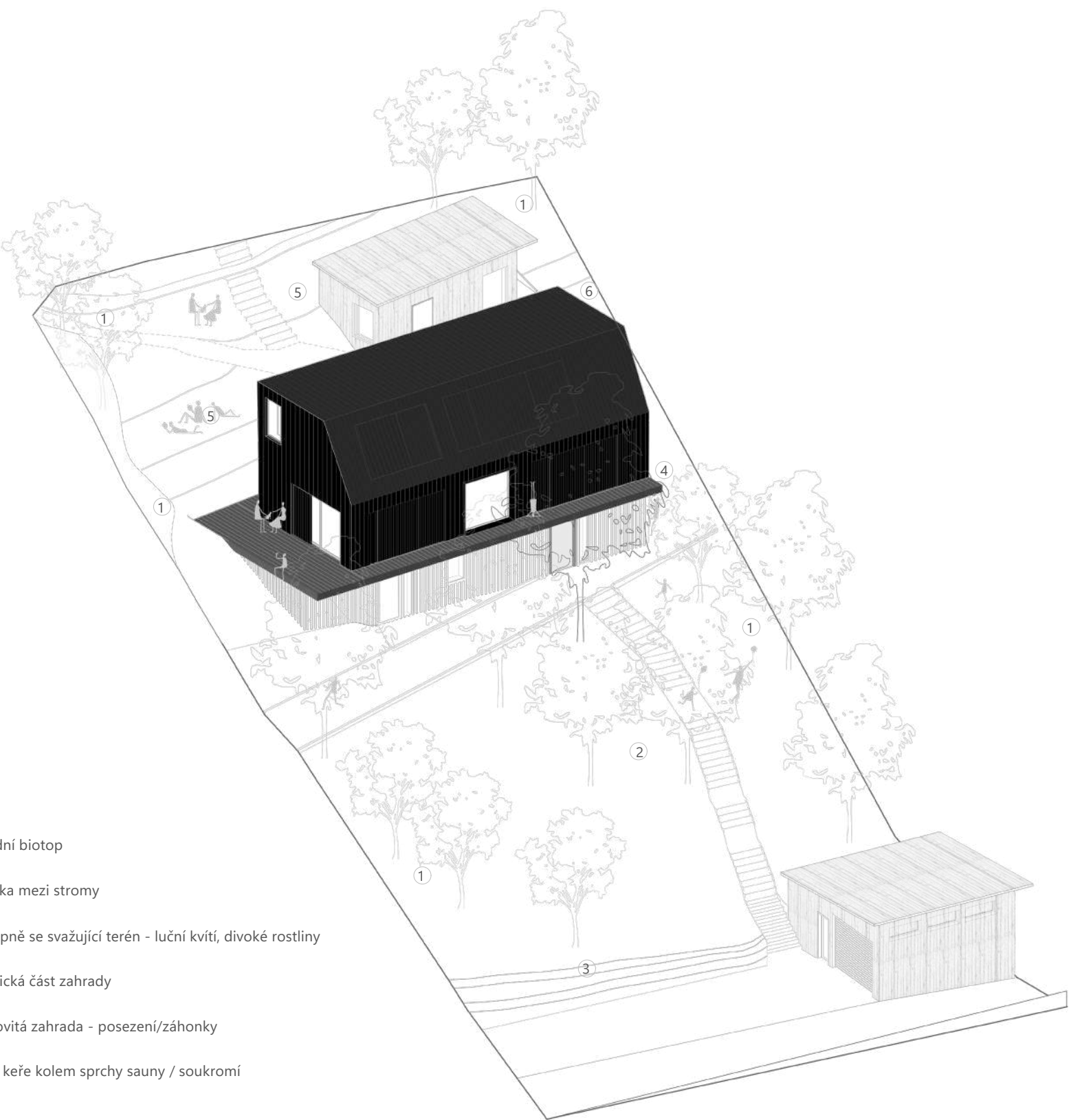
human scale



generational connection_family tree

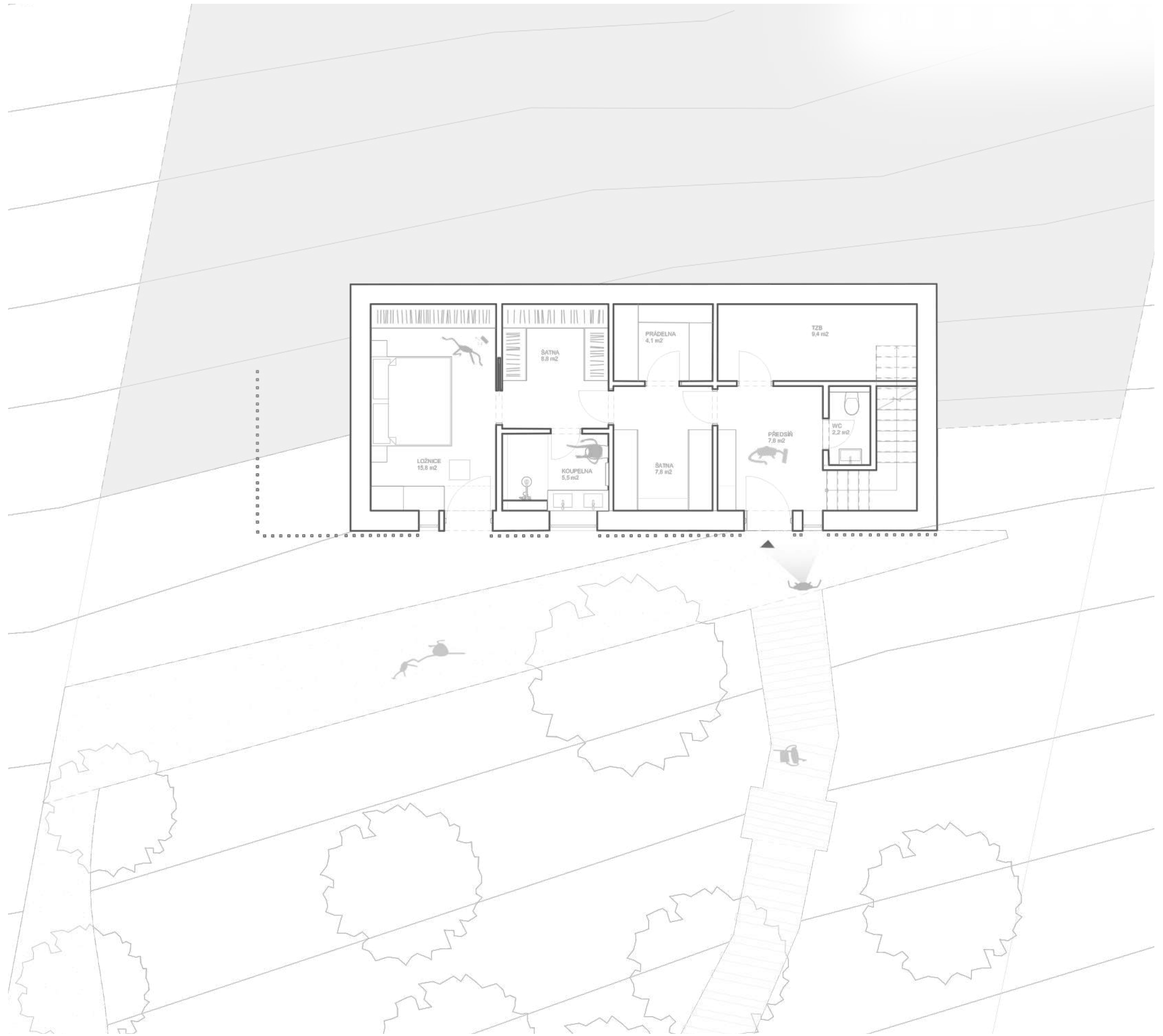


site contex plan



- ① přírodní biotop
- ② hamaka mezi stromy
- ③ postupně se svažující terén - luční kvítí, divoké rostliny
- ④ technická část zahrady
- ⑤ terasovitá zahrada - posezení/záhonky
- ⑥ husté keře kolem sprchy sauny / soukromí

axonometric view

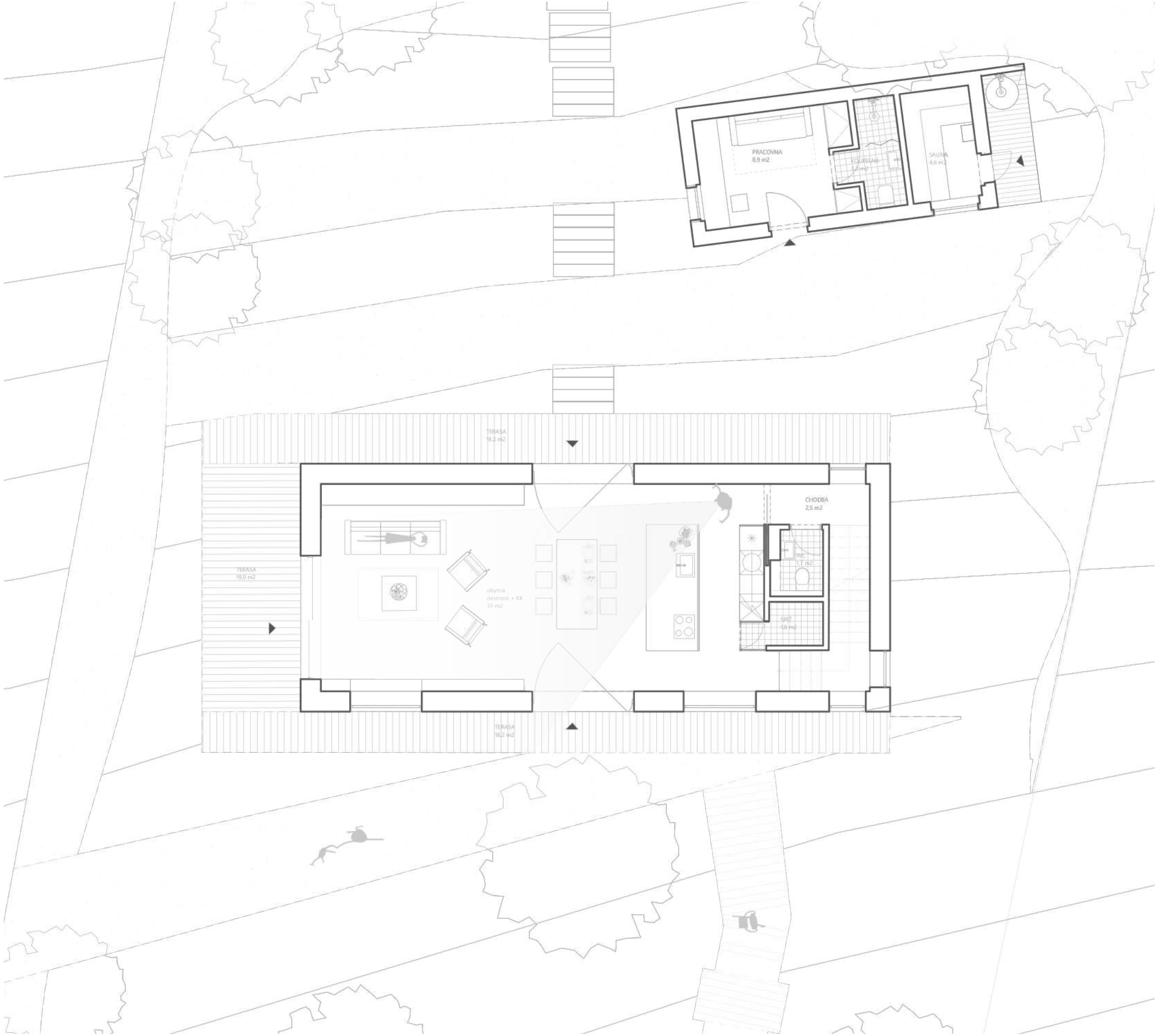


ground floor plan_partially below grade

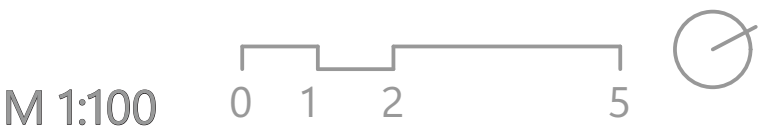
M 1:100

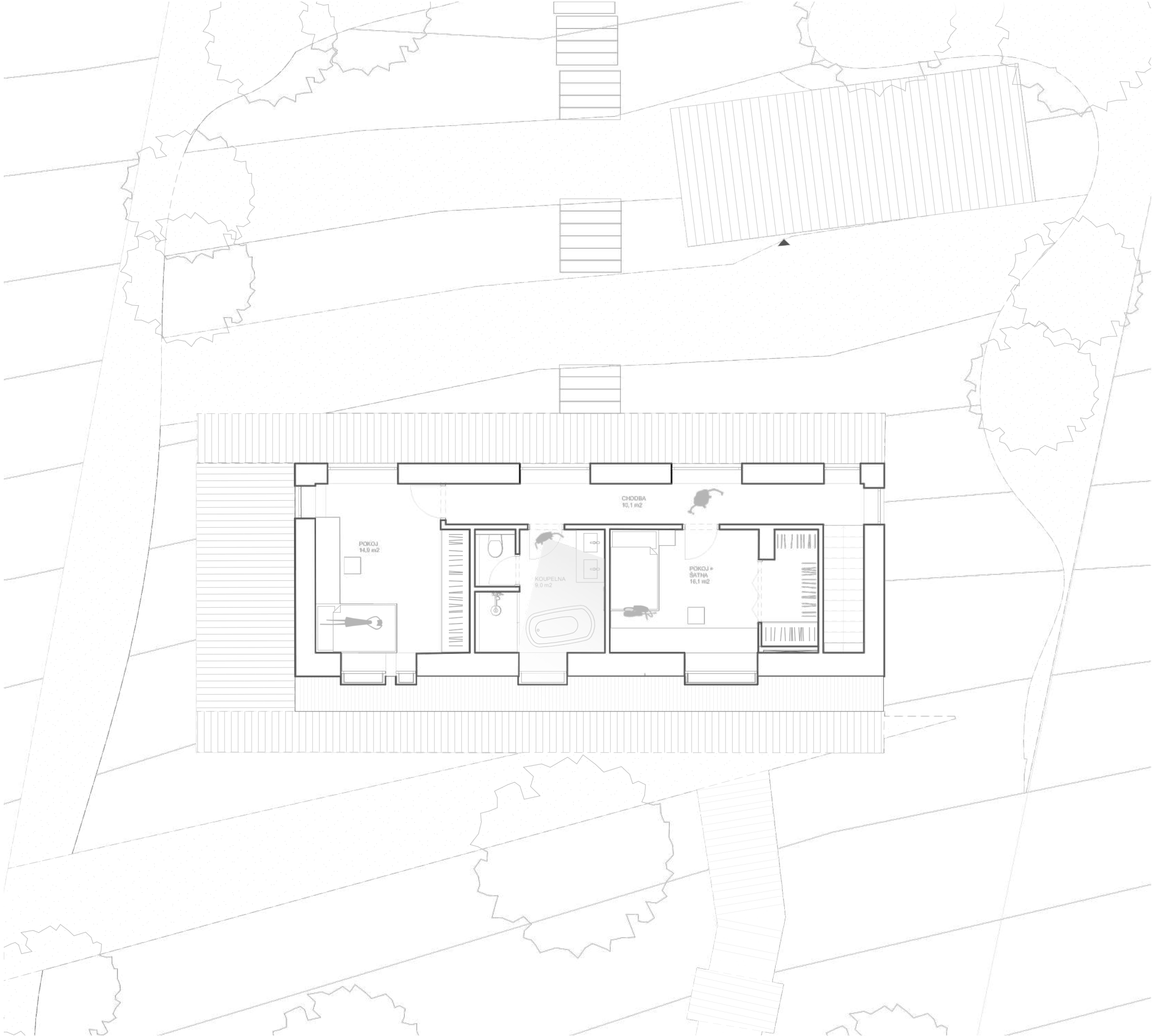
0 1 2 5



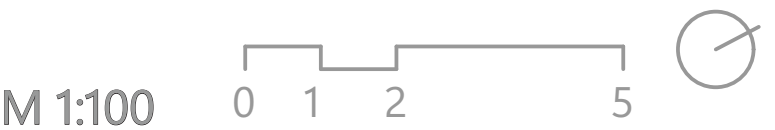


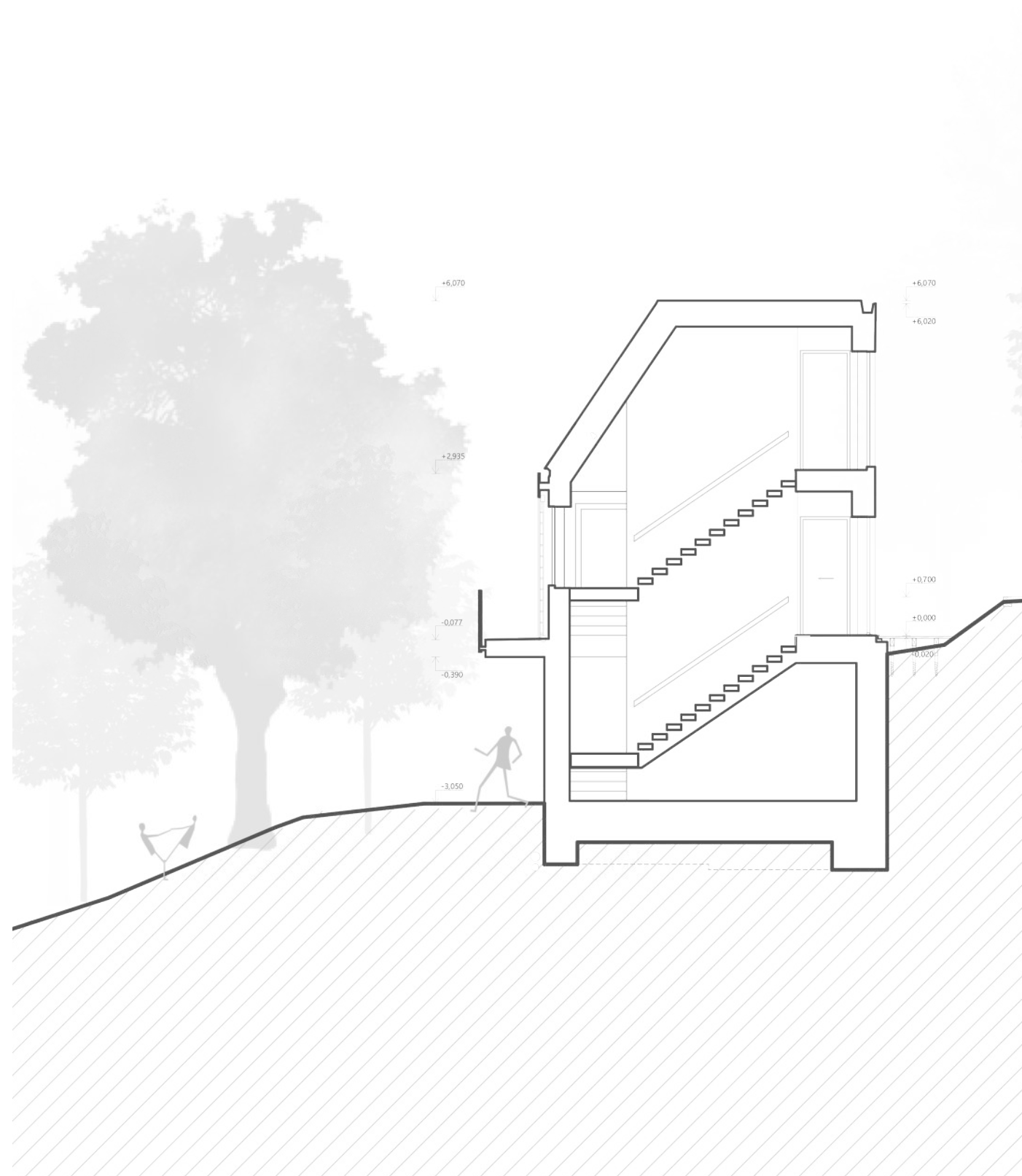
1st floor plan





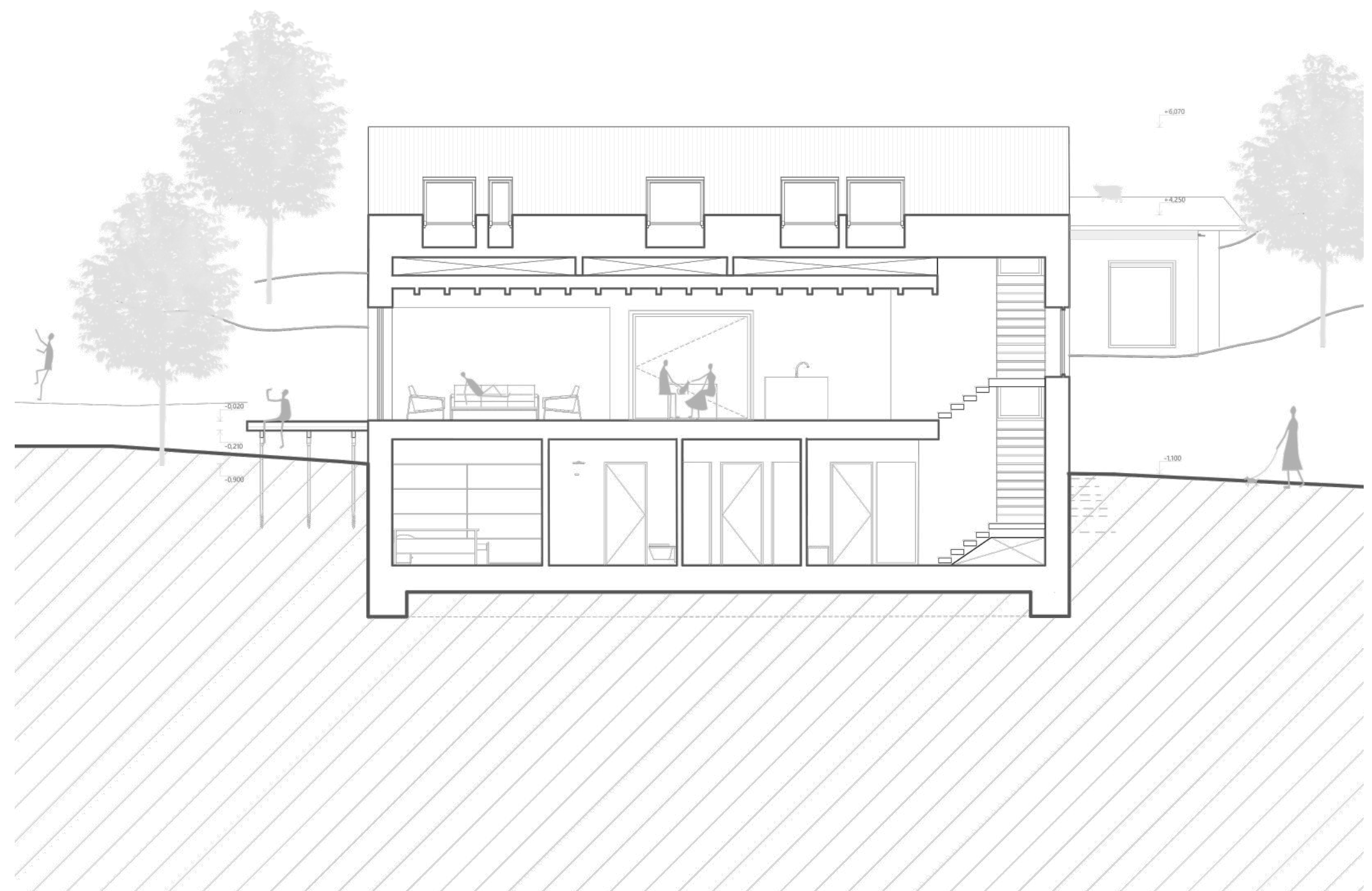
2nd floor plan





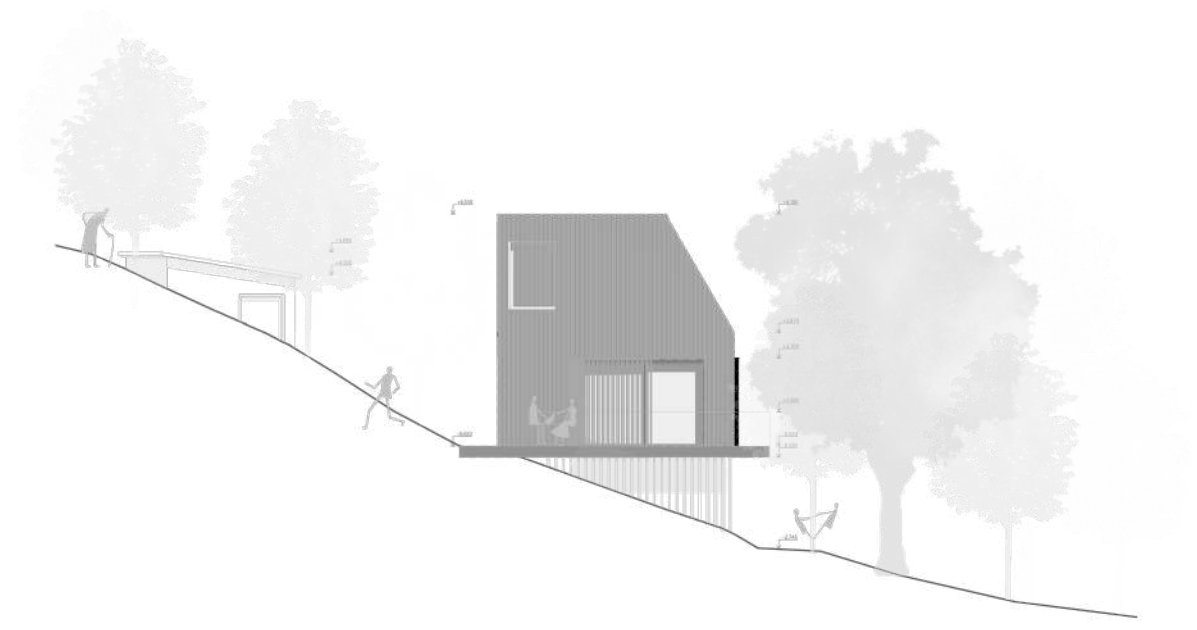
cross section

M 1:100 0 1 2 5

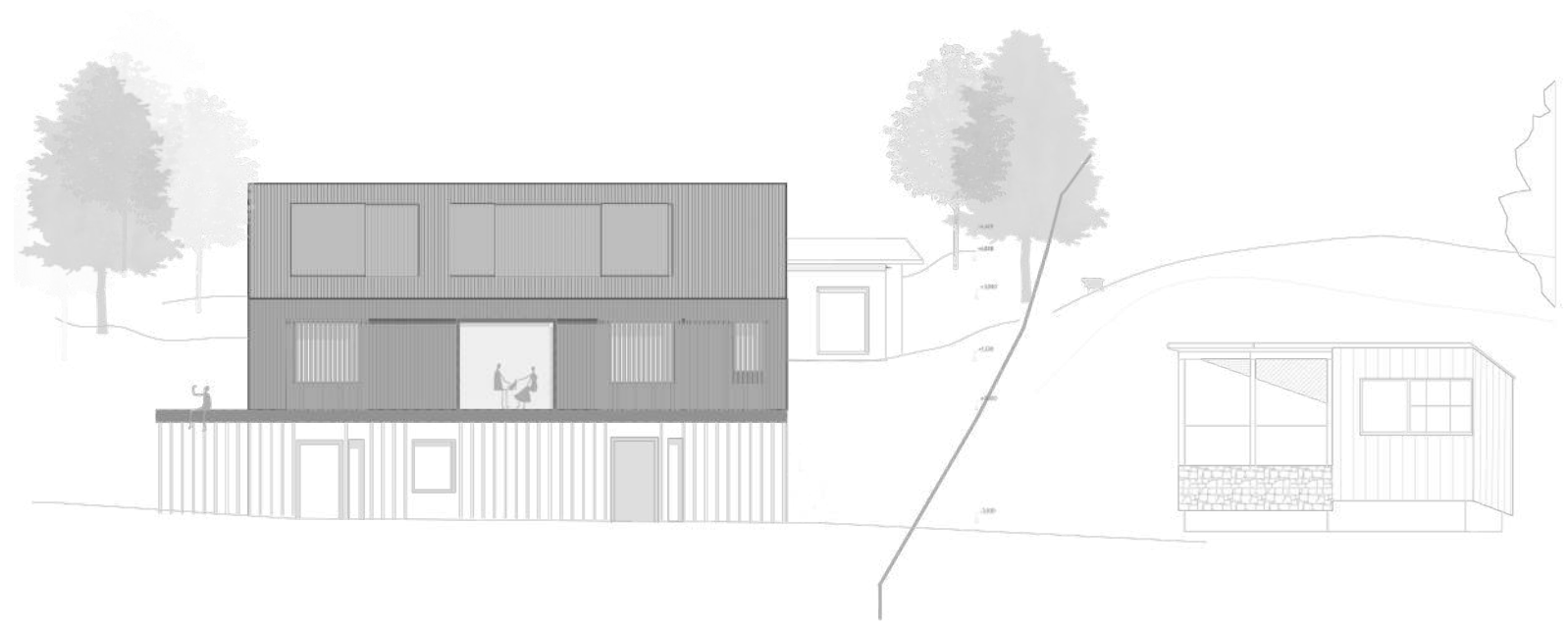


longitudinal section

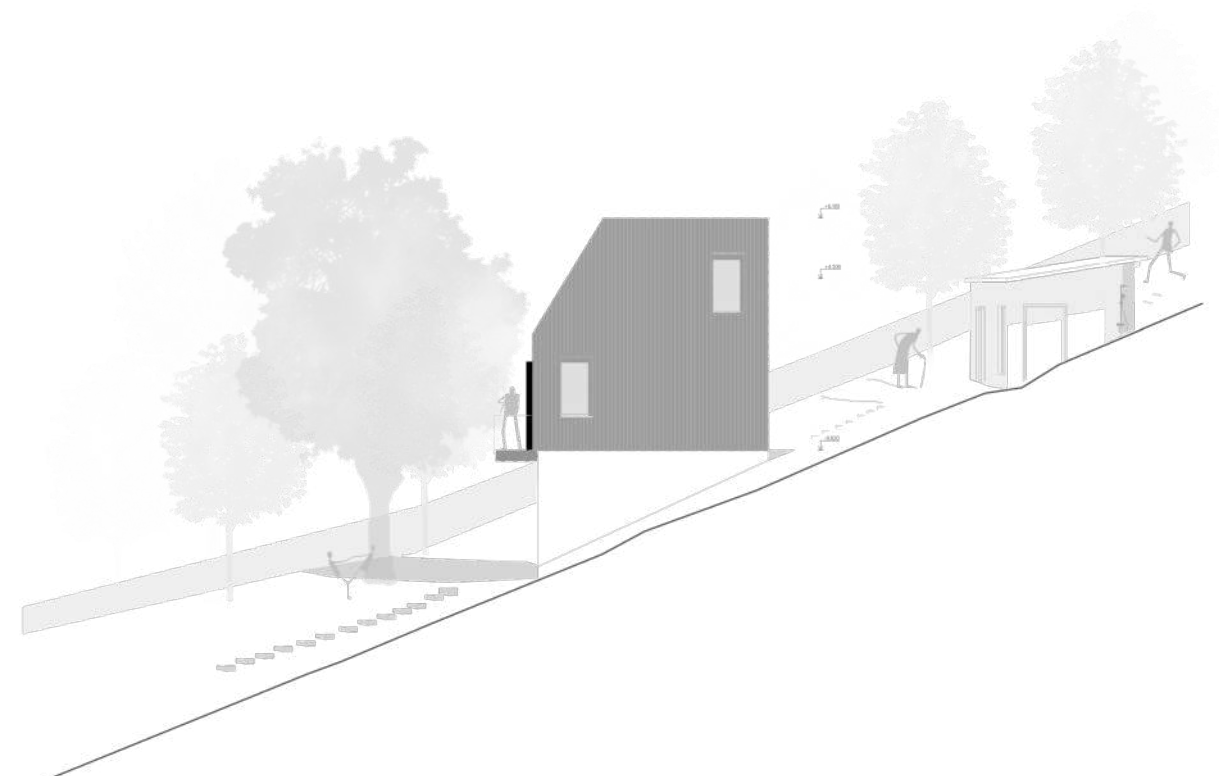
M 1:100 0 1 2 5



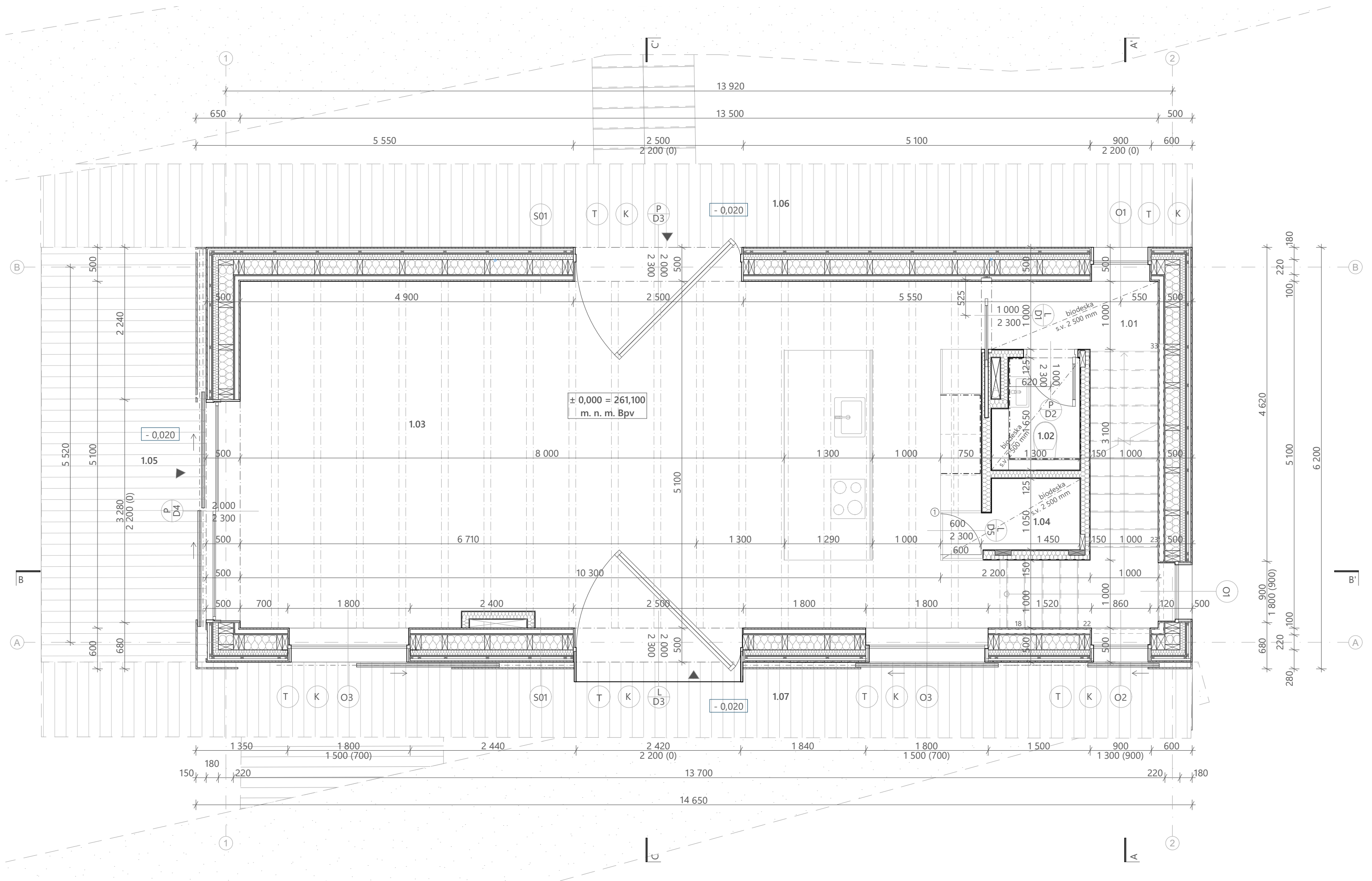
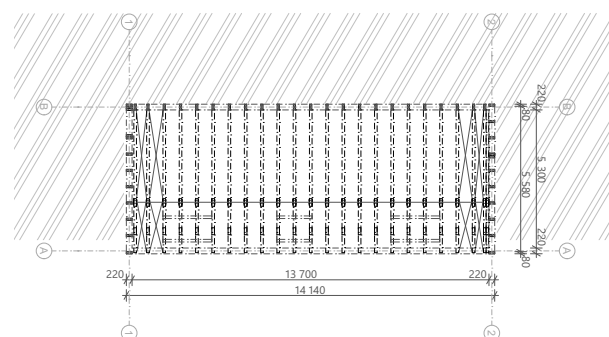
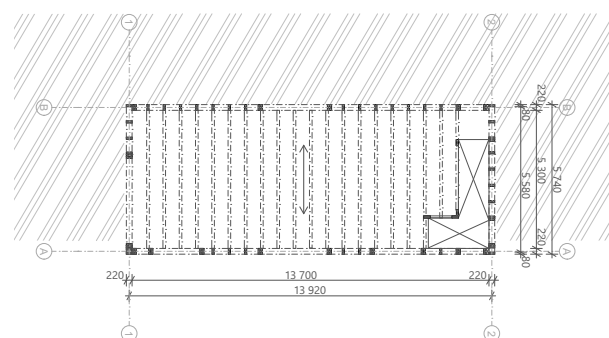
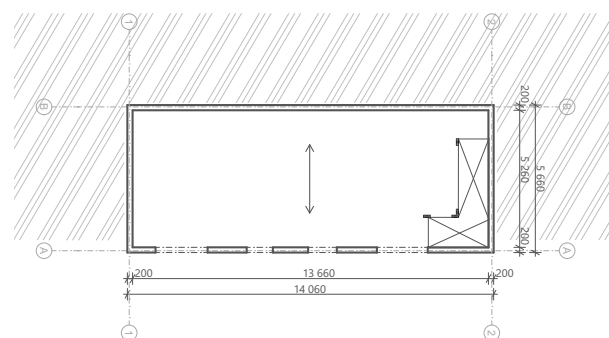
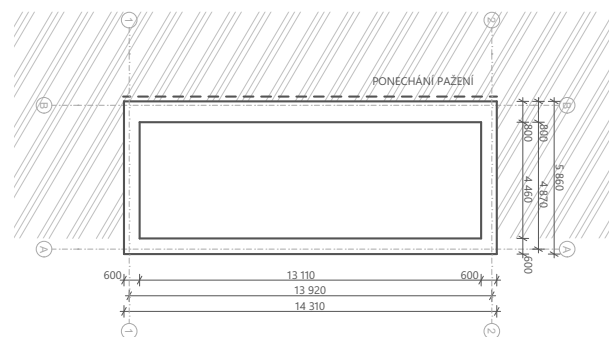
south elevation

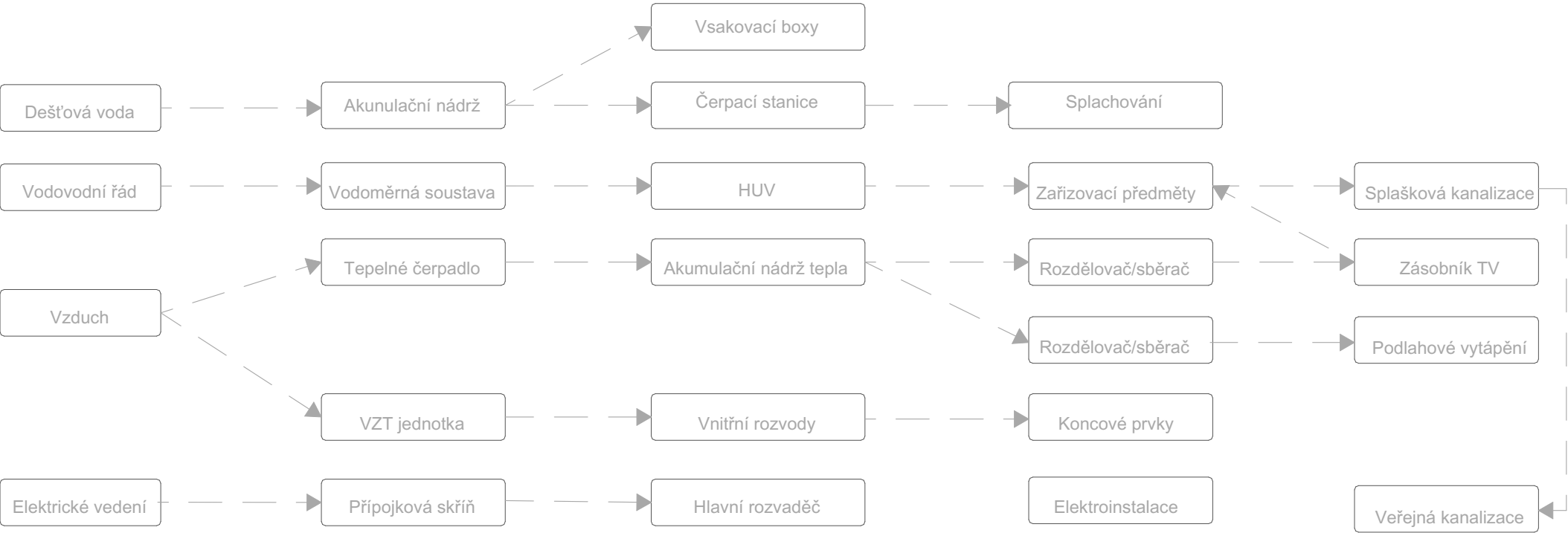


east elevation

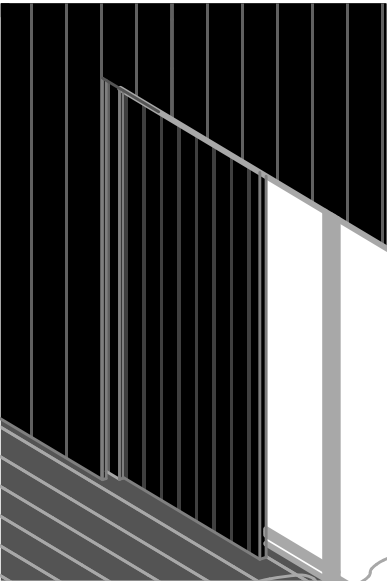


north elevation





shading concept

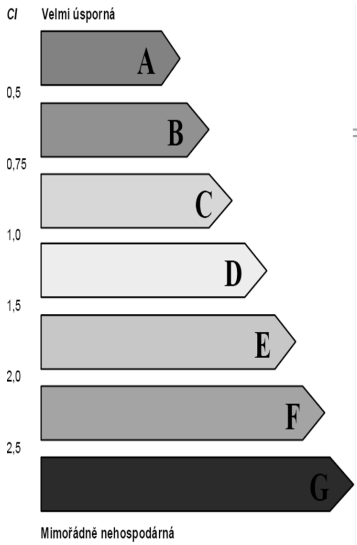
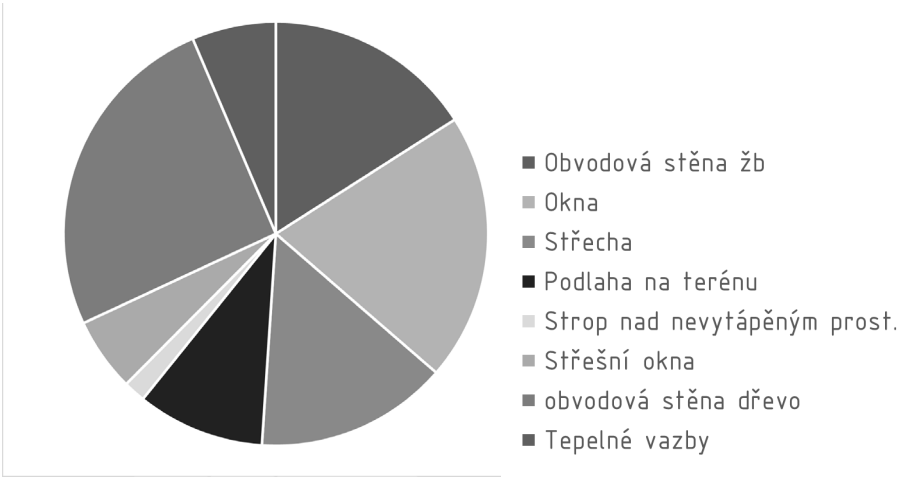


- 1 sliding shutters
- 2. external louvers
- 3. landscape concept

heat losses

building envelope rating

average U-value



=0,54

$$U_{em} = \frac{\sum H_{t,j}}{\sum A_j} = \frac{\sum 117,53}{\sum 579} = 0,20 \text{ W/(m}^2 \text{ K)}$$

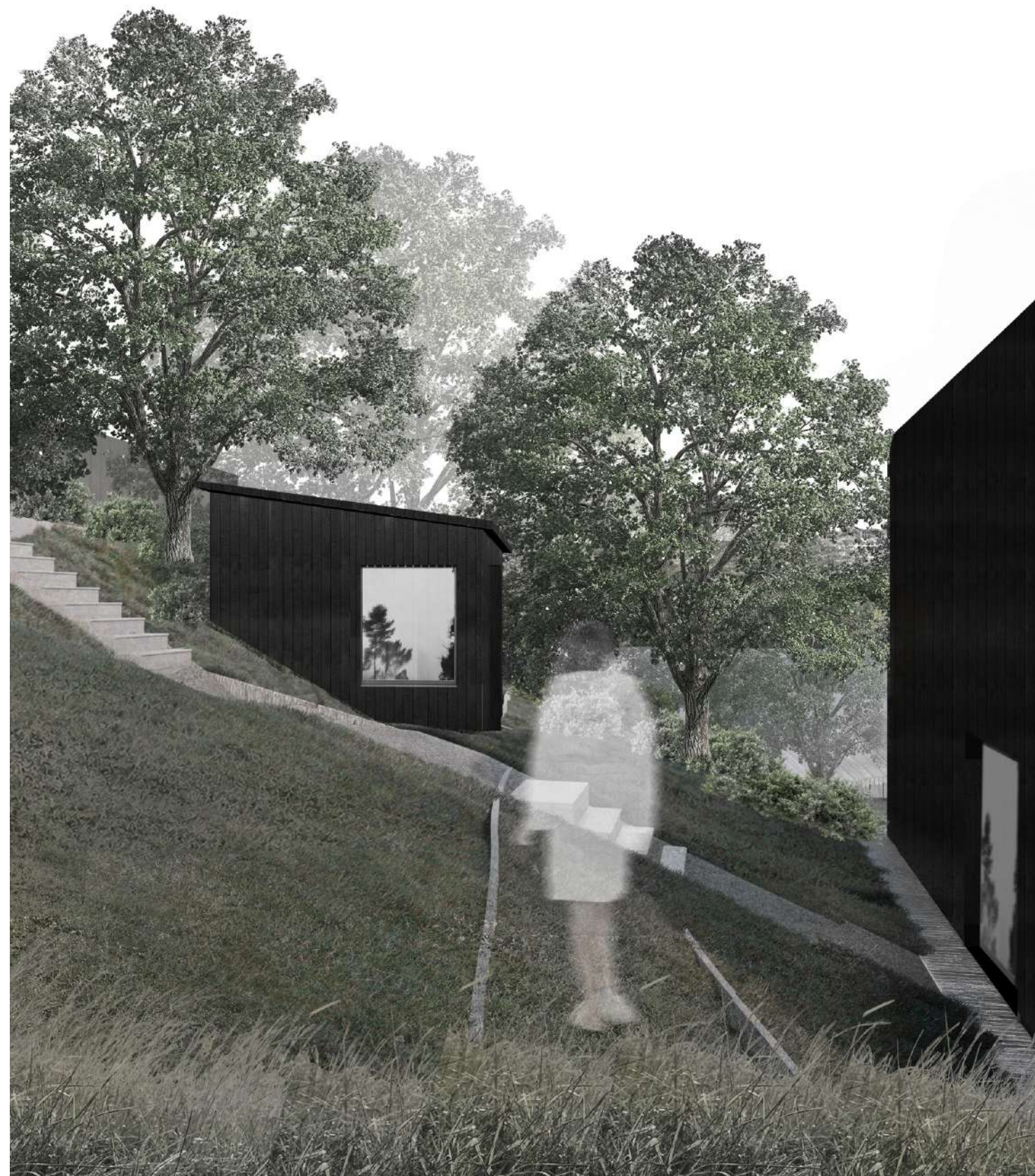
$$U_{em,N} = \frac{\sum H_{t,ref,j}}{\sum A_j} = \frac{\sum 215,58}{\sum 579} = 0,372 \text{ W/(m}^2 \text{ K)}$$

$$0,20 < U_{em} < 0,35$$

$$CI = \frac{U_{em}}{U_{em,N}} = \frac{0,20}{0,372} = 0,54$$

building service concept







thank you for your attention