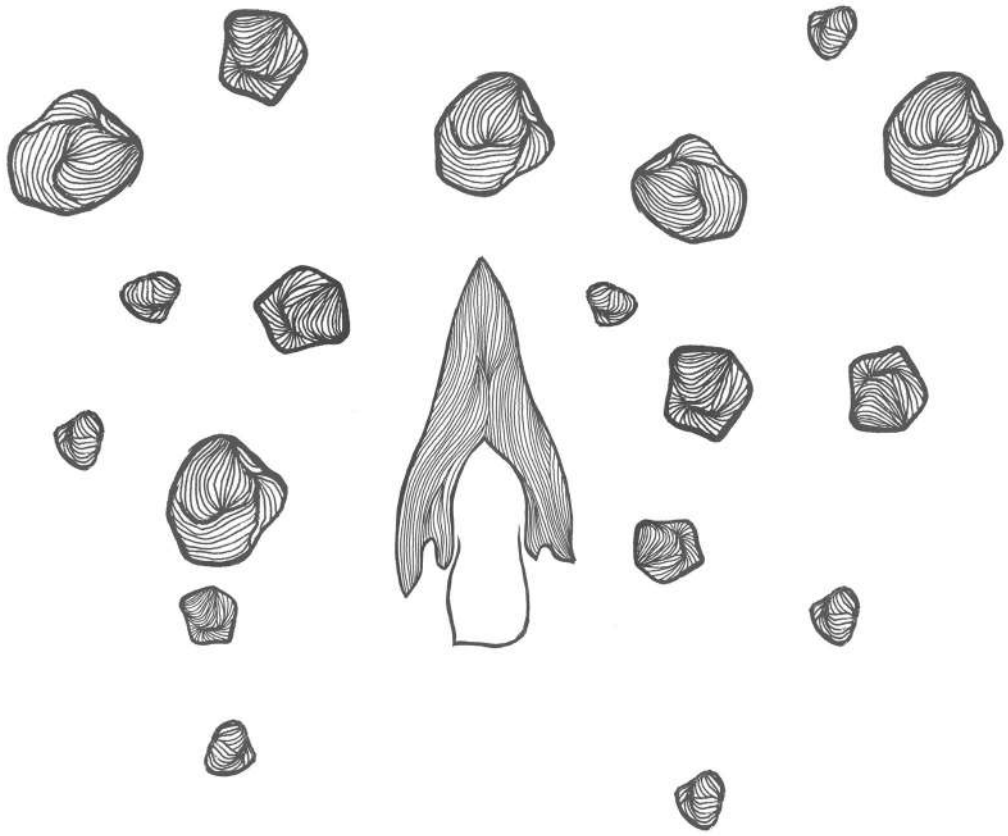
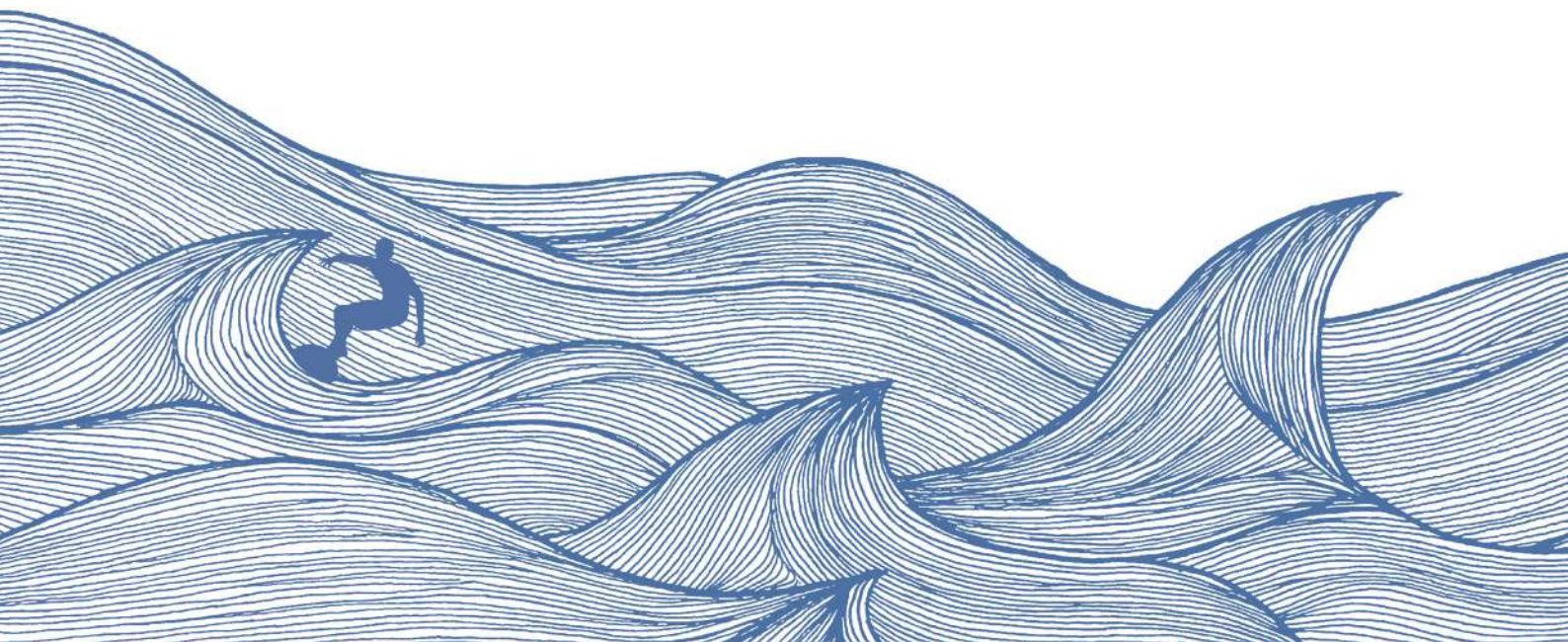
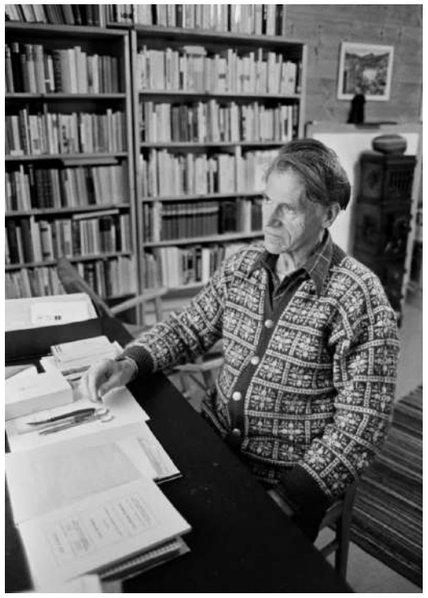


Let the landscape work

building a protected shelter in landslide zone in Hoddevik

Diploma project at Bergen Arkitekthøgskole
David Fercak





Olav Håkonson Hauge

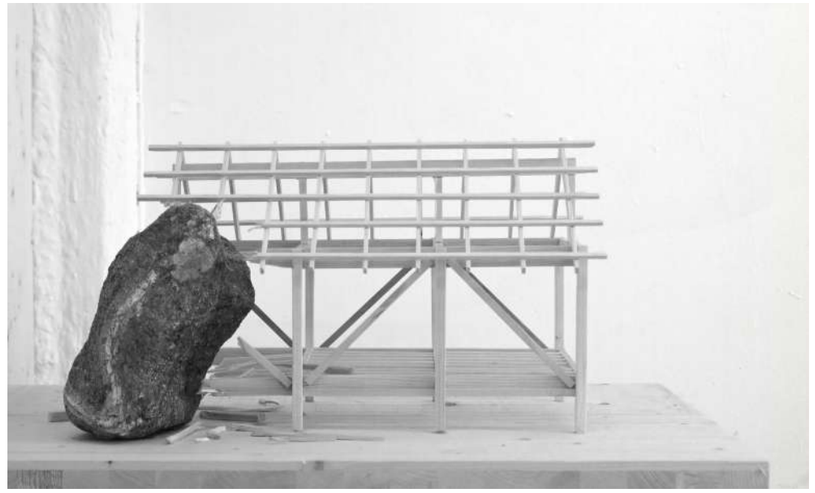
Under bergfallet

Du bur under bergefall.
Og du veit det.
Men du sår din åker
og trør trygt ditt tun
og lèt dine born leika
og legg deg
som inkje var.

Det hender,
når du stør deg til ljåen
ein sumarkveld,
at augo sviv som snarast
yver bergsida
der dei segjer
sprekken
skal vera,
og det hender
du vert liggjande vaken
og lyda etter
steinsprang
ei natt.

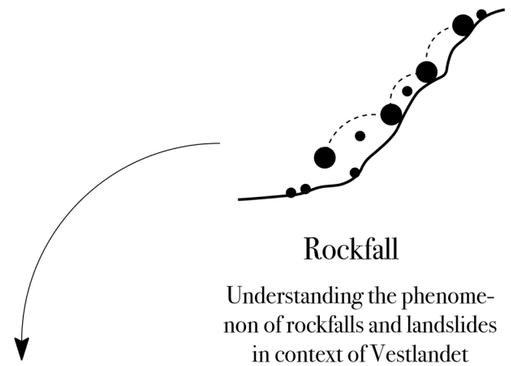
Og kjem raset,
kjem det ikkje uventa.
Men du tek til å rydja
den grøne boti
under berget

– um du då har livet.



Discourse

In recent years, people have become increasingly aware of the dangers of rockfalls and landslides. These events can be devastating to both people and the environment. However, we can shift our perspective to consider the potential opportunities they offer. By using the qualities of stone, we can design structures and systems that protect against these events while also enhancing the environment's aesthetic and tactile qualities. This concept can transform our understanding of rockfalls from a hazard to an opportunity for creative and sustainable design.

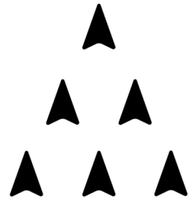


Rockfall

Understanding the phenomenon of rockfalls and landslides in context of Vestlandet

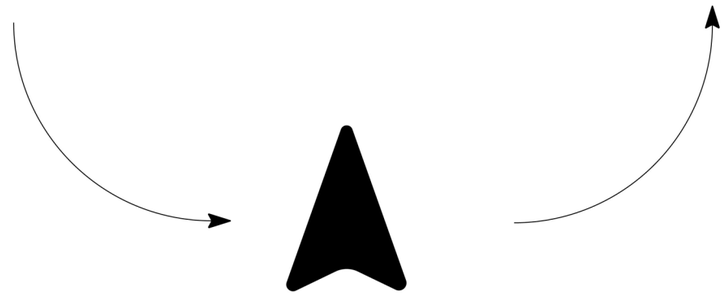
Stone (granite)

Realizing the constructive potential of the stone that fell from the mountains



System (tun)

Combining multiple structures into a system that works together

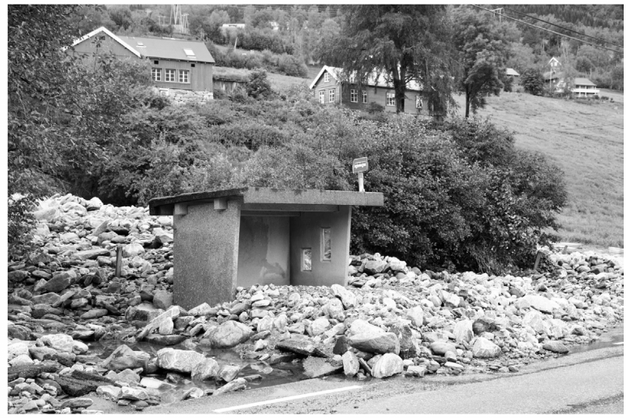


Structure (cabin)

Combining multiple stones into a formthat protects

Klimaforsker, Meteorologisk institutt og NVE: Må regne med flere skred

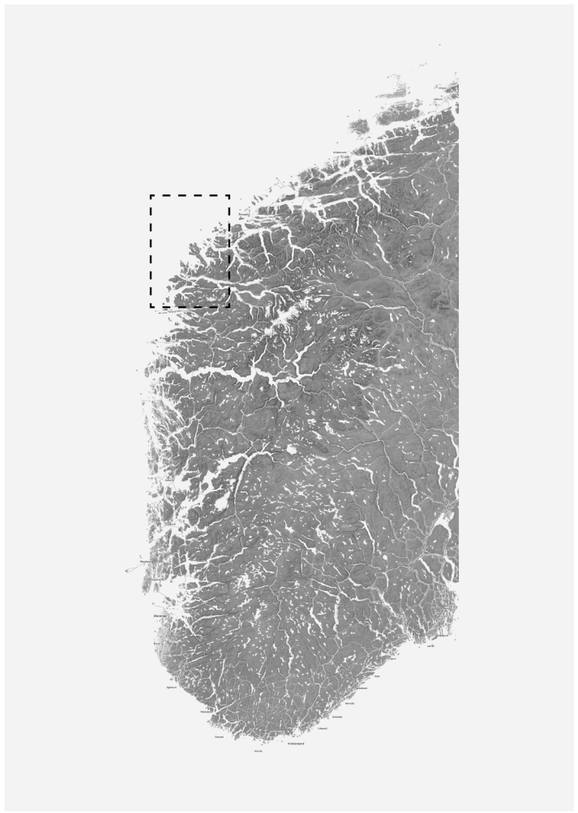
Flom og jordskred rammet Sogn og Fjordane kraftig denne uken. Én person er antatt omkommet. Ekspertene venter flere skred i fremtiden.



Slik så det ut ved et busstopp i Jølster kommune etter et av jordskredene. *Foto: Audun Braastad / NTB scanpix*

Landslides in Norway

The topography of Vestlandet, characteristic by its steep mountain slopes, is highly susceptible to rockfall incidents. Considering that rainfall serves as a primary trigger for such events, it becomes increasingly evident why a significant portion of landslides in Norway occurs specifically in this region. Within this context, you can observe a record of events that happened during the period I worked on this project, as documented in Bergens Tidene.

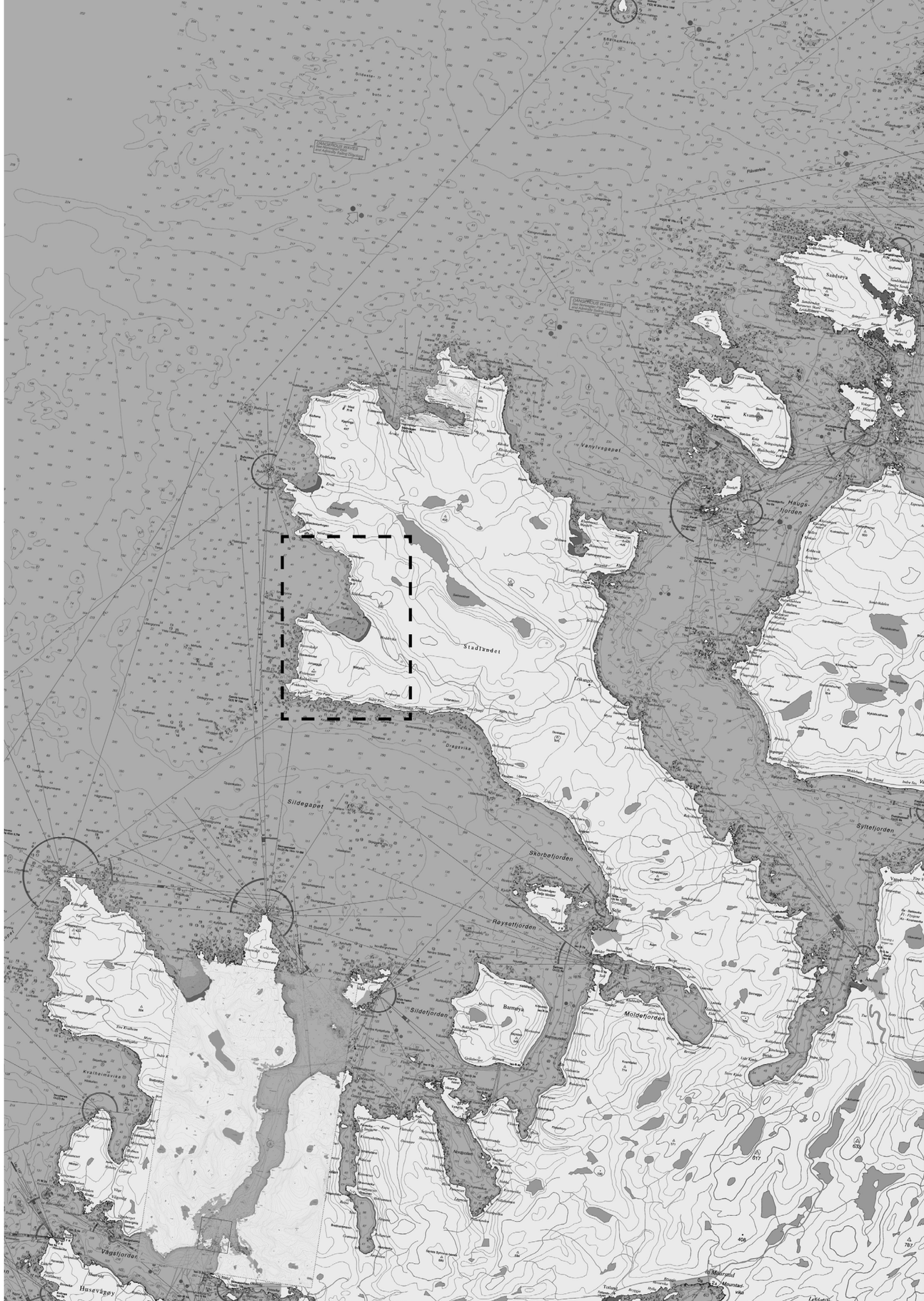


Vestlandet

The topography of Vestlandet, characteristic by its steep mountain slopes, is highly susceptible to rockfall incidents. Considering that rainfall serves as a primary trigger for such events, it becomes increasingly evident why a significant portion of landslides in Norway occurs specifically in this region.

Stadlandet

Stadlandet, located on the western coast of Norway, is renowned for its harsh and unpredictable weather conditions. Exposed to the full force of the North Atlantic Ocean and the North Sea, the peninsula experiences stormy seas and strong winds year-round, posing challenges for sailors and fishermen.



Weather in Stadlandet

The peninsula, exposed to the full force of the North Atlantic Ocean and the North Sea, experiences stormy seas, strong winds year-round and towering waves that shape the coastline. The combination of its rugged geography and proximity to the open sea creates an environment where wind speeds can reach high levels. These strong winds, often accompanied by driving rain or snow, contribute to the dynamic and ever-changing weather patterns of Stadlandet. The powerful waves crashing against the rocky shores and cliffs add to the dramatic scenery. The interplay between the wind and waves creates a special environment that attracts surfers seeking these conditions and challenging swells. Despite the formidable nature of the wind and waves, they also lend a unique character to Stadlandet, shaping the landscape and providing a sense of awe and respect for the forces of nature.

Old stone structures

The presence of aged stone structures on the site is a testament of the rich historical heritage woven within the landscape. A bird's-eye view reveals these structures, made by fallen stones originating from the surrounding mountains. When looking through the land, one can encounter diverse remains such as walls and ruins of old barns. In their days, these structures fulfilled the roles of lining up the boundaries between various farms and users, as well as serving as corridors and fences to guide and enclose livestock.

The pot of
Hoddevik

The distinct morphology of Hoddevik is a part of a unique visual identity. On one hand, this terrain presents numerous challenging situations, while on the other hand, it offers remarkable opportunities. From the gusts of winds to the occasional rockfalls from the steep mountain slopes, juxtaposed against the breathtaking views and closness to the ocean with flat area culminating in a stunning beach along the seashore, the landscape of Hoddevik embodies a blend of challenges and beauty.

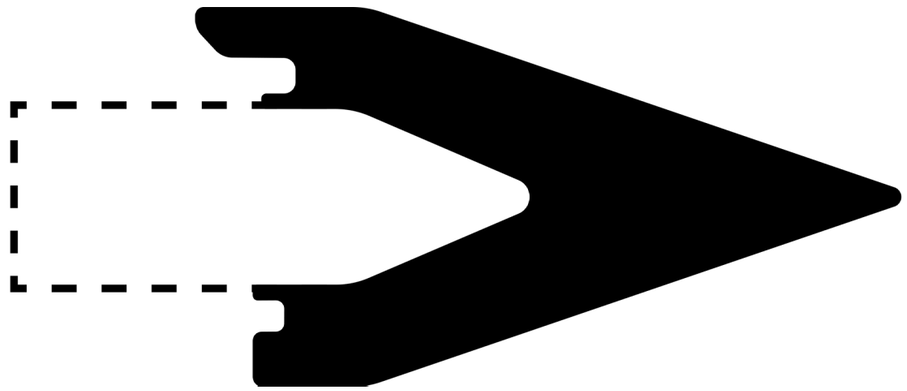
Changing Identity

In a world characterized by constant change, the question of what the identity is, is worth asking. The significance is in approaching this remote world with care, ensuring that any intervention introduced do not disrupt the the situation as it is. Preserving the centuries-old structures made by farmers and the legacy of their landscape shaping becomes an important. Currently, the future presents both challenges and opportunities. It is noteworthy that an increasing number of surfers, who genuinely hold deep care for this place, are drawn to it.

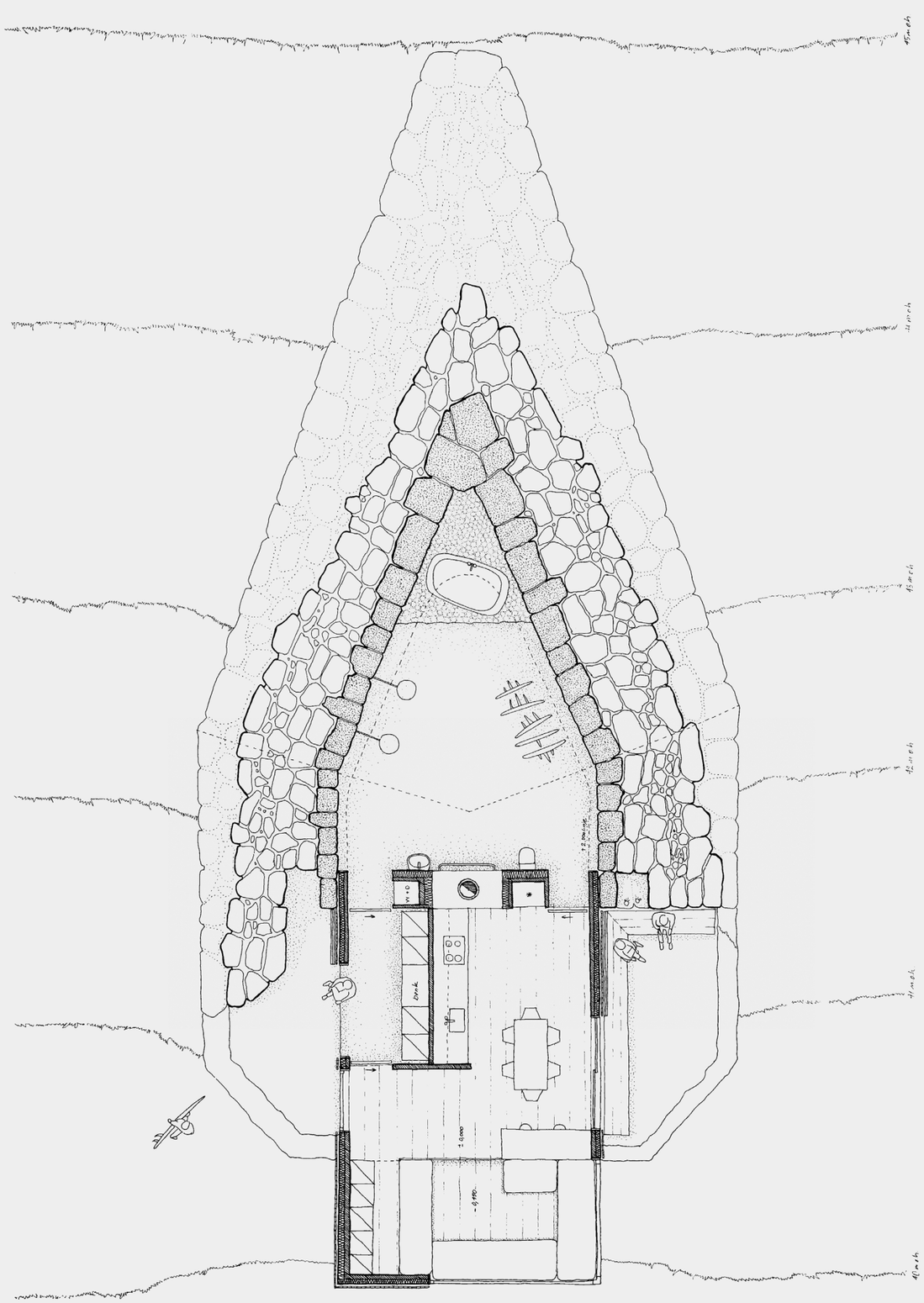
Concept

The concept of the dwelling involves the integration of stone and wood, combining the heavy protective structure of stone with the lightweight wooden framework. Together, these two elements form a cohesive unit, creating interesting and unique spatial qualities.

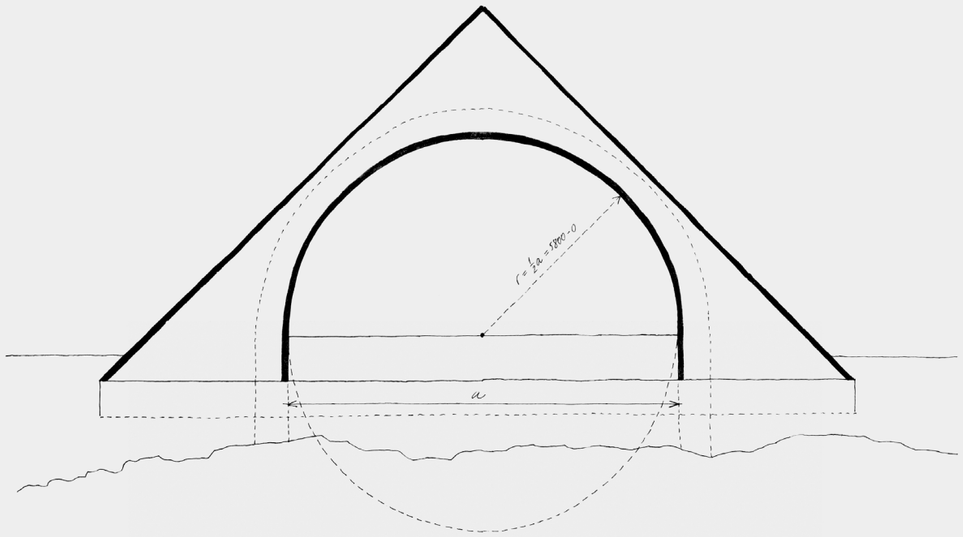
The primary function of the stone structure is to protect against falling rocks from the mountains. These dwellings are built in dangerous landslide zones, necessitating a robust structure to comply with safety regulations of building in these conditions. On one hand, the dwelling is intentionally designed to be secure in such hazardous terrain, and on the other hand, clustering the dwellings provides safe spaces for farmers both around and near the road at the bottom of the valley.



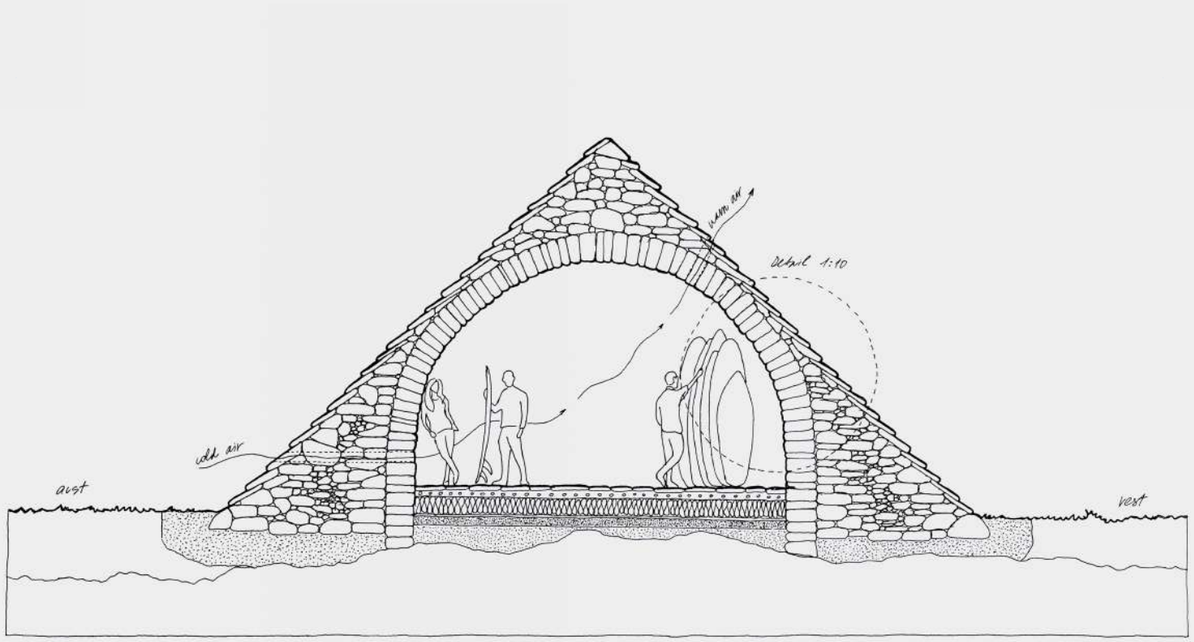
Drawing of the cluster of houses



Drawing of the plan

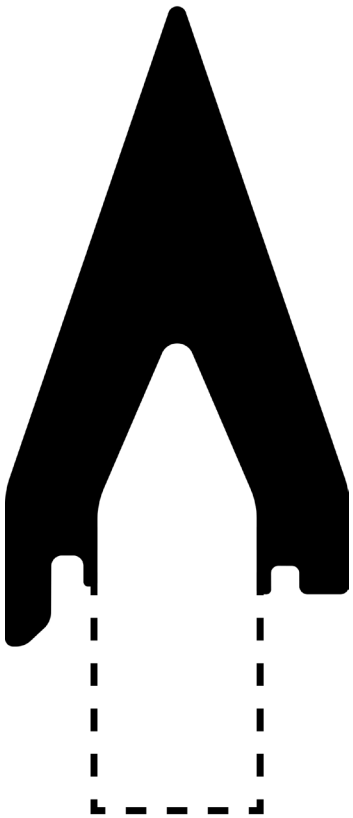


Concept of the geometry and principle of protecting structure



Section through protective structure

Visual of the model set into the landscape



Security and protection

Consider a scenario where you own a dwelling in mountain terrain, built next to the main road. Departing for a short vacation, you return to find an imposing boulder sitting meters away from your house. In light of this situation, can you truly ever have a sense of security when going to bed in this place of yours? Can the fragment of mountain that fell so close, nearly devastating the house, have the capacity of protection you in the future?