Thesis Dossier
ARB301 Project Thesis
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The Berlage Center for
Advanced Studies in Architecture
and Urban Design

Try It Out

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Fashion is technological, since the first clothing worn by the early humans, the garments have been developed radically to become efficient and comfortable (quick dry, highly warm, extremely light) to match weatherability.

Up until the last decade, fiber technology and materials science were limited to specialists.
Since then, textile and clothing brands decided to invest in research and development. The lower costs of cutting-edge technology made it possible for independent designers as well as medium and larger companies to create concepts using innovative products. Additionally, there is a new consumer profile opting for environmentally responsible products that reflect their digital lifestyle.

The Try It Out contribution - sited in the Andermatt, a village in the Swiss Alps - proposes a facility for the development of prototyping and testing of the textile performance.

Material research becomes increasingly paramount, as material innovation is one of the main drivers for the fashion industry to tackle environmental challenges. By improving the lifespan of fabrics (duration), creating better-performing garments (higher value), and revolutionizing production processes (production), this will change how fashion is consumed (consumption).

Fashion is one of the world's largest industries, crisscrossing the globe in a highly intricate supply chain of material sourcing and production for fashion goods, including complex retail, research, and marketing networks. These goods include clothing, footwear, cosmetics, and accessories that range from everyday ready-to-wear and made-to-measure, to elegant bespoke and haute couture.

The fashion industry is also one of the largest contributors to global emissions and waste, contributing up to 10% of global carbon emissions annually. Acknowledging the industry's impact, influential fashion figures have called for change; despite this, little has been curtailed. Marginal improvements have been overshadowed by an overall acceleration of more consumers—in more markets worldwide—purchasing more fashion goods that are disposed more frequently. Voluntary reform has not worked, encouraging new generations of consumers who are catalyzing fashion design brands, fabricators, and suppliers to raise the standard of their business practices, expecting earnest emphasis on environmental circularity through stricter regulation and embracing more diverse body norms and requirements. Juxtaposed against a backdrop in which international apprehensions over globalization are threatening the viability of contemporary economies, the fashion industry must be reimagined.

Today's fashion industry is dominated by four cities that together make up the global "big four" of London, Milan, New York, and Paris. Although most fashion goods are now produced in emerging markets with lower wage costs—including South-east Asia and Eastern Europe—the global big four combined is the centerpiece of the industry, hosting week-long fashion events—such as runway shows and trade fairs—that theatrically display designer work and new products. These four annual fashion weeks have an outsized influence on the direction—and style—that upcoming fashion goods will adopt; everything from luxury, designer brands to department store generic brands closely monitor them. The entire global fashion industry–from its production centers to methods of retail and marketing, and the supply chains that connect them–are optimized to relentlessly grow and accelerate, paving the way for the emergence over the past two decades of fast and ultra-fast fashion, which are defined by exploitative labor conditions in sweatshops and energy-intensive global supply networks worldwide.

Emblematic of this paradigm is the notion of a "fashion house." Originally a private residence-turned-tailor or dressmaker–then atelier and brand headquarters–the fashion house emerged as a singular protagonist and architectural type that propelled the construction and dissemination of fashion goods from its traditional domestic origins into an international industry with complex and far-reaching networks. The spatial organization of the earliest residences-turned-ateliers–most notably townhouses of nineteenth and early twentieth century European capital cities–determined the organization for how to make—and retail—garments, resulting in discrete physical separations of seamstresses, tailors, designers, and shopkeepers from one another that underscored their increasingly specialized roles within the entire garment creation process. The brands that have emerged from this model are some of the most influential and continue to shape the course of the entire fashion industry by setting the example for smaller and newer brands. Although no longer pervasive as an architectural setting for the contemporary fashion industry, the domestic legacy is evident most plainly in fashion brands' names and most perniciously in industry-wide company organizations within and between designers, producers, and suppliers that still characterize brands born of the global big four.

The collective project anticipates the spatial implications of a fashion industry that is decentralized and more tightly regulated by reinterpreting the guild house as a model to design a new type of fashion house. The guild house—the administrative center for medieval craft guilds—was a meeting place overlaid on workrooms, treasuries and trade-halls, and libraries where members would establish the rules governing the conditions of their respective trade and additionally provided local citizens with space for celebrations. In particular, the guild houses of the Hanseatic League—a commercial confederation of guilds and market towns in medieval Northern Europe—were trading posts that stitched together far-flung cities, allowing exchanges of expertise and surplus resources for goods and knowledge they lacked. The guild house, therefore, was both general and specific: it simultaneously occupied a prominent civic presence in the cities it administered and—taken individually—was a node in a sprawling self-regulating network. Reconceptualized in the context of the speculated future fashion industry, the guild house offers an architectural model to rethink the fashion house type to once again be the focal point for the fashion industry.

In 2040–in which consumers uphold more conscientious consumption habits–the fashion house will be the conduit that links together international brands and suppliers to collaboratively operate and where industry-wide regulations are developed with—and enacted by—regional authorities. Envisioned within a global paradigm of connected and interdependent regional networks, less frequent and limited production cycles, and environmental sustainability and economic circularity as default, the project establishes and implements the rubric—through the creation of a pattern book—by which the envisioned fashion house is designed in five post-industrial second-cities within Europe–Berlin, Marseille, Rotterdam, Valencia, and Zurich.

Twenty-three contributions explore the architectures and urban designs that result from and sustain the territorial recalibration of the fashion industry within Europe. Sited within the immediate regions surrounding the five cities, these contributions explore themes ranging from enhancement to emancipation, from dignity to desire, to introduce corresponding regulatory certifications that maintain the variegated modes of production that each contribution advocates. As a whole, the certifications developed by the contributions and in the design of the five fashion house locations provide the framework within which an alternate European fashion industry is imagined, addressing topics such as reindustrialization, regulation, self-sufficiency, and life cycle.

Fashion House is a collective architectural project that anticipates an alternative future for the fashion industry in five emerging fashion centers in and around Berlin, Marseille, Rotterdam, Valencia, and Zurich. These five cities–each the focal point of formerly post-industrialized regions that are undergoing shifts toward creative and service industries–form the Red Thread, an imagined discontinuous urban corridor that encourages intercity exchange of products, services, and expertise to collaboratively introduce a paradigm shift away from the traditional "big four" global fashion capitals of London, Milan, New York, and Paris which are the exemplars of a global fashion industry laced with untenable practices, ranging from resource over-extraction to exploitative labor practices.

The project explores topics including garments' utility, trend making, and mass-customization to examine the economic, environmental, and cultural implications of a fashion industry that has slowed and contracted as a result of global efforts to regionalize economic networks in response to 2050 climate goals. In particular, the European Union's climate-neutral goals for 2050–made possible by the implementation of its "Made in Europe" by 2030 framework–establish the backdrop in which this project is situated. Fashion House establishes a pan-European cooperative and regulatory body–entitled Fashion House–that intensifies regional production and reinforces conscientious consumption patterns within the Red Thread and beyond by granting certifications to products and businesses and by providing consultancy and industry services to smaller-scale regional designers, producers, and suppliers via membership.

The certifications–a combination of universal certifications, that dictate bare-minimum requirements for participation within the Red Thread network, and discretionary certifications, that certify specific processes and products for brands that surpass universal requirements–establish a single baseline standard across the Red Thread. These standards include extended garment lifespan through commonplace repair and recycling infrastructures, only made-to-order production in a seasonless and limited production calendar at close-to-home fabrication sites, and harnessing fully-automated technologies and expert hand-craft in specialized facilities to improve quality standards and discontinue sizing standardization.

In each city within the Red Thread, Fashion House operates a physical location–modeled after, and reinterpreting the medieval guild house–that provides small batch and prototyping services, workshops, and gathering spaces for regional members alongside the certification and administrative facilities necessary to operate the cooperative. Like the guild house before it–and in contrast to the contemporary fashion brand headquarters–each location is designed as a place where all constituents within the fashion industry congregate to exchange expertise, eliminating the binary distinctions of production and consumption by overlapping the "workshop" with the "showroom." In this new model, the fashion house is relieved of its retail functions–which is now conducted only on digital platforms–emphasizing a shift away from the point-of-sale as the defining moment of a garment's life.

Each Fashion House location is designed to contextually implement the design principles, guidelines, and standards of the Pattern Book, a set of manuals conceptualized to establish a consistent vocabulary for Fashion House—from architectural detailing and programming to daily operations and letterhead design. Divided into four primary chapters—Design & Implementation, Certifications, Governance & Operations, and Red Thread Atlas—the Pattern Book is the template for Fashion House, ensuring that—like the guild house before it—each Fashion House location simultaneously maintains universal standards and context-specific character.

Through the research and design of the Pattern Book, five Fashion House locations, and twenty-three contributions, the project anticipates that decentralized economic networks will span across national borders—led by joint efforts from cities and regions—to become instrumental in delivering a fashion industry that operates within the ecological limits set by a slowed global economy. Paradigm shifts including the quality in a wardrobe becoming more coveted than its quantity, circular and fully-traceable processes that eliminate new resource extraction, and international infrastructures for textile waste collection and garment-sharing will replace persistent procurement of new garments and refocus the entire process of garment creation—from fabrication to fitting, showcasing and its maintenance—towards its continual alteration from one state to another: initial construction, to repair, to upcycling, to decomposition. From topics ranging from aspiration and authority to fanaticism and fetish, Fashion House explores the spatial implications of a fashion industry that is no longer "fast."

1. The future fashion industry must dislocate the trendsetting dominance of the global big four fashion capitals of Paris, New York, Milan and London– that perpetuate practices of resource over-extraction and exploitative labor conditions—by dispersing manufacturing and design centers into interconnected and specialized European regions.

2. In 2040, the European fashion industry will achieve self-sufficiency by reconfiguring material sourcing landscapes to altering climate conditions and establishing a circular continental network for collecting and reusing textile waste and other raw materials, thereby eliminating the need for non-renewable resource extraction.

3. Shifts in automated and handcraft manufacturing processes—bolstered by re-shored operations, the resurgence of vulnerable craft-trades, and the harnessing of local thriving industries—enable a slower-paced fashion industry to revitalize Europe's emerging fashion hubs—which include Berlin, Zurich, Marseille, Rotterdam and Valencia—toward an economy that emphasizes design and fabrication.

4. An interconnected system of waterways and high-speed railways, in addition to commonplace infrastructures of repair, alteration, recycling, and reuse facilities, will create a synergetic collaboration between regions to increase lifespan of products while minimizing carbon emissions.

5. Inspired by the role of the medieval guild house as a node within a regulatory network that served as a hub for civic activity, a decentralized fashion industry requires a regulatory body with administrative centers scattered throughout its network to certify small and medium-sized enterprises—ranging from hyper-personalized services to durable, long-lasting production—and provide spaces for regional members to prototype, meet, and showcase innovative industry practices that promote degrowth.

Fashion House Pattern Book

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I. Introduction

I.01
Ethos: What is Fashion House?

Fashion House is a pan-European cooperative and regulatory body that intensifies regional production and reinforces conscientious consumption patterns within the Red Thread and beyond by granting certifications to products and businesses and by providing consultancy and industry services to smaller-scale regional designers, producers, and suppliers via membership. In each city within the Red Thread, Fashion House operates a physical location–modeled after, and reinterpreting the medieval guild house–that provides small batch and prototyping services, workshops, and gathering spaces for regional members alongside the certification and administrative facilities necessary to operate the cooperative.

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I.02
Mission Statement

Fashion is one of the world's largest industries, crisscrossing the globe in a highly intricate supply chain of material sourcing and production for fashion goods, including complex retail, research, and marketing networks. These goods include clothing, footwear, cosmetics, and accessories that range from everyday ready-to-wear and made-to-measure, to elegant bespoke and haute couture.

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Fashion House was founded in recognition that only collective action can stop the industry from continuing to have a harmful environmental impact. We envisioned a future in which fashion brands, producers, and suppliers prioritize garments' transparency to all consumers by providing infrastructural means and biasing regionalized downstream production. Our primary mission is to empower established and emerging small and medium-sized local businesses–from designer brands to suppliers, recyclers to researchers and everything in between–to operate within evolving sustainability regulations by providing industry and consultancy services, and credentialing businesses to receive Red Thread-wide economic incentives within a broad structural framework.

We believe that assisting these businesses mitigates the deleterious impacts of the fashion industry on our environment and climate. We–as a regulatory body–promote and grant certifications to committed fashion brands, their producers, suppliers, and distributors that allow them to access the ever-expanding Red Thread network. These certifications guarantee operational transparency and are foundational to a network-wide commitment towards slow, regionalized production chains to create a network that mutually cooperates to accelerate change.

In partnership with the five pilot cities' regional administrations, Fashion House supports member brands to produce and retail. Importantly, the Fashion House network facilitates members to contribute their expertise and surpluses to support one another throughout the Red Thread.

Fashion House is the operational association of the Red Thread, first implemented in five cities and their regional territories: Berlin, Marseille, Rotterdam, Valencia, and Zurich. All five are post-industrial cities that have emerged as fashion hubs beyond the traditional global big four of Paris, Milan, New York, and London. Fashion House invests in these brands not just to meet environmental standards but to drive an unprecedented collective impact to meet the demands of this pivotal moment.

I.03
About Pattern Book

The Pattern Book consists of Four manuals :

1. Design and Implementation
This manual specifies the principles and guidelines to design Fashion House's physical locations throughout the Red Thread.

2. Certification
This manual outlines the certification systems to which members must adhere–and the application processes for prospective members– to operate within the Red Thread and beyond

3. Governance and Operations
This manual drafts the business model for the execution and operation of the Fashion House cooperative, its member services, and regulatory body with additional guidance for its day-to-day functioning.

4. The Red Thread Atlas
This manual compiles atlases that map the supply chain infrastructure, logistics, and regional production centers that operate in and around the Red Thread network.

I.04
The Four Core Parameters

Four core parameters guide Fashion House. They direct design, operation decisions and certification frameworks at all Fashion House locations, to determine how Fashion House acts and how to maintain accountability:

1. Value
Value is embedded in craftsmanship, design inclusivity and exclusivity, knowledge and cultural monetization, intellectual property, preservation and heritage, branding, and desirability to name only a few.

2. Duration
Duration is evident throughout a product's life span, ownership or rental, resale and repair, seasonal collections and editions, among others.

3. Production
Production occurs not only in material responsibility and innovation, provenance, re- and upcycling, but also in the building constructions of Fashion House such as window displays, facade elements and other attributes within each city.

4. Consumption
Consumption underlies all forms of pricing, bespoke and mass-customization, mediation, advertisement, and customer experience ranging from in-store display and purchasing to digital presence and online-shopping.

I.05
Terms of Agreement

Hanseatic League (German: Hanse)	The Hanseatic League was a medieval commercial and defensive confederation of merchant guilds and market towns of mainly North German merchants, that existed between the Twelfth and Seventeenth Centuries, the aim of which was to ensure the safety of traveling merchants, and to represent common economic interests, especially in markets external to the league. The Hanseatic League heavily influenced economic, political, and cultural development. This legacy can be seen today in architectural patterns across former member cities and towns.
Intermodal Container	An intermodal container, commonly referred to as a shipping or cargo container, is a large standardized shipping container designed and built for intermodal freight transport, meaning that these containers can be used across different modes of transport, from ship, to rail, to truck, without unloading and reloading their cargo.
Local	Relating or restricted to a particular area or one's neighborhood.
Long ton (mass: 2,240 pounds)	The long ton is an imperial measurement of weight defined as 2,240 pounds.
Low Carbon	Causing or resulting in only a relatively small net release of carbon dioxide into the atmosphere.
Made in Europe 2030	2030 was the target year of the "Made in Europe" policy initiative by European Union governmental bodies to shift all industries toward regionalization of production and consumption, environmental and social sustainability, and the adoption of circular economy procedures. The target goals of these initiatives were successfully met by 2030.
Metric ton (mass: 1000 kilograms)	The metric ton, or tonne, is a unit of mass defined as 1,000 kilograms.
Municipal	Relating to a town or district or its governing body.
Nearshoring	A form of offshoring, for a business to establish part of their production process outside of the country in which the business is domiciled, and in a country that is relatively nearby. It usually takes place in bordering countries.
Net-zero	A target of completely negating the amount of greenhouse gasses produced by human activity, to be achieved by reducing emissions and implementing methods of absorbing carbon dioxide from the atmosphere. Net-zero is not carbon neutrality, which refers to balancing out the negative environmental consequences of carbon emissions through compensatory measures.
Not-Collected (recycling)	Garments which are not collected for fiber-to-fiber recycling, and therefore, entry into the circular economy recycling process, due to material or construction ineligibility.
Offshoring	For a business to establish a part of their production process outside of the country in which the business is domiciled. The offshored workplace may or may not be owned by, or be a subsidiary of, the business. For instance, Taiwanese semiconductor manufacturer TSMC may offshore part of their microchip manufacturing process by establishing a chip manufacturing plant in the United States of America.
Polycentric law	Polycentric law is a theoretical legal structure in which "providers" of legal systems compete or overlap in a given jurisdiction, as opposed to monopolistic statutory law according to which there is a sole provider of law for each jurisdiction.

Post-consumer Waste	Post-consumer waste is a waste type produced by the end consumer of a material stream; that is, where the waste-producing use did not involve the production of another product. Depending on the type of waste and the action taken by the consumer, post-consumer waste is recycled, sent to a landfill, or incinerated.
Post-industrial city	Derived from Alain Touraine's theory of a post-industrial society, a post-industrial city is a city in which the service sector of the economy generates more wealth than the manufacturing sector of the economy. This transition from one dominant sector to the next is accompanied by widespread and deep societal restructuring, often through economic stratification changes, city district and neighborhood gentrification and decline.
Provincial	Of or concerning the regions outside the capital city of a country.
Register ton (volume: 100 cubic feet)	The register ton is used to measure the volumetric capacity of ships defined as 100 cubic feet (2.8 m3).
Regional	Relating to or characteristic of a region.
Regulatory Body	A regulatory body is a public organization or government agency that is responsible for establishing and strengthening standards and ensuring consistent compliance with them. Various regulatory bodies oversee different sectors of the economy and public life, including transportation, education, and the sale of food and drugs. - Impose requirements, conditions, and restrictions on businesses and organizations. - Draft, issue, and revise standards. - Conducting inspections and audits. - Enforcing standards by issuing fines and other consequences for violations
Rehabilitation	The act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural, or architectural values.
Repair (garments)	Repair of garments is rather self-explanatory, and includes mending tears, replacing lost buttons, stitching loose seams, darning or patching tears and holes on clothes, and replacing spoilt zippers and slacked elastics. The earlier one repairs damage, the more one avoids continued damage, and later increased time and effort for repair.
Reshoring	For a business to establish in its domicile country, a part of their production process that was formerly established in another country. For instance, Taiwanese semiconductor manufacturer TSMC may reshore its formerly offshored manufacturing by shutting down some or all plants abroad, and re-establishing those aspects in Taiwan. Secondary cities are urban centers that typically, but don't necessarily have to, follow after the largest cities in their respective countries in terms of population, and which provide critical support services for governance, infrastructural, production, financial, and other functional areas. Several secondary cities are former industrial centers—as a result of national-level economic trends—which heavily distinguishes their contemporary socio-economic character relative to the primate city of their respective country. Berlin is one such secondary city that, while nearly doubling the next largest German city in population, and while having the seat of the German federal government, mostly functions as a support city towards the financial capital of Frankfurt, the technologies innovation hub of Munich, or the automotive center of Stuttgart.

Accountable

For an individual or group to be required or expected to justify their actions or decisions. In other words, for that individual or group to be morally or legally responsible.

Adaptive-Reuse

The process of reusing an existing building for a purpose other than which it was originally built or designed for. It is also known as recycling and conversion.

Alteration (garments)

Alteration is a change made in fitting a garment, such as the lengthening of a sleeve, or the tightening of a waist belt.

Carrying Capacity (environmental)

The carrying capacity of an environment is the maximum population size of a biological species that can be sustained by that specific environment, given the food, habitat, water, and other resources available.

Certification (the Process & Document)

Certification is the action or process of providing someone or something with an official document attesting to a status or level of achievement. The process of certification is performed by a certification body or certifier, which is always a third-party. Internal control is called first-party verification. The granting or denial of certification is the certification decision.

The document, analog or digital, which attests to certification can also be referred to as a certification.

Certification Label

A label or symbol indicating that compliance with standards has been verified. Use of the label is usually controlled by the certification body. Where certification bodies certify against their own specific standards, the label can be owned by the certification body.

Circular Economy

A circular economy is a model of production and consumption, in which the value of products, materials and resources is maintained in the economy for as long as possible, and the generation of waste is minimized.

A circular economy involves sharing, leasing, reusing, repairing, refurbishing, and recycling existing materials and products for as long as possible, all to resist contributing to climate change, biodiversity loss, waste, and pollution.

This stands in contrast to the traditional linear economic model.

Collected (recycling)

Garments which are collected for fiber-to-fiber recycling, and therefore, entry into the circular economy recycling process.

Confederation

A confederation (also known as a confederacy or league) is a union of sovereign groups or states united for purposes of common action. There is no one singular definition, but only a series of precedents from history, such as the Hanseatic League, or the European Union, which establish certain consistent patterns. The member states of a confederation retain their sovereignty and some degree of autonomy. The central authority is relatively weak, or non-existent.

Cooperative (Business Model)

In general, a cooperative is a business owned and democratically controlled by the people who use its services and whose benefits are derived and distributed equitably on the basis of use.

1. Democratic Member Control
   - One member; one vote.
   - Members elect a board of directors
   - The board of directors handle all other provisions.
2. Member's Economic Participation
   - Members contribute equally to, and democratically control, the capital of the cooperative. This benefits members in proportion to the business they conduct with the cooperative rather than on the capital invested.
   - Profit is allocated on the basis of the work contributed by each member in order to achieve this profit.

3. Cooperation Among Cooperatives
   - Cooperatives serve their members most effectively and strengthen the cooperative movement by working together through local, national, regional and international structures.
4. Concern for Community
   - While focusing on member needs, cooperatives work for the sustainable development of communities through policies and programs accepted by the members.

Covenant of Mayors

The Covenant of Mayors is a European cooperation movement involving local and regional authorities, launched by the European Commission to support the efforts of the EU climate and energy package of 2008. Signatories of the Covenant of Mayors voluntarily commit to increasing energy efficiency and the use of renewable energy sources on their territories.

Efficiency

The degree to which a system or machine is efficient, is how much it maximizes productivity while minimizing wasted effort or expense. The degree to which a person is efficienct, is how much they can work in a well-organized and competent way.

Environmental Sustainability

The avoidance of the depletion of natural resources in order to maintain an ecological balance.

Environmental sustainability European carbon neutrality 2050

This is a stated goal of the European Green Deal. There is a built-in interim goal of a fifty to fifty-five percent reduction of greenhouse gas emissions by 2030.

European Committee of the Regions

The European Union's assembly of local and regional representatives that provides sub-national authorities (i.e. regions, counties, provinces, municipalities and cities) with a direct voice within the EU's institutional framework.

Established in 1994, the CoR was set up to address two main issues. First, about three quarters of EU legislation is implemented at local or regional level, so local and regional representatives need to have a say in the development of new EU laws. Second, there were concerns about a widening gap between the public and the process of European integration; involving the elected level of government closest to the citizens was one way of closing the gap.

European Green Deal

The European Green Deal is a set of policy initiatives by the European Commission to make the European Union climate neutral by 2050. An interim goal of fifty to fifty-five percent greenhouse gas emission reduction from 1990 to 2030 was met.
- No net emissions of greenhouse gasses by 2050.
- Economic growth decoupled from resource use.

Expeditious

Done with efficiency and speed.

Fast fashion

Fast fashion is a fashion industry business model of replicating recent catwalk trends and high-fashion designs, mass-producing them at a low cost, and bringing them to retail stores quickly, while demand is at its highest. Fast fashion relies on low cost, high volume labor.

The term fast fashion is also used generically to describe the products of the fast fashion business model.

Fiber-to-Fiber Recycling

A recycling system which turns textile waste into new fibers, that are then used to create new clothes or other textile products. Fiber-to-fiber recycling limited by the collection, sorting, and preprocessing production limitations.

Guild

Guilds are an association of people with similar interests or pursuits.

Restoration

The act or process of accurately depicting the form, features, and character of a property as it appeared at a particular period of time by means of the removal of features from other periods in its history and reconstruction of missing features from the restoration period. The limited and sensitive upgrading of mechanical, electrical, and plumbing systems and other code-required work to make properties functional is appropriate within a restoration project. The Restoration Standards allow for the depiction of a building at a particular time in its history by preserving materials, features, finishes, and spaces from its period of significance and removing those from other periods.

Shipping ton (volume: 1.1—1.2 cubic meters)

A shipping ton, freight ton, measurement ton, or ocean ton is a measure of volume used for shipments of freight in large vehicles, trains or ships. In the United States of America, it is equivalent to 40 cubic feet (1.1 m3) while in the United Kingdom, it is 42 cubic feet (1.2 m3).

Short ton (mass: 2,000 pounds)

The short ton is an imperial measurement of weight defined as 2,000 pounds.

SMEs - Small & Medium-sized Enterprises

European Commission - SME Definition as per European recommendation 2003/361.

SMEs face fewer requirements or reduced fees for EU administrative compliance.

The main factors determining whether an enterprise is an SME are
1. staff headcount
2. either turnover or balance sheet total.

Company Category	Company Category	Company Category	Or	Company Category
Medium-sized	< 250	≤ euros 50 m		≤ euros 43 m
Small	< 50	≤ euros 10 m		≤ euros 10 m
Micro	< 10	≤ euros 2 m		≤ euros 2 m

Steady-state economy

A steady-state economy is an economy structured to balance growth with environmental integrity. A steady-state economy seeks to find an equilibrium between production growth and population growth. In a steady state economy, the population would be stable with birth rates closely matching death rates and production rates similarly matching the depreciation or consumption of goods.

Sustainability

The capacity to maintain or improve the state and availability of desirable materials or conditions over the long term.

Traceability

The metric measuring the ability to trace all processes from procurement of raw materials to production, consumption, and disposal, to clarify when and where the product was produced by whom.

Transparency (Products & Services)

The practice of disclosing detailed information about products and services including what they contain, how they were produced and where they come from.

Twenty-foot equivalent unit (TEU)

An inexact unit of cargo capacity, often used for container ships and container ports, and based on the volume of a twenty-foot-long intermodal container. Container heights are not standardized, leading to unit inexactitude.

Universal certifications (Fashion House)

Universal certifications are the certifications that specify the requirements that each current and new Fashion House member must follow. These requirements ensure adherence to environmental and social sustainability mandates from the 2030 Made in Europe framework, and drive the fashion industry towards meeting the 2050 European Union carbon neutrality goal.
These universal certifications are verified by Fashion House full-time in-house certification body employees, as opposed to specific certifications which are audited by third-parties.

Upcycling

Upcycling is the reuse of discarded objects or material in such a way as to create a product of higher quality or value than the original discarded objects or material.

Vegan leather

Vegan leather is any leather alternative that is not made from the skin of animals, and which may include stricter requirements against the inclusion of animal products in specific or every part of the manufacturing process.

The wide range of leather alternatives currently includes plastics-based leather alternatives that may be improperly disposed of, and contribute to plastic and microplastic pollution. Vegan leathers based on plant materials may biodegrade.

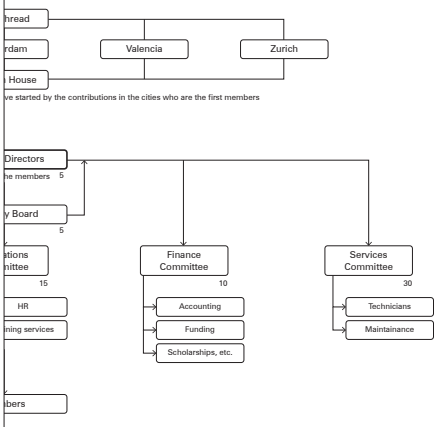
II. Governance and Operations

II.01
How to use this manual

The Governance and Operations manual defines how Fashion House is organized, managed, and monitored. The two governing bodies of Fashion House are the Board of Directors, and the Committees. Both bodies determine strategic priorities in the best interests of the regulatory body and services providing departments of Fashion House.

Fashion House governance procedures are inspired by medieval European organizations known as guilds. Medieval guilds were associations of merchants and artisans that ensured consistent product quality standards, and unified taxes and prices, across different guild houses of a particular category of product.

The guild house program included meeting halls, rooms for members, libraries, trading spaces, storage, and working areas. Guilds imposed long standardized periods of apprenticeship for new members seeking to learn the skills necessary to produce particular categories of products.



f.g.II.02.03.1 Board of Fahion House Directors

II.02.04 Advisory Board

The Board is composed of 9 chairs with wide and diversified experience, relating in particular to:

Corporate strategy
Finance
Governance
Logistics
social and environmental responsibility
retail sector
fashion industry
Technology
product development
financial corporations

The advisory Board will bring a fresh perspective to the cooperative and help it evolve. The term will be of four years, with the opportunity of renewing it for one more time.

Eligibility:
Current or former members of Fashion House
Representatives of partner organizations

Age and tenure

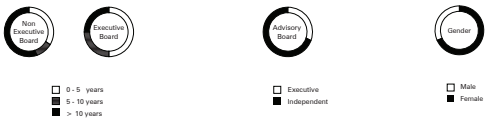
Advisory Board is appointed based on skill, leadership, integrity, experience, diversity and business requirement. No maximum age limit and tenuere on the board is determined with reference to contribution and engagement as assesed through the annual board evualuation process.

Independence

The majority of the board should consist of non -executive members, the majority of whom should be independent.

Gender

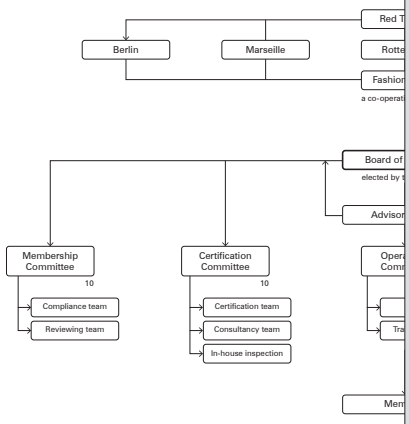
At least 30% of the board should compromise of female in the medium term.



f.g.II.02.04.1 Advisory Board

II.02
Fashion House Governance

Fashion House is a cooperative, owned and democratically controlled by the members who use its services and whose benefits are derived and distributed equitably on the basis of use.



f.g.II.02.01.1 Fashion House Organization

II.02.01 Governance Model

Fashion House is organized as two independent departments: a certification body that tests, administers, authenticates, and regulates Fashion House certifications across the Red Thread and an in-house service provider that offers members access to production equipment, design consultancy, logistical support, and marketing among others. In a non-hierarchical cooperative model, organizational responsibilities and expertise are distributed between all Fashion House locations across the Red Thread.

II.02.02 Organigram

Directors and Advisory Committee are expected to be diligent and fully committed to the work of Fashion House, which benefit from the diverse backgrounds, skills and expertise of their members.

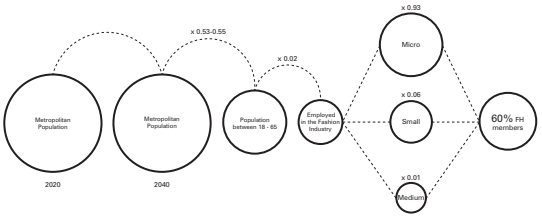
II.02.03 Committees

The different committees will be formed according to the cooperative organigram. They will share their opinions and perspectives, study issues, with the main goal of developing recommendations and an implementation handbook for the future of Fashion House.

- Committees:
- Membership
- Certifications
- Operations and Finance
- Services

II.03
Fashion House Members

As a service provider, Fashion House offers memberships to local micro, small and medium enterprises - SMEs - sited within the five cities of the Red Thread.

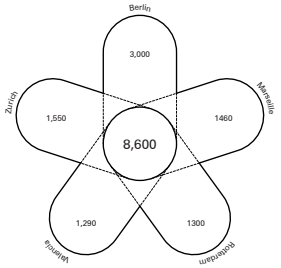


f.g.II.03.01.1 Number of Members' Computation Process
Membership Types

II.03.01 Eligibility

Eligible candidates that wish to become Fashion House members shall comply with the following requirements:

- Be an SME directly or indirectly employed in the fashion or textile industry.
- Be sited in one of Fashion House's city locations; Berlin, Marseille, Rotterdam, Valencia and Zurich, or within the city's regional economic jurisdiction.
- Have a local supply chain and comply with **"Made in Europe"** policy.
- Their products, systems, individuals or processes shall comply with Fashion House's universal certifications - *For the Record, Door to Door, and Everlasting.*



f.g.II.03.01.2 Members Numbers

II.03.02 Benefits

Fashion House members are granted the following benefits:
- Reduced trade taxation within the Red Thread participating cities
- Access to universal certifications and specific certifications
- Access to consultancy services with Fashion House's network of experts in the fashion and textile industry
- Access to Fashion House's workshops, equipment and training spaces
- Connection with all Fashion House's members
- Assistance to events hosted by Fashion House
- A vote in advisory board elections

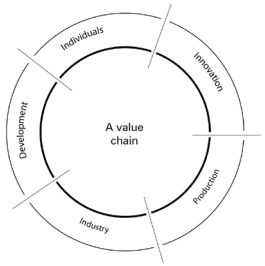
Fashion House has a limited number of members per city. This number is based on the city's population growth or degrowth, the population employed in the fashion industry and its operational size. In this respect Berlin will cater for 3,000 members, Marseille for 1,460, Rotterdam for 1,300, Valencia for 1290 and Zurich for 1550; adding to a total of 8,600 members.

II.04
Fashion House Management

Fashion House management is organized through the cooperative principles model, which establishes that it is a business owned and controlled by the people who use its services where benefits are distributed equitably among its members.

II.05
Fashion House Role and Responsibilities

Fashion House strives to create best practices with local brands, producers and suppliers supported by services and platforms, framed by the highest environmental and social standards.



f.g.II.05.01.1 Governance Investment

II.05.01 Onboarding and Training

As a cooperative, Fashion House facilitates the smooth transition of new employees and members into the organization via role-specific onboarding and training.

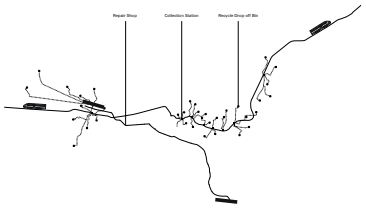
- Members

Prior to induction into Fashion House, prospective members should already be informed on Fashion House universal certification requirements (see IV.02. Certification Parameters and Categories). Onboarding procedures prepare newly inducted members on continuing certification procedures, including auditing, and procedures toward developing specific certifications (see IV.03.02 Discretionary Certifications).

Onboarding and continuing training prepares Fashion House staff to provide services to members, and to upkeep the Fashion House organization, and physical locations.

II.05.02 Production

Fashion House locations are sites of textiles recycling, upcycling, repair, and research, through either in-house facilities operated by Fashion House staff, or by facilities open to third-party contracting and use. In addition to a portfolio of services that do not produce tangible products (see II.04.03 Revenues, Expenses and Profits), Fashion House locations are equipped with garment drop-off locations for members of the public to deposit unwanted garments (see V.04.05 Collection Points).



f.g.II.05.02.1 Repair and Recycle Infrastrcuture in Berlin

II.04.01 Investment Policy (taxes, incentives, etc)

Fashion House is initially funded by municipal grants in the form of non-reimbursable investments. The municipalities in which it is established are emerging creative industries that seek to strengthen and position the fashion and textile sector as one of its main contributors to their economy.
Once established, Fashion House will run as a privately owned cooperative whose business model is sustained through membership fees. Each fashion house runs with a minimum of 10,000,000.00 euros for its operational annual expenses.

Membership fees are divided in three types, S, M and L. The S type has a cost of 4,000 euros per year and only gives access to universal certifications. The M type cost is 4,800 euros per year. M type memberships include universal and specific certifications, access to Fashion House's services - workshops and training spaces - and Fashion House's members network. The L type has an annual cost of 8,400 euros and gives fully and unlimited access to all Fashion House's services including consultancy.

Fashion House is established under the premise of degrowth, speculating that the fashion and textile market will slow down and shrink until full circularity is achieved. Accordingly, members are limited to a fixed quantity of 8,600 members distributed throughout the five participating cities. However, during the first five years of its establishment, Fashion House considers possible expansions to nearby cities to the Red Thread network. In this case, the number of members will be recalculated in relation to the new cities' population and textile industry market.

	S An introduction to the world of Fashion House 4,000 €/year	M The original membership 4,800 €/year	L Fashion House golden pass; all our services unlimited. 8,400 €/year
Universal Certifications	✓	✓	✓
Bring up to 3 guests at a time to your local FH	✓	✓	✓
Specific Certifications		✓	✓
Bring up to 3 guests at a time to all branches of FH		✓	✓
Access to FH workshops, and training spaces		✓	✓
Regular events in any FH or related locations		✓	✓
Connect with other FH members worldwide through our app		✓	✓
FH consultancy services			✓

f.g.II.04.01.1 Membersip Types

II.04.02 Employees (different committees, policy of employment, diversity, etc)

Fashion House substantiates the principles laid out by its baseline universal certifications, and supports the economy of the Red Thread city region, by, whenever economically or logistically feasible, sourcing internal staff and contracting entities, and equipment and operational material procurement, from within city region economic jurisdictions.

Operations are met with a minimum of 70 employees and a maximum of 100 employees distributed into 5 committees: membership committee, operations committee, certifications committee, finance committee and services committee.

Fashion House employment policies operate under the following standards and principles:
- Fashion House does not employ anyone underage.
- We operate under a safe, healthy and respectful environment where everybody has equal opportunities regardless of gender, ethnicity, age, physical appearance, ability, illness, and political,religious or sexual orientation.
- Any physical, sexual, psychological or verbal harrasment or abuse towards employees is denounced and forbiden.
- Gender equality and diversity is promoted among employees, partners and suppliers.
- We offer training programs that range from the use of the facility and its equipment to social and environmental sustainable practices.

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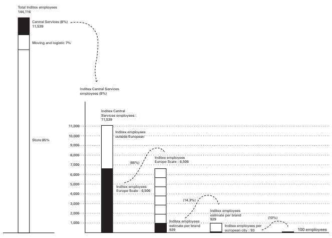
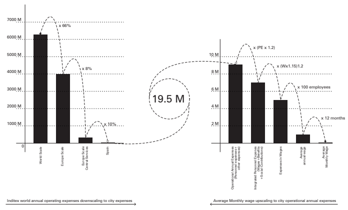
- Our supply chain is highly monitored to secure working conditions that comply with the standards here mentioned.
- Fashion House implements the four-day workweek where employees only work for 32 hours a week and have three days off.
- We encourage workers to avoid overtime. However overtime is voluntary and paid, and it shall comply with the permitted hours stated in the laws and regulations of each country.
- We promote remote work. Workers can work remotely three to five days a week, therefore flexible workspaces are implemented.
- During vacations we offer "Climate Leave" in order to incentivise train travel. Train travel is environmentally more sustainable than air travel. However since it is slower, we offer 5 extra days of vacation to accomodate train traveling time spams.
- Parental leave is supported by Fashion House. Parents are entitled to 480 days of paid parental leave. If they are two, days shall be split in 240 days each.
- Three to five paid days of medical leave due to severe menstrual pain.



f.g.II.04.02.1 Employees

II.04.03 Revenues, Expenses and Profits

Fashion House operates through a membership business model in which its net sales are distributed in three main areas, taxes and amortization, operational expenses and profit. Taxes and amortization represent x percent of the net sales. The operational expenses include personnel expenses - wages, salaries, and social contributions - , administrative expenses, maintenance, repair and utilities, and funding for the Equity Road foundation sited in Valencia.
Fashion House is a non-profitable institution. All profits will be reinvested in assets for its operation, from furniture and up-to-date machinery and equipment to transportation, training and research.



f.g.II.04.03.1 Money Breakdown

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II.05.03 Services

Fashion House is a service-providing business. It provides services to its members primarily at its physical locations throughout the Red Thread. In addition to the core portfolio of services offered at each Fashion House location, there are services unique to one or more locations, referred to as Flex programs (see V.04.08.2 & Appendix)
Universal services are:

- Consultancy
Fashion House provides consultancy services to regional fashion industry micro- to medium-sized enterprises.
These include assisting the enterprise in applying for and following local, regional, and state-level financial programs, private funding programs, and bureaucratic and legal procedures.

-Liaison
Fashion House offers intermediary services between an enterprise client and Fashion House location municipal governmental agencies and departments, in matters concerning municipal business regulation, law, and financial incentive programs.

-Production Workshops
Fashion House locations offer production workshop spaces for clients and members to use. Woodworking and metalworking workshops are offered at each Fashion House location.

II.05.04 Ethical Position On Sustainability

Fashion House adheres to a consequentialist organizational ethical model regarding sustainability. If processes and their end results are analogous to means and ends, then Fashion House considers the adherence to upright means, as an end-unto-itself.

Fashion House considers carbon neutrality as an upright objective from a consequentialist standpoint. Carbon neutrality is a means toward a more livable world, as it inherently decreases carbon emissions, the main driver of climate change, which directly increases the likelihood of climatic conditions and disasters which threaten all life on the planet currently living, and all life yet to come into being. The extent to which processes get closer to achieving carbon neutrality, the more upright those processes are.

Tangibly, adherence to standard operating procedures which are economically circular as default, and which uphold carbon neutrality as much as possible, is considered upright behavior.

Non-upright behavior is negligence, willful or not, of fully adhering to economic circularity, and of deliberate efforts toward achieving or verifying carbon neutrality in all Fashion House processes.

II.05.05 Commitment to Customers & Membersand Members

Fashion House commits to delivering a mutually satisfactory exchange of goods and services between the organization and its in-house members and external customers. This is to maintain the good reputation of the organization among its target demographic of micro- to medium-sized enterprises, which cannot financially bear to pay for and receive a less-than-satisfactory service.

Fashion House physical showroom and digital client relations staff are all trained in Fashion House sustainability principles (see II.05.04 Ethical Position On Sustainability) and their strategic implementation into Fashion House processes. They are always prepared to help inform our clients about these sustainability principles and practices across multiple platforms, all to encourage industry-wide carbon neutrality adoption.

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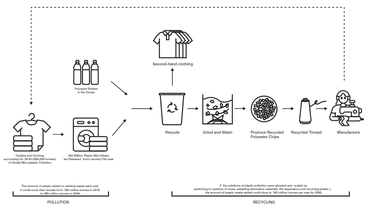
II.05.06 Environmental Sustainability

Fashion House organizational policies, whether in logistics, procurement, construction, production, and more, push for carbon neutrality wherever financially or logistically feasible, and then economic circularity as a fall-back default. Fashion House performs carbon emissions calculus on all these aforementioned processes as part of standard operating procedure, which involves materials and financial auditing of several internal and external service providers, including any third-party logistics services (for example, procurement outside of the Red Thread and/or European Union).

Carbon neutrality is achieved through groups of processes which, on-balance, reduce as many carbon emissions as emitted. Carbon reducing processes can be used to offset the emissions of another process.



f.g.II.05.06.1 Microplastic Pollution and Recycling

II.05.07 Economic Circularity

Fashion House organizational policies, whether in logistics, procurement, construction, production, and more, operate in economic circularity as default, as required by European Union business law. This means that any raw materials consumed in any of the aforementioned processes lose as little of their value as possible during consumption, and Fashion House produced items are designed to be durable and long-lasting. Economic circularity is verified through the materials and financial auditing of all aforementioned processes.

f.g.II.05.07.1 Made in EU 2030

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II.05.08 Transport

Fashion House transport of employees and members for organizational matters, no matter the distance required to travel, shall prefer passenger trains, including public or private services, and including high-speed, intercity, commuter, and light rail.

Fashion House is intentionally sited within four-hundred meters of multiple public transportation stops or stations, including bus and light rail stops, and metro and long-distance rail stations.

Fashion House encourages its staff, and visiting clients and members, to use human-pedal or electric bicycles to commute to Fashion House locations. Fashion House, per location, designs and installs bike parking stands in-excess of staff and visitor capacity, electric bike charging stations, and hydrogen-fuel pumps.

II.06
Fashion House Working Hours

Fashion House's offices and administration services are open from 9:00 to 14:00, Monday to Thursday. We work under a 32 hour week four times a week.

III.01
Fashion House Certifications

Fashion House is a regulatory body that grants certifications to products and businesses to ensure the implementation of strict regulations, initiate conscientious consumption patterns, and provide a competitive edge to small- and medium-scale fashion enterprises within the Red Thread and beyond. The 2050 climate neutrality goals to be accomplished at a global scale are pushing toward regionalizing economic networks; in particular, the European Union's 2030 "Made in Europe" framework. In response, Fashion House Certifications (FHCs)—granted to participating brands—implement slowed and contracted production and consumption cycles in the fashion industry. A combination of universal certifications that dictate bare-minimum requirements for participation within the Red Thread network, and discretionary certifications that certify specific processes and products for brands that surpass universal requirements, establish a single baseline standard across the Red Thread.

Certifications are given to a wide gamut of brand's products, services, processes, and individuals in the fashion industry, in accordance with the European Commission's framework for certification types. From individual craftspeople to fully-automated manufacturing techniques, and garments' utility to its inventive recycling and upcycling, the certifications simultaneously establish benchmark standards for fashion goods and stipulate spatial requirements in which the fashion goods are made, retailed, used, or reprocessed. Each Fashion House location shall include a physical full-time in-house certification committee that maintains a detailed record of their respective members' certification data and compliance status.

III.02
Certification Parameters and Categories

Fashion House Certifications integrate Fashion House's four key parameters—production, consumption, value, and duration—to champion global paradigms of connected and interdependent regional networks, less frequent and limited production cycles, discontinued sizing standardizations, and environmental sustainability and economic circularity as default throughout the fashion industry.

- Production
The shift from mass-produced to made-to-measure garments shall focus on preserving local crafts and know-how, hyper-personalization, and in-house production to emphasize quality over quantity; while, at the same time, addressing the environmental impact of products and services to establish fully traceable manufacturing processes.

- Consumption
In response to capped regionalized production within a digitalized and image-based society, consumption of products and services will be inextricably embedded with notions of data privacy, techniques of dissemination and training in the fashion industry, alternative spaces for self-expression and unique experiences, and shall reimagine traditional practices that emphasize environmental circularity.

- Value
Less frequent and capped production—in addition to more conscientious consumption patterns, restricted use of synthetic textiles, and limited new resource extraction—shall prioritize sourcing alternative virgin materials that are environmentally replenishable, focusing on garment quality over quantity and utilizing existing valuable resources in the fashion industry.

- Duration
The lifespan of garments and textiles shall be extended through commonplace repair and recycling, and garment sharing infrastructures, incorporating post-consumer waste as a new resource in the fashion and building industries, and reframing non-traditional materials—like human material waste—to be worthy to use in new fashion goods.

Certifications are classified according to the European Commission's defined categorization for certification framework and types:

- Products or Services
Certifying a product or service that meets specific predetermined requirements that enable their lifespans to be extended.

- Processes or Systems
Certifying a series of procedures that a brand or a company adopts that are interconnected and meet certain quality requirements that contribute to limited quality-focused production and consumption

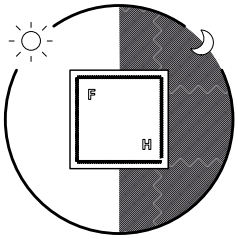
- Individuals
Certifying that an individual has amassed—over a set of stipulated length of time—extraordinary knowledge, skills, and expertise that surpass the industry standard or are proprietary to a specific brand, product, or tradition that demonstrate the potential to elevate established standards in the fashion industry.

FHCs are granted to recognize brands, companies, or people who have evidently contributed to the fashion industry by adopting responsible and innovative methods of production, shifting patterns of consumption, recentering value in regional know-how, and ensuring extended duration of fashion goods.

II.06.01 Contribution to Nightlife

In order to contribute to a safe night environment within the neighborhoods that Fashion House is established, workshops and studio areas are open 24/7 for its members. Trained and authorized members can make use of Fashion House's installations and equipment at any time through personalized ID's that give access to these areas.

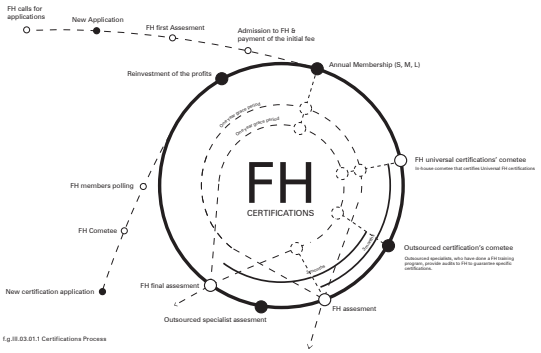
Public spaces such as courtyards are accessible to any visitor until 23:00. Cafes and restaurants are as well accessible to members and non-members from 9:00 to 14:00 and from 16:00 to 23:00 as part of Fashion House's effort to engage with its neighborhood.



f.g.II.06.01.1 Governance Diversity and Safety

III.03
Certification Types

Fashion House provides two different types of certifications :
1. Universal Certifications
2. Discretionary Certifications



f.g.III.03.01.1 Certifications Process

III.03.01 Universal Certifications

Universal certifications include the specific requirements that each member—both current and prospective—of Fashion House must abide by to remain—or be admitted to become—a member of Fashion House. Universal certifications are verified and attested by Fashion House's in-house certification body of auditors, examiners, and policy-experts. These certifications shall primarily address sourcing transparency, environmentally sustainable means of manufacturing and delivery of goods and services, and extended lifespans of materials and textiles.

03.01.1 For the Record Certification

The certification guarantees a product, service, system, or processes' traceability by displaying its economic costs—including labor and material—and environmental impact—including energy and territorial—associated in its manufacturing. It outlines the minimum required lifespan for the product and its speculated costs of repair, alteration, and recycling over its lifespan. A "For the Record"-certified product recognizes the primary origin and sustainable sourcing of the raw materials used in the manufacturing of the product and ensures the protection of workers' rights whom are involved in its process.

03.01.2 Door to Door Certification

The certification guarantees that bulk delivery has been transported using minimally greenhouse gas-emissive infrastructures of waterways and/or high-speed railways that avoid air freight. Deliveries of products and services are batched for optimal local efficiency. Express deliveries and/or single-recipient deliveries are not permitted. Last-mile delivery to municipal and regional infrastructures of collection and drop-off points ensure timely deliveries that holistically balance speed, prudence, and environmental sustainability. Biodegradable and/or reusable packaging solutions must be used for all products.

03.01.3 Everlasting Certification

The certification guarantees products that have been designed for holistic circularity and are suitable to be reused or repaired in its original state, or recycled after deconstruction, and/or biodegradable once degraded. Additionally, it prioritizes mono-material constructions—as opposed to blended constructions—to enable easier repair and recycling to extend a product's longevity.

f.g.III.03.02.1 Fashion House Certification Stamps

III.03.02 Discretionary Certifications

Discretionary certifications are specific certifications whose criteria exceed the baseline universal certifications that are developed in collaboration with Fashion House members who intend to raise the standards of their products or services to give themselves a competitive edge within the fashion industry. To certify discretionary certifications—whose requirements often incorporate professional expertise, resources, or authorizations outside Fashion House's qualifications—Fashion House hires external specialists with sophisticated knowledge and expertise of the product, service, or process to verify their compliance with Fashion House Certification standards.

Tde FH Discretionary Certifications Category : Consumption

03.02.01. Classified Certification

The certification guarantees a mono-directional spatial organization that eliminates double encounters and ensures client anonymity while acquiring a product, process or service.

The certification has three spatial requirements. Each space must have at least two access points to separate entry and exit. Spaces must be organized as an enfilade in which each space is only entered once and exited in succeeding order. In the event of multiple possible exit routes, the separating thresholds and/or doors must remain ambiguously marked to preserve the anonymity of the succeeding spaces.

The certification addresses consumption of hyper-personalized fashion goods and services that require a consumer's privacy to be secured. Therefore, this certification provides fashion brands who explicitly address notions of, or handle products, that wrestle with shame, embarrassment, or guilt with an ideal strategy to guarantee their clientele's privacy.

External FH Consultant: A spatial-patenting expert

03.02.02. Growing-the-Scene Certification

The certification guarantees locations that are well-suited to, and fulfill the spatial requirements, to host spectacular events. Locations must be unique, iconic, timeless, and embody extraordinary experiences.

Prospective locations must adhere to the following parameters and will be determined relative to its speculated impact within the urban fabric. The entrance must not only be a threshold but be holistically incorporated into the experience the prospective location offers. On the premises, enclosed spaces with limited access for members and collaborators that are designed to meet their professional needs must be provided. There must be one extraordinary architectural characteristic that is an iconic symbol to make a certified location to stand out.

The tactility and fellowship offered by highly social and recreational physical locations counteracts commonplace digital dissemination of fashion: displaying products and services, collaborating with like minded professionals within the fashion fraternity, and conducting business reaffirms fashion's emancipatory capacity.

External FH Consultant: A speakeasy enthusiast

03.02.03. Know-It-All Certification

The certification guarantees professionals that have concurrently achieved handicrafts skills competency in at least five distinct fashion artisanal disciplines toward becoming increasingly generalist professionals. Individual competencies can be attested by professional auditors representing disparate business entities including vocational schools, manufacturers, and discipline-specific organizations, associations, unions, or federations.

The minimum five competencies must be evaluated within one examination space within a three-month timespan, upon completion of the first competency. The examination spaces must be appropriately outfitted with necessary equipment, machinery, materials, tools, furnishings, and other items for the completion of the audit process. Competency will be evaluated through tests that are, per discipline, of appropriate challenge and rigor to determine the knowledge and understanding of handicrafts skills necessary to work at a high level.

The "certification advocates the training and proliferation of professionally-autonomous generalist artisans in the fashion industry. These professionally generalist artisans are best suited to revitalize regional legacies or reinforce emerging handicraft industries through individual manufacturing capacity, and the dissemination of skills and knowledge through mentorship and product sales.

External FH Consultant: A professor with an expertise in generalization

03.02.09. Savoir-Faire Certification

The certification guarantees products that have been crafted in strict accordance to local traditional techniques by brands or individuals in workshops that are similarly authentically organized and/or supplied so that the product and its associated know-how are perpetuated to new generations.

Certified products shall be required to be made at premises that have learning and/or study spaces for apprentices to practice, and shall be flexibly-planned to accommodate adjusted layouts for numerous craft specialties. These demonstration spaces shall be designed—by including promenades, balconies, or theater seating to name a few examples—to allow students, apprentices, and the general public to easily observe the certified product's manufacturing process to promote its dissemination and continuation.

With the onset of fully-automated manufacturing technologies, traditional knowledge and skills for handcrafted products are at risk for obsolescence therefore becoming more highly-sought after as luxury items that stimulate down-stream general-production processes to adopt traditional techniques that are by virtue slower, less wasteful, and rooted in crafted quality.

External FH Consultant: A cultural historian

03.02.10. Made-from-Scratch Certification

The certification guarantees modifiable digital mannequins that are used to exhibit products on online platforms. A certified mannequin shall use anonymously-collected user data to generate customized presentations of fashion goods in an exclusive and secure manner.

Mannequins shall only use data collected from consumers in private body-scanning rooms in brand-approved locations. Data shall be securely stored, and will only be processed at brand-approved—or brand in-house—3D-modeling laboratories that will design new appearances.

Certified digital mannequins exhibiting products on online platforms assist prospective customers to assess and compare products as they would look on themselves so that they can make informed decisions based on their own beauty judgements rather than socially-idealized beauty standards.

External FH Consultant: A data analyst

FH Certification Category : Value

03.02.11. Good-as-New Certification

The certification guarantees the cleaning process for resold or rented fashion goods to meet quality, safety, and sanitation standards that require no traces of any hazardous materials or contaminants, and are processed using only eco-friendly cleaning products and energy-efficient equipment.

Certified fashion goods shall undergo a rigorous process—or a demonstrably similar—of several stages that happen on a single premises. Goods must be initially screened in designated unloading areas and subsequently sorted, washed, dried, and steamed in a streamlined and interconnected area. After cleaning, goods shall be carefully examined for quality control and prepared for delivery to designated online shopping or renting pick-up points operated—or licensed—by the brand.

In a slowed and more prudent fashion economy, in which new methods and materials in garment manufacturing have necessarily increased their useful lifespans, consumers who aspire to participate in—and shape—rapidly evolving fashion trends will enthusiastically utilize now-commonplace garment rental services to—temporarily—flaunt the latest styles.

External FH Consultant: A laundry technician

03.02.12. Made-to-Last Certification

The certification guarantees products that have been manufactured with meticulous tailoring techniques that are made with highly durable raw materials, and are designed to seamlessly be continually repaired, alterated, and updated over an individual's working career.

Tailored alterations shall be conducted in brand-run or brand-approved ateliers that offer professional in-house alterations for garment component substitution or renewal. These ateliers shall be furnished with all requisite equipment and work areas for simple or extensive alterations, and shall be hospitably designed to host networking events for working professionals.

Products designed to be continually redesigned mirror industry-wide recalibrations towards slower consumption habits, garment longevity, and revaluing high-quality handcraft. By establishing lifelong relationships with their garments—no matter how frequent or extensive its renovation—consumers will personalize their wardrobes and be more self-responsible for its proper care and maintenance.

External FH Consultant: A tailor

03.02.13. With Love Certification

The certification guarantees garments that have been carefully repaired and customized by the local repair experts, customers, and qualified robots. Garments' lifespans must be prolonged and visible repairing alteration to their appearance—through examples such as stitching, darning, or needle felting—or visible transformation and upgrading—such as resizing, remaking, redecorating, or recoloring—shall be required to synthetically unify aesthetics of maintenance and care with consumer desirability for personalization.

For different settings and/or scales of repair and alteration, distinct requirements shall be mandated for certification. At "to-go" or express repair stations, robotic scanning and inspection machines shall be required at the stations' terminus to examine garments before they are re-packaged and available for pick-up. At sit-down "do it yourself" repair centers, desks and/or workstations for volunteers shall be provided in public view to encourage friendly exchanges between volunteers and repairers while garments are inspected to ensure self-repaired garments have been responsibly mended. At consultancy-based repair and alteration studios, adequate space shall be provided for inspection officers to undergo quality control reviews and shall be furnished with sufficient digital infrastructures to register products into Fashion House's digital database.

Promoting aesthetics of lovingly-maintained products and garments, widespread and commonplace services recalibrate the fashion industry away from an obsession with almost-exclusively "new" products towards customizing reused products, destigmatizing longstanding cultural assumptions about repair—and whom repairs—through highly efficient, self-responsible, and high-quality design.

External FH Consultant: A veteran seamstress

03.02.04. Shameless Certification

The certification guarantees individuals that have fulfilled a three-month residency in which they—in close contact with consumers—have been empowered to rethink fashion and body norms and design.

This residency must be based in and around a design atelier situated within an enclaved social condenser that is used as testing ground by both consumer and designer to ensure short feedback loops between iterative design, applied testing, and design refinement. The testing ground shall reside outside of everyday life and the expected fashion norms that come with it, and shall incorporate spaces in which consumers can see and be seen by one another in both normative and subversive spaces.

The certification stimulates perennial reconsiderations of fashion and body norms that—by reconfiguring the relation between designer and consumer—progressively disentangle the fashion industry and its consumers from deep-rooted consumption patterns established by fast fashion.

External FH Consultant: A travel and fashion influencer

03.02.05. Perfect Match Certification

The certification guarantees ceremonial processes, events, and public functions that—through a carefully constructed protocol that integrates traditional and contemporary regionally-appropriate methods—are situated in forgotten landscapes for their protection and locational rejuvenation after its completion.

Certified ceremonies shall be located in remote, yet not difficult-to-reach, venues that have dilapidated or otherwise destabilized natural features. Temporary and/or semi-permanent event installations shall simultaneously protect landscape features for the duration of the ceremony and—upon its completion—shall contribute to the landscape's continued rejuvenation. Examples include diverting runoff courses for better on-site water management, botanical renaturation, and debris pulverization; however each ceremony must produce bespoke protocols for each landscape venue.

Formerly the culminating moment for specially-designed and laboriously-crafted garments and fashion goods, ceremonies will reverse the fashion industry's ecological footprint from a "consumer" to a propagator.

External FH Consultant: An environmental expert in landscape revivals

FH Certification Category : Production

03.02.06. Off-the-Shelf Certification

The certification guarantees brands that exclusively use mono-materials and instantaneous production processes to create personalized items. Zero-waste production—such as additive manufacturing and overall reductions in material debris and off-cuts—shall be used by certified brands to make products that can be made, worn, shredded, and remade.

This certification shall require dedicated on-site spaces in the brand's retail stores or production facilities for clients to test their hyper-personalized products, such as biometric walking tracks to test footwear. Additionally, brand's shall provide clearly identified pick-up points on the facility's premises for customers to retrieve their purchased goods. Storage spaces shall be meant solely for personalization machinery and raw materials but shall not be used for display or stockpiled inventories of finished products.

Instantaneous production processes enable brands to shape or quickly adapt to shifting trends and satisfy customer expectations for highly customized products while maintaining high standards of quality without wasting material by creating superfluous deadstock products. Instantaneous production requires a dispersed network of local production centers, which will forge stronger connections between customers and brands, leading to increased brand loyalty and improved long-term outcomes.

External FH Consultant: A material scientist / researcher

03.02.07. On-the-House Certification

The certification guarantees products that have been manufactured without the intention to make profit by requiring products to be made, re-cycled, and re-made in a closed-loop cycle that only uses new material when the recycled stock is too degraded to be reused.

It requires that the producer implements official trade-in and pickup locations for products so that they can be remade. Additionally—and most especially—this certification requires that the product's fabrication is unlicensed or outsourced and is made at a single location from beginning to end, thus ensuring that the certified products are made without compromising its quality or integrity.

Not-for-profit production system removes the incentives and competitive pressures on brands to increase revenues, thereby shifting brands' focus from profit to value, which results in quality-made products that reflect a shift towards brand loyalty becoming the most highly-prized asset.

External FH Consultant: An independent investigation auditor to track monetary flows

03.02.08. Re-Scents Certification

The certification guarantees fragrance and perfumery products that recreate natural fragrance smells by combining extracts from organic scents and oils from greenhouse-grown botanicals with distilled compounds from food waste into fragrance mix solvents.

The certification requires that all constituent ingredients in a certified fragrance base notes shall be adequately collected, extracted, sampled, and tested in accordance with established standards of organoleptic and analytical inspection specifications and shall be safe for use in human and non-human surroundings. Carefully monitored botanical greenhouses, dedicated temperature and moisture regulated storage spaces for food waste, and sanitary laboratories shall be required on the same premises in which the fragrance is produced.

Fusing together techniques of material preservation and inventive waste repurposing, biologically-engineered products will safeguard the existence and viability of natural species from the dangers associated with shifting climatic conditions and will streamline future innovations to further reduce dependencies on natural raw materials.

External FH Consultant: A botanical scientist

03.02.14. Sweep-Up Certification

The certification guarantees a safe and sanitary method to collect human hair for safekeeping, or for use to make new personalized products, including hair-sweaters, socks, and wigs.

Collected hair must be kept at hair banks in strict observance of the following regulations: hair must be collected from hair bank-affiliated salons and barbershops and transported to the hair bank in climate-conditioned packing. Collected hair shall be sorted in specially-designated areas according to their intended purpose—safekeeping or repurposing—and separately washed at designated washing stations, untangled and dried in designated drying rooms, and stored in certified containers in a vault room. At hair banks that reprocess and manufacture new hair products, physically-separate manufacturing spaces shall be provided with necessary equipment and workstations.

Already an integral—albeit offshoot—component to the fashion industry, hair and hairstyles are reconsidered to reintegrate its byproduct—hair clippings—as a worthy resource to make new and necessary products.

External FH Consultant: A bank executive

03.02.15. Sorted-Out Certification

The certification guarantees textile recycling processes that properly sorts, shreds, and stores textile and post-consumer waste so that it can be seamlessly transformed into new products.

"Sorted Out" certified recycling facilities shall implement fully-automated sorting equipment and storage spaces that have segregated individual textile and fabrics based on a three-parameter criteria—material type, quality/degradation, and color—so that recycled textiles can have best "second-use" lifespans. Furthermore, certified facilities shall incorporate textile collection and recycling spaces and equipment to concentrate full-circle textile recycling to single close-to-home locations.

Dispersed, semiautonomous, and fully-automated sorting and recycling facilities will complement progressively increasing volumes of discarded recyclable textiles to fuel public adoption of remade fashion goods.

External FH Consultant: A garment recycling expert

03.02.16. Clothes-the-Loop Certification

The certification guarantees made-to-order cladding materials that have been manufactured using exclusively locally sourced end-of-life textiles and fabrics.

Certified facilities shall be required to operate and maintain a connected network of textile pick-up locations in its regional vicinity, and shall provide display areas for reprocessed end-of-life textiles and cladding manufacturing areas on the premises. Furthermore, facilities shall be constructed—as much as possible—from reclaimed construction materials instead of virgin materials.

By reappropriating waste from one industry into a resource for another industry, light-industrial waste-processing-cum-manufacturing plants circumvent waste build-up of end-of-life products that can no longer be sensibly recycled and celebrate the potentials of fully closed-loop and interconnected economies.

External FH Consultant: An architect

FH Certification Category : Duration

03.02.17. Nowhere-to-Hide Certification

The certification guarantees breeding, raising, euthanizing, pelting, crafting, and retailing practices of animal-origin virgin materials at a single destination that synchronously focuses on product quality and the continued well being of the animal until euthanization all within the animal's natural habitat.

Certified facilities—including farms, ranches, aquariums, and plantations to name a few examples—shall provide detailed reports and study for the bred animal species's biological needs—from nutrition and shelter to physiological and behavioral training—that is developed in close consultation with zoological and wildlife researchers and conservationists. The conclusive findings of these reports shall inform the landscape design, preservation, and/or alteration of each certified facility's property to ensure suitable habitation for the animals while also positively contributing to its locale's biodiversity. All constituent processes—from breeding to raising, from crafting to retailing—shall be performed on the same single premises in which the animals have been euthanized so that their provenance can be faithfully recorded. Each certified facility must be clearly delineated from its surroundings using physical separators—such as fences, moats, or ha-ha barriers—and shall incorporate closed-loop ecosystem maintenance infrastructures to record and regulate ecological balances.

Restricted synthetic fiber use and progressively rigorous manufacturing standards for durable and long-lasting fashion goods will reincentivize using animal-origin materials that are responsibly sourced. Animal-origin materials and products—cultivated and crafted at single-address natural landscapes—provide attractive and bespoke alternatives to mass-produced virgin-material fashion goods.

External FH Consultant: An animal biologist with an expertise in ecological balance

03.02.18. End-to-End Certification

The certification guarantees textile products that are entirely biodegradable and made using sustainable methods in a fully circular production chain in which supply, design, planning, processing, and packaging are exclusively conducted in a closed-loop system.

Certified products undergo rigorous evaluation to verify provenance, quality, contamination, and performance testing. Certified products shall be cultivated, processed, and crafted in hyper-proximate spaces whose microclimatic conditions are tightly monitored and regulated. Facilities producing certified products shall be proportionately-sized to exacting standards to produce a predetermined number of products annually, with constituent spaces—that are designated for specific stages or production processes—sized accordingly.

While initially only economical for luxury textiles such as silk, cashmere, and velvet, exceedingly strict product and production requirements give consumers utmost confidence of a product's provenance, allowing brands to retail certified products at higher values that is reinvested into preserving traditional and/or industrial know-how and heritage.

External FH Consultant: A sustainability consultant specializing in textiles

03.02.19. As-Found Certification

The certification guarantees organizations and institutions that rehabilitate dilapidated neighborhoods into desirable locations by forming locally-run luxury hospitality platforms that reposition guests and hosts.

Certified organizations shall adhere to strict—yet regionally-appropriate—means and methods of rehabilitation, and shall only be undertaken with continual and robust community involvement. Rehabilitation shall occur only in neighborhoods that are not already-advantaged nor are highly-sought after. Similarly, rehabilitation efforts shall primarily be focused—in area and finance—in private residences or public venues that facilitate direct engagement between residents and visitors.

Already a longstanding approach used by fashion brands to build reputation and ground themselves into chosen and/or native locations, brand-sponsored architectural restorations of landmarked and heritage buildings will be more widely-adopted. No longer favoring new or faraway clientele, fashion brands will reinvest into local urban rehabilitation projects, enhancing the familiar everyday with experiences of luxury, championing new product classifications of "local" to be of necessity and privilege.

External FH Consultant: A travel influencer

03.02.20. Cult-rated Certification

The certification guarantees digital collectibles and fashion goods that meet superlative standards for quality, authenticity, and uniqueness that make them recognized high-value, low-risk, and exclusive investments.

Certified digital collectibles shall be cached in secure, climate-controlled, and private digital data vaults that can only be accessed by collectible owners. This is to ensure that these collectibles are maintained in mint condition and uncorrupted from outside conditions.

Progressive expansions—and integration—of digital platforms and collectibles with fashion will challenge the verifiable provenance of collectibles and their creative singularities, necessitating both regulatory and incentive-based countermeasures—such as coordinated digital marketplaces and highly-desirable exclusive collectible releases—to combat counterfeiting and reaffirm artist's copyrighting.

External FH Consultant: A product designer specialized in digital technologies

03.02.21. Extra-Ordinary Certification

The certification guarantees individuals who have completed the requirements for—and have demonstrated appropriate demeanor to—become independent inspectors and reporters that unbiasedly test and promote fashion goods' performance, quality, and durability before mass-production approval.

Certified individuals shall conduct performance testing—and disseminate their findings—in laboratory-based environments that consolidate variegated testing equipment, simulated real-world environments, and seductive broadcasting studios to convincingly and objectively report fashion good prototype results.

Independently-reviewed, unbiased, and institutionally-endorsed performance testing exposes industry-wide malpractice, progressively safeguarding consumers and reinforcing more conscientious patterns towards a more sustainable fashion industry.

External FH Consultant: An athlete involved in extreme winter sports

03.02.22. Right-to-Replica Certification

The certification guarantees fashion goods that have demonstrably significant merit as heritage assets—both tangible and intangible merit, such as rare antique materials and historically-significant technique, respectively—that can be reproduced as contemporary simulacrums as a method of heritage conservation.

To obtain certification, prospective fashion goods shall undergo rigorous evaluation on its technical and material credentials on the basis of its contextual historic importance and its potential to be reproduced. Upon certification, a certified good shall be archived in climate-controlled facilities that—in a single interconnected location—store, analyze, reconstruct, and publicly-disseminate fashion goods in a linear workflow that systematizes exceptional garment care and creation.

Expanding on conventional notions of archiving and knowledge-preservation, reproduction-based archival methods ensure that historically-significant garments and fashion goods are not fetishized solely as artifacts, but maintain inherent qualities of utility and self-expression because they are once-more worn in everyday scenarios.

External FH Consultant: A counterfeit analyst

03.02.23. Ready-to-Grow Certification

The certification guarantees individuals who have sufficiently completed the requirements to own and operate wool textile production facilities—including, but not limited to, sheep farms, yarn spinners, felting workshops, and knitting studios—in coordination with and from financing of non-profit foundations.

Certification candidates must train in wool-producing facilities within—and already affiliated with—Fashion House's network throughout the Red Thread for a minimum of two years. These wool-producing facilities shall be full-service producers that have expertise across the entire gamut of wool textile making—from husbandry to shearing, and felting to knitting—in a consolidated environment. Regionalized economic networks will reprioritize locally-sourced resources, offering formerly-disadvantaged communities and individuals opportunities for upward social mobility through vocational training in vital emergent industries.

External FH Consultant: A wool farmer

III.05
Certification Protocols

1. The Fashion House Certification Committee shall take up to three months to report the compliance of prospective and current members after thorough evaluations of their product and/or services.

2. Members and brands that seek discretionary certification shall only be considered if they are already compliant with Fashion House's Universal Certifications.

3. FHC's are initially granted for up to five years to awarded brands, companies. or individuals upon which an Official Certification Display Document (refer to ——). This includes the certification warrant is presented to the awarded recipient, which provides the recipient the authority to use the certification.

4. When the product, process, or an individual displays an awarded certification warrant(s), it shall always adhere to the coding systems of Fashion House (refer to IV.06.01). Fashion House's coding systems govern how certification warrants must be displayed on a brand's products, services, stationery, advertisements, broadcasting, and other printed material, on their premises and on delivery vehicles to name but only a few examples.

5. In the event that a member can no longer fulfill the standards required for universal and/or discretionary certifications, their awarded status shall be temporarily withdrawn during a one calendar year grace period in which to correct their inaccuracies. Members placed into this grace period are still expected to pay Fashion House membership dues if seeking reinstatement. If—at the verification inspection concluding this mandated grace period—the member still cannot fulfill the expected standards, the brand's Fashion House membership shall be immediately withdrawn.

6. Brands seeking reinstatement shall be allowed to reapply for Fashion House membership and should expect no special treatment during the vetting process.

7. All certification warrants are audited by the Fashion House Certification Committee in advance of at least one calendar year before their expiration.

8. A certification may not be renewed if the quality and/or supply for the product or service no longer sufficiently meets the guidelines established by Fashion House at the time of renewal.

9. The certification committee reserves the right to—and shall—perform annual unannounced on-site inspections to verify member brand's compliance with FHC standards.

10. Any certification awarded to a brand that undergoes ownership change or becomes financially insolvent shall be automatically reviewed and may be revoked if FHC standards cannot be demonstrably met.

III.05
Coding System

Organizes all information of registered fashion house companies and products into a digital platform. Each Fashion House company has a registered number and each new product produced by Fashion House companies or a halfway product has a unique code. The code can be seen on the label attached to the product and has an RFID tag on it. Customers can scan the smart tag and see all of the information about this product: the complete unique code, history, manufacturer information, materials, certifications, etc. The structure of the product number: registered company number, timestamp, monthly counter. The coding system is reflected in the graphic design of the Fashion House logo.

III.04
Discretionary Certifications

Title	Description	Type
CONSUMPTION		
CLASSIFIED	Certifies a mono-directional spatial organization that eliminates double encounters and ensures client anonymity while acquiring a product, process or service.	Process
GROWING THE SCENE	Certifies locations that are well-suited to, and fulfill the spatial requirements, to host spectacular events. Locations must be unique, iconic, timeless, and embody extraordinary experiences.	Individual
KNOW IT ALL	Certifies professionals that have concurrently achieved handicrafts skills competency in at least five distinct fashion artisanal disciplines toward becoming increasingly generalist professionals.	Individual
SHAMELESS	Certifies individuals that have fulfilled a three-month residency in which they–in close contact with consumers–have been empowered to rethink fashion and body norms and design.	Individual
PERFECT MATCH	Certifies ceremonial processes, events, and public functions that–through a carefully constructed protocol that integrates traditional and contemporary regionally-appropriate methods–are situated in forgotten landscapes for their protection and locational rejuvenation after its completion.	Process
PRODUCTION		
OFF THE SHELF	Certifies brands that exclusively use mono-materials and instantaneous production processes to create personalized items.	Process
ON THE HOUSE	Certifies products that have been manufactured without the intention to make profit by requiring products to be made, re-cycled, and re-made in a closed-loop cycle that only uses new material when the recycled stock is too degraded to be reused	Process
RE-SCENTS	Certifies fragrance and perfumery products that recreate natural fragrance smells by combining extracts from organic scents and oils from greenhouse-grown botanicals with distilled compounds from food waste into fragrance mix solvents.	Product
SAVOIRE - FAIRE	Certifies products that have been crafted in strict accordance to local traditional techniques by brands or individuals in workshops that are similarly authentically organized and/or supplied so that the product and its associated know-how are perpetuated to new generations.	Product
MADE FROM SCRATCH	Certifies modifiable digital mannequins that are used to exhibit products on online platforms. A certified mannequin shall use anonymously-collected user data to generate customized presentations of fashion goods in an exclusive and secure manner.	Product
DURATION		
GOOD AS NEW	Certifies the cleaning process for resold or rented fashion goods to meet quality, safety, and sanitation standards that require no traces of any hazardous materials or contaminants, and are processed using only eco-friendly cleaning products and energy-efficient equipment.	Process

Title	Description	Type
MADE TO LAST	Certifies products that have been manufactured with meticulous tailoring techniques that are made with highly durable raw materials, and are designed to seamlessly be continually repaired, alterated, and updated over an individual's working career.	Product
WITH LOVE	Certifies garments that have been carefully repaired and customized by the local repair experts, customers, and qualified robots.	Product
SWEEP UP	Certifies a safe and sanitary method to collect human hair for safekeeping, or for use to make new personalized products, including hair-sweaters, socks, and wigs.	Process
SORTED OUT	Certifies textile recycling processes that properly sorts, shreds, and stores textile and post-consumer waste so that it can be seamlessly transformed into new products.	Process
CLOTHES THE LOOP	Certifies made-to-order cladding materials that have been manufactured using exclusively locally sourced end-of-life textiles and fabrics.	Product
VALUE		
NOWHERE TO HIDE	Certifies breeding, raising, euthanizing, pelting, crafting, and retailing practices of animal-origin virgin materials at a single destination that synchronously focuses on product quality and the continued well being of the animal until euthanization all within the animal's natural habitat.	Process
END-TO-END	Certifies textile products that are entirely biodegradable and made using sustainable methods in a fully circular production chain in which supply, design, planning, processing, and packaging are exclusively conducted in a closed-loop system.	Process
AS FOUND	Certifies organizations and institutions that rehabilitate dilapidated neighborhoods into desirable locations by forming locally-run luxury hospitality platforms that reposition guests and hosts.	Product
CULT-RATED	Certifies digital collectibles and fashion goods that meet superlative standards for quality, authenticity, and uniqueness that make them recognized high-value, low-risk and exclusive investments.	Product
EXTRA ORDINARY	Certifies individuals who have completed the requirements for–and have demonstrated appropriate demeanor to–become independent inspectors and reporters that unbiasedly test and promote fashion goods' performance, quality, and durability before mass-production approval.	Product
RIGHT TO REPLICA	Certifies fashion goods that have demonstrably significant merit as heritage assets–both tangible and intangible merit, such as rare antique materials and historically-significant technique, respectively–that can be reproduced as contemporary simulacrums as a method of heritage conservation.	Product
FRIENDLY WOOL	Certifies individuals who have sufficiently completed the requirements to own and operate wool textile production facilities–including, but not limited to, sheep farms, yarn spinners, felting workshops and knitting studios–in coordination with and from financing of non-profit foundations.	Individual/s

III.05.01 Coding System

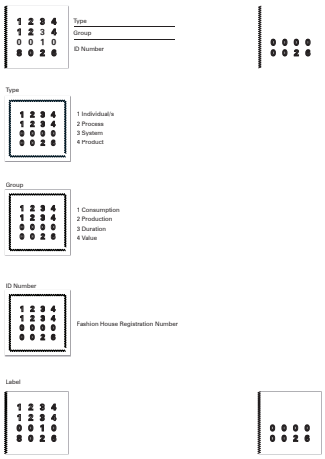
Transitioning from traditional labeling systems and inspired by Maison Margiela —where each garment is labeled with a series of numbers that correspond to the item's design process— Fashion House introduces a labeling system for all of its products, that provides an insight into the history, manufacturer information, materials, certifications, among others. This system is meant to reflect Fashion House's focus on minimum standards (refer to IV.03) towards a conscious and slow-paced fashion industry.

f.g.III.05.01.1 Red Thread symbol

Fashion House has two types of labels.

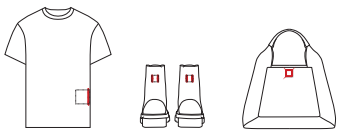
The first type of label is for products that are made from scratch inside Fashion House. The second label is for preloved garments that enter the circular process of Fashion House.

The first includes automatic identification and data capture through an RFID tag system. The second type of label is for preloved garments that enter the circularity process of Fashion House by upcycling or repairing; these garments are inspected, cleaned and attempt to trace materials, sourcing and others before tagging and being returned. This label has a different design and includes information about the product's history and condition before entering the circularity process.



f.g.III.05.01.2 Codind System

All tags are positioned on the inside of garments, where possible, recognizable by the red stitch on the left hand side. The front of the tag features certification and compliance information, while the back of the tag displays each item's care instructions.



f.g.III.05.01.3 Apply to products

For easy and convenient access to information, customers can scan the RFID tag on the label attached to the product using the Fashion House app. The app contains extensive information about the product, including its complete history, certifications, and compliance information.

f.g.III.05.01.4 Fashion House Application Interface

IV. Toward the Red Thread

IV.01
Intro- from Consumption to Waste

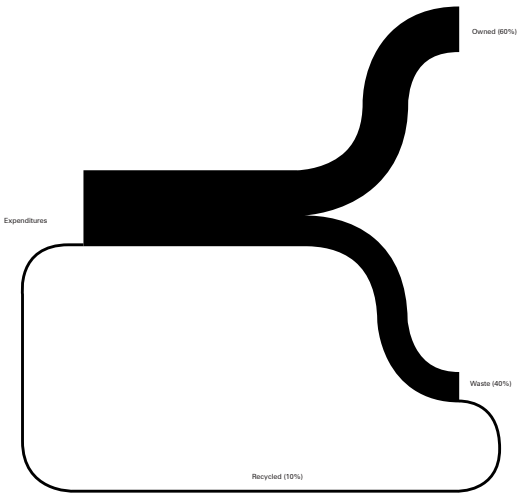
The fashion industry has a high consumption to waste rate, meaning that a large amount of resources, such as water and energy, are used to produce clothing, and a significant portion of these garments end up in landfills or are incinerated. This is due to a variety of factors, including fast fashion, which is the practice of producing cheap clothing in large quantities to meet consumer demand, and a culture of disposability, where clothing is seen as disposable and not meant to last. Additionally, the industry is also known for its poor working conditions, exploitation of labor and negative impact on the environment.

In 2040, with increasing awareness of the environmental and social impacts of the fashion industry, consumers and companies are likely to place more emphasis on ethical and sustainable production methods. This could involve using more eco-friendly materials, reducing waste through recycling and upcycling, and implementing fair labor practices. Additionally, advances in technology may also play a role in reducing consumption to waste, through the use of digital textile printing and other innovations. However, it is also important to note that it will take significant effort from all stakeholders to reduce the consumption to waste rate of the fashion industry by 2040.

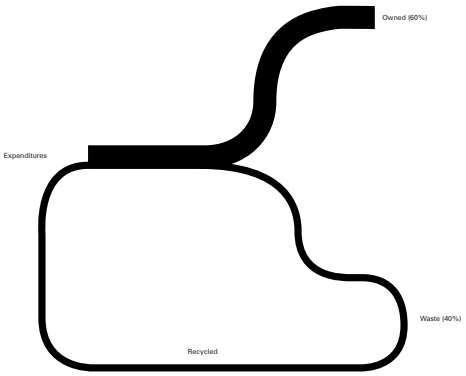
IV.01.02 Production to Consumption

Consumers of the fast fashion paradigm circa 2022 tended to spend, on average, approximately six-hundred euros on footwear and clothing annually, of which forty percent of this was generally disposed of as waste. A relatively low percentage was recycled annually: there was insufficient post-consumer household waste recycling infrastructure in-place to process low quality, rapidly degrading fast fashion garments.

Fashion House and its various members currently manage textile disposal management across the Red Thread and its five member cities to recycle and upcycle old garments, and guarantee further reuse. In our slower fashion paradigm, one particular annual expenditure may be higher, but average expenditures over time are lower compared to those of the previous paradigm, due to prevalent conscientious maintenance of clothing use, such as repair, and rental.



f.g.IV.01.02.1 Current situation in 2022

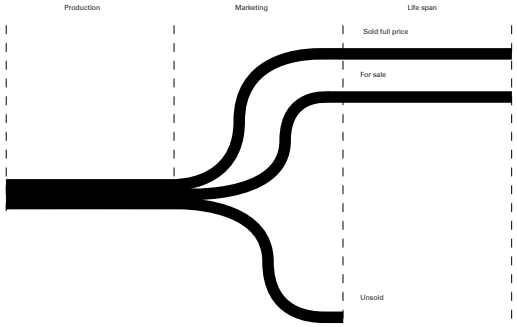


f.g.IV.01.01.2 Speculation for 2040

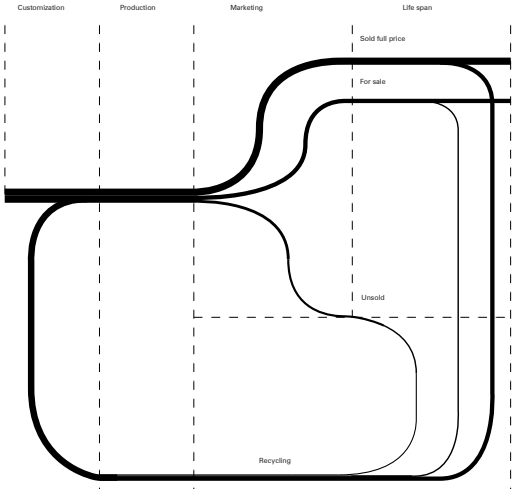
IV.01.01 Production to Consumption

The previous fashion paradigm production-to-consumption manufacturing standard was unsustainable due to continuallyincreasing deadstock, and the lack of customer personalization or built-in waste management proceduresprior to final manufacturing.

Deadstock is now eliminated from the fashion industry, both in physical storage, and as a concept altogether. Customer product customization in a made-to-order manufacturing paradigm avoids overproduction of unwanted products. Efficient recycling processes based on precise and accurate automated sorting eliminate the traditional concept of waste. Controlled production which responds specifically to consumers' necessities avoids overconsumption.



f.g.IV.01.01.1 Current situation in 2022

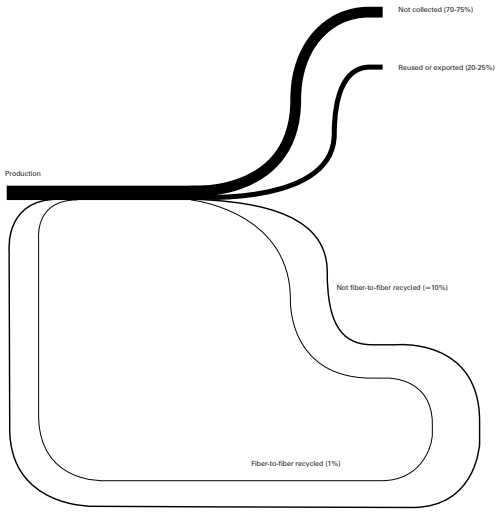


f.g.IV.01.01.2 Speculation for 2040

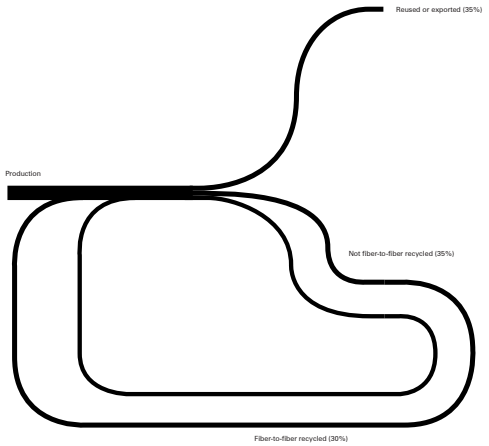
IV.01.03 The one percent

About 40% of the textiles bought in Europe became waste, currently, only 1% of those is recycled fiber-to-fiber. Not Collected—those items which are not elegible to recycling processes. Not fiber-to fiber recycled—open loop recycling processes to create sources other than textiles. Fiber-to-fiber recycled—close loop recycling systems which allow to obtain new materials for the fashion industry.

The future Production-to-Waste pattern scales textile recycling, and manage responsibly post-consumer houshold textiles across the Red Thread.



f.g.IV.01.03.1 Current situation in 2022



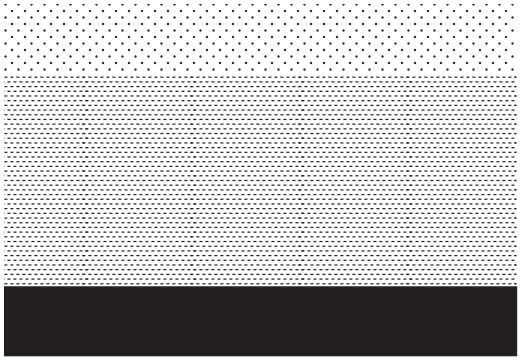
f.g.IV.01.03.2 Speculation for 2040

IV.01.04 Nine Million Tons Waste

One consistent set of objectives across the Red Thread is, at bare minimum, to maintain the amount of waste generated in Europe each year, and ideally, to gradually lower this amount year-over-year. We currently produce up to approximately seven million tons of gross textile waste. This is forecasted to increase up to nine million tons, shifting from fifteen kilograms, to twenty kilograms of waste per person. Fashion House proposes a scenario where this gross textile waste can be reduced by thirty percent, instead of gradually increasing over the years.

f.g.IV.01.04.1 The Nine Million Tons

Fast fashion trajectory



Fashion House scenario 2040

IV.03
Raw Materials

Raw materials are the materials that are used to produce clothing. These range from more traditional materials as wool, cotton and leather, that will keep there significance, to materials like hemp that will be significant in 2040, to materials as polyester that will loose significance in 2040.

Raw Materials | Arable land

25% of Europe is arable land. In 2050 south of Europe will risk water shortages due to raised temperatures and decrease in precipitation. This will have an impact on the what is cultivated in that area in the future.

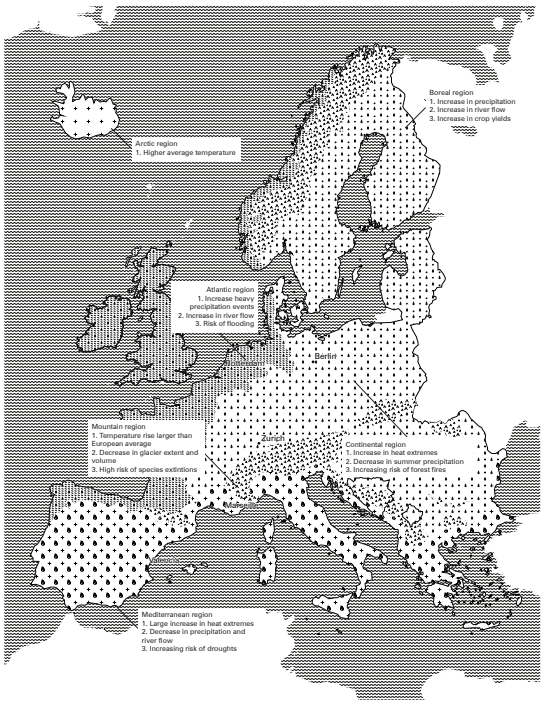
Legend

Arable land
Risk for watershortage in 2050

IV.02
Climate

In 2040, climate zones will shift in Europe due to the continuous CO2 emissions. The shift of these zones will impact the arrangement of cultivation and industries in the territory.

87



Climate

This map illustrates how climate zones across the countries are organized per climatic regions and are featured by different weather conditions.

0 100 400m

89

Raw Materials | Hemp

This map shows the hemp distribution within the arable areas.

Legend

Hemp
Risk for watershortage in 2050

0 100 400m

93

Raw Materials | Cotton

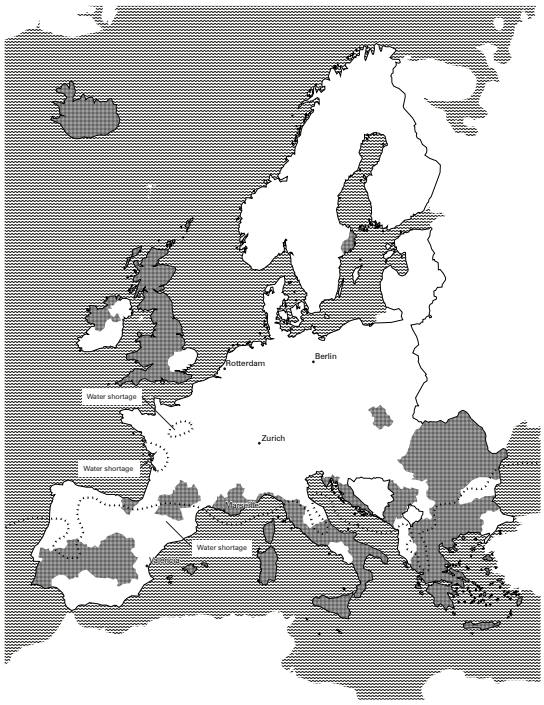
This map illustrates the amount of cotton available in relation to the water scarcity.

Legend

Cotton
Risk for watershortage in 2050

0 100 400m

94



Raw Materials | Wool

This map shows the wool availability across countries together with the possible risk of the water source.

Legend

Wool

Risk for watershortage in 2050

95

Raw Materials | Polyester

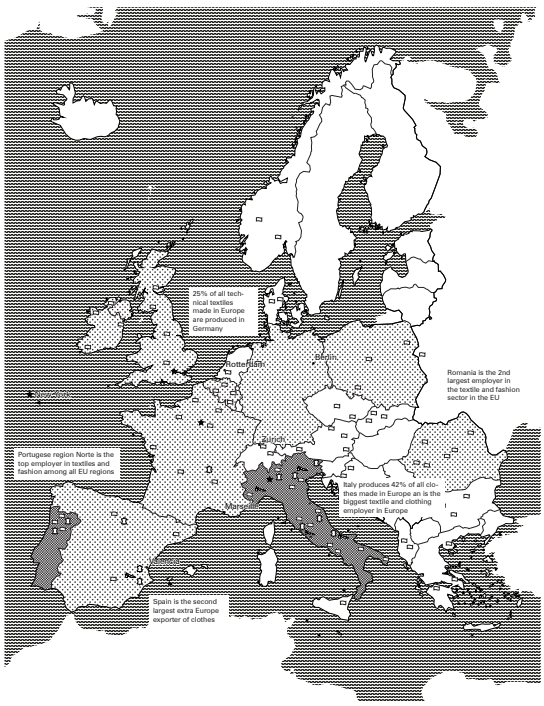
The map illustrates where oil extraction sites are located as well as where oil is transformed into polyester as a source of the material.

Legend

Polyester

Manufacturer

96



Production and Manufacturing | Clothing Manufacturing Industries

Top ten EU producers for fashion and textile goods

Legend

Top producer

Second largest

Fashion capitals

Clothing industry

Tanning industry

Shoe industry

101

102

Raw Materials | Livestock

This map shows the lifestock availability across countries.

Legend

Livestock

Risk for watershortage in 2050

0 100 400m

97

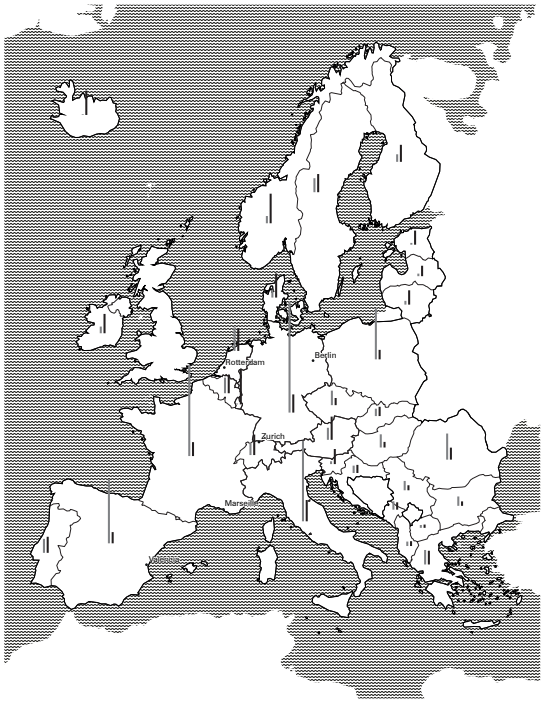
IV.04
Production and Manufacturing

99

IV.05
Consumption and 'Waste'

Current consumption and 'waste' numbers are mapped out per country, to form a base for our speculation.

103



Consumption and 'waste' | Clothing and Footwear Consumption

This map illustrates the spending per capita on clothing and footwear from the consumer's perspective concerning the number of inhabitants per country.

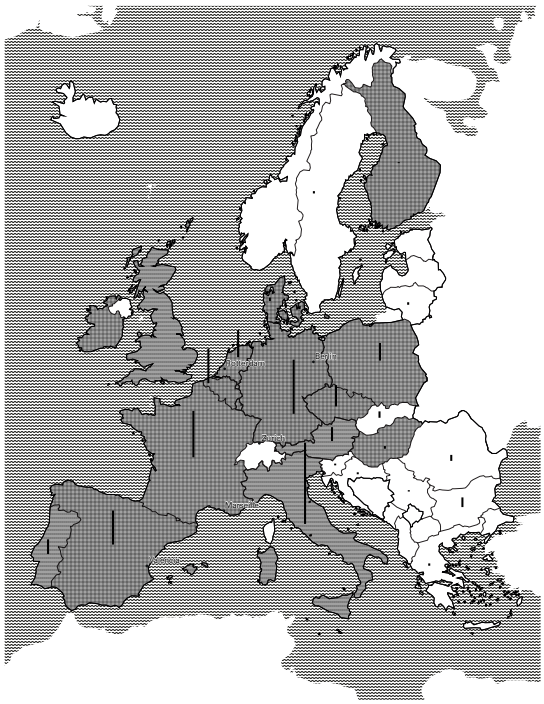
Legend

Millions of inhabitants per country

Consumers expenditures per capita on clothing and footwear

0 100 400m

104



Consumption and 'waste' | Clothing and Footwear Consumption

Analysis of the 15 European and non-European most consuming countries for each year. The level of sustainability is based on multiple parameters such as yearly total textile waste, quantities of waste per person which are recycled, reused, or incinerated as well as average spending.

Legend

- Most sustainable
- Average
- Least sustainable
- Textile waste per country in metric tons

0 100 400m

IV.06
Infrastructure

Current and expected infrastructural networks are mapped out, both for the transfer of people: high speed train network, the transfer of goods: water navigation, and the transfer of information: below sea level network cables.

Infrastructure | Public Railways

This map illustrates the public transport railways together with some future rail connections which are planned to be implemented.

Legend

- Future railway connections
- Public transport railways

0 100 400m

Infrastructure | Freight Railway Network

Europe's major submarine cable systems.

Legend

- Underwater cable

0 100 400m

Infrastructure | Water Navigation

This map illustrates the waterways across and within regions as the main ways of transport for the future fashion industry trade.

Legend

- International waterways
- Main path
- Secondary path
- Minor path

0 100 400m

108

Infrastructure | Freight Railway Network

The Rail Freight Corridors belong to the TEN-T, which represents the European corridors. The EU commission has planned to double its traffic and equipe smart and sustainable transport by 2050.

Legend

- Rail Freight Corridors

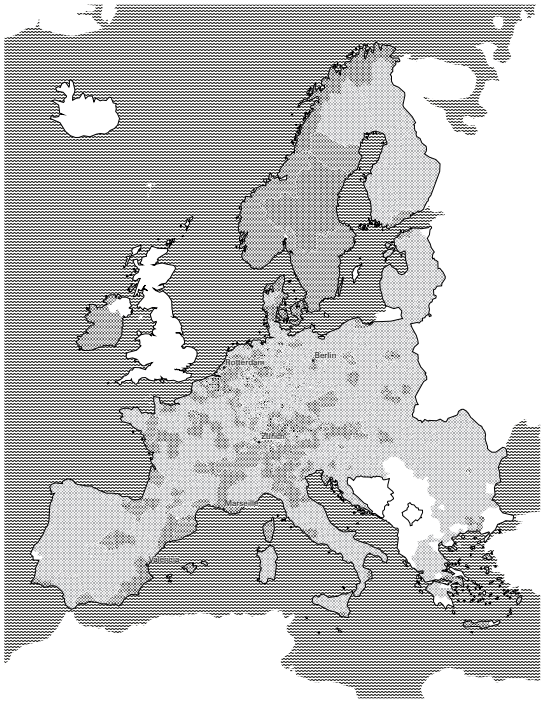
0 100 400m

109

IV.07
Population and Demographics

Expected population changes are mapped out per administrative area.

113



Population | Urban Centers

This map shows the population growth and decrease across countries.

Legend

- 10% growth
- 0-10% growth
- 0-10% decrease
- 10% decrease

0 100 400m

115

IV.08

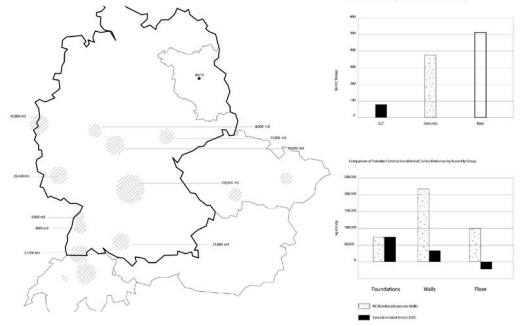
Pilot Locations

Current and expected infrastructural networks are mapped out, both for the transfer of people: high speed train network, the transfer of goods: water navigation, and the transfer of information: below sea level network cables.

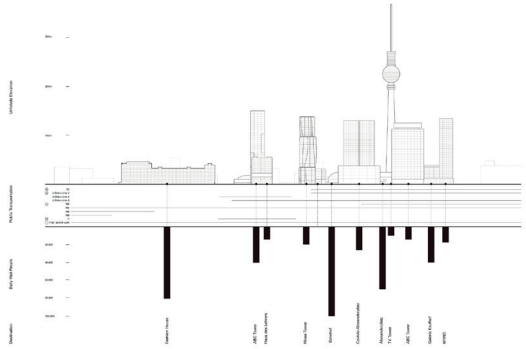
IV.08.01

Berlin

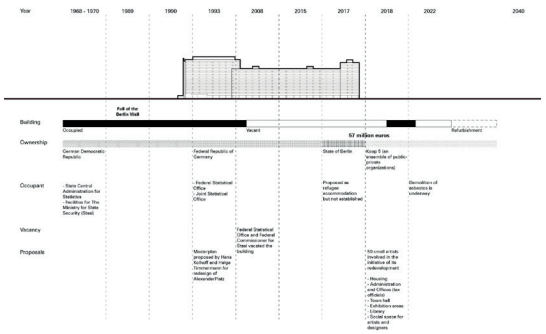
IV.08.02 Berlin Visualized Evidence



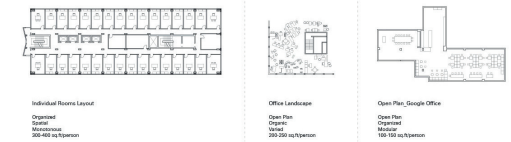
f.g.IV.08.02.1 Germany Cross Laminated Timber(CLT) Production & Sustainbility



f.g.IV.08.02.2 Unfolded Elevation around Fashion House Berlin



f.g.IV.08.02.3 Haus der Statistik - Chronological Scenario



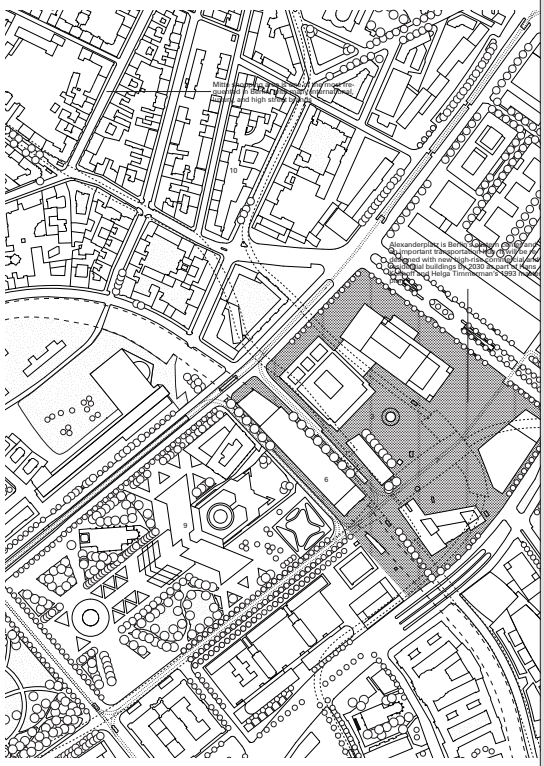
f.g.IV.08.02.4 Evolution of Office Layout

IV.08.01 Berlin Regional Plan

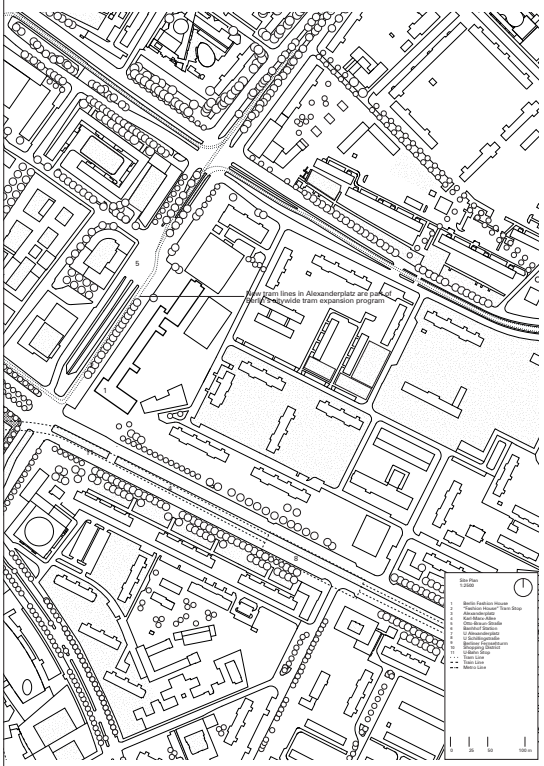
118

119

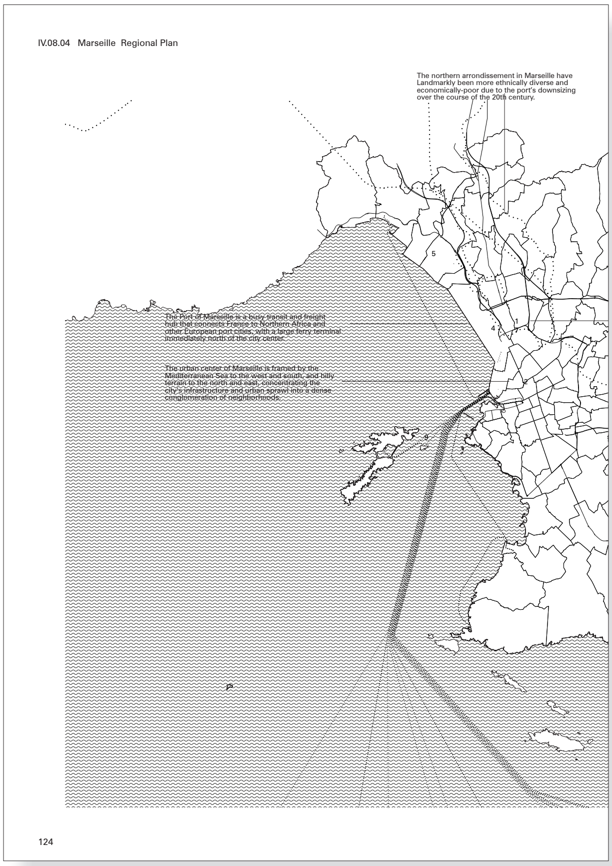
IV.08.03 Berlin Site Plan

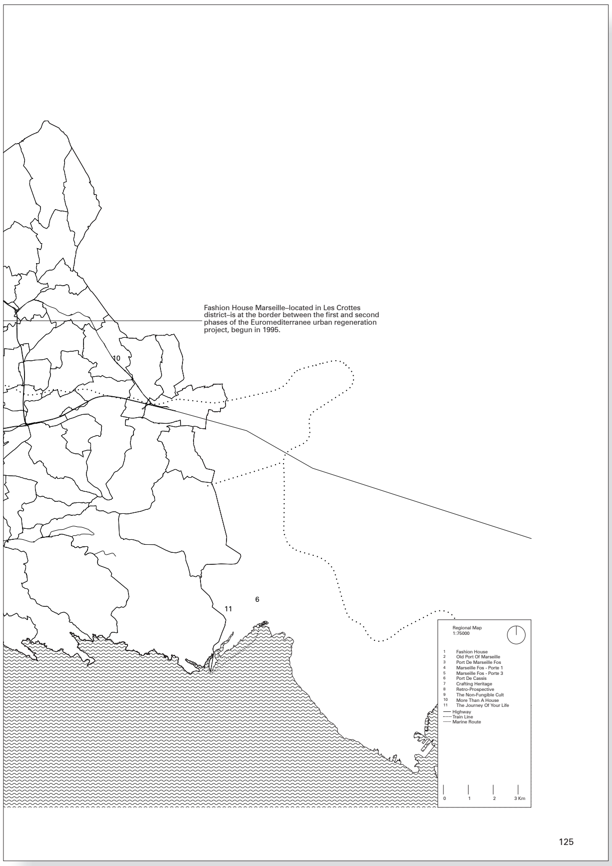


122

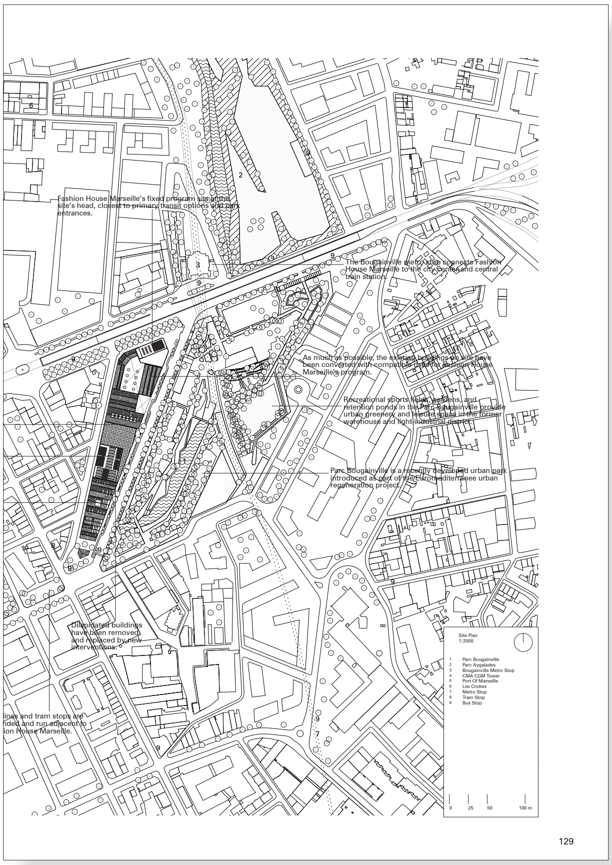


123

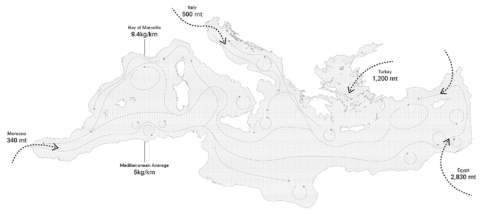

IV.08.04 Marseille Regional Plan
The northern arrondissement in Marseille have Landmarkly been more ethnically diverse and economically-poor due to the port's downsizing over the course of the 20th century.
The Port of Marseille is a busy transit and freight hub that connects France to Northern Africa and other European port cities, with a large ferry terminal immediately north of the city center.
The urban center of Marseille is framed by the Mediterranean Sea to the west and south, and hilly terrain to the north and east, concentrating the city's infrastructure and urban sprawl into a dense conglomeration of neighborhoods.
124


Fashion House Marseille–located in Les Crottes district–is at the border between the first and second phases of the Euromediterranee urban regeneration project, begun in 1995.
Regional Map
1:75000
1 Fashion House
2 Old Port Of Marseille
3 Port De Marseille Fos
4 Marseille Fos - Porte 1
5 Marseille Fos - Porte 3
6 Port De Cassis
7 Crafting Heritage
8 Retro-Prospective
9 The Non-Fungible Cult
10 More Than A House
11 The Journey Of Your Life
Highway
Train Line
Marine Route
0 1 2 3 Km
125

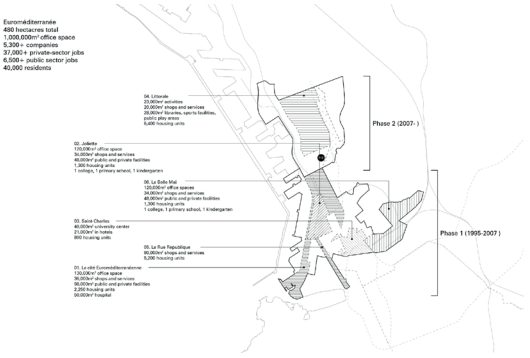

IV.08.06 Marseille Site Plan
Fashion House is located at the intersection of Phase 1 and Phase 2 of the Euromediterranee masterplan, adjacent to the Parc Bougainville. Divided into a patchwork of several buildings occupying an entire city block, the intervention is designed to reconcile the industrial and post-industrial neighborhood vernaculars to the north of the site with the newly-constructed Euromediterranee-financed developments primarily to the south of the site.
Fashion House Marseille occupies a full city block once occupied by former soap and textile warehouses that are now abandoned or converted into mechanics shops and office space.
Fashion House Marseille's flex program–a vocational school–anchors the heart of the city block
The block-printing workshop Crafting Heritage is integrated into the full Fashion House Marseille complex.
The ferry and light-industrial terminals of the Marseille-Fos port are located within a fifteen minute walk from Fashion House Marseille.
128


Fashion House Marseille's fixed program sits at the site's head, closest to primary transit options and park entrances.
The Bougainville metro stop connects Fashion House Marseille to the city center and central train station.
As much as possible, the existing buildings on site have been converted with compatible uses for Fashion House Marseille's program.
Recreational sports fields, gardens, and retention ponds in the Parc Bougainville provide urban greenery and leisure space in the former warehouse and light-industrial district.
Parc Bougainville is a recently developed urban park introduced as part of the Euromediterranee urban regeneration project.
Dilapidated buildings have been removed and replaced by new interventions.
Site Plan
1:2500
1 Parc Bougainville
2 Parc Aygalades
3 Bougainville Metro Stop
4 CMA CGM Tower
5 Port Of Marseille
6 Les Crottes
7 Metro Stop
8 Tram Stop
9 Bus Stop
129

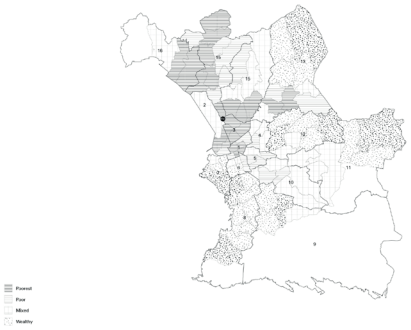
IV.08.05 Marseille Visualized Evidence



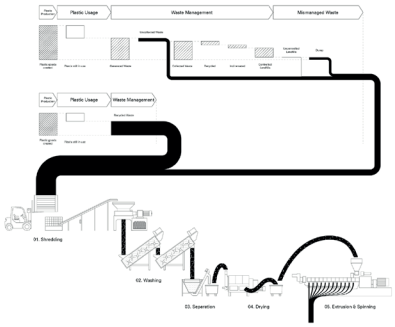
f.g.IV.08.05.1 Mediterranean Marine Plastic Pollution



f.g.IV.08.05.2 Euromediterranee Masterplan

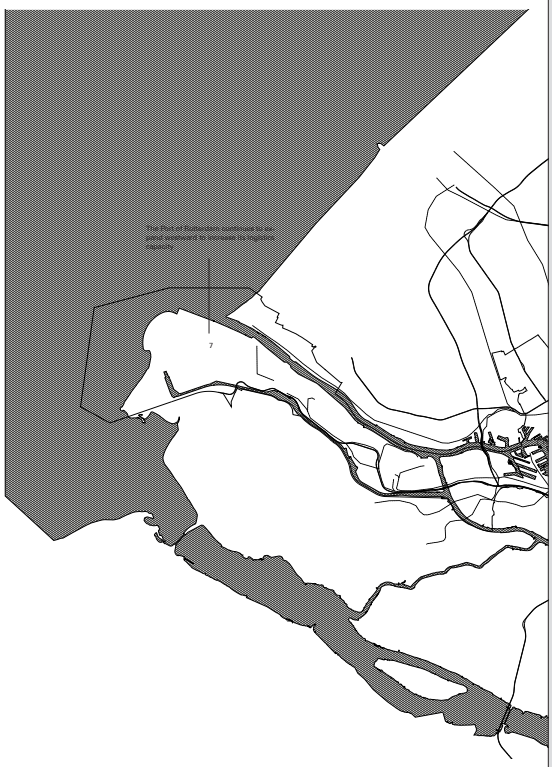


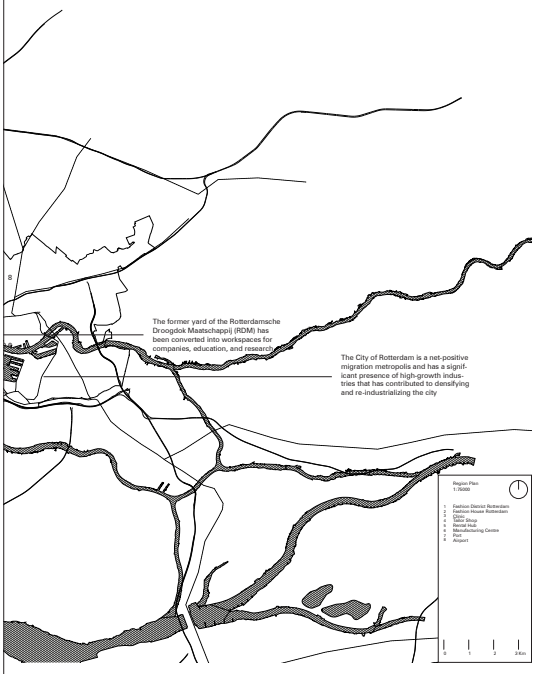
f.g.IV.08.05.3 Marseille Poverty Unemployment



f.g.II.08.05.4 Plastic Recycling Process

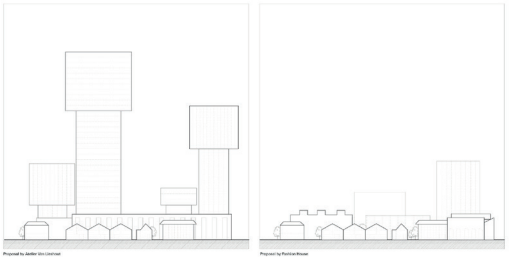
IV.08.07 Rotterdam Regional Plan



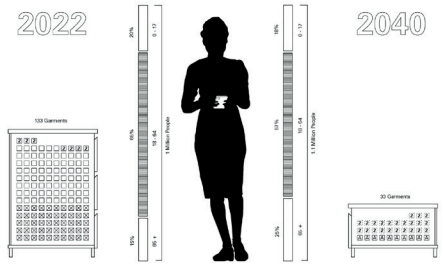


IV.08.08 Visualized Evidence

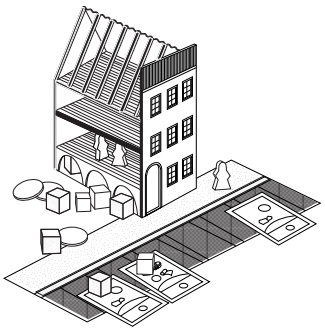
f.g.IV.08.08.1 Europes Navigable Waterways



f.g.IV.08.08.2 New Proposal by Fashion House Rotterdam

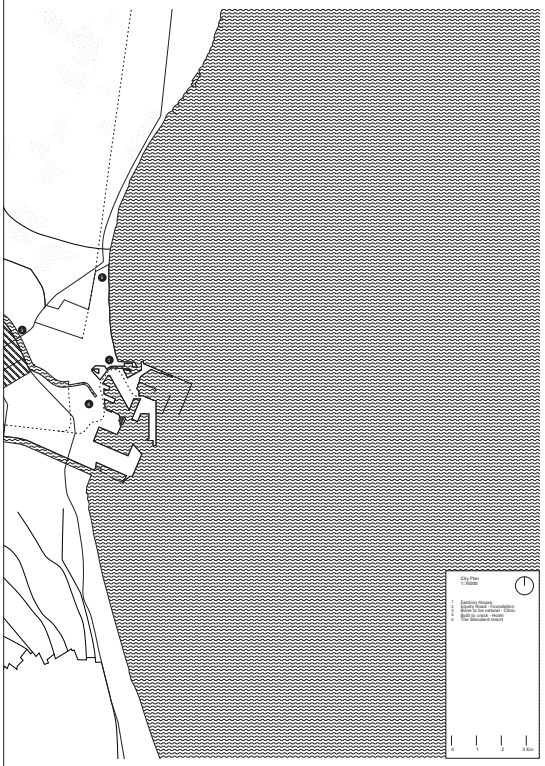


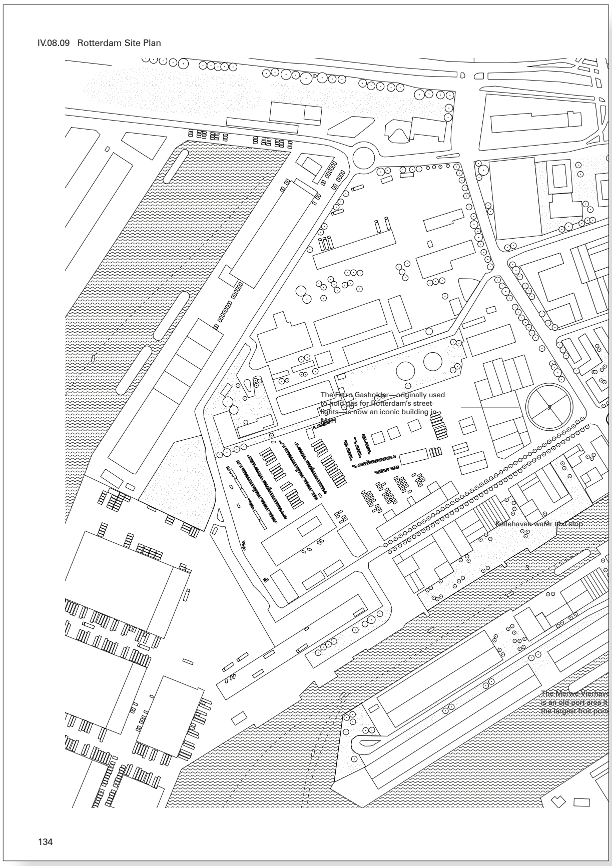
f.g.IV.08.08.3 Rotterdamer's Closet

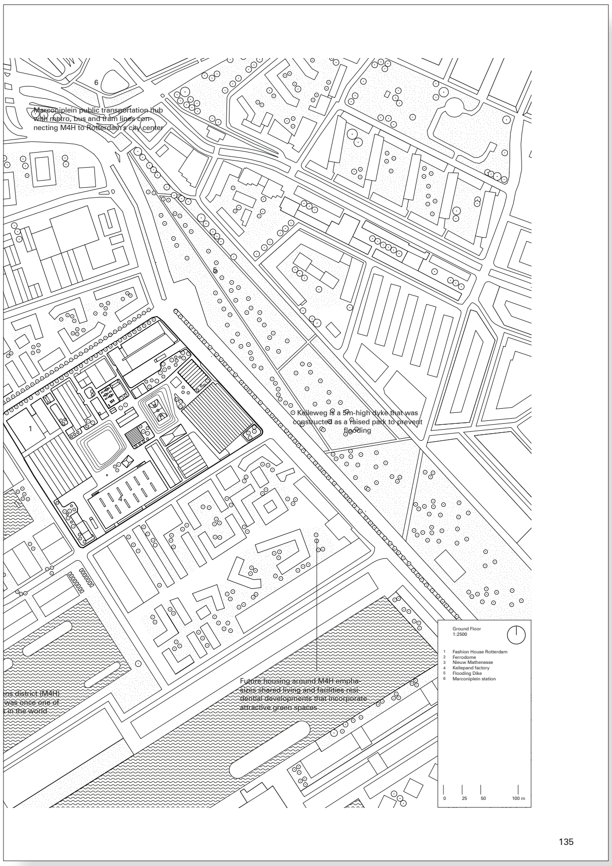


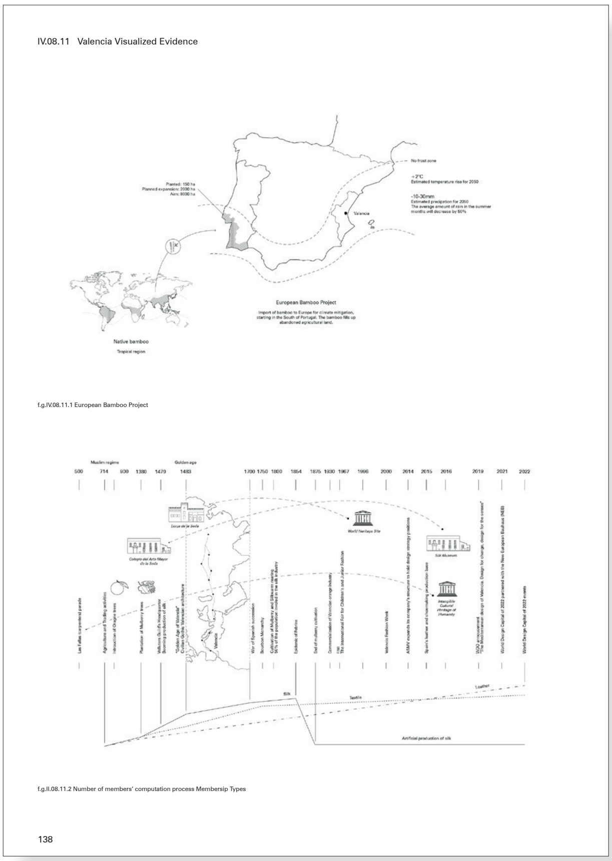
f.g.IV.08.08.4 Merchant House

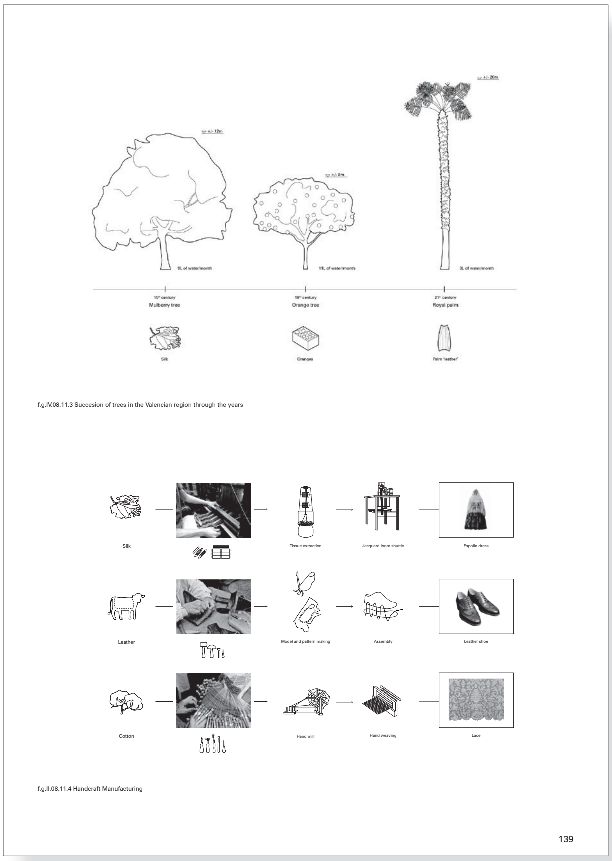
IV.08.10 Valencia Regional Plan




IV.08.09 Rotterdam Site Plan
The Ferro Gasholder—originally used to hold gas for Rotterdam's street-lights—is now an iconic building in M4H
Keilehaven water taxi stop
134

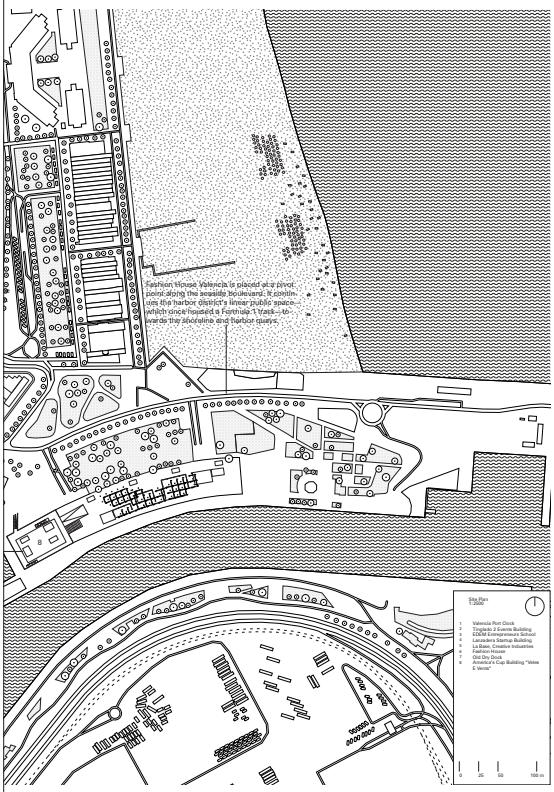

Marconiplein public transportation hub with metro, bus and tram lines connecting M4H to Rotterdam's city center
Keileweg is a 5m-high dyke that was constructed as a raised park to prevent flooding
Future housing around M4H emphasizes shared living and facilities residential developments that incorporate attractive green spaces
Ground Floor
1:2500
1 Fashion House Rotterdam
2 Ferrodome
3 Nieuw Mathenesse
4 Keilepand factory
5 Flooding Dike
6 Marconiplein station
0 25 50 100 m
135


IV.08.11 Valencia Visualized Evidence
No frost zone
+2°C
Estimated temperature rise for 2050
-10-30mm
Estimated precipation for 2050
Valencia
European Bamboo Project
Native bamboo
Tropical region
f.g.IV.08.11.1 European Bamboo Project
Muslim regime
Golden age
500 714 939 1380 1479 1483 1700 1750 1800 1854 1875 1930 1967 1996 2000 2014 2015 2016 2019 2021 2022
Silk
Textile
Leather
Artificial production of silk
f.g.II.08.11.2 Number of members' computation process Membersip Types
138


Mulberry tree
Orange tree
Royal palm
Silk
Oranges
f.g.IV.08.11.3 Succesion of trees in the Valencian region through the years
Silk
Tissue extraction
Jacquard loom shuttle
Leather
Model and pattern making
Assembly
Leather shoe
Cotton
Hand mill
Hand weaving
Lace
f.g.II.08.11.4 Handcraft Manufacturing
139

IV.05.12 Valencia Site Plan

140



141

IV.08.14 Zurich Visualized Evidence

1892 - 1972

Usage
Silk factory

Historic Name
Seidenfirma /
Seidenweberei

1972 - 1980
Take over by the city

Usage
First studios and events

Historic Name
Sozialdemokratische Partei (SP)
Initiative Rote Fabrik, Referendum (1977)

1980-240

Usage
Cultural Centre
(leisure, artist studios,
evening program)

Management
City of zurich (owner)
Kollektiv IG Rote FabriK (operator)

2040 -

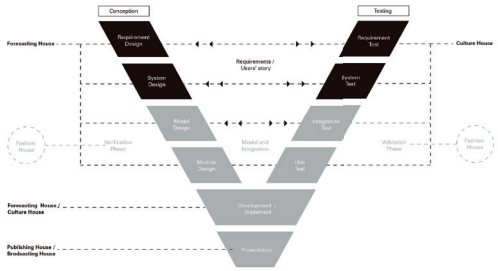
Usage
Fashion House
Forecasting
Publishing
Education

Name
Fashion House Zurich

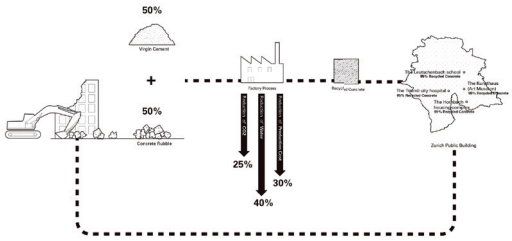
f.g.IV.08.14.1 Timline of Rote Fabrik

f.g.IV.08.14.2 Different Uses of Roe Fabrik

144



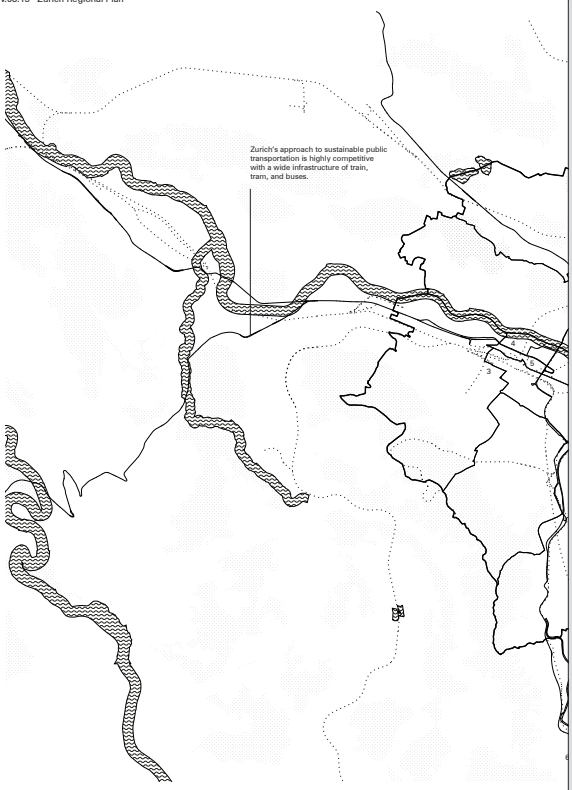
f.g.IV.08.14.3 Fashion House Zurich R&D Organization



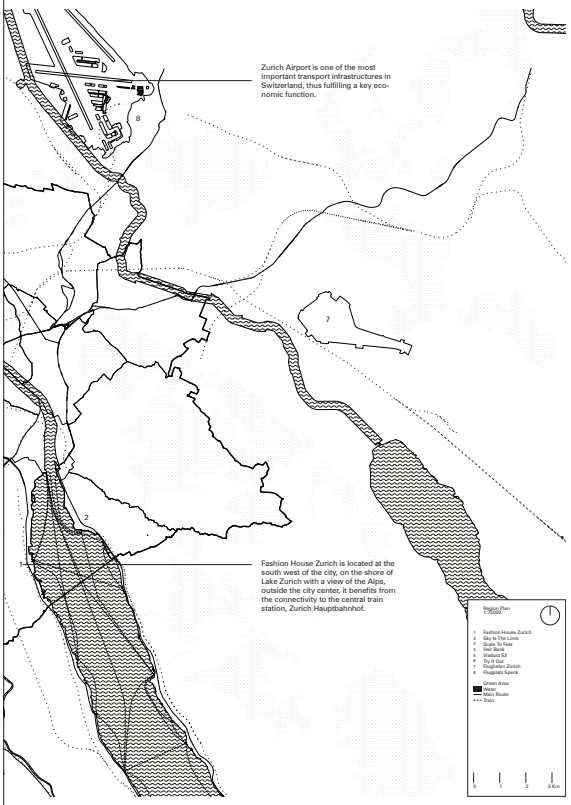
f.g.IV.08.14.4 Second Life of Concrete

145

IV.08.13 Zurich Regional Plan



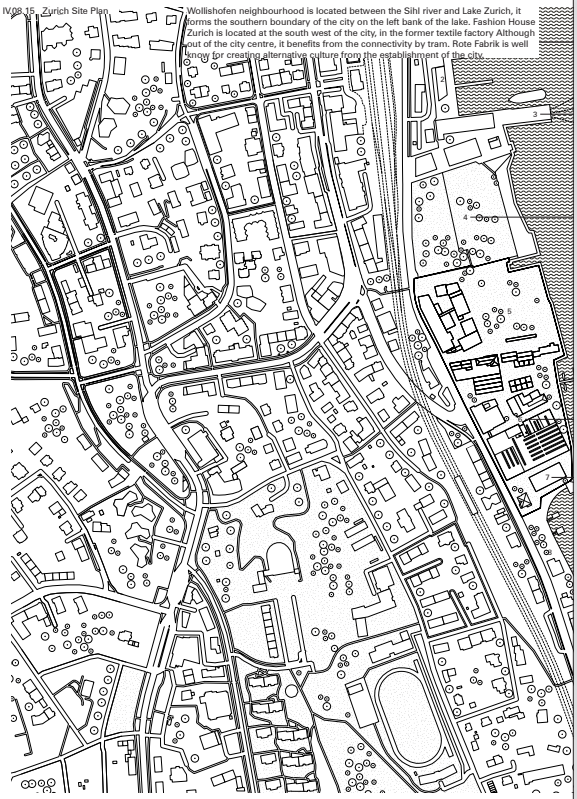
142



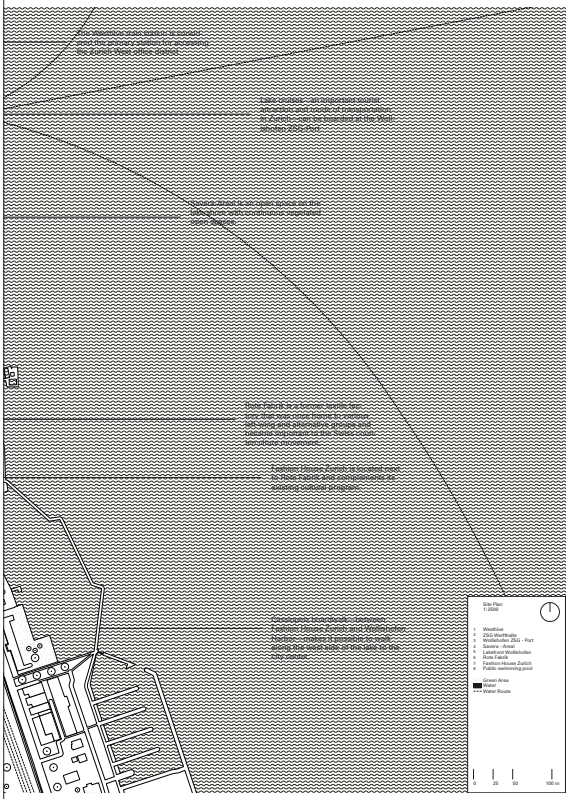
143

IV.08.15 Zurich Site Plan

Wollishofen neighbourhood is located between the Sihl river and Lake Zurich, it forms the southern boundary of the city on the left bank of the lake. Fashion House Zurich is located at the south west of the city, in the former textile factory Although out of the city centre, it benefits from the connectivity by tram. Rote Fabrik is well known for creating alternative culture from the establishment of the city.



146



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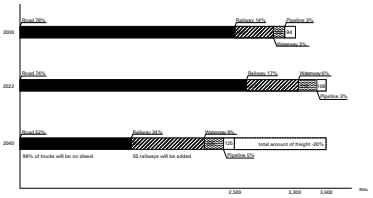
V.01
How to use this Manual

The following manual is a set of written guidelines and visual aids that inform the design of Fashion House locations, from site selection to detailing and everything in between.

This manual establishes a step-by-step guide to place an emphasis on the interactions between design components—such as architectural spaces and details, to furniture and signage throughout. This consistent set of guidelines paired with a common, but not identical, way to act within the Red Thread network incorporates considerations for locations' sites and design parameters that enables the design of each Fashion House to spatially and stylistically adjust within each member city.

02.02.3 Fashion House is connected to regional low carbon emissions transportation networks to facilitate exchange of goods and services to and from nearby cities and towns. Fashion House is situated close to a water network and/or train network to move goods.

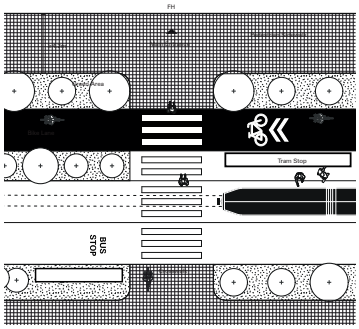


f.g.V.02.02.2 Tendency of freight transportation change

V.02.03 Accessibility

02.03.1. The route connecting Fashion House locations to public transportation and the main entrance must be always accessible and inclusive, in compliance with municipal accessible design regulations. Sidewalks should be at least 4.2m wide. Crosswalks shall be placed as close as possible to preferred walking paths.

02.03.2 Frontage signage along pedestrian-first routes is paramount.

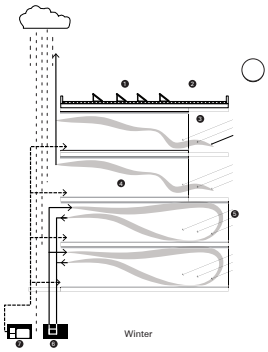


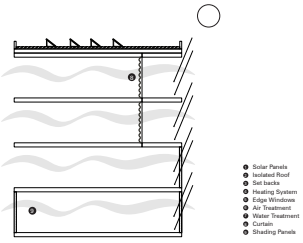
f.g.V.02.03.1 Fashion House and its surrounding

V.02.04 Accommodating Changing Climatic Conditions

Scientific projections predict rising temperatures and more volatile natural disasters over the short, medium and long term. Updated projections and reports–specific to the climate of any prospective Fashion House location–must be evaluated before implementing any new location. Building design must incorporate specific mitigation and/or climate design strategies in response to these reports' findings.

Energy - Climate change will shape the amount and type of energy consumed. Energy demand is highly climate-sensitive, and temperature in particular is a significant determinant of both the quantity and type of energy consumed.





Summer

f.g.V.02.04.1 Climate System

V.02
Site Selection

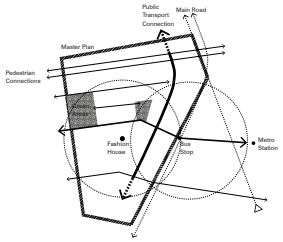
This section outlines site selection parameters for physical locations of the regulatory body in a city, prioritizing integrated connectivity with the city infrastructure and regional transit networks.

V.02.01 Real Estate

02.01.1 Fashion House is situated in a post-industrialized city, taking advantage of the existing infrastructure and placed in proximity to current and future business, cultural, and entertainment establishments, it is designed to catalyze emergent neighborhoods.

02.01.2 The property is located in decentralized areas which are part of future or ongoing development projects promoted by municipal efforts, providing a space for local designers and the community

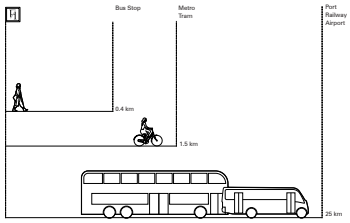
02.01.3. Fashion House is situated in a well-connected district so that it can be easily reached by local producers, designers, and visitors.



f.g.V.02.01.1 Master Plan Outline

V.02.02 Public Transportation

02.02.1. Fashion House is located within 400m (5 minutes walk) of multiple transit stops along well-traveled public transit lines such as the metro, tram, bus stop; at least one stop should be named Fashion House.



f.g.V.02.02.1 Master Plan Outline

02.02.2 Existing bicycle lanes that are clearly designated by striping, signage, and pavement markings for the exclusive use of bicyclists—running in the same direction of traffic—will adjoin Fashion House to ensure convenient and affordable travel to and from for employees, clients, members, guests and visitors, tourists, and friends. If no such bicycle lanes exist, new lanes will be introduced in the design of Fashion House and will be integrated within the city's bicycling infrastructure.

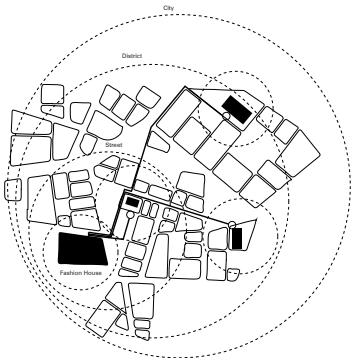
V.03
Site Design

Fashion House's surroundings– gardens, public areas for people to sit or interact, and premises access–shall follow common patterns that highlight activity on the ground floor.

V.03.01 Urban Anchor

03.01.1. Fashion House locations are institutional headquarters that represent each member city and region in the Red Thread network. Therefore, every location shall be designed to be a source of civic pride, putting on display the best of each city.

03.01.2. Fashion House frequently hosts events for its members, city and regional officials, and the general public; the spaces within and around each location shall be designed to accommodate large and/or formal events.

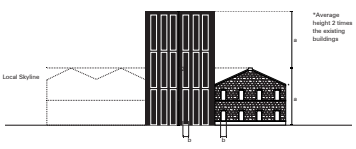


f.g.V.03.01.1 Urban Impact

V.03.02 Context

03.02.1. Fashion House's exterior building design shall adhere to its contextual language and integrate into its surroundings while being distinct.

03.02.2. Building envelope volumes shall be scaled to appropriately fit into each location's site surroundings, or into future zoning masterplans; building area shall be minimized to most competently implement the program requirements of each location and any future phasing or addition plans.



f.g.V.03.02.1 Elevation Context of Fashion House

03.02.3. Materials used within the construction of the building shall be locally sourced and recyclable as much as possible, or sourced within the Red Thread (refer to V.06.04 Building Materials).

03.02.4. Building construction techniques shall adapt regional know-how and expertise to promote the dissemination and preservation of knowledge.
03.02.5. Fashion House will become a landmark.

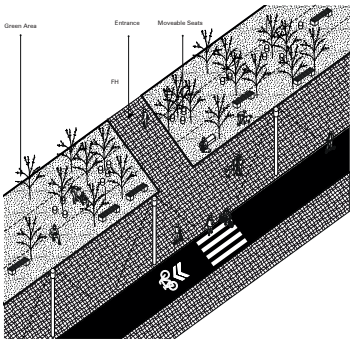
V.03.03 Public Space

From lot-line setbacks to courtyards and public spaces Fashion House is generous with its space, time, and presence in its community.

03.03.1 Outdoors must provide shading and flexible seating. Seating that can be rearranged to accommodate different group sizes and needs shall be included so that each outdoor space has many possible uses. Seating areas shall be arranged to allow members and employees to congregate or sit individually, provide places to sit in the sun or shade, and encourage passersby to sit down to extend the social quality of the street and opportunities to choose comfortable positions. For further implementation see V.03.04 Natural Features.

03.03.2. Outdoor spaces shall be well-lit throughout the day. Night-time lighting shall be provided to extend the hours in which people can comfortably and safely remain in outdoor spaces at Fashion House locations. Lighting shall be designed to avoid glare, prioritize natural light, and avoid deep shadows.

Height - Standard poles for sidewalks and bike facilities in commercial or industrial areas shall be between 10 m and 12 m.
Spacing - The spacing between two light poles should be roughly 2.5—3 times the height of the pole.
Energy - Lighting should comply with low-energy solutions such as LED/ OLED to minimize energy consumption and light pollution.



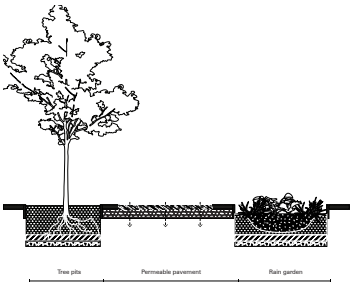
f.g.V.03.03.1 Fashion House Public Space

V.03.04 Natural Features

Fashion House locations enhance the best qualities of its local context, from harnessing daylight and climate to prioritizing scenic views and utilizing natural features.

03.04.1. Outdoor gardens–at grade, on patios, or terraces to name only a few options–shall be considered in the design of Fashion House. These gardens shall be cultivated to provide plants for natural dyes and to encourage on-site biodiversity.

03.04.2 Tree planting is necessary in the public space to provide natural shading, promote on-site biodiversity, and–when surrounded by soft-scapes–shall be provided to improve the local microclimate and reduce urban heat island effects.



f.g.V.03.04.1 Green Infrastructure

03.04.3. Green infrastructure along sidewalks shall be implemented as continuous or noncontinuous strips, while also maintaining clear pedestrian paths. These strips can consist of various green elements such as tree pits, swales, rain gardens, and permeable paving.

03.04.4. Species selection shall be appropriate for today's climate and ensure resilience for future change. The following criteria shall be considered:

- Drought tolerance
- Heat tolerance
- Wind tolerance
- Longevity
- Pollution tolerance
- Pest and disease susceptibility
- Sun and shade tolerance
- Ongoing maintenance requirements

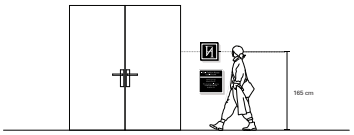
03.04.5. Green and/or blue roofs shall be implemented on as much roof-area as possible at each Fashion House location, particularly in colder climates. Rainwater shall be collected and used wherever possible within the building and for plant irrigation.

V.03.05 Art

03.05.1. In member-facing spaces, and spaces of high-traffic, art commissioned by regional artists will be displayed to enrich each location's spaces with a friendly and modest atmosphere.

03.05.2. In display areas visible in lobbies, public-facing spaces, and along street fronts, products and designs from Fashion House members will be featured.

03.07.2. Interior Signage
- Interior signage shall maintain consistent sizes and formatting, referring to Fashion House's brand identity.
- Interior signage shall be discrete but easily discoverable to provide sufficient wayfinding.
- Interior signage shall be located at eye-height on vertical surfaces.
- Interior signage will consist of icons and text to indicate spaces within Fashion House locations.
- Interior signage color palettes will be adapted to each location according to locally-sourced materials.

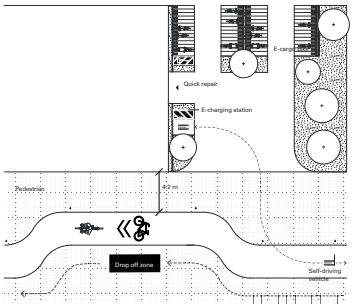


f.g.V.03.07.1 Fashion House Signage position

V.03.08 Logistics

03.08.1 Dedicated transportation options–including designated bicycle lanes and parking, ridesharing stands, and bus-stops–and delivery drop-off and pick up zones adjacent to pedestrianized zones shall provide Fashion House employees and members safe and convenient transportation options.

03.08.2. To decrease the carbon footprint of last mile delivery, Fashion House shall use automated equipment, drones & self-driving electric vehicles to move goods and materials. One designated parking spot for loading and unloading shall be provided at Fashion House with sufficient electrical plugs and charging ports.



f.g.V.03.08.1 Fashion House Standard Logistuc Area Design

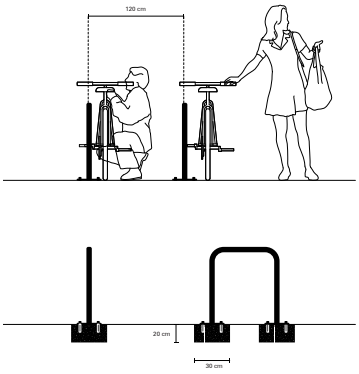
03.08.3. Fashion House will be a textile waste collection point that is integrated within municipal textile waste collection and recycling systems.

03.08.4. Designated staging zones shall be provided to store collected textile and post-consumer waste from textile dropoff points. These staging grounds shall be minimally-sized because of minimal waste production and delivered-to-order material delivery timings. (refer to V.04.05 Collection Points)

V.03.09 Parking

Fashion House prioritizes pedestrian and cycling mobility. Cars will only have access to drop-off areas with temporary parking. (refer to V.04.03 Entry)

03.09.1 Bicycle parking should:
- Be near building entries
- Be easy accessible and useable
- Offer spaces for non-standard sized bicycles
- Offer tools for quick repairs
- Offer covered spaces
- Offer electric charging stations



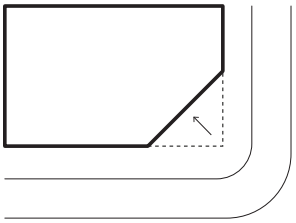
f.g.V.03.09.1Bike Parking Infrastructure Installation

V.03.06 Facades

03.06.1. There is no front and back facade, all facades are equally important and to be designed.

03.06.2. Fashion House locations with a corner condition shall recess the building's facade to create a public plaza before entry.

03.06.3. At Fashion House locations built on sites with existing construction, exterior wall construction shall be evaluated for its structural durability, construction techniques, and historical significance to determine its viability for future and compatible use in each location's design.

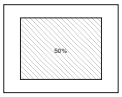


f.g.V.03.06.1 Buildings in a corner

03.06.4. New construction must not mimic contextual architectural languages. Rather, new interventions shall be differentiated from its surroundings.

03.06.5. Ground-up construction at Fashion House locations shall incorporate climate design strategies to accommodate changing climatic conditions (refer to V.02.04 Accommodating changing climatic conditions), built according to the regional planning regulations and use recycled building materials (refer to V.06.04 Building Materials) as much as possible.

03.06.6. Windows shall be located to prioritize natural ventilation and incorporate shading devices where necessary.



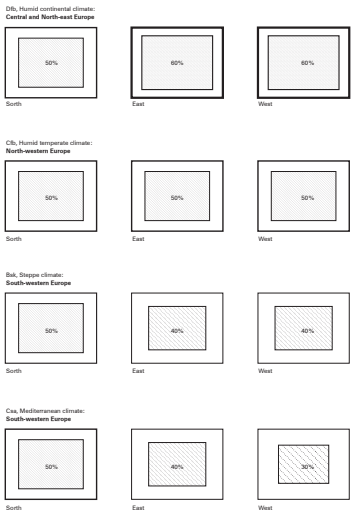
f.g.V.03.06.2 Minimum window-to-wall-ratio for display areas and public facing progams in ground up buildings

03.06.7. Fenestration specifications shall be common across all Fashion House locations, with minor adaptations allowed to avoid unsightly conflicts with contextual conditions.

03.06.8. Along sun-path facing facades, sun-shading devices–such as exterior louvers and fins–and internal adjustable screens–such as blinds or curtains–shall be provided.

03.06.9. The South Facade must open towards the outdoors.

03.06.10. Facades must be built with materials that do not require high maintenance or constant replacement. Fashion House encourages physical locations to limit construction to three materials. Refer to V.06.04 Building Materials for additional information regarding building material selection.



f.g.V.03.06.3 Average window to wall ratio for climate control and lighting per climate

V.03.07 Signage

A brand is recognizable through its brand identity. Fashion House locations embrace its uniqueness and stands out to potential members.

03.07.1. Exterior Signage
- Fashion House exterior signage shall be in street-facing facades, far from any trees or any other possible obstructions.
- Exterior signage shall be sized to be legible at a distance across the street, but no more.
- Exterior signage shall be located at eye-height on vertical surfaces.
- Exterior signage shall not monopolize the street front elevations of Fashion House locations, except when done to fit contextual signage conventions.
- Signage typography is consistent with institutional typography standards as described in Fashion House's brand identity.

V.04
Building Design

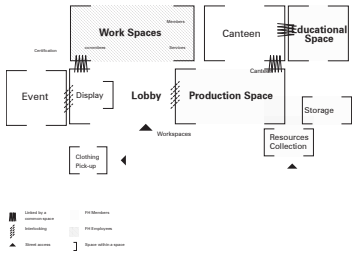
Building design considers factors such as functionality, aesthetics, and building codes, as well as the needs of the building's inhabitants and the surroundings.

V.04.01 Space Tactics

04.01.1 The layout of every Fashion House location shall be organized in accordance with a common diagram that articulates points of entry, primary programmatic adjacencies, and spatial relationships. Although universal, this common shall be adapted in its planimetric and sectional distribution for each location to accommodate site-specific constraints or contextual spatial strategies.

04.01.2. Each Fashion House location consists of Fix and Flex programs. The Fix program, as detailed in Fashion Houses' Governance and Operations manual, is a common set of mininum programmatic requirements to facilitate Fashion House's operations throughout the Red Thread network as established in this manual, and referenced in the Appendix. The Flex programs are accentuated, or otherwise exaggerated, components of the Fix programs that feature a location's particular specialty contribution across the Red Thread network. Please refer to the Appendix for additional details of the currently-operational Fashion House locations specialities.

04.01.3. Flex programs shall not be physically separated from Fix programs, unless unavoidable because of site constraints, to facilitate continual interaction between employees working in different departments.



f.g.V.04.01.1 Spatial progression of program

V.04.02 Ground Floor

04.02.1. The ground floor level of Fashion House is where its primary public-facing - lobby, collection points and fabrication spaces - programs are located, so that it can generously connect to its surrounding city and host wide-ranging events.

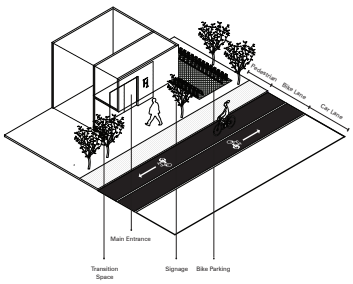
04.02.2. The ground floor should welcome employees, Fashion House members, students, event-participants, customers, and passersby.

04.02.3. Celebrating the distinct contributions to the Red Thread network, the flex-program spaces of each Fashion House location are featured prominently in the allocation and organization of the ground floor.

04.02.4. Easy pedestrian access to, and into, the ground floor of each location is necessary.

V.04.03 Entry

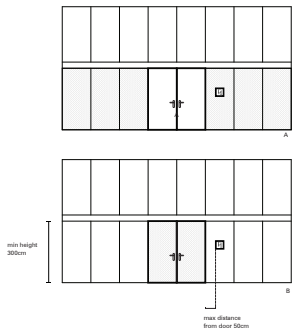
Prioritizing pedestrian access, Fashion House's public space guides its visitors towards the main entrance.



f.g.V.04.03.1 Fashion House Entrance surroundings

04.03.1. Fashion House is a public building, open to all public and members.

04.03.2 Signage should be placed at eye level to be recognizable and legible from the pedestrians' and bikers' point of view. Signage should be within a maximum distance of 50 cm from the main door.



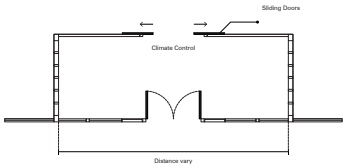
f.g.V.04.03.2 Fashion House Main Door Material

04.03.3 Where possible, the main entry door shall be set back from the minimum setback line of the building plot to create a transition between interior and exterior. The entry threshold is articulated with a small vestibule prior to entering the lobby space to create anticipation and provide a climate-controlled buffer, as required.

04.03.4 There shall be a height difference between the vestibule and lobby to emphasize the interior space of the lobby.

04.03.5 Primary entry facades shall juxtapose sections of opaque (or solid) wall constructions with sections of transparent vision ilte to add visual interest and maintain window-wall ratios. For instance, if the entry door is made with a transparent, glass-like material, the adjacent walls should be solid; alternatively, if the main door is built with an opaque material, the adjacent walls shall be transparent.

04.03.6. Entry doors shall specify automatic sliding doors to minimize temperature transmission.



f.g.V.04.03.3 Fashion House Main Door Dimension

V.04.04 Lobby

The lobby is the main public space at Fashion House and articulates its other main programmatic spaces. It is both the point of departure and convergence of all activities that occur at Fashion House. The lobby consists of three main elements that shall be prominently featured at all locations: shelves and clothing racks for display (refer to V.04.04.3), a self service and information kiosk (refer to V.04.04.4), and demonstration table (refer to V.04.04.5).

04.04.1. Entry lobbies are generous spaces that welcome visitors into an open-floor display area.

04.04.2 Lobbies are used for members' products display and meeting point to network and exchange expertises.

04.04.3 Display areas shall not provide points-for-sale nor shall be considered as sales floors. As is Fashion House's policy, displayed products and goods are only purchasable on online platforms. Multi-configurable shelves and clothing racks shall attractively display member products and goods, and shall provide customers sufficient information so that they can purchase goods online on each members' platforms.

04.04.4 Personalized and automated customer service shall be available at information self-service kiosks located immediately upon entry, to the right or left side of the main entrance where possible.

V.04.05 Collection Points

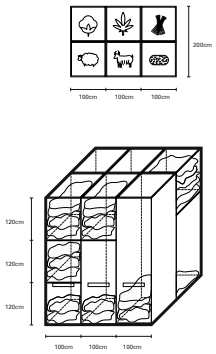
Deadstock elimination and made-to-order production processes allow storage spaces to be significantly reduced in size, enabling them to be self-contained within larger public spaces as collection points and accessible by foot and by small self-driving electric vehicles.

04.05.1 Collection points within Fashion House shall be located either inside or adjacent to the lobby space and in close proximity to the main entrance as freestanding clearly-visible modules. These collection points are divided into three categories: 1) resources collection point, 2) textile drop off, and 3) clothing pickup.

04.05.2 Resources collection point

04.05.2.1 Resources collected at Fashion House range from natural products–such as palm leather and madder root–to synthetic products–such as post-consumer plastic waste–depending on each location's regional specialty. Resource collection points shall be designed in accordance to the dimensional and weight requirements of the anticipated resources collected at each location.
04.05.2.2 Resource collection points shall be located nearby bicycle lanes and shall provide an independent entrance for deliveries and resource retrieval by small self-driven electric vehicles.
04.05.2.3 Resource collection points shall provide sufficient climate control and/or passive interior climate regulation to ensure collected natural products will not decompose due to improper temperature and humidity levels.

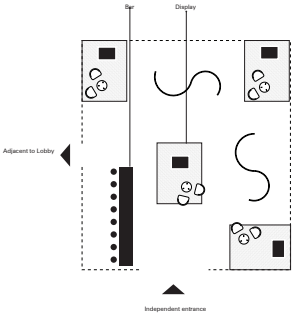
04.05.3 Textile Drop off points



f.g.V.04.05.1 Textile Drop-off box dimension

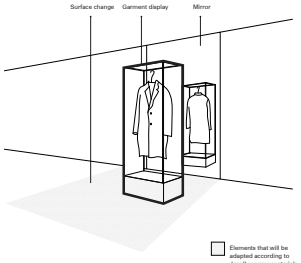
04.05.3.1 Fashion House locations shall provide designated spaces for members, neighborhood residents, or passersby to donate and recycle old textiles and post-consumer textile waste.
04.05.3.2 Textile dropoff points will be clearly visible from the exterior and interior. They will have a separate–or adjacent–entry to Fashion House's primary entry for small self-driven electric vehicles that will collect and move textiles to local recycling centers.
04.05.3.3 Drop-off points will consist of deposit doors and drop-off instructions signage. Each door corresponds to a single compartment that is sorted by fiber–such as cotton, wool, cashmere, silk, linen and hemp–to allow for individuals to more easily self-sort their textiles.

04.05.4 Clothing Pick-up

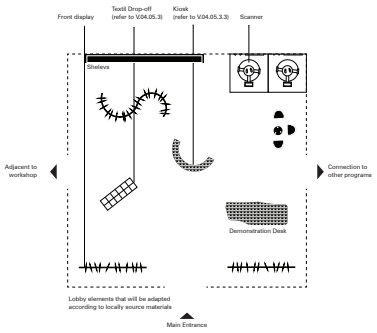


f.g.V.04.05.2 Fashion House Clothing Pickup Plan Instruction

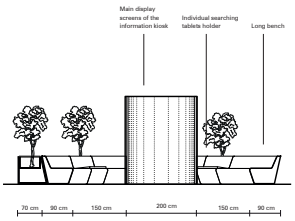
04.05.4.1Every Fashion House location shall provide a designated area for online-ordered clothing and accessories purchases pickup. This space should be located adjacent to the lobby, with an independent entrance towards the street.
04.05.4.1 Retrievals are scheduled throughout Fashion House's daily operating hours. A maximum of 2 to 4 customers can be scheduled per hour to allow ample time for customers to try on their purchased goods and ask questions on its care instructions.
04.05.4.1 Pickup areas shall be designed to reflect the same care with which the goods were crafted. Purchased goods will be delivered into transparent display cases that are only accessible to customers with a purchase code. Special fitting rooms with seating areas will be provided for customers to try on their new garments in front of family and/or friends.



f.g.V.04.05.3 Fashion House Clothing Pickup Garment Display Area



f.g.V.04.04.1 Fashion House Lobby Plan Instruction

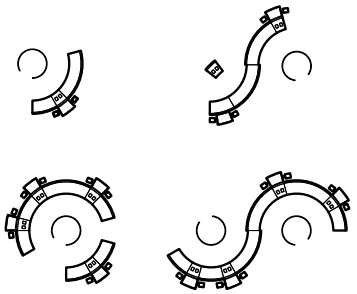


f.g.V.04.04.2 Fashion House Information Kiosk Section

04.04.5 A demonstration table shall be set up to display featured products' attributes, benefits, and general information. Dimensions may vary by location and its material shall be locally sourced in accordance with Fashion House's sourcing standards and regional product availabilities within the Red Thread. Refer to the Means & Methods chapter for more information.

04.04.6 Digital body scanners shall be provided at every Fashion House location in the lobby space. These body scanners shall be specified to digitally scan for body measurements and allow members or customers to virtually try-on fashion goods.

f.g.V.04.04.3 Fashion House Information Kiosk Module



f.g.V.04.04.4 Fashion House Information Kiosk Set of suggested configurations

04.04.7 Lobbies shall be spatially and visually connected to the three primary constellations of programs: 1) Regulator body working spaces, 2) Member's fabrication spaces, and 3) Event spaces.

04.04.8 Lobbies feature textile collection points adjacent to the entrance in a freestanding enclosed modular space. In a separate–but in close proximity–module, clothing pick up points shall be provided for online purchase retrievals. Refer to Section V.04.05 Collection Points for further specifications on textile and resources collection points and clothing pick up points.

04.04.9 Lobbies shall be lightly-scented with a range of distinct fragrances developed by Fashion House member brands. These "Fashion House fragrances" change on a regular basis, to feature as many brands as possible within the Red Thread network, accompanied with corresponding samples.

04.04.10 Lighting in lobby spaces shall feature lighting fixtures evenly spread across the ceiling with occasional highlights to emphasize displayed products.

04.04.11 Windows in lobbies shall be used to frame specific moments of the display areas. In ground-up buildings, windows shall have a minimum width of 1.20 m and a minimum height of 2.40 m.

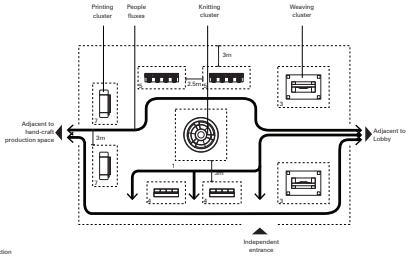
V.04.06 Fabrication Spaces

Made-to-order production, less frequent purchases, conscientious material choices, and capped production limits make garments' fabrication worth celebrating. Shrunken from its industrial-scale predecessors and replete with high-quality goods made by expert technicians, the fabrication spaces at Fashion House are prominently located and visible.

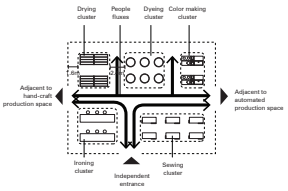
04.06.1 Located in adjacency to Fashion House's lobby, fabrication spaces shall have both a visual and spatial connection with the lobby and the exterior. They must have an independent entry to be accessible 24/7 - after Fashion House's working hours - as well as an entrance for resource delivery.

04.06.2 Fabrication spaces are divided into three types: 1) handcrafting, 2) full-automation, and 3) studios. Handcraft production shall be separated from automated production. Studio spaces can be either separate or integrated into handcraft production. Studio spaces hold collaborative working spaces for design making, sketching and prototyping. All three spaces shall be located either adjacent or in close proximity to each other.

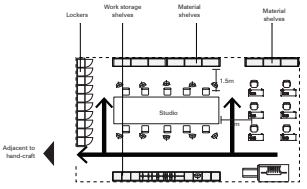
04.06.3 Fabrication spaces are arranged in visually continuous spaces prioritizing natural lighting and ventilation. These spaces' minimum height and length shall be determined by machinery dimensions and circulation fluxes. The minimum height shall be at least twice the highest machine and be able to accommodate installation pipelines. In handcraft and studio spaces, the minimum height shall be 3.50m unless otherwise restricted in adaptive-reuse buildings.



f.g.V.04.06.1 Automated Production Space Plan Instruction

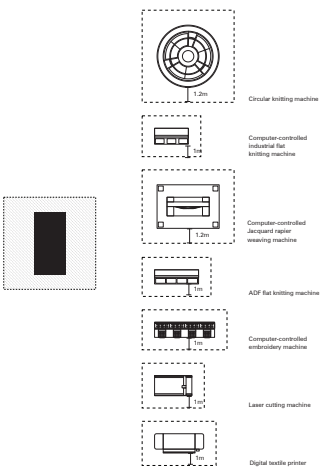


f.g.V.04.06.2 Hand-craft Production space Plan Instruction



f.g.V.04.06.3 Studio Plan Instruction

04.06.4 Machinery and work spaces shall be clustered following complementary tasks and processes in products' fabrication.

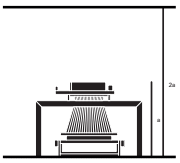


f.g.V.04.06.4 Machine Safety Instruction

04.06.5 Fabrication spaces shall provide tools and equipment for beginning-to-end garment and fashion goods fabrication that are organized into specialized clusters corresponding to complementary techniques and/or stages in garment construction. Technicians train members to be knowledgeable and under control of all fabrication stages. Each cluster shall be separate, but connected by dedicated circulation paths that streamline crossovers for goods and technicians. Connecting corridors and/or paths shall have minimum widths of 160 cm—for two people passing simultaneously—and be increased by 80 cm per new person.

04.06.6 To aid natural ventilation, targeted ventilation hoods and high-volume, low-noise ventilation systems, that are activated only when the space is in use, shall be provided.

04.06.7 Fabrication spaces shall provide sufficient acoustic panels and baffles on ceilings and walls as needed, based on the machinery, equipment, and tools that are used in each area.



f.g.V.04.06.5 Production Space Ceiling Height

V.04.07 Working Spaces

First and foremost, Fashion House locations are places for work: clerical regulatory auditing, member consultation, and Red Thread network-wide logistics and management.

04.07.1. Hybrid work-in-office and work-from-home modalities are utilized in each location, with a limited number of assigned workstations. Each workstation interfaces with programmable settings that, when initiated by any employee who taps their work badge, automatically adjust to their desired settings.

04.07.2. Working spaces will be designed as open floor collaborative flexible areas with a minimum amount of workstations due to hybrid work. Meeting rooms are the main working spaces and shall be visually clear. Demountable partitions with transparent vision lite are recommended to allow multiple configurations.

04.07.3 Working spaces shall incorporate small break areas with a kitchenette and tables for eating. (refer to V.04.09.1)

04.07.4. Proper acoustical comfort is paramount. Open office workspaces shall provide sufficient non-invasive acoustic panels and baffles on ceilings and/or between workstations as needed.

04.07.5 Within the working spaces, a specific area shall be designated for Fashion House's patent and consultancy services.

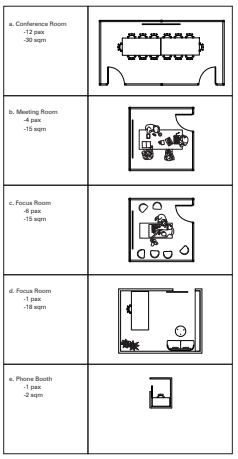
04.07.6. Working spaces designated for patent review and approval shall provide safe storage spaces for official paper documents.

04.07.7. An online archive of all patents will be only accessible from Fashion House servers while on-premise. Therefore, access to the online database will be granted only at assigned spots within the patent/consultancy area.

04.07.8.Spaces for members' consultancy services shall be enclosed within the open working spaces to ensure privacy. Solid partitions or operable dividers such as curtains are recommended.

04.07.9. Each working space shall maintain compliance with all other general requirements for workspaces as part of the flexible program's requirements of the potential site.

Enclosed spaces (1)
must be surrounded
by open desks (2)



f.g.V.04.07.1 Fashion House Office area Layout

V.04.08 Common Areas

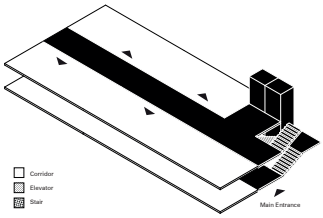
Each employee should take at least one long break during the day and multiple shorter breaks to ensure physical and mental well-being. Common areas that are separated from working spaces shall be provided in at least one location per floor or primary working space.

04.08.1 Sitting arrangements shall be provided in and around common areas to provide alternate spaces to enjoy breaks during the day.

04.08.2 Common areas shall provide space for game lounges–furnished with digital and board game options–as an alternative break option during working hours.

04.08.3 Space for personal wellbeing–including activities such as stretching, praying, and breastfeeding–shall be positioned next to at least one common area in each Fashion House location. Employees are able to book this area during breaks to exercise and disconnect from the working routine.

04.11.4. Every space in Fashion House locations must be accessible by freight elevator. Elevators will be multi-functional as much as possible so as to limit the total number of elevators required at each location. Cabin interiors shall be designed with durable materials.



f.g.IV.04.11.1 Circulation Layout

V.04.12 Services

Service areas for technical and mechanical support, maintenance, and storage are necessary to operate Fashion House locations. These areas shall be inaccessible to members and visitors, and shall be designed with the smallest possible footprint.

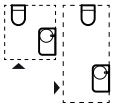
04.12.1. Every Fashion House location will consolidate primary and fixed mechanical equipment into designated mechanical and/or building systems rooms.

04.12.2. Whenever possible, rainwater shall be collected for greywater use in toilets or for on-site garden irrigation. The collection cisterns shall be located underground, or inside designated building systems rooms.

04.12.3. Every Fashion House location shall provide a dedicated waste room in close proximity or directly adjacent to a pick-up zone. Waste rooms hold basic processing machinery –such as collectors and high-pressure machines– that prepares the produced waste for transportation to the cooperative city services.

04.12.4. A well-ventilated closet or room shall be provided to allocate Fashion House's servers. This should be easily accessible and close to the working spaces.

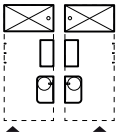
04.12.5. Restrooms at every Fashion House location are genderless. Individual toilet compartments and washbasins are grouped together with no differentiation between male and female restrooms.



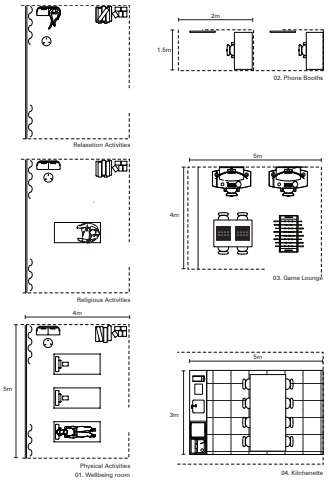
f.g.V.04.12.1 Fashion House Restroom Layout

04.12.6. Toilets must be seamlessly integrated into the space and should not be viewed as separate areas.

04.12.7. In at least one location per Fashion House location, sufficient changing room space with personal storage lockers and showers shall be provided.



f.g.V.04.12.2 Fashion House Changing Room Layout



f.g.V.04.08.1 Fashion House Common Area Layout

V.04.09 Educational Spaces

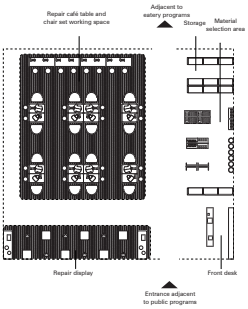
Fashion House is committed to members' and the general publics' continued education through personal study in its system of interconnected libraries and at public forums and lecture series in its lecture halls.

04.09.1 Libraries shall be in close proximity to studio spaces and serve as a consultation point for research and study. They should also hold acoustically insulated spaces for group discussions.

04.09.2 The lecture hall shall be in close proximity to the lobby and easily accessible to the general public. The minimum capacity shall be one fourth of the total members in the city of location.

V.04.10 Eatery

Fashion House provides one or more spaces for food and beverage consumption open to the general public, employees and members.



f.g.V.04.10.3 Repair Cafe Plan Instruction

04.10.1 Spaces such as canteens and restaurants shall be visible from the exterior and easily accessible from the lobby and working spaces.

04.10.2 Repair cafes will be provided as part of Fashion House's services. They shall be preferably opened towards the exterior, but can also be accommodated within the lobby or public spaces such as patios and gardens. Repair cafes shall provide self-repair points and repair assistance.

V.04.11 Circulation

The transitions between Fashion House's levels and spaces, reflect the house's operations as not just circulation areas but also socially active areas for the employees, members, and visitors.

04.11.1. Each floor shall be connected by stairs, ramps, or elevators that are widened to actively encourage serendipitous conversations and interaction between employees and members. The minimum width of the corridors should be 1.5 meters and the sitting arrangements shall have an average of 0.5 meters set back from them.

04.11.2. Waste bins shall be located throughout Fashion House locations in areas of highest traffic. Waste bins shall be self-closing to minimize adverse odors and shall separate soiled and unsoiled waste types

04.11.3. For locations with multiple floors, one main staircase that is clearly visible from the main entrance shall connect each floor. The staircase shall be designed as a sculptural element that will stand out as one of the House's characteristic elements.

V.05
Building Specifications

Specifications regarding the components used during the design process of Fashion House will be developed in this section.

V.05.01 Equipment

05.01.1. The work done in fabrication spaces is messy and multifaceted. Therefore, all furniture pieces shall be specified to be uncluttered, discrete, and easily cleanable so that the work is the focus and the furniture a backdrop.

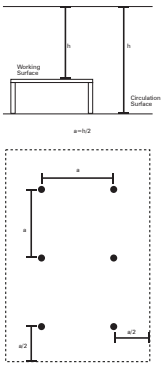
05.01.2. Selected furniture pieces shall be sourced from single suppliers and made from natural or recycled materials from within the Red Thread network. (Refer to V.06.04.1)

05.01.3 Autonomous forklifts will distribute goods and materials throughout Fashion House locations. They shall be specified to handle heavy and/or bulky cargo.

05.01.4. Each Fashion House location shall maintain a small fleet of self-driving electric vehicles that deliver and collect goods and materials to and from Fashion House, using bicycle lane infrastructures as much as possible.

V.05.02 Lighting

05.02.1. Lighting levels shall be evenly spread in interior spaces by spacing lighting fixtures following spacing distance and mounting height criterias. Horizontal distribution equal to one half the floor-to-ceiling height is recommended.



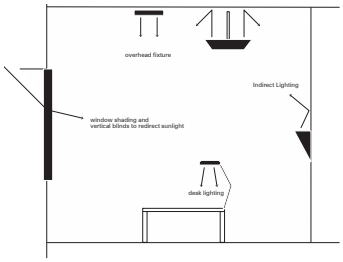
f.g.V.05.02.1 Fashion House Gennal Light Spacing

05.02.2 Avoid placing lights in corners to reduce unnecessary light fixtures. Repeatable patterns in ceiling construction, except when creating highlighted lighting features, are recommended.

05.02.3. Lighting fixtures shall be connected to automated smart-lighting programming and controlled by digital interfaces that adjust to outside weather conditions and to interior occupancy.

05.02.4. Lowest-possible lighting levels shall be maintained wherever possible - in particular in open office workspaces - and supplemented with task-lighting to avoid glare and minimize energy consumption.

05.02.5. Indirect natural light shall illuminate as many spaces as possible.



f.g.V.05.02.2 Lighting Type

V.05.03 Climate Control

05.03.1. Climate zones are established–according to program type and spatial organization–to maximize passive heating and cooling strategies, and to minimize the necessity for active climate-control.

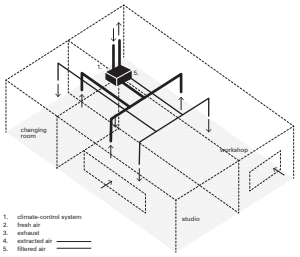
05.03.2. Natural ventilation should be prioritized, to avoid dependency on active climate-control.

05.03.3. Automated, integrated climate-control systems - such as smart thermometers, motion-activated and smart-scheduled conditioning systems, automated window shades, and night-time flushes - regulate the building interiors where applicable in each location. Employees, particularly those who spend the majority of their working day at a desk, should have manual override control to operate these systems.

05.03.4. Mechanical ventilation systems will utilize the highest industry-standard filtration systems available, particularly in colder climates and near busy street fronts.

05.03.5. Passive heating and cooling systems - like heat sinks, heat chimneys, or hollow-core slabs - shall be incorporated into the design.

05.03.6 Sufficient insulation shall be provided in the exterior envelope of every Fashion House location, particularly in colder climates or in climates with large annual temperature swings, in applicable wall construction.



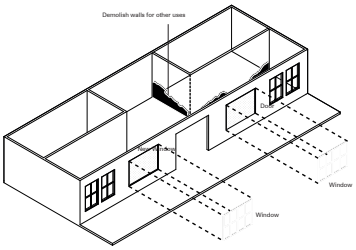
f.g.V.05.03.1 Fashion House Genral Ventilation System

V.06.02 Demolition

Existing construction that does not sufficiently facilitate proposed uses nor holds significant historical value shall be removed.

06.02.1 Existing elements on Fashion House sites are not needlessly removed. Instead, interventions alter as little as possible to implement its objectives, whether that be minimal alteration or extensive overhaul.

06.02.2 Salvage, recycle, or reuse as much non-hazardous construction waste as possible, and ensure proper handling to minimize contamination or commingling.



f.g.V.06.02.1 Demolition Elements

V.06.03 Construction Techniques

06.03.1 New construction should not specify techniques that require specialists or equipment that is not readily procurable within the Red Thread network.

06.03.2 Non-invasive attachment techniques for easy dismantling in case of change of program or future extensions are encouraged.

V.06.04 Building Materials

Fashion House strives to minimize waste and environmental damage by prioritizing material reduction, reuse and recycling, when possible construction should avoid new materials. New construction should avoid specifying materials that require specialists or equipment that is not readily procurable within the Red Thread network.

06.04.1. Fashion House has the following hierarchy to make material choices:

1 - Reuse materials (Refer to V.06.01.2.)

2 - Recycled materials (Refer to V.06.01.3. to V.06.01.7) .

3 - If not possible, use Bio-based materials: Materials derived from renewable bio resources. Ecological building materials are renewable without chemical or abiotic substances. (Refer to V.06.04.2.)

4 - If no other alternative, use Conventional materials: conventional building materials can be an option, with considerations to carbon emissions, environmental impact, and its capacity to be reused or recycled at the end of its life.

The following are quality standards that must be included in all architectural specifications:

06.04.2. Raw materials grown, cultivated, or harvested within the Red Thread should be prioritized, such as hemp, natural dyes, and biomaterials such as plant-based leather to take advantage of endemic materials to localize the supply chain. (Refer to IV. Red Thread Atlas)

06.04.3. The use of petroleum-based materials will be reduced to a minimum over time, shifting the use of plastic to bioplastic and gas to alternative sources.

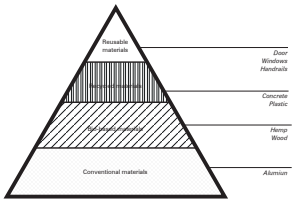
06.04.4. Specified materials must have low-carbon footprints, within accordance to European Union 2050 climate-neutral guidelines, except when no other alternatives are available.

06.04.5. In addition to aesthetic choices, specified materials should be selected on their capacity to be safely deconstructed, recycled, or salvaged with minimal unusable construction waste in the event of full-demolition or remodeling.

06.04.6. Except when no other alternative is available, materials, fixtures, and building components should be sourced from producers or suppliers from within the Red Thread network.

06.04.7. Specified materials must be fully-traceable to its raw-material source from suppliers and vendors whose operations are certified for sustainable practices.

06.04.8. Specified materials must be durable and require only intermittent maintenance without replacement.



f.g.V.06.04.1 Material hierarchy of Fashion House

V.06
Means & Methods

Techniques, materials, and processes used in the design and construction of ground up buildings and/or adaptive and reuse structures.

V.06.01 Heritage

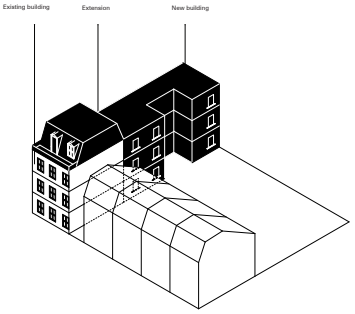
Following International standards for heritage buildings and construction, Fashion House employs distinct strategies to appropriately incorporate existing buildings and techniques into its locations.

06.01.1. Fashion House locations that include existing building and landscape construction shall be examined for features that exhibit "significant historic value," and value their regional significance based on their site specifications.

06.01.2. Preservation - Important physical features on site shall be identified based on their significant historical value and will be stabilized to preserve its existing integrity as-is. Additional work shall be limited, but can include work such as building system upgrades of plumbing, mechanical and electrical systems to make these features functional and sufficiently integrated with Fashion House location building operations, and shall be carried out without new physical additions.

06.01.3. Restoration - Important features on site - that cannot be adapted to proposed compatible uses, or that demonstrate more-than-significant historical value - shall be identified to be restored to its original character. All additions from other historical periods that are damaging to its original physical features shall be carefully removed and made functional with appropriate building systems upgrades, such as plumbing, mechanical and electrical systems.

06.01.4. Rehabilitation - Important features on site shall be identified on their significant historical value to be repaired, restored or preserved to retain its historic character while new additions or alterations should be incorporated according to the spatial demands of the building's functions.



f.g.V.06.01.1Adaptive Reuse

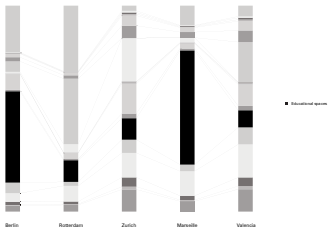
06.01.5. Existing patterns and motifs–including structural elements, decoration and ornamentation, materials, and building techniques–shall be surveyed and inform the design of new construction and/or interior fitouts. These existing elements shall be integrated within the new designs while remaining recognizable.

06.01.6. Salvaged construction waste should be integrated within the materials for new on-site construction as much as possible. Masonry can be pulverized and used as aggregate in new concrete or masonry; wood and gypsum can be broken down and included in new fiber-board constructions; fiber materials can be shredded and used as wall insulation.

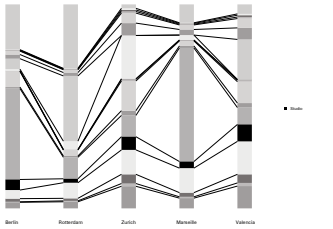
06.01.7. Construction waste will only be disposed of in landfills or incinerated if no other options exist.

Appendix

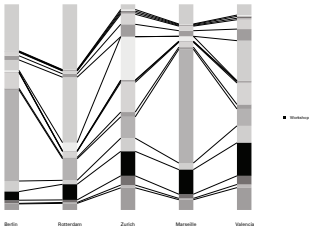
APPX.01
Program Matrix



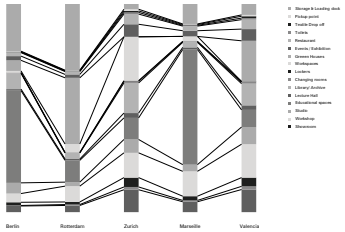
f.g.AP1 Program graph Educational Spaces



f.g.AP2 Program graph Studio



f.g.AP3 Program graph Workshop



f.g.AP4 Program graph

APP.X.02.01 Berlin Protagonists

The fashion industry plays a significant role in shaping the culture and identity of a city, where Fashion House Berlin serves as major players in the Fashion Industry. The following protagonists are central characters in shaping that narrative.

Textile collectors

Event hosts and presenters

Fashion Icon

Laboratory technicians

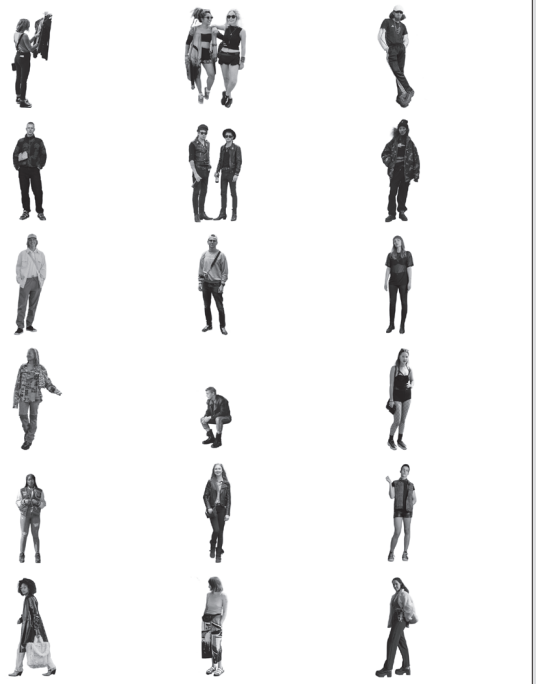
Repair experts

Teachers

			BERLIN		ROTTERDAM		ZURICH		MARSEILLE		VALENCIA
	Fashion House Members		**3,002**		**1,300**		**1,553**		**1,457**		**1,287**
	RH Employees		**126**		**79**		**85**		**80**		**75**
	Working Spaces Capacity		156		65		78		73		64
Regulatory body	Office Spaces	3%	860	3.18%	500	10.75%	560	4.96%	540	10.85%	500
	Lobby/ Reception	0.2%	70	0.44%	70	1.34%	70	0.64%	70	1.52%	70
MEMBERS	Showroom	1.5%	450	1.24%	195	4.51%	235	2.02%	220	4.23%	195
	Workshop	4.2%	1,238	7.63%	1,200	11.90%	620	11.99%	1,305	16.05%	740
	Studio	5.1%	1,504	1.91%	300	16.79%	875	3.17%	345	8.24%	380
	Educational spaces	44.3%	13,000	10.49%	1,650	0.00%	0	55.40%	6,030	8.24%	380
	Lecture Hall	0.8%	225	0.64%	100	2.30%	120	1.01%	110	2.17%	100
	Library/ Archive	7.6%	2,230	2.86%	450	14.49%	755	2.39%	260	10.41%	480
	Changing rooms	0.3%	75	0.22%	35	0.77%	40	0.37%	40	0.76%	35
	Lockers	0.1%	20	0.10%	15	0.29%	15	0.14%	15	0.33%	15
	Workspaces (offices that are not part of the regulatory body)	0.8%	229	4.07%	640	21.11%	1,100	2.39%	260	0.00%	0
	Greeen Houses	5.1%	1,490	31.78%	5,000	0.00%	0	0.00%	0	19.52%	900
PUBLIC	Events / Exhibition	2.0%	600	1.65%	260	6.05%	315	2.71%	295	5.64%	260
	Restaurant	1.7%	490	1.37%	215	4.89%	255	2.20%	240	4.56%	210
	Toilets	0.2%	70	0.22%	35	0.77%	40	0.37%	40	0.76%	35
	Textile Drop off	0.2%	60	0.25%	40	0.77%	40	0.37%	40	0.87%	40
	Pickup point	0.2%	70	0.19%	30	0.77%	40	0.32%	35	0.65%	30
	Loading dock + storage	22.7%	6,650	31.78%	5,000	2.50%	130	9.55%	1,040	5.21%	240
	TOTAL SQM	100%	29,331	100%	15,735	100%	5,210	100%	10,885	100%	4,610

f.g.AP5 Fashion House Square Meters

APPX.02
Protagonists



Second hand shopper | Young club-visiting tourists | Club socializers

Local academicians | Fur divas | Second hand shopper

APPX.02.02 Marseilles Protagonists

The fashion industry plays a significant role in shaping the culture and identity of a city, where Fashion House Marseilles serves as major players in the Fashion Industry. The following protagonists are central characters in shaping that narrative.

Cruise Tourists | Sports Streetwearers | Marseille Fashion Icons

Film Student | Fishermen | Honeymooners

APPX.02.03 Rotterdam Protagonists

The fashion industry plays a significant role in shaping the culture and identity of a city, where Fashion House Rotterdam serves as major players in the Fashion Industry. The following protagonists are central characters in shaping that narrative.

Cyclist | Logistics worker | Raincoat people

Umbrella people | Logistics worker | Dancing people

North African Immigrants Influencers Parisian Transplants

204

Athleisurewearer Motorcyclists and Scooters Textile Worker

205

Tailor Bar & Club Hospitality Engineer

208

Local Designer Business student Barbershop Subculturist

209

APPX.02.04 Valencia Protagonists

The fashion industry plays a significant role in shaping the culture and identity of a city, where Fashion House Valencia serves as major players in the Fashion Industry. The following protagonists are central characters in shaping that narrative.

The Beach Go-er | North European Middle Aged Tourist | Erasmus Students

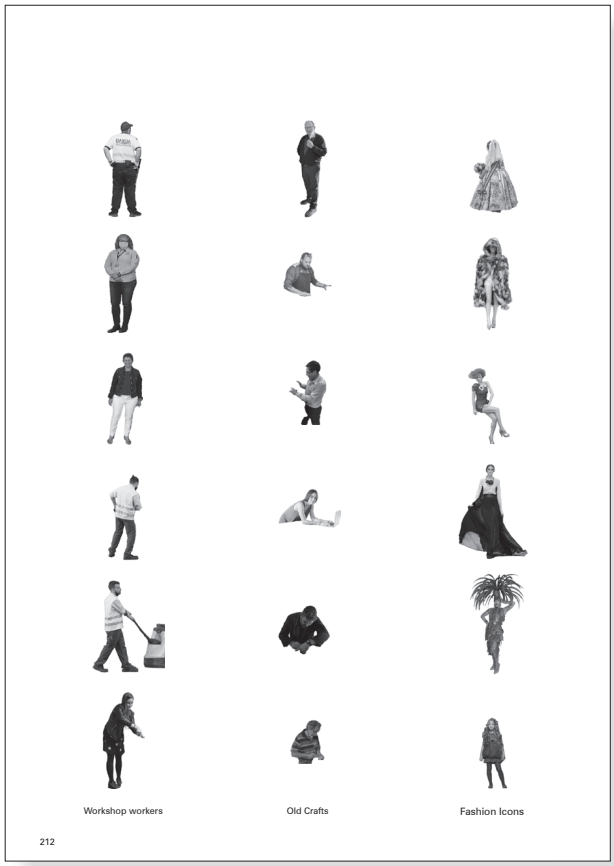
Coastal Grandparents | Enhanced People | Digital Nomad

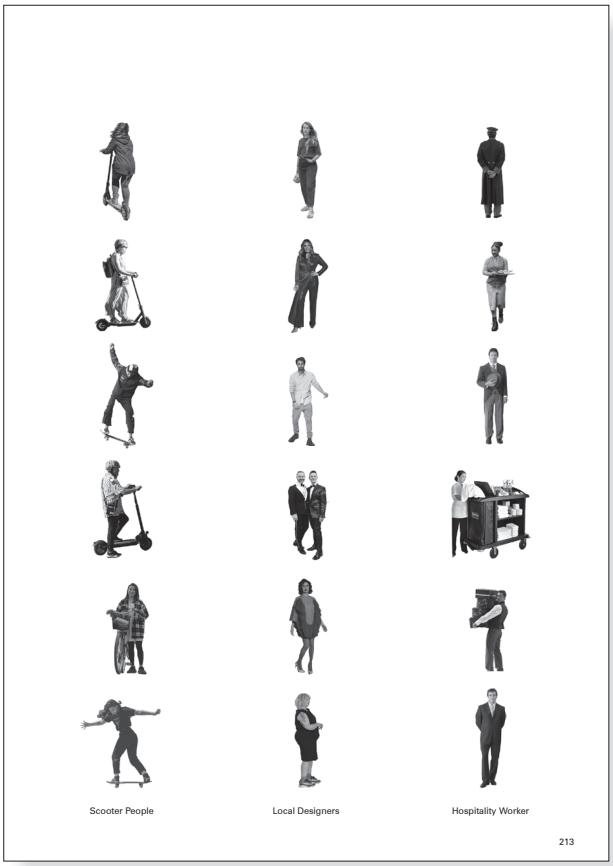
APPX.02.05 Zurich Protagonists

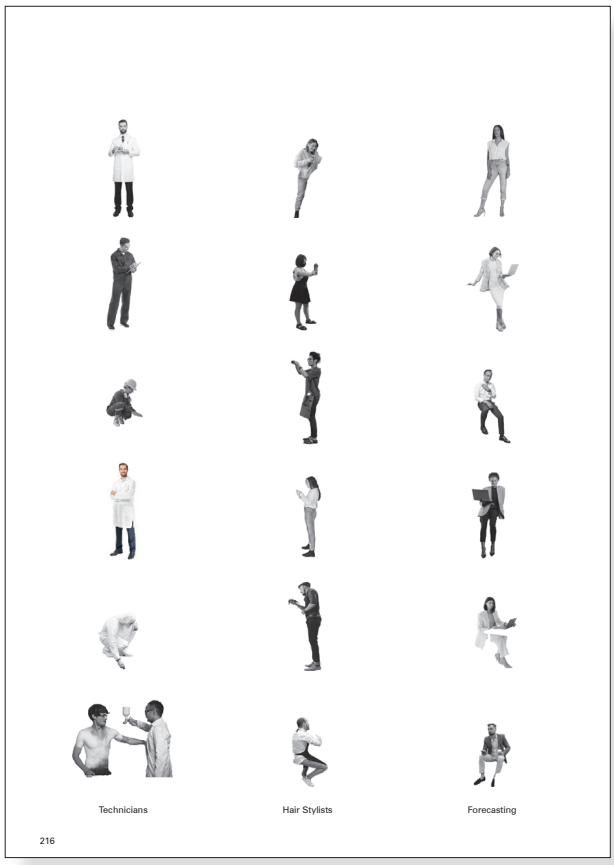
The fashion industry plays a significant role in shaping the culture and identity of a city, where Fashion House Zurich serves as major players in the Fashion Industry. The following protagonists are central characters in shaping that narrative.

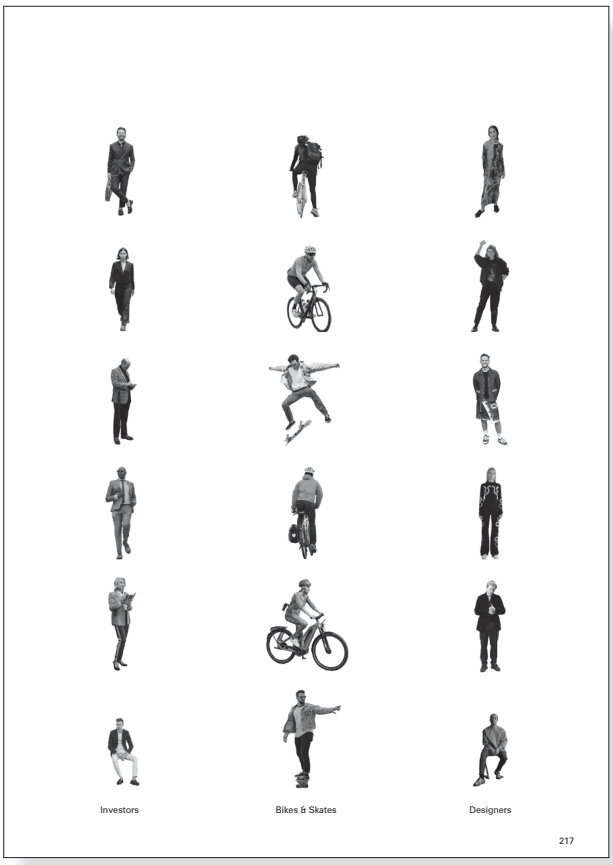
Gorp Core | ETH Students | High Class

Fit & Healthy | Bikes & Skates | Wealthy Casual


Workshop workers
Old Crafts
Fashion Icons
212


Scooter People
Local Designers
Hospitality Worker
213


Technicians
Hair Stylists
Forecasting
216


Investors
Bikes & Skates
Designers
217

Signatory of Fashion House

Yours, Forever

With Love

Out of the Fabric

Make Scents

Aporia

The Journey of Your Life

Non-fungible Cult

Crafting Heritage

More than a House

Retro-Prospective

The Unmentionables

Ready-to-Rent

The Establishment

Shelf Life

Ready to Grow

Bone to be Natural

Built to Crack

The Standard Resort

Sky's the Limit

Hair Bank

Try It Out

Scale to Feet

Viaduct...53

Fashion House is a collective project exploring architecture and the fashion industry. Twenty-three contributions are sited across five European cities—Berlin, Marseilles, Rotterdam, Valencia, Zurich—that are emerging today as new fashion centers, challenging the global "big four" of London, Milan, New York, and Paris. The project begins by examining the spatial relationships between dressmaker and client at the beginning of the twentieth century and then continues by speculating on how future production and consumption patterns will alter the once domestically conceived "Fashion House," redesigning its architecture for the near present. Topics range from planned obsolescence and life span to re- and up-cycling and mass customization, from provenance and heritage to intellectual property to branding.

Edition

January 20, 2023

The Berlage Center for Advanced Studies in Architecture and Urban Design

Faculty of Architecture and the Built Environment

Delft University of Technology

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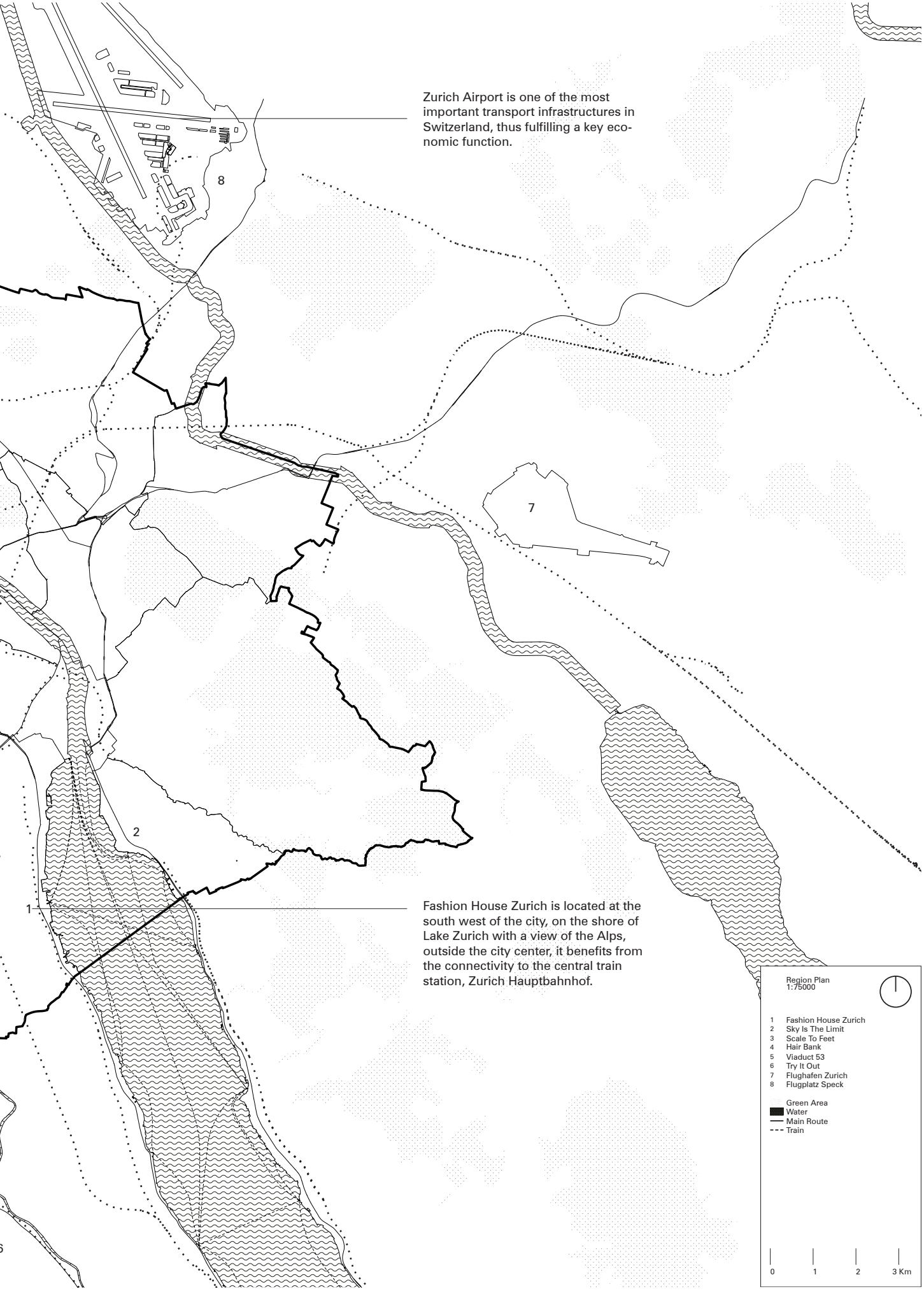
Jesse Verdoes (NL)
Rongting Xiao (CN)


Zurich's approach to sustainable public transportation is highly competitive with a wide infrastructure of train, tram, and buses.
3
4
5


Zurich Airport is one of the most important transport infrastructures in Switzerland, thus fulfilling a key economic function.
8
7
2
1
Fashion House Zurich is located at the south west of the city, on the shore of Lake Zurich with a view of the Alps, outside the city center, it benefits from the connectivity to the central train station, Zurich Hauptbahnhof.
Region Plan
1:75000
1 Fashion House Zurich
2 Sky Is The Limit
3 Scale To Feet
4 Hair Bank
5 Viaduct 53
6 Try It Out
7 Flughafen Zurich
8 Flugplatz Speck
Green Area
Water
Main Route
Train
0
1
2
3 Km


1
2
3
4
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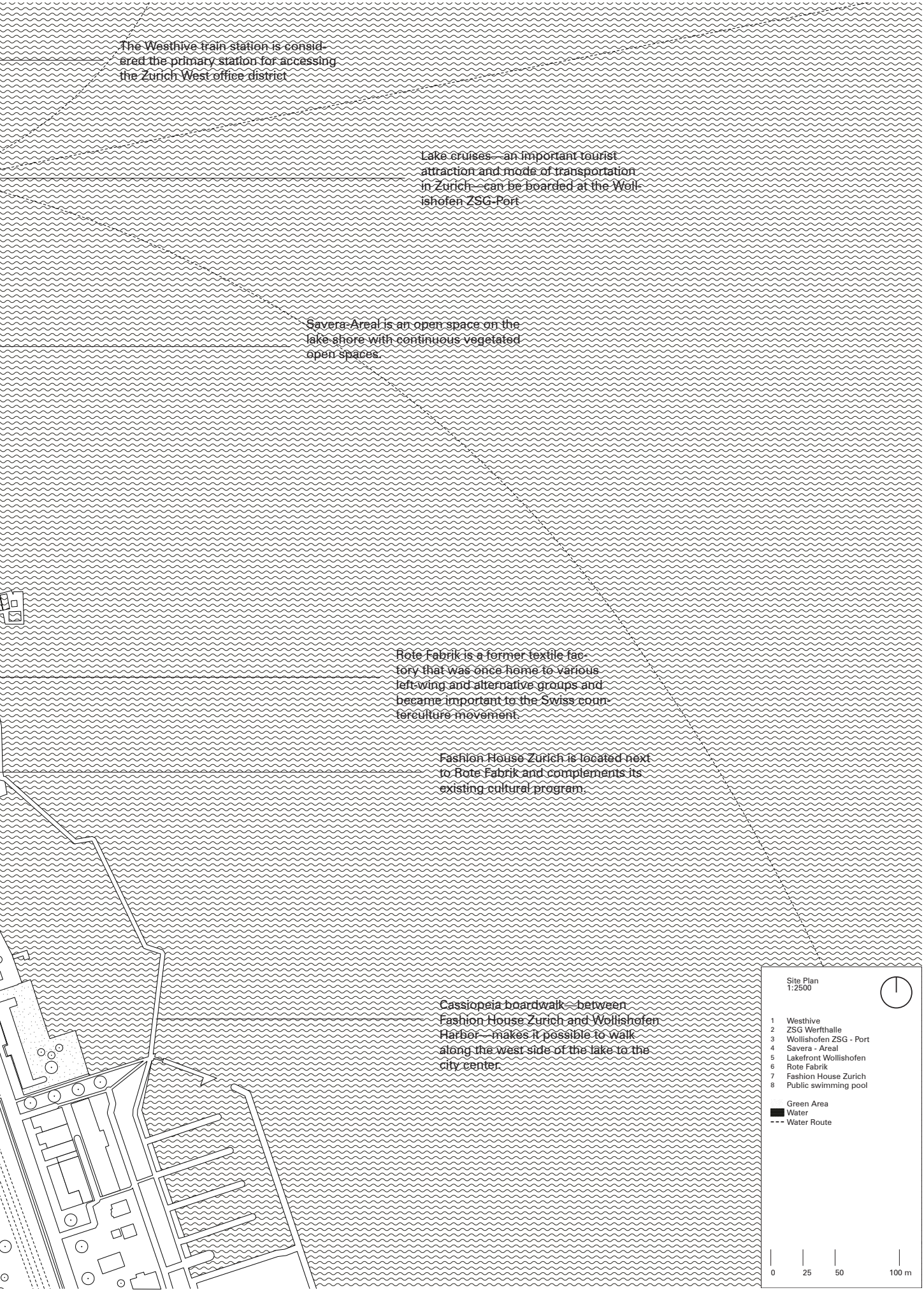
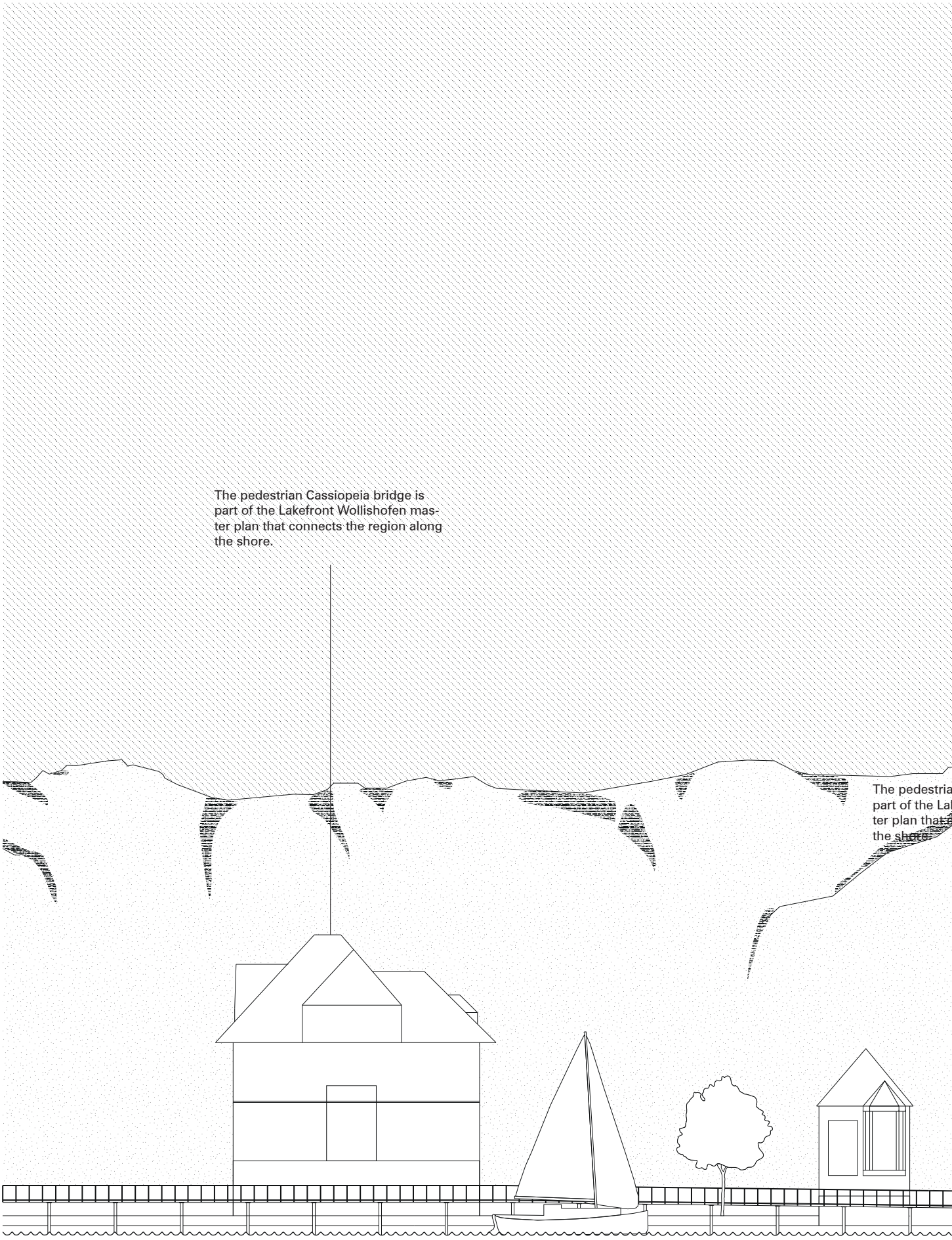
6
7
8


The Westhive train station is considered the primary station for accessing the Zurich West office district
Lake cruises—an important tourist attraction and mode of transportation in Zurich—can be boarded at the Wollishofen ZSG-Port
Savera-Areal is an open space on the lake shore with continuous vegetated open spaces.
Rote Fabrik is a former textile factory that was once home to various left-wing and alternative groups and became important to the Swiss counterculture movement.
Fashion House Zurich is located next to Rote Fabrik and complements its existing cultural program.
Cassiopeia boardwalk—between Fashion House Zurich and Wollishofen Harbor—makes it possible to walk along the west side of the lake to the city center.
Site Plan
1:2500
1 Westhive
2 ZSG Werfthalle
3 Wollishofen ZSG - Port
4 Savera - Areal
5 Lakefront Wollishofen
6 Rote Fabrik
7 Fashion House Zurich
8 Public swimming pool
Green Area
Water
Water Route
0
25
50
100 m

The pedestrian Cassiopeia bridge is part of the Lakefront Wollishofen master plan that connects the region along the shore.



The pedestria
part of the La
ter plan that
the shore.

6

The hills surrounding the city of Zurich are iconic and provide a great outdoor experience.

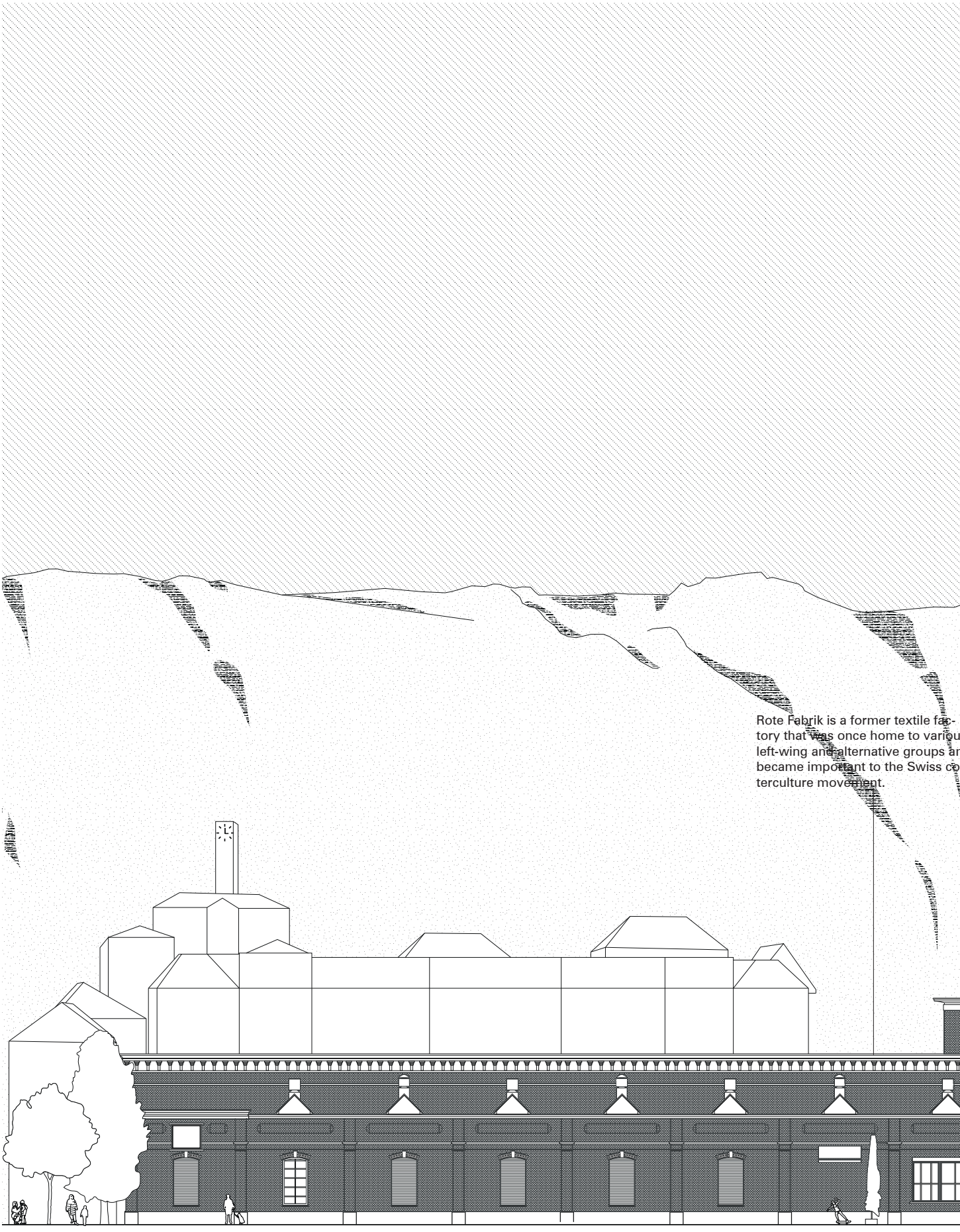
The west facade of the building faces the lake, allowing for a contemplative view from inside the building.

n Cassiopeia bridge is
kefront Wollishofen mas-
onnects the region along

West Elevation
1:250

1 Lake Zurich
2 Rote Fabrik
3 Fashion House Zurich
4 Pick up point
5 Pedestrian Cassiopeia Bridge
6 Immediate surroundings

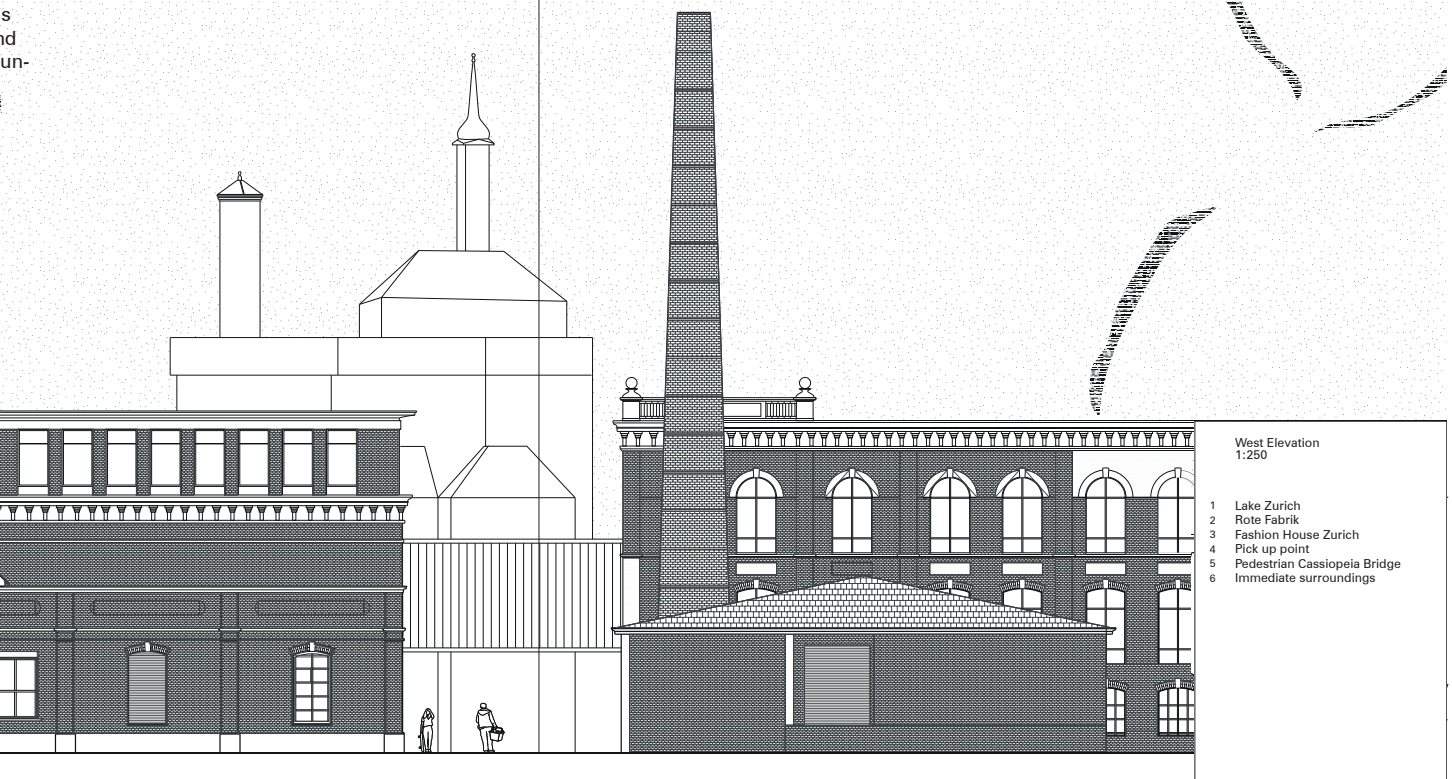
0 1 2 3 4 m



Rote Fabrik is a former textile fac-
tory that was once home to variou
left-wing and alternative groups an
became important to the Swiss co
terculture movement.

2

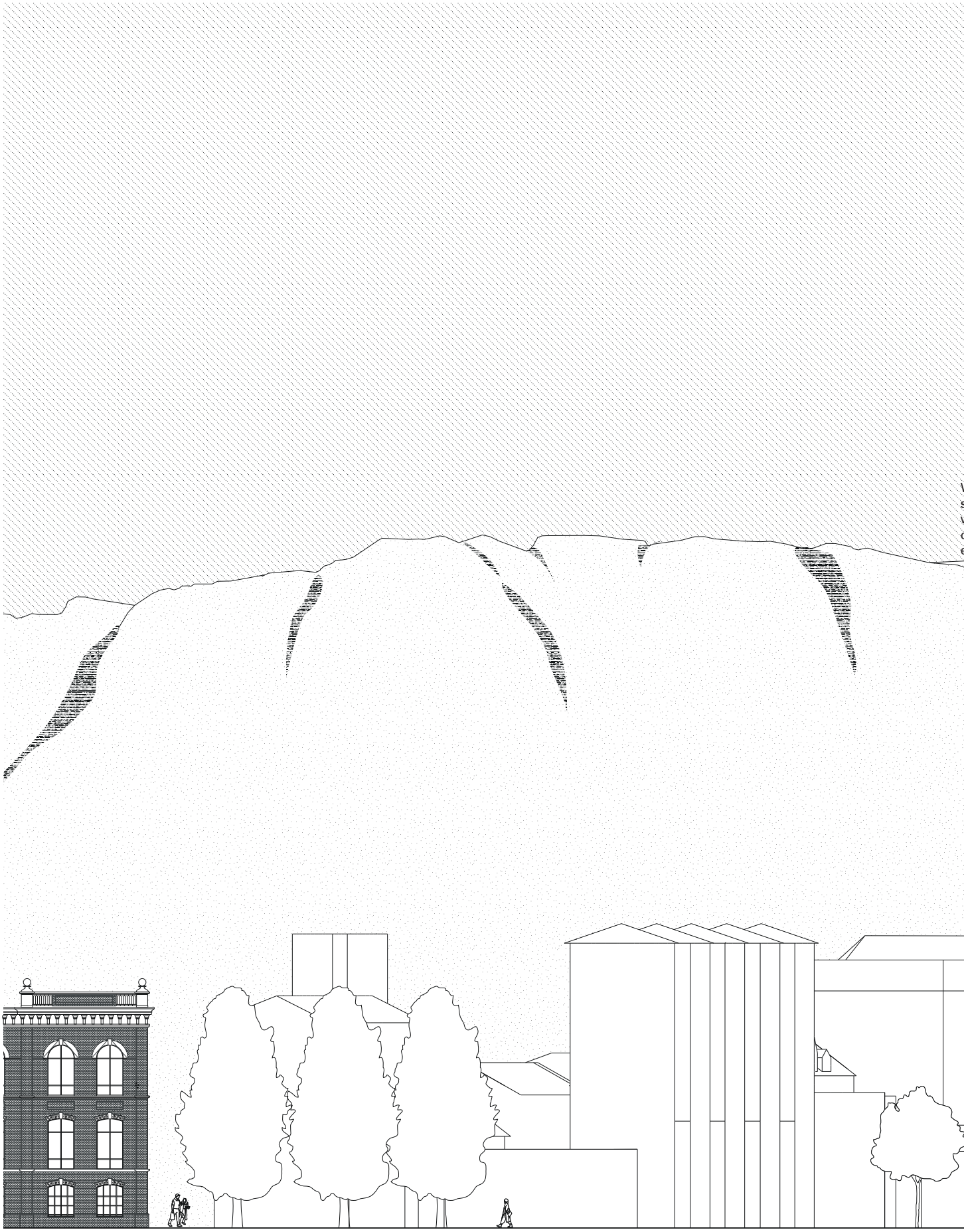
The buildings that comprise Rote Fabrik are connected by a series of alleys which serve as spaces for interaction, with varying levels of privacy.



West Elevation
1:250

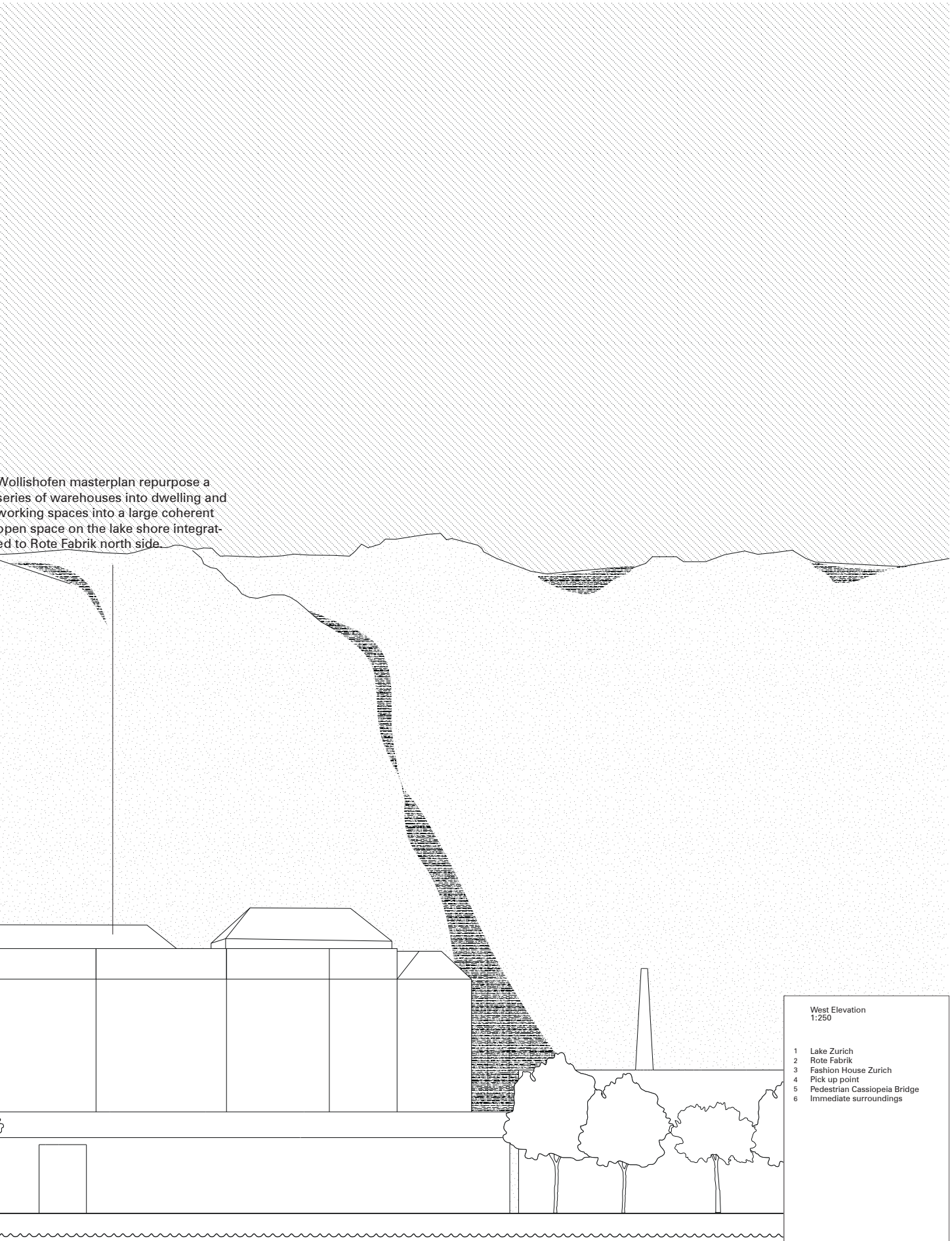
1 Lake Zurich
2 Rote Fabrik
3 Fashion House Zurich
4 Pick up point
5 Pedestrian Cassiopeia Bridge
6 Immediate surroundings

0 1 2 3 4 m



6

Wollishofen masterplan repurpose a series of warehouses into dwelling and working spaces into a large coherent open space on the lake shore integrated to Rote Fabrik north side.

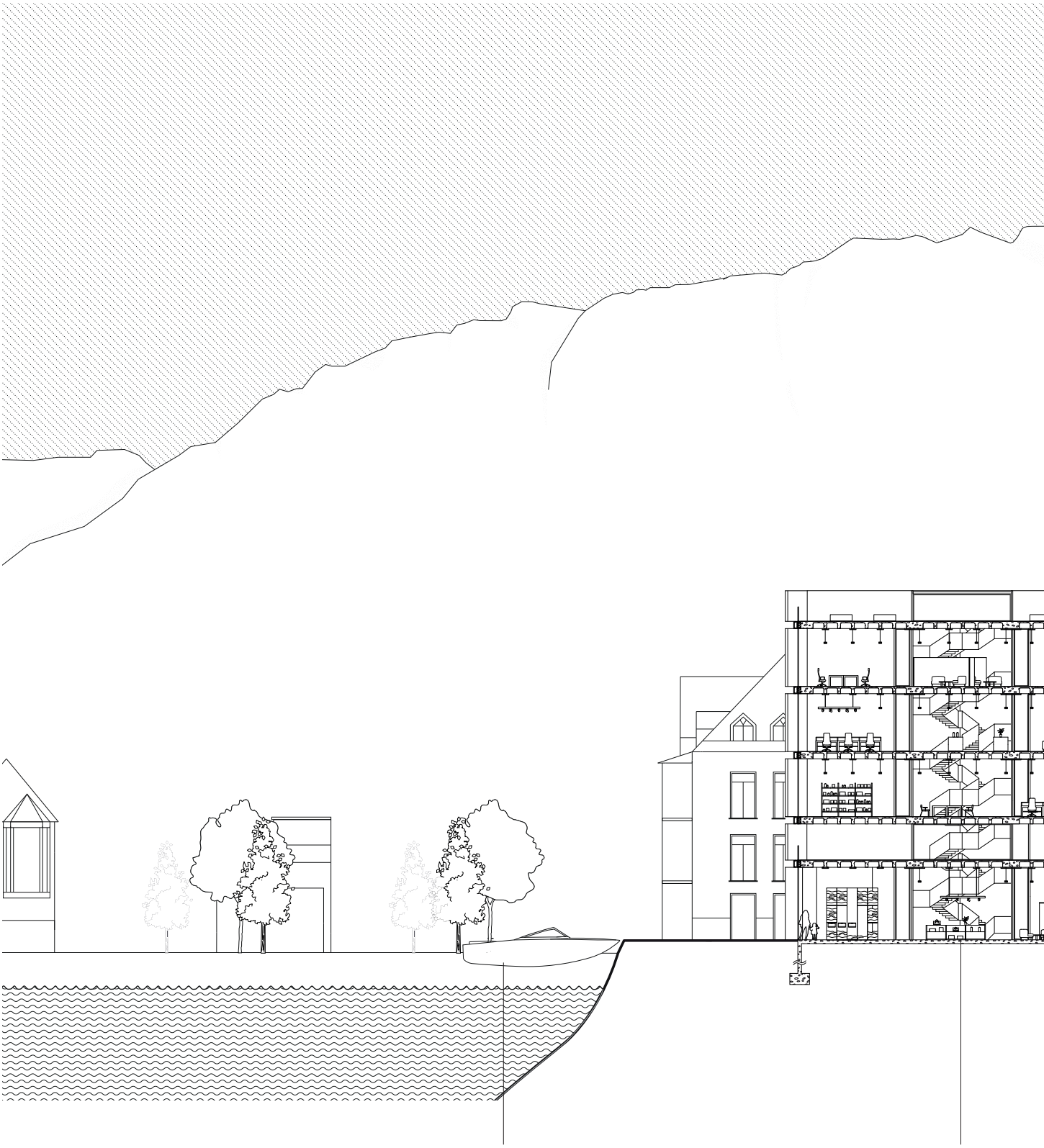


West Elevation
1:250

1 Lake Zurich
2 Rote Fabrik
3 Fashion House Zurich
4 Pick up point
5 Pedestrian Cassiopeia Bridge
6 Immediate surroundings

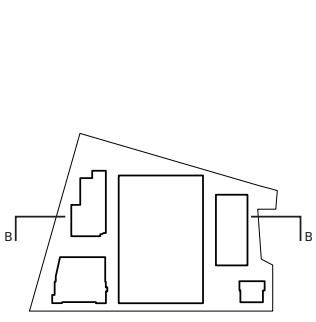
0 1 2 3 4 m

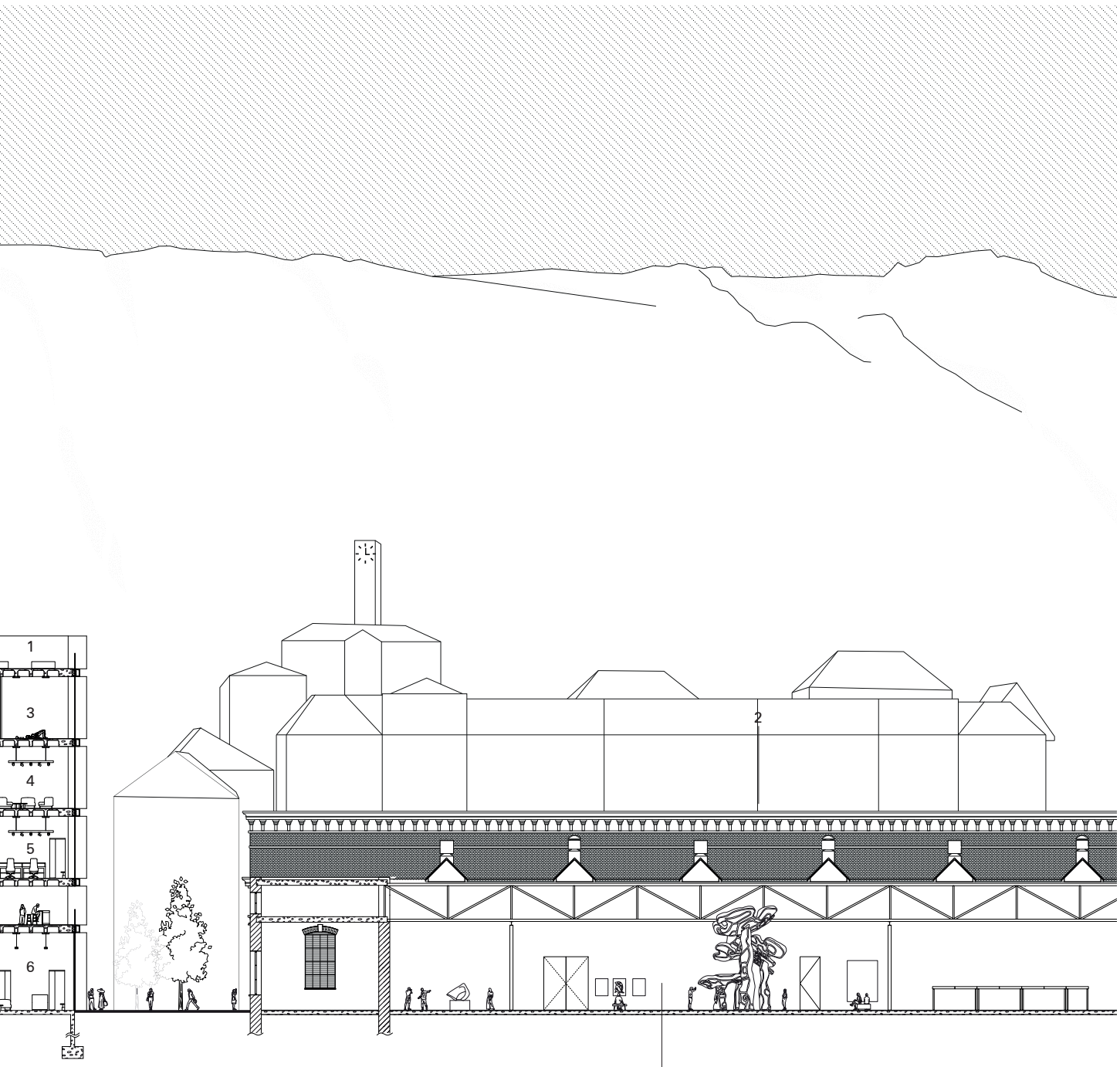
1



Fashion House Zurich can be easily accessed via various means, including tram, metro, or through the water transportation system.

Fashion House Zurich's program arranged in a gradient of privacy the most public spaces located the ground floor and the more p spaces located on the upper floo





s are
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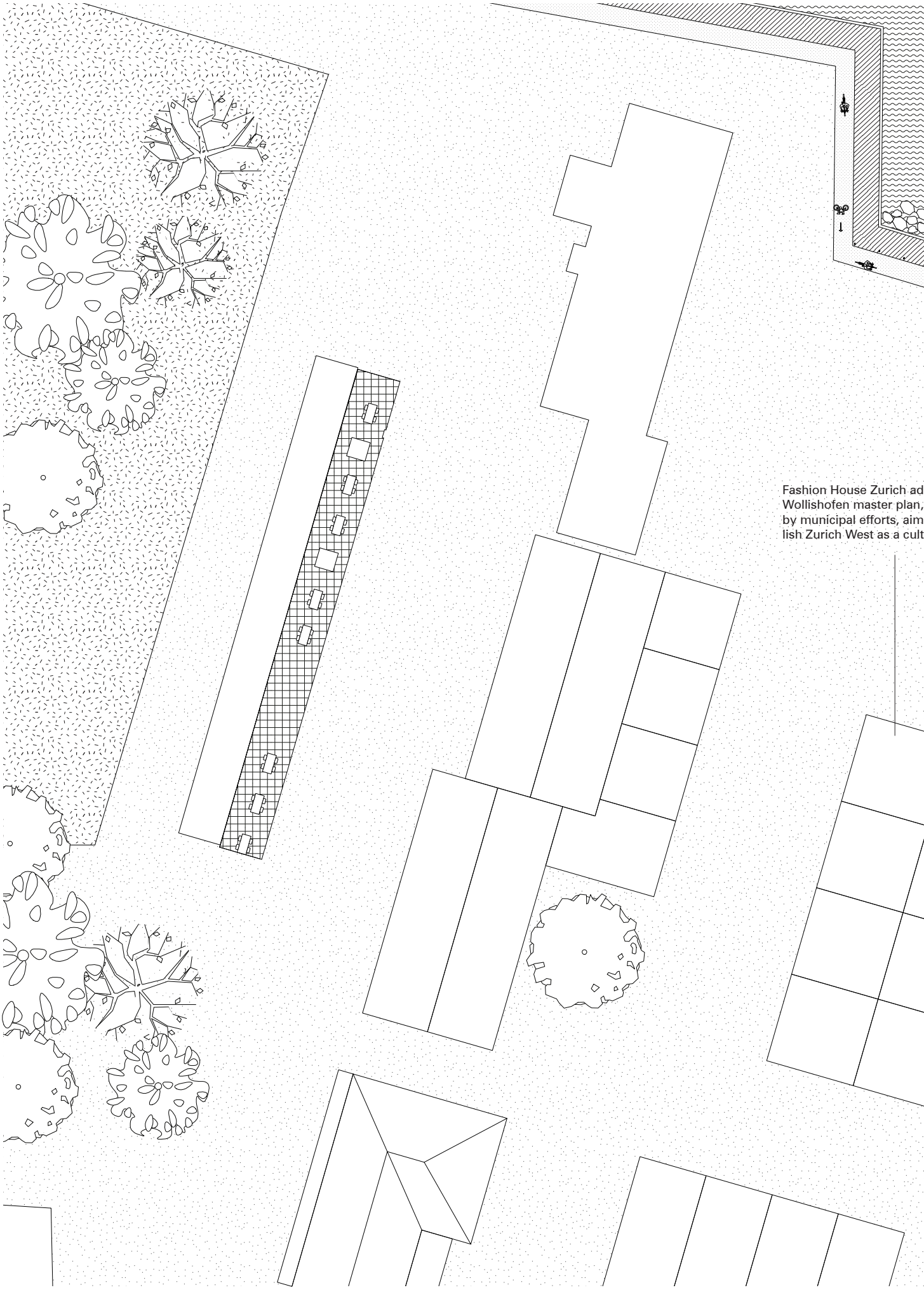
rivate
rs.

The existing structure of Rote Fabrik is highly adaptable, able to accommodate a range of different programs and activities.

Cross Section
1:250

1 Fashion House Zurich
2 Rote Fabrik
3 Fashion House Offices
4 Research Area
5 Archive
6 Showroom

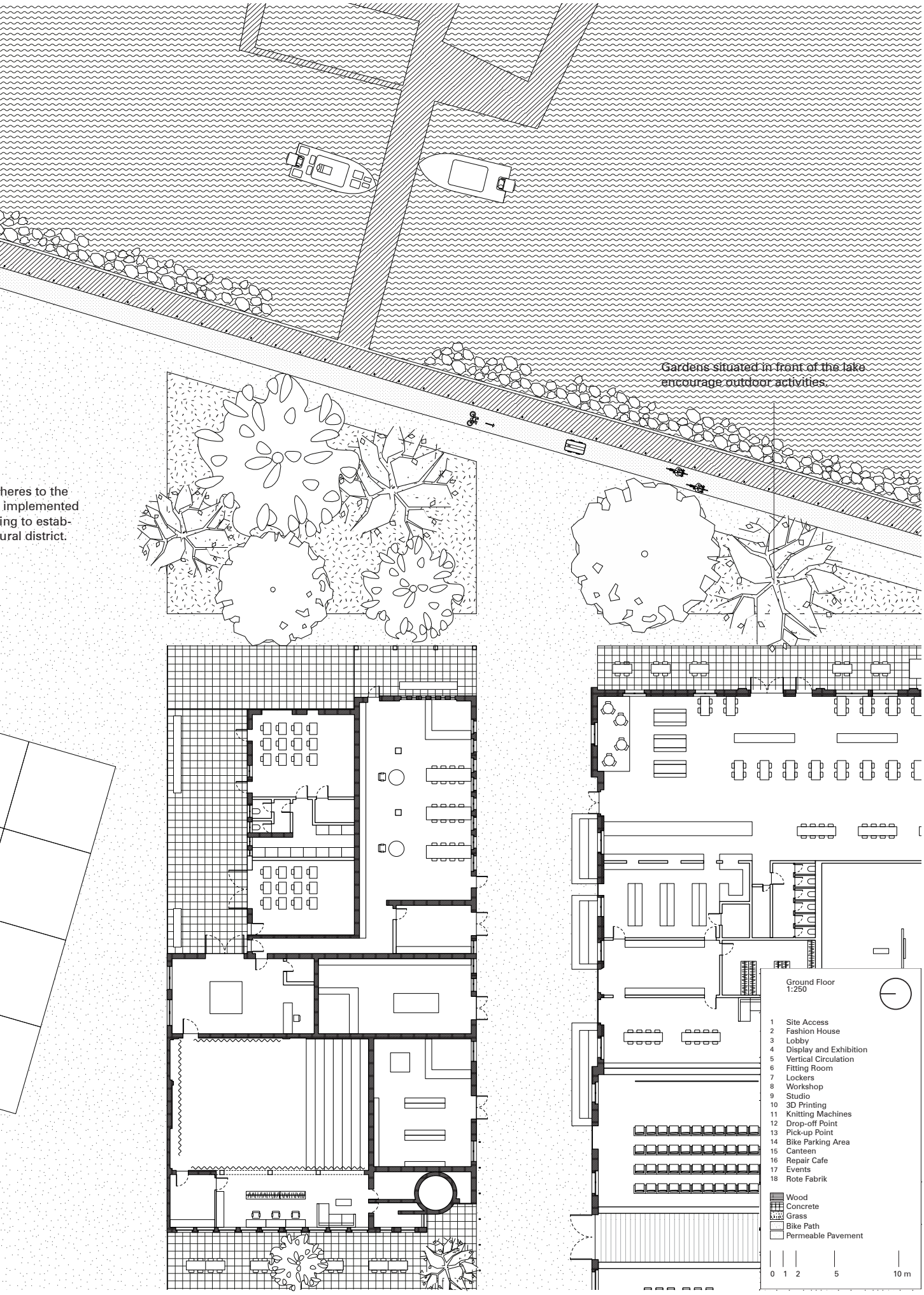
0 1 2 5 10 m



Fashion House Zurich ad
Wollishofen master plan,
by municipal efforts, aim
lish Zurich West as a cult

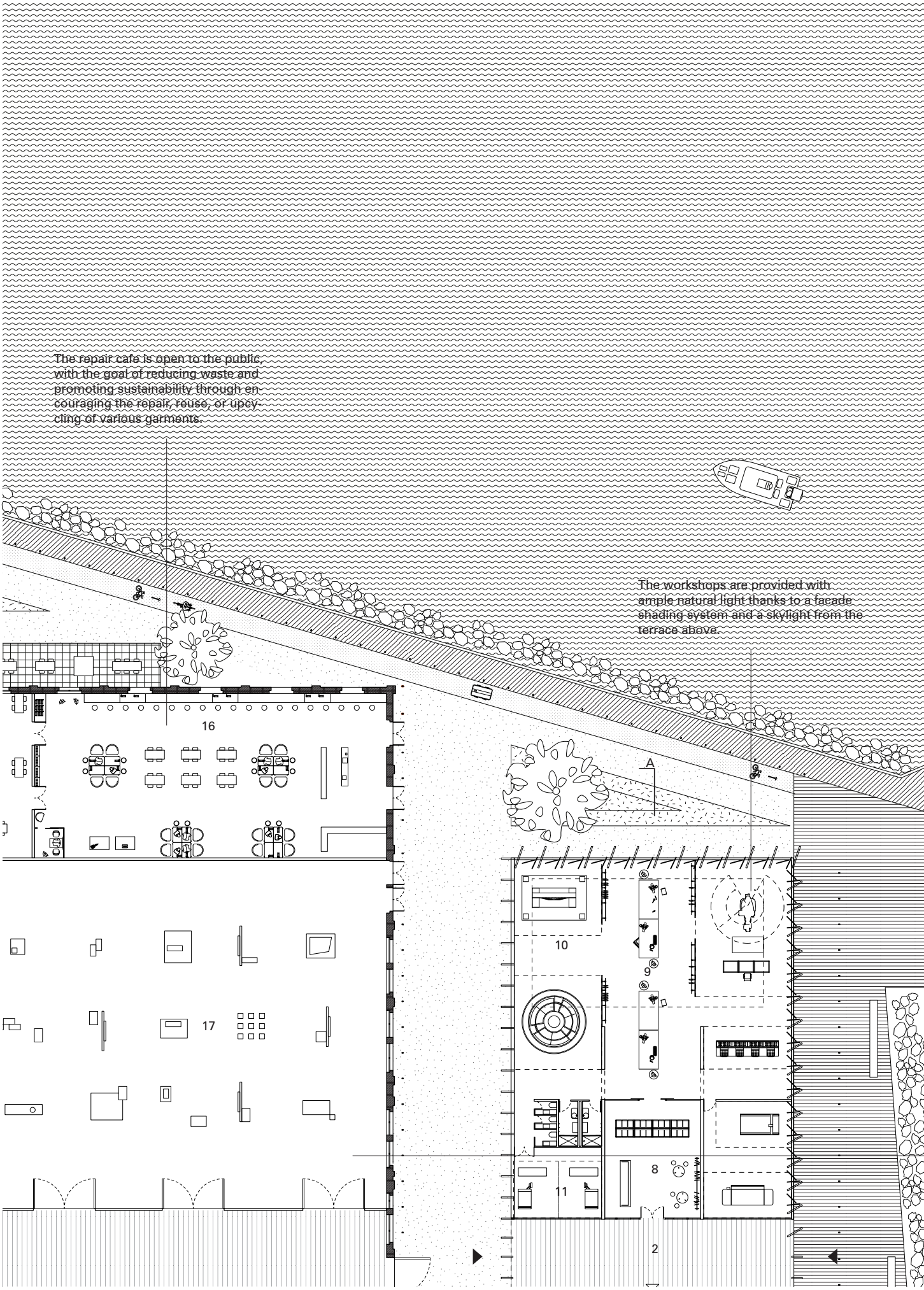
heres to the
implemented
ing to estab-
ural district.

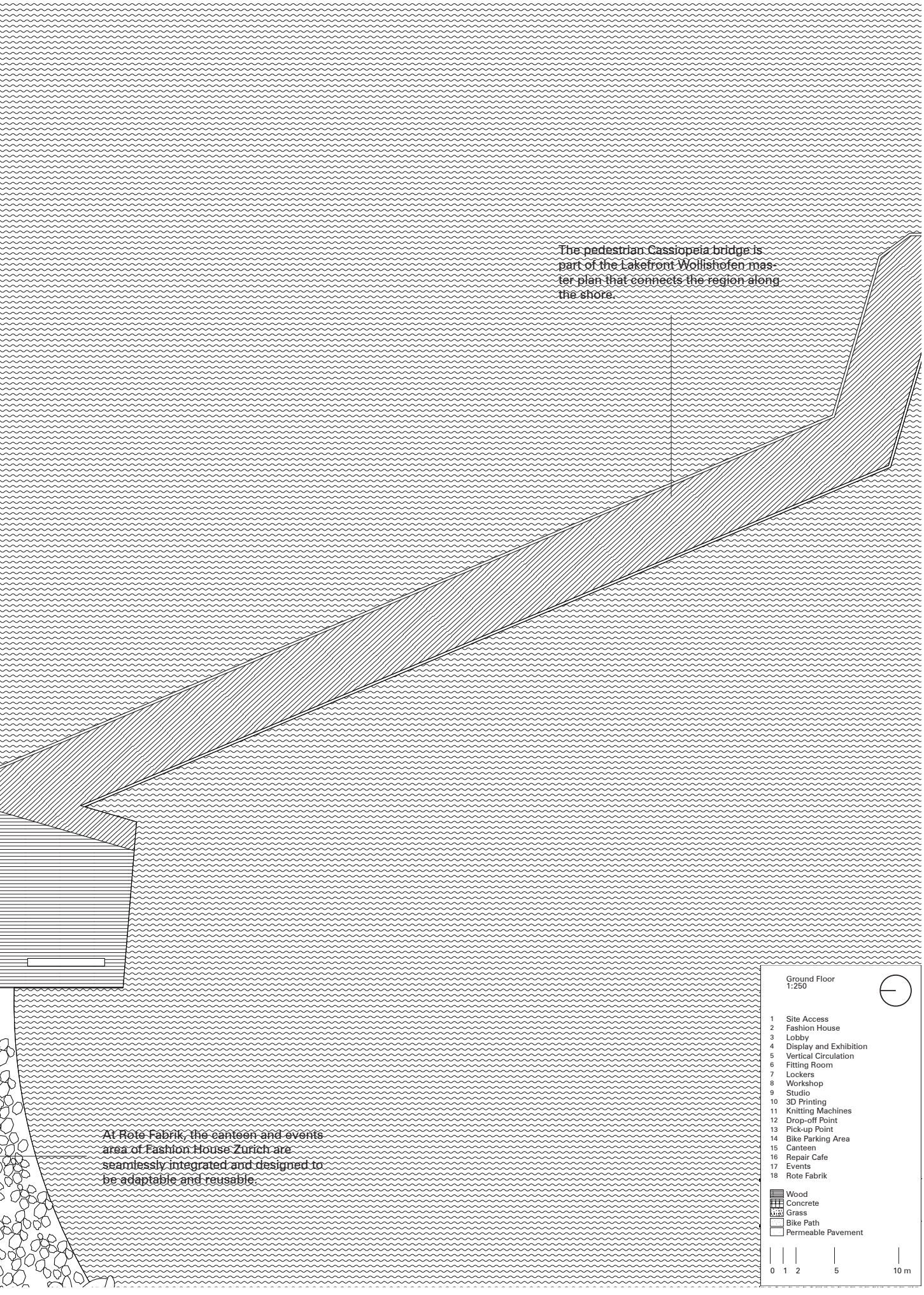
Gardens situated in front of the lake encourage outdoor activities.

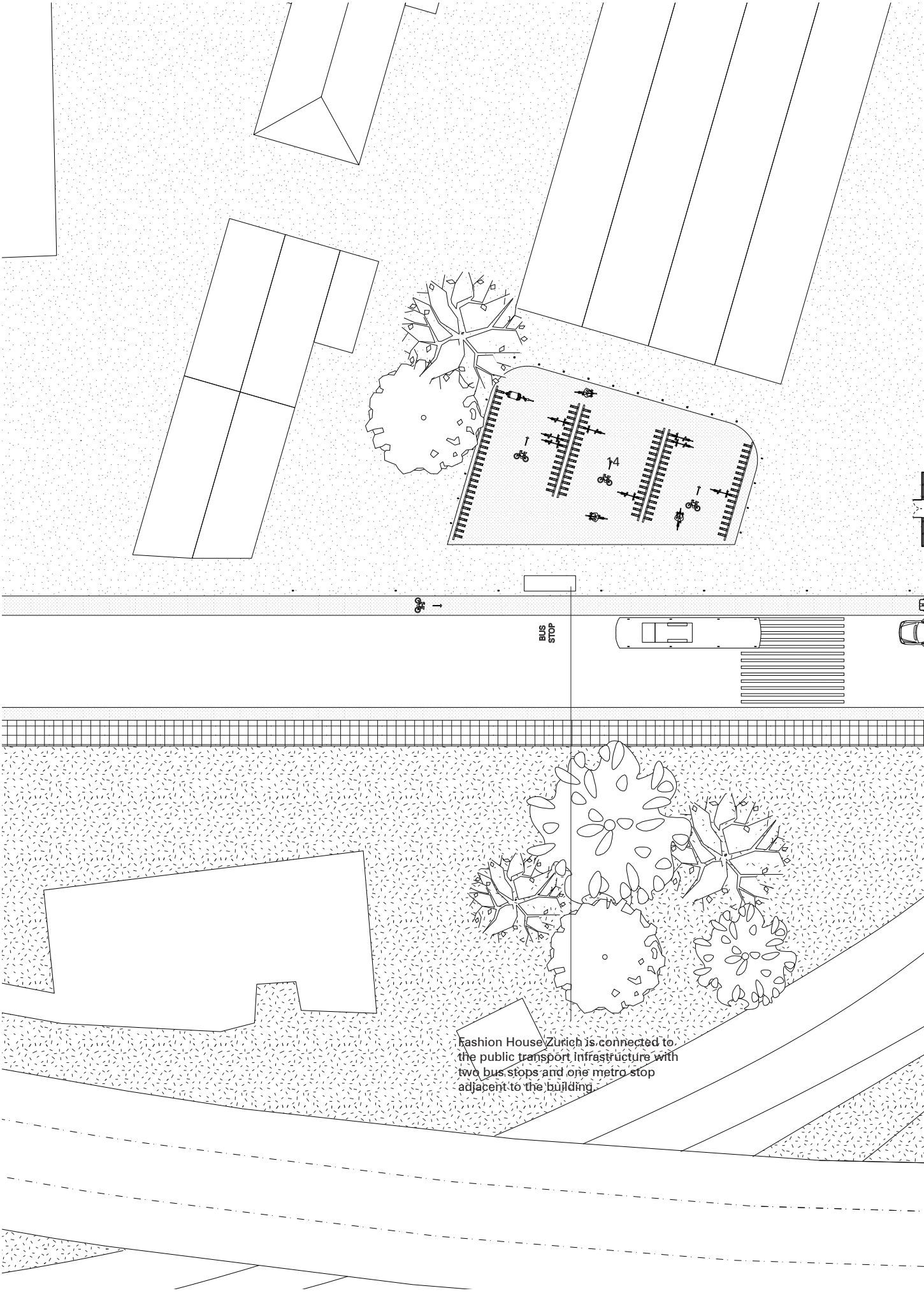


The repair cafe is open to the public, with the goal of reducing waste and promoting sustainability through encouraging the repair, reuse, or upcycling of various garments.

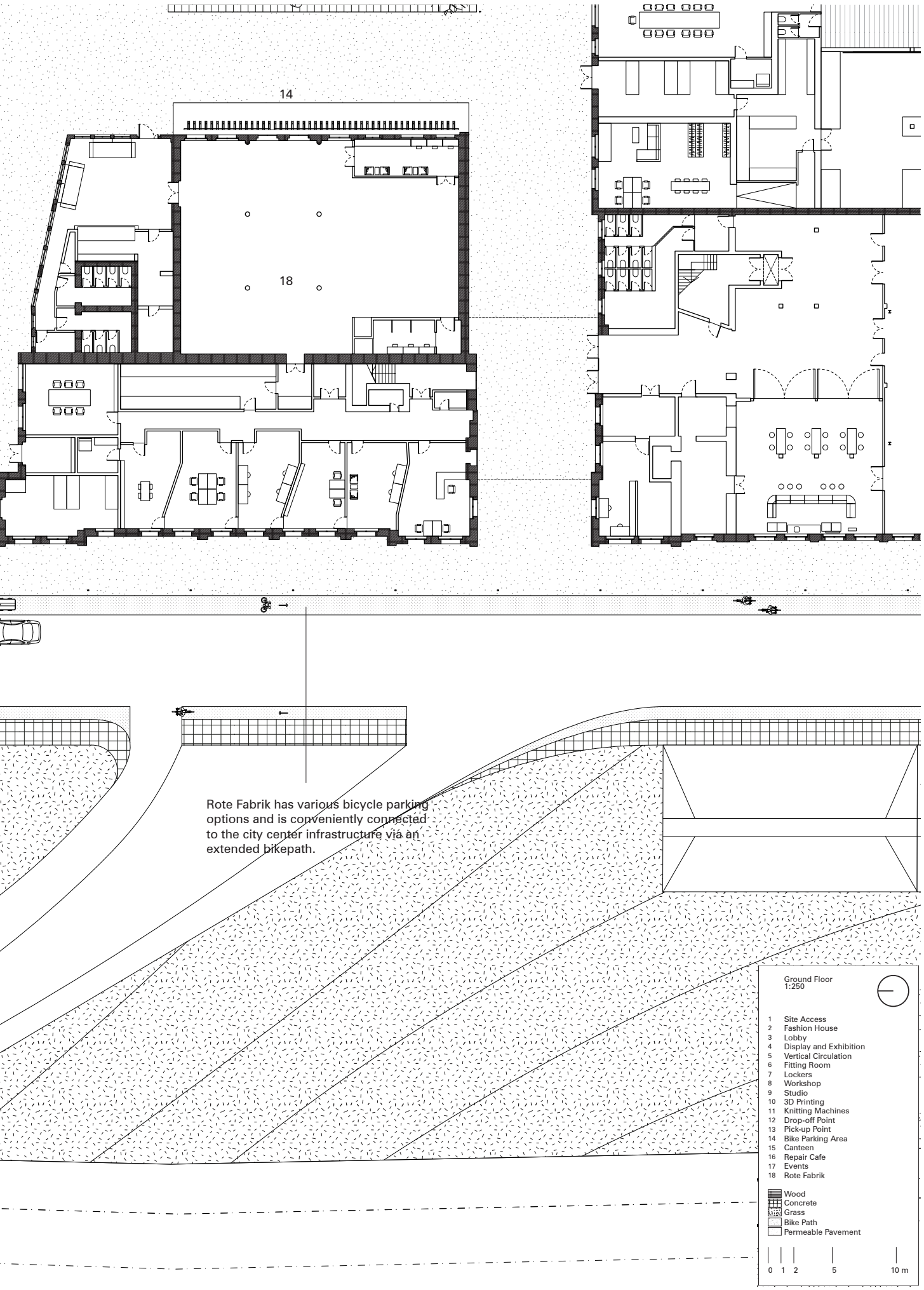
The workshops are provided with ample natural light thanks to a facade shading system and a skylight from the terrace above.

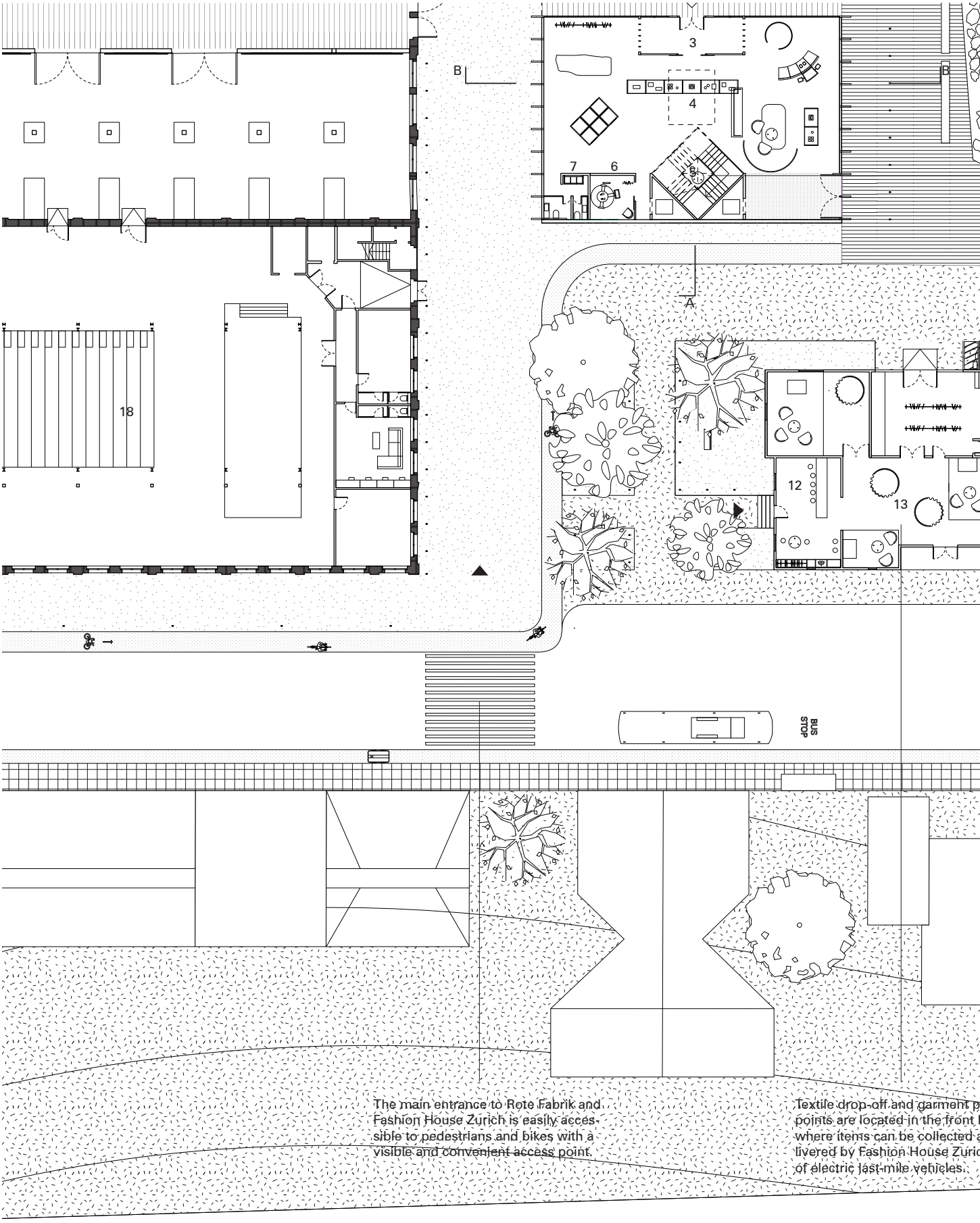



The pedestrian Cassiopeia bridge is part of the Lakefront Wollishofen master plan that connects the region along the shore.
At Rote Fabrik, the canteen and events area of Fashion House Zurich are seamlessly integrated and designed to be adaptable and reusable.
Ground Floor
1:250
1 Site Access
2 Fashion House
3 Lobby
4 Display and Exhibition
5 Vertical Circulation
6 Fitting Room
7 Lockers
8 Workshop
9 Studio
10 3D Printing
11 Knitting Machines
12 Drop-off Point
13 Pick-up Point
14 Bike Parking Area
15 Canteen
16 Repair Cafe
17 Events
18 Rote Fabrik
Wood
Concrete
Grass
Bike Path
Permeable Pavement
0 1 2 5 10 m



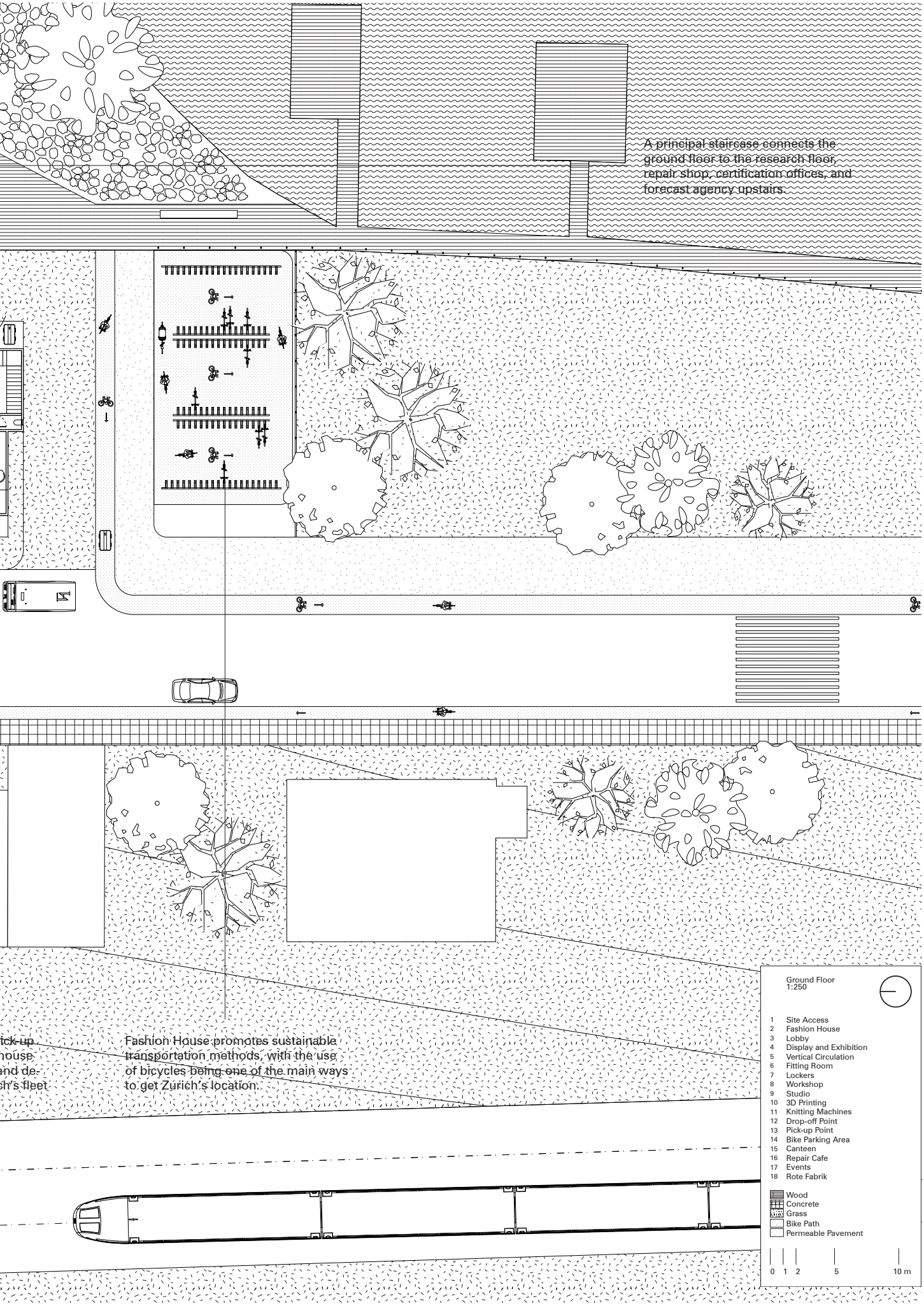
Fashion House Zurich is connected to the public transport infrastructure with two bus stops and one metro stop adjacent to the building.


14
18
Rote Fabrik has various bicycle parking options and is conveniently connected to the city center infrastructure via an extended bikepath.
Ground Floor
1:250
1 Site Access
2 Fashion House
3 Lobby
4 Display and Exhibition
5 Vertical Circulation
6 Fitting Room
7 Lockers
8 Workshop
9 Studio
10 3D Printing
11 Knitting Machines
12 Drop-off Point
13 Pick-up Point
14 Bike Parking Area
15 Canteen
16 Repair Cafe
17 Events
18 Rote Fabrik
Wood
Concrete
Grass
Bike Path
Permeable Pavement
0 1 2 5 10 m



The main entrance to Rote Fabrik and Fashion House Zurich is easily accessible to pedestrians and bikes with a visible and convenient access point.

Textile drop-off and garment p
points are located in the front
where items can be collected
livered by Fashion House Zuric
of electric last-mile vehicles.


A principal staircase connects the ground floor to the research floor, repair shop, certification offices, and forecast agency upstairs.
tck-up
house
nd de-
h's fleet
Fashion House promotes sustainable transportation methods, with the use of bicycles being one of the main ways to get Zürich's location.
Ground Floor
1:250
1 Site Access
2 Fashion House
3 Lobby
4 Display and Exhibition
5 Vertical Circulation
6 Fitting Room
7 Lockers
8 Workshop
9 Studio
10 3D Printing
11 Knitting Machines
12 Drop-off Point
13 Pick-up Point
14 Bike Parking Area
15 Canteen
16 Repair Cafe
17 Events
18 Rote Fabrik
Wood
Concrete
Grass
Bike Path
Permeable Pavement
0 1 2 5 10 m

1 2 3

Fashion House Zurich repurposes satellite buildings on site: the former street-facing house is converted into a textile drop-off and garment pick-up point.

The shading system of Fashion House Zurich utilizes two elements: a fixed elements that is tuned according to facade orientations, and a flexible one that is adjusted based on the program.

Fashion House Zurich's south facade is articulated with deep openings to protect from direct solar protection and is made from recycled concrete panels.

South Elevation
1:250

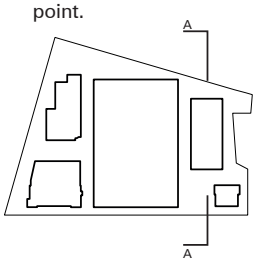
1 Pick Up Point
2 Rote Fabrik
3 Fashion House Zurich
4 Public Space
5 Industrial Buildings

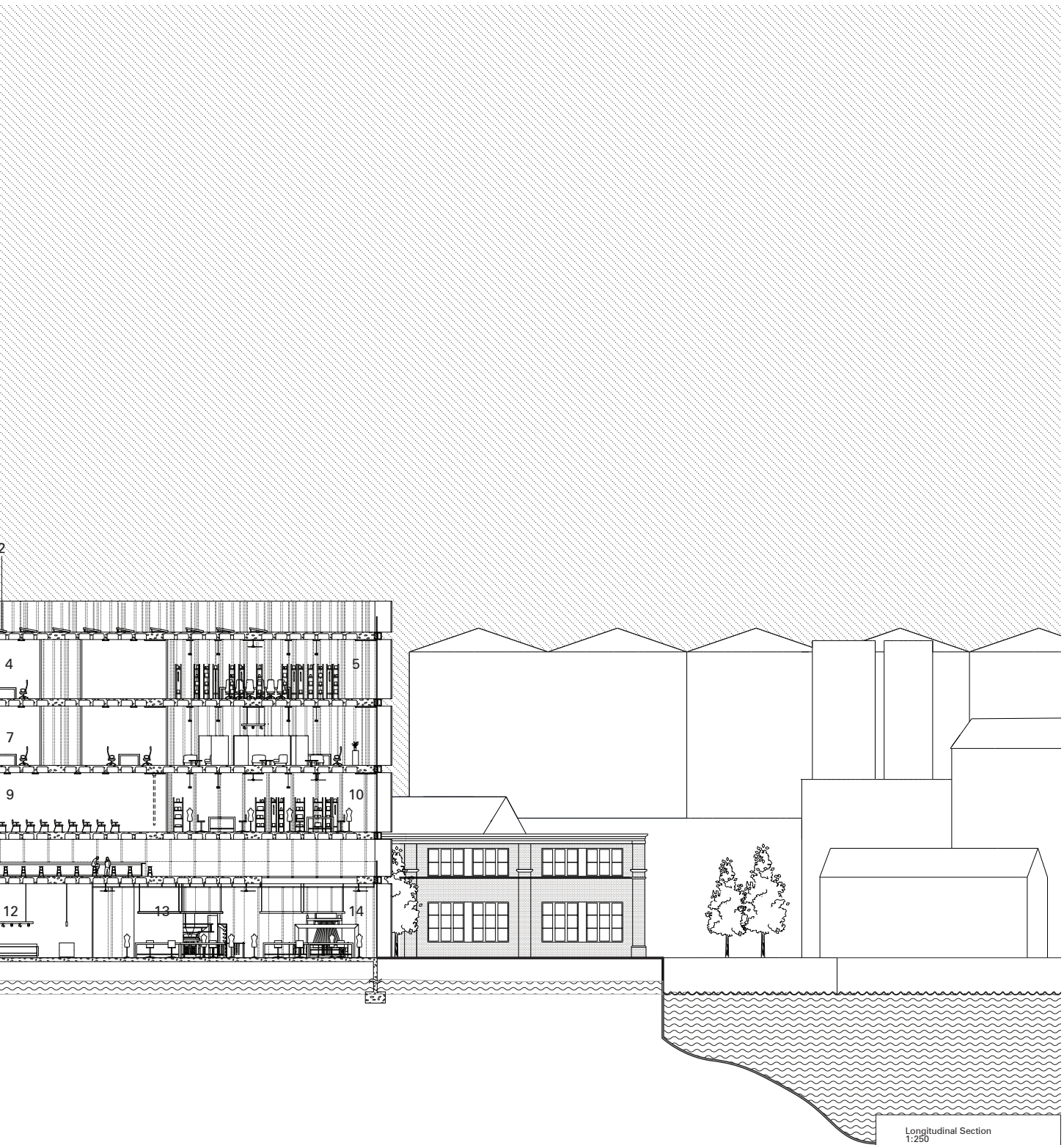
0 1 2 5 10 m

Fashion House Zurich repurposes satellite buildings on site: the former street-facing house is converted into a textile drop-off and garment pick-up point.

The existing street-facing house and Fashion House Zurich are connected by a garden, creating a seamless connection between the two properties .

Ground floor and terrace are ope
non-members, and they are avai
24/7.





Longitudinal Section
1:250

1 Rote Fabrik
2 Rooftop PV System
3 Working Spaces
4 Breakout Room
5 Patent Office
6 Research Area
7 Meeting Room
8 Archive
9 Lecture Hall
10 Studio
11 Showroom
12 Main Entrance
13 Photo Studio
14 Prototyping Studio

0 1 2 5 10 m

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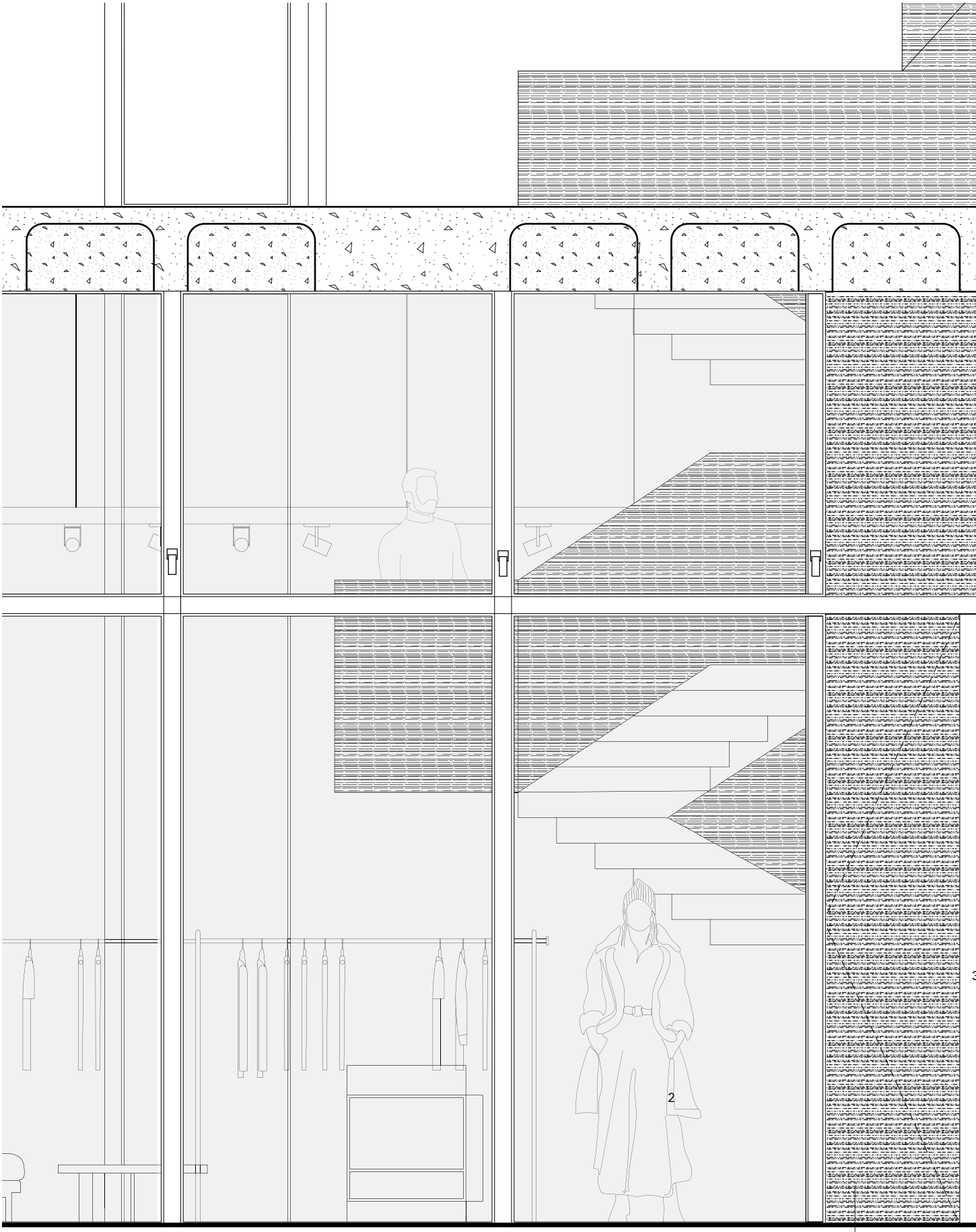
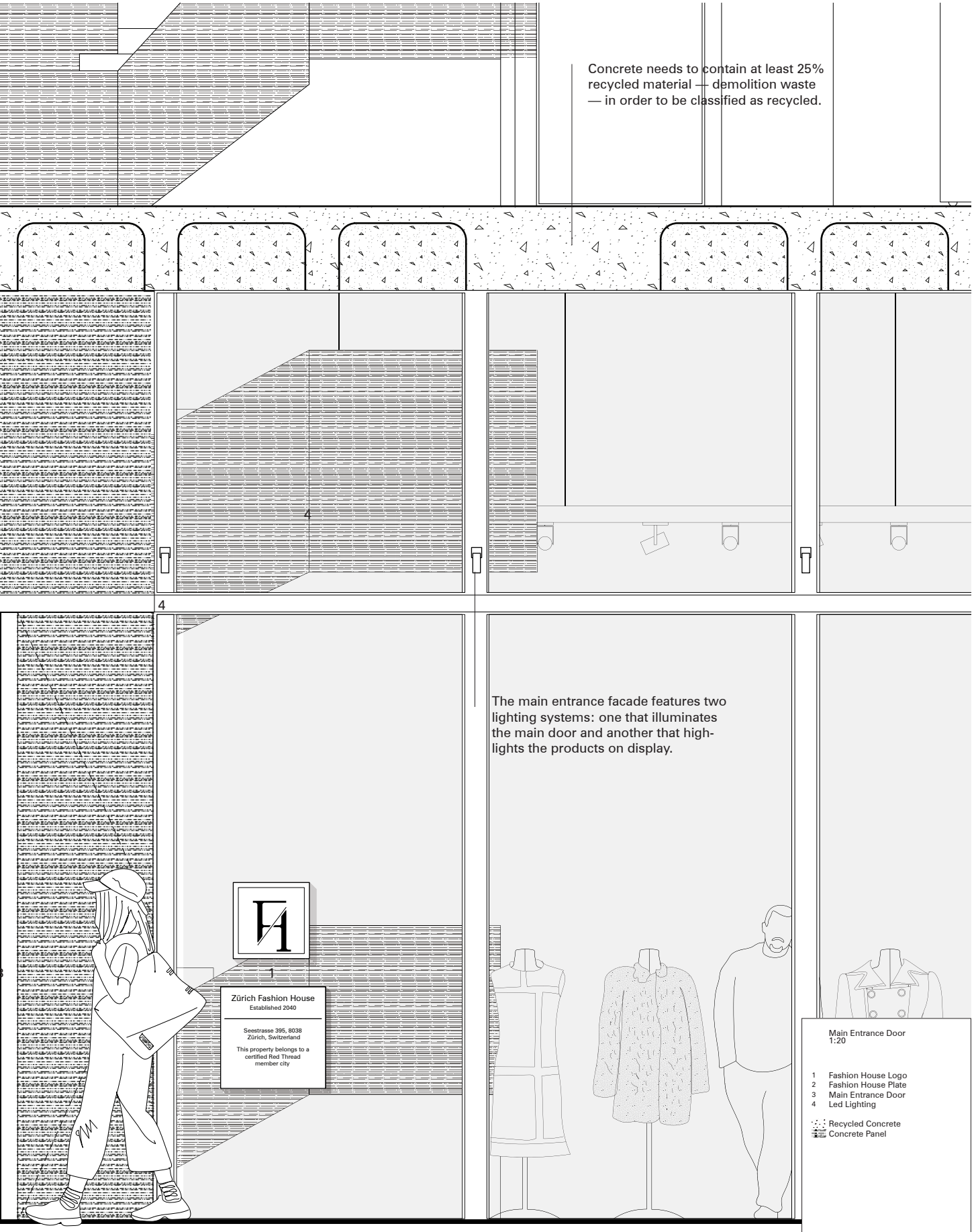
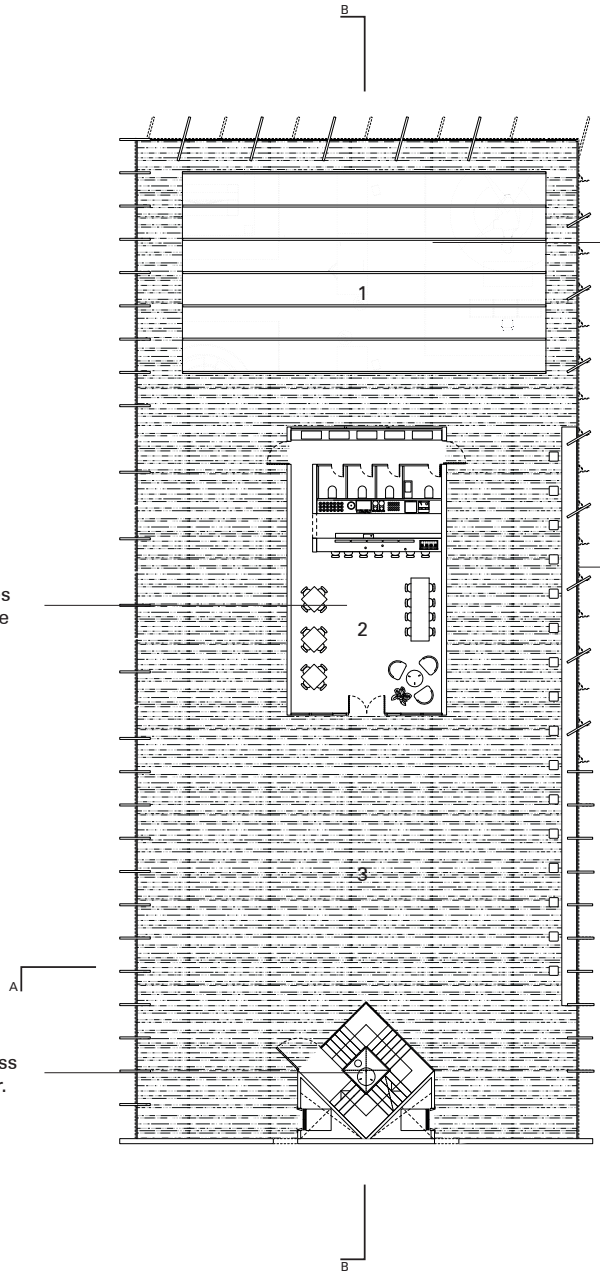


Fashion House Zu
incentives for mo
struction using re
new construction



urich follows the city
re sustainable con-
ecycled materials in
s.



The terrace skylight improves the lighting in the workshop located on the first floor.

The north side of the terrace faces Rote Fabrik, while the south side faces the lake, creating a framed view of the outdoors.

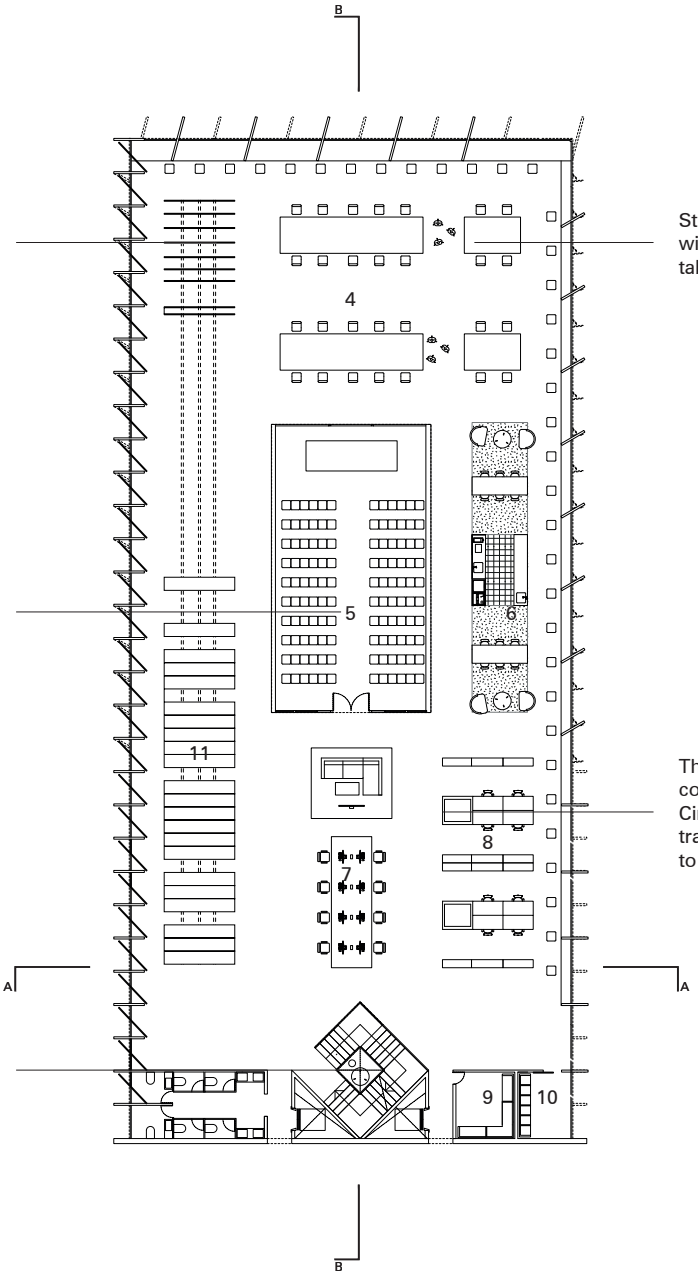
The north side of the terrace faces Rote Fabrik, while the south side faces the lake, creating a framed view of the outdoors.

The terrace has an independent access and it's available 24/7 during summer.

Library references and research materials at Fashion House Zurich are archived in shelves that move along rails, allowing easy and efficient access to different materials maximizing flexible organization of the collection.

Each floor has a central core which serves as structure and encloses the most private activity in each floor like the auditorium in the first floor.

Fashion House Zurich concentrates vertical circulation and building services into a solid core at the western edge of the building to liberate the remaining floor area to be an open workspace.



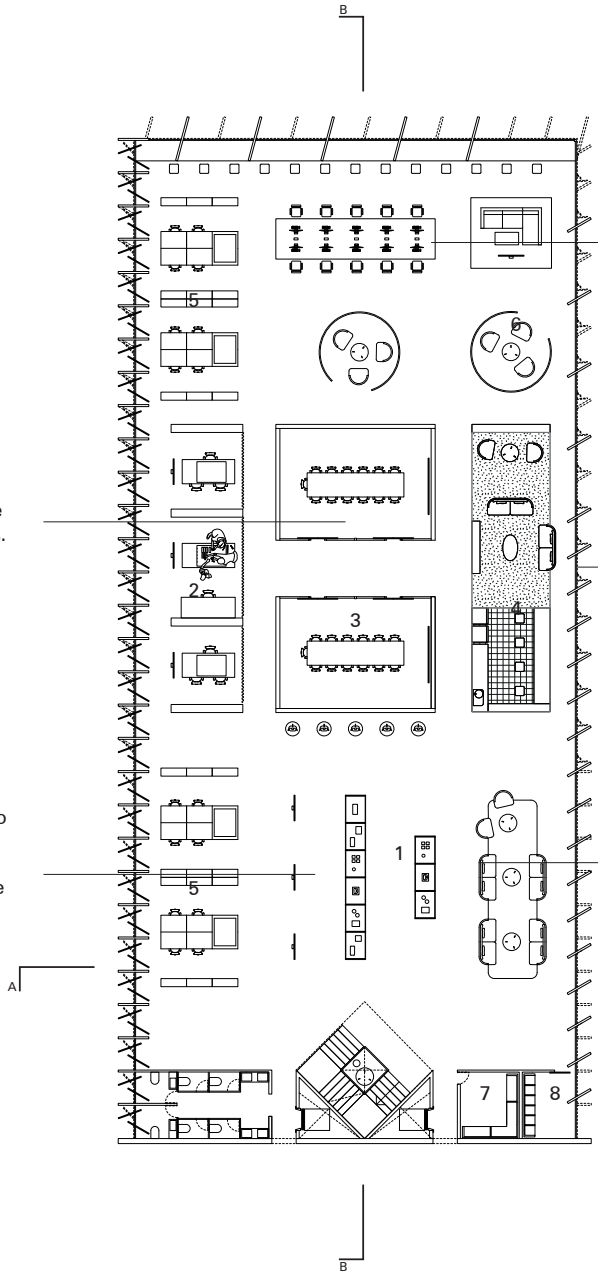
Studio areas allow members to work with large materials on comfortable tables.

The research area is equipped with computers and resting spaces Circulation and services are concentrated at the west part of the building to open up the floor plate.

First Floor
1:250

1 Skylight
2 Terrace Cafeteria
3 Terrace
4 Studio
5 Lecture Hall
6 Kitchenette
7 Database Access
8 Archive
9 Working Spaces
10 Storage
11 Lockers

0 1 2 5 10 m



Working spaces are designed to promote interactions and shared experiences, allowing employees to perform their tasks efficiently.

The enclosed space at the core of the floor provides private meeting rooms.

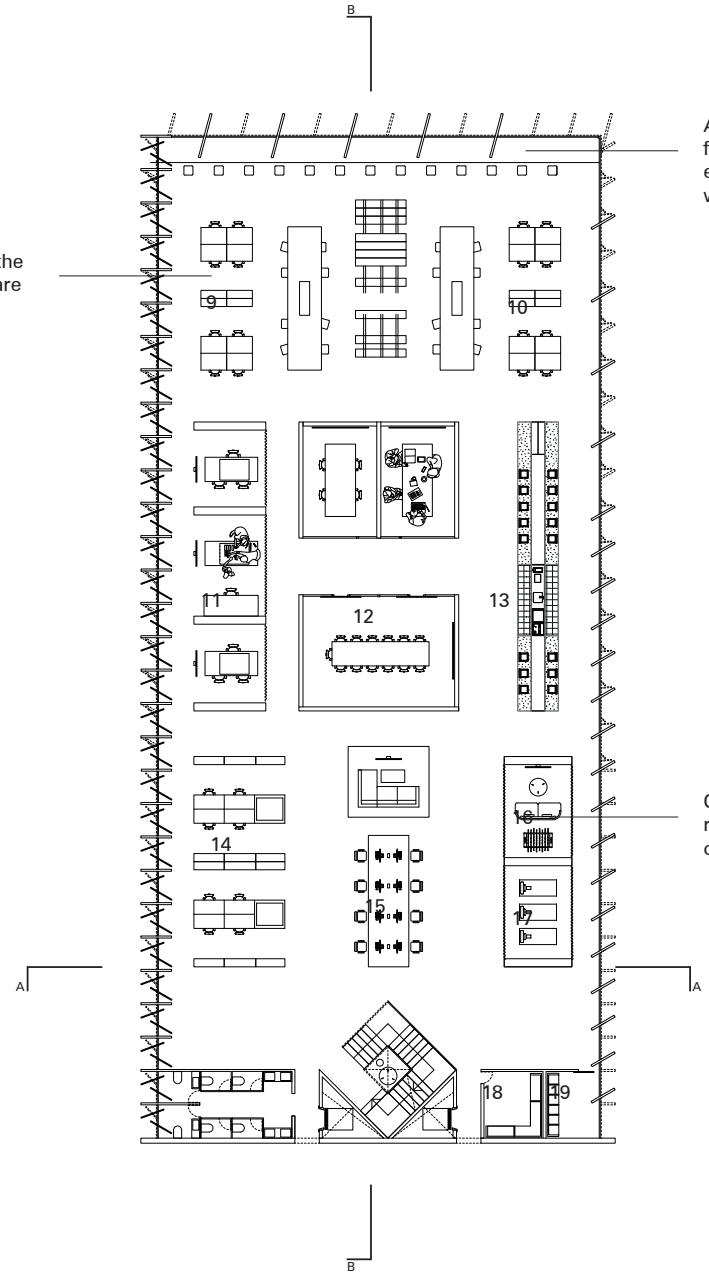
Natural light and well-designed artificial lighting systems create a pleasant and inviting atmosphere for both Fashion House members and visitors.

The layout of the space is designed to encourage movement and flow, making it easy for customers to navigate and for employees to move about the space with ease.

The product display areas and working spaces are designed to be functional and visually appealing by strategically placing showcased products in the best possible light.

A table positioned longitudinally and facing the lake allows members and employees to take in the view while working.

The patent office and consultancy spaces are placed at the far end of the floor plan to ensure privacy needs are met.

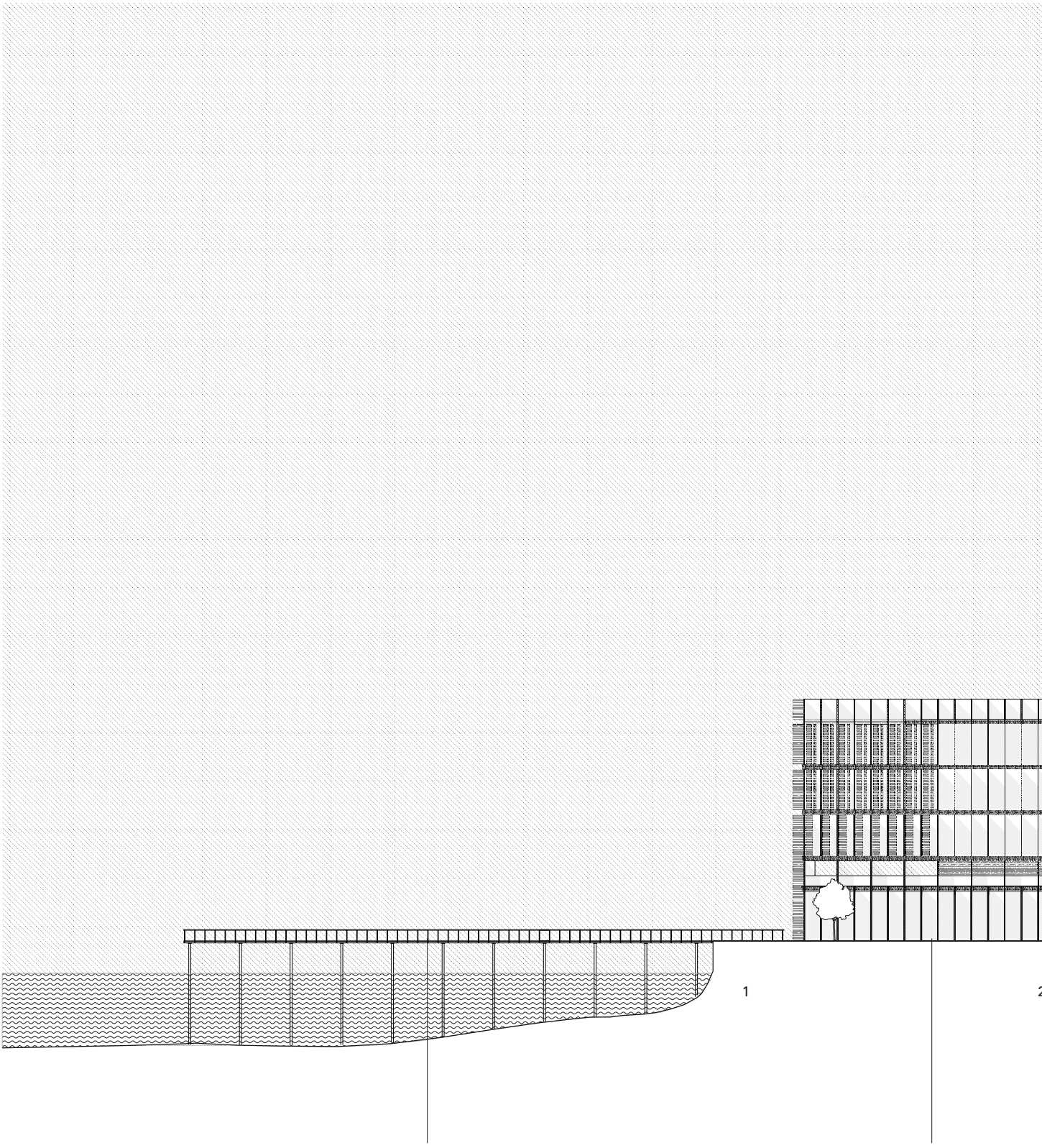


Common areas—including a wellbeing room and game lounge—are located on opposite ends of the office space.

Third Floor
1:250

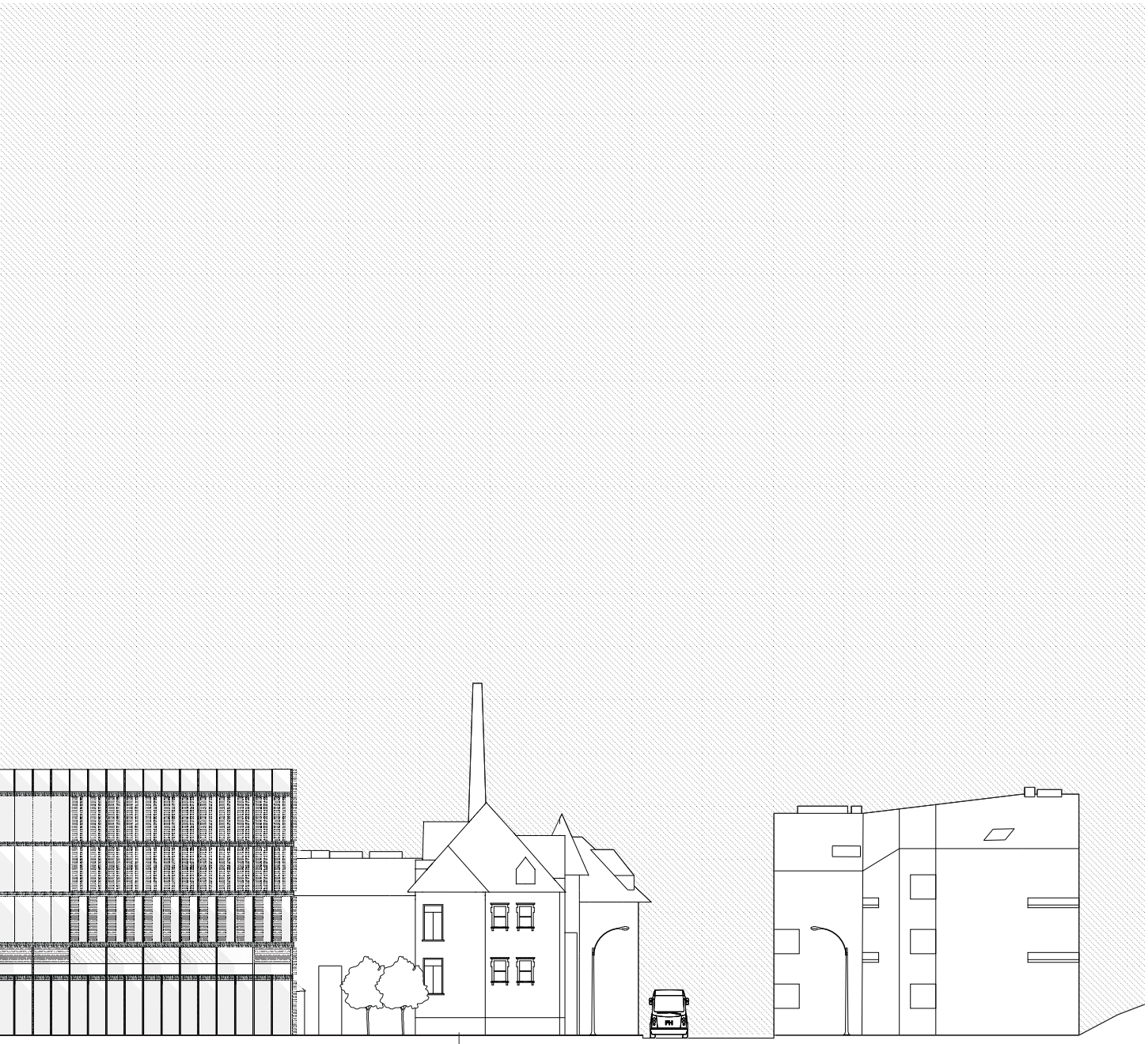
1 Product Display
2 Focus Room
3 Meeting Room
4 Kitchenette
5 Working Spaces
6 Database Access
7 Lockers
8 Storage
9 Patent Office
10 Consultancy
11 Focus Room
12 Meeting Room
13 Kitchenette
14 Working Spaces
15 Database Access
16 Game Lounge
17 Well-being Room
18 Storage
19 Lockers

0 1 2 5 10 m



The pedestrian Cassiopeia bridge is a public space that is part of the Wollisnhofe master plan that connects the region.

The north facade system is open to frame the view towards Rote Fabrik.



2 3 4

The street-facing house at the limit of the plot indicates the beginning of the residential area of the district.

North Elevation
1:250

1 Public Space
2 Fashion House Zurich
3 Pick Up Point
4 Residential Area

0 1 2 5 10 m

5

1

Wollishofen masterplan repurposes a series of warehouses into dwelling and working spaces into a large coherent open space on the lake shore integrated to Rote Fabrik north side.

Since 1980, Rote Fabrik has work an association that aims to conv promote alternative contempora critical culture.

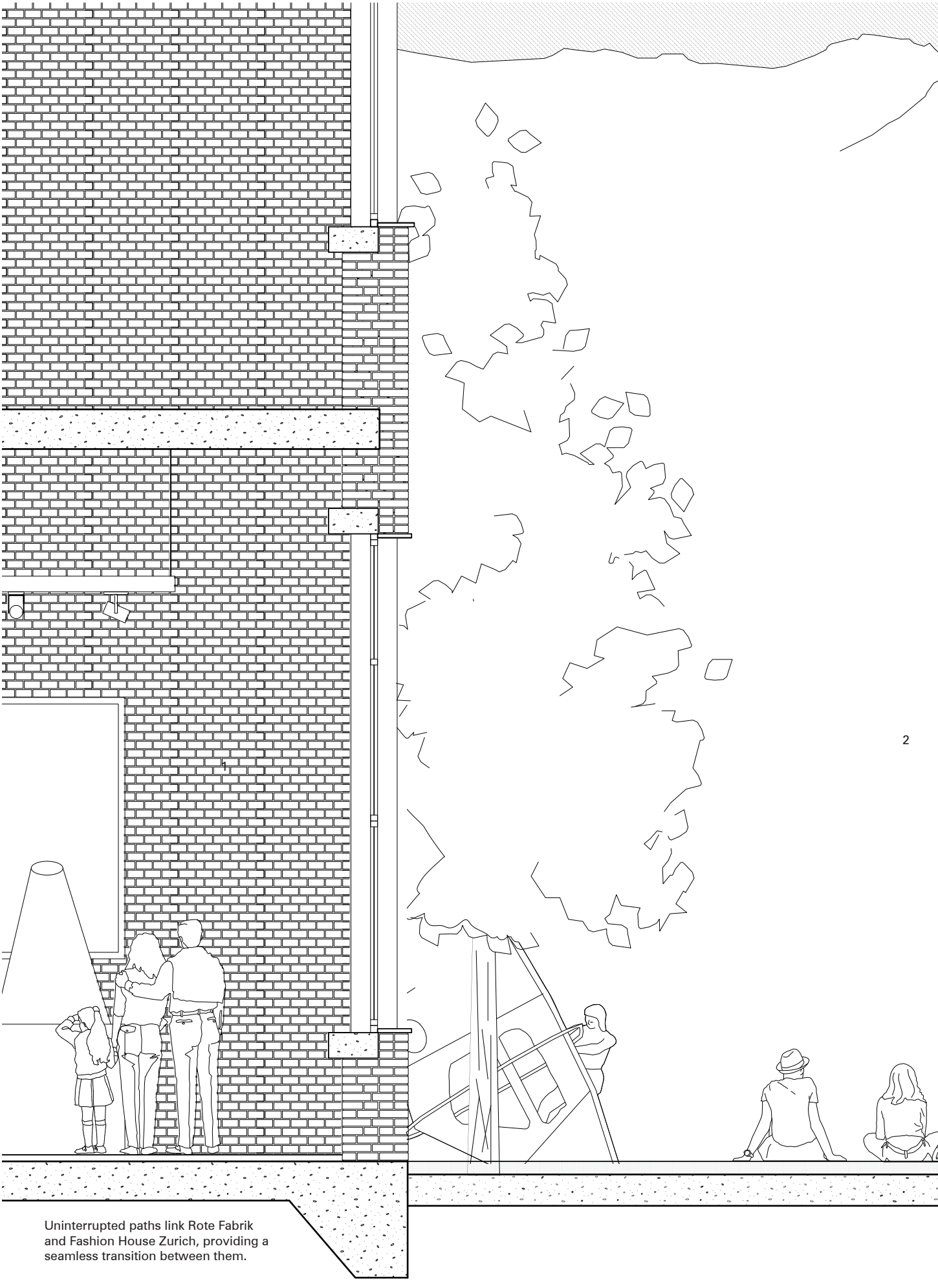
2 3 4

East Elevation
1:1000

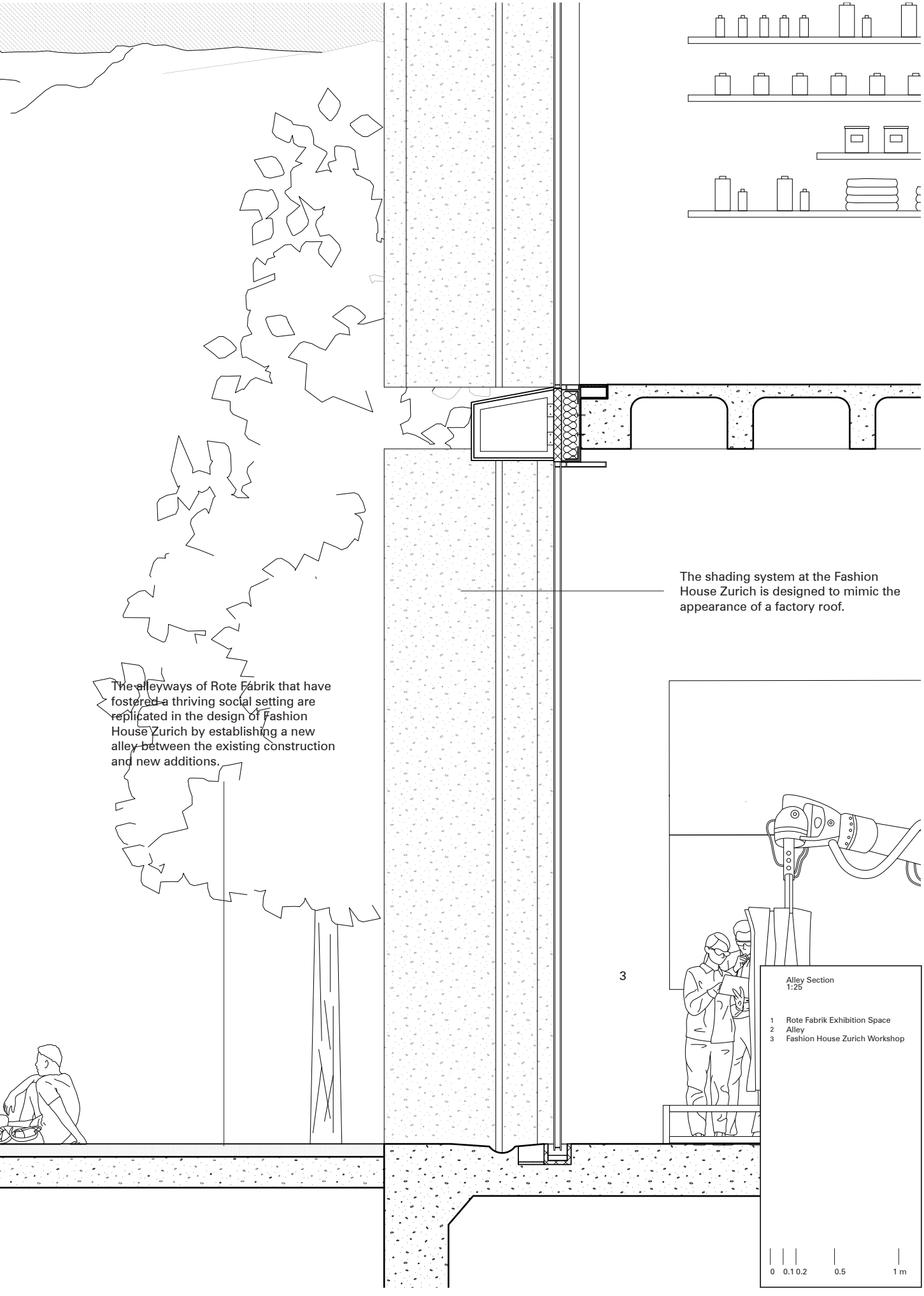
1 Rote Fabrik
2 Fashion House Zurich
3 Pick Up Point
4 Residential Area
5 Seeufer Wollishofen

0 10 20 30 40 m

The Wollinshofen district primarily consists of housing, community centers, healthcare facilities, and one of the most significant cultural centers in Zurich.



Uninterrupted paths link Rote Fabrik and Fashion House Zurich, providing a seamless transition between them.


The shading system at the Fashion House Zurich is designed to mimic the appearance of a factory roof.
The alleyways of Rote Fabrik that have fostered a thriving social setting are replicated in the design of Fashion House Zurich by establishing a new alley between the existing construction and new additions.
3
Alley Section
1:25
1 Rote Fabrik Exhibition Space
2 Alley
3 Fashion House Zurich Workshop
0 0.1 0.2 0.5 1 m

Fashion is technological,
Not only for the available modern tools at our disposal, but also for the innovation that help us do other things better.

Vistapointe.net, Neanderthals clothes speculation (70,000 BCE), 2021

The exact date when fur was first used in clothing is debated. It is known that several species of hominoids including Homo sapiens and Homo neanderthalensis used fur clothing.
For centuries, our warm clothes meant heavy garnments with high maintainance.

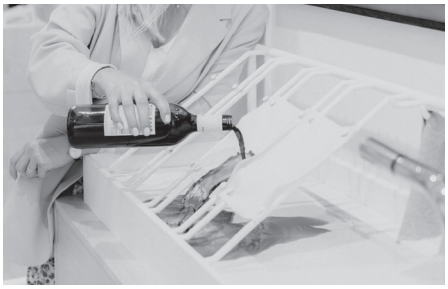
"The Prehistoric Development of Clothing: Archaeological Implications of a Thermal Model". Journal of Archaeological Method and Theory.

Commonly in the fashion industry as a puffer jacket or simply puffer, is a quilted coat which is insulated with either duck or geese feathers. Air pockets created by the bulk of the feathers allow for the retention of warm air.

Cameron, Gwen. "24 Tool User". Alpinist.

The down jacket was created by outdoor adventurer Eddie Bauer in 1936. Following a hazardous fishing trip during which Bauer almost died of hypothermia, the adventurer invented an outer jacket encased with feathers, originally sold as the "skyliner".
It remained popular within winter outdoor sports communities for decades.

Yotka, Steff. "The Top 25 Puffers to Ever Grace a Fashion Show". Vogue. Retrieved 2021-02-11.



Until the last decade fiber technology and materials science were confined to specialist but with the ongoing "material revolution", textile and clothes brands are investing in research and development, leading to a increase in functional wearables:

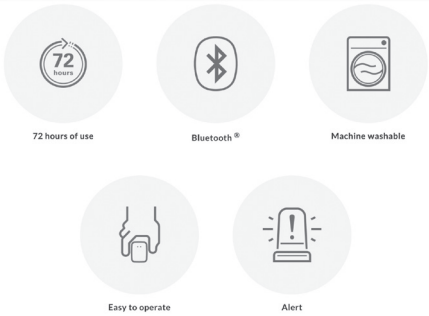
A) Rising investment;

- Smart textile expected to grow from (2020) $93 billion to $475 billion by 2025;
- Regulation on smart textiles are increasing

B) Radical experimentation;

- Investments in research and development of new technologies are increasing due to lower cost of cutting edge technologies.
- Patents increasing 8x from 2013 to 2019.
-

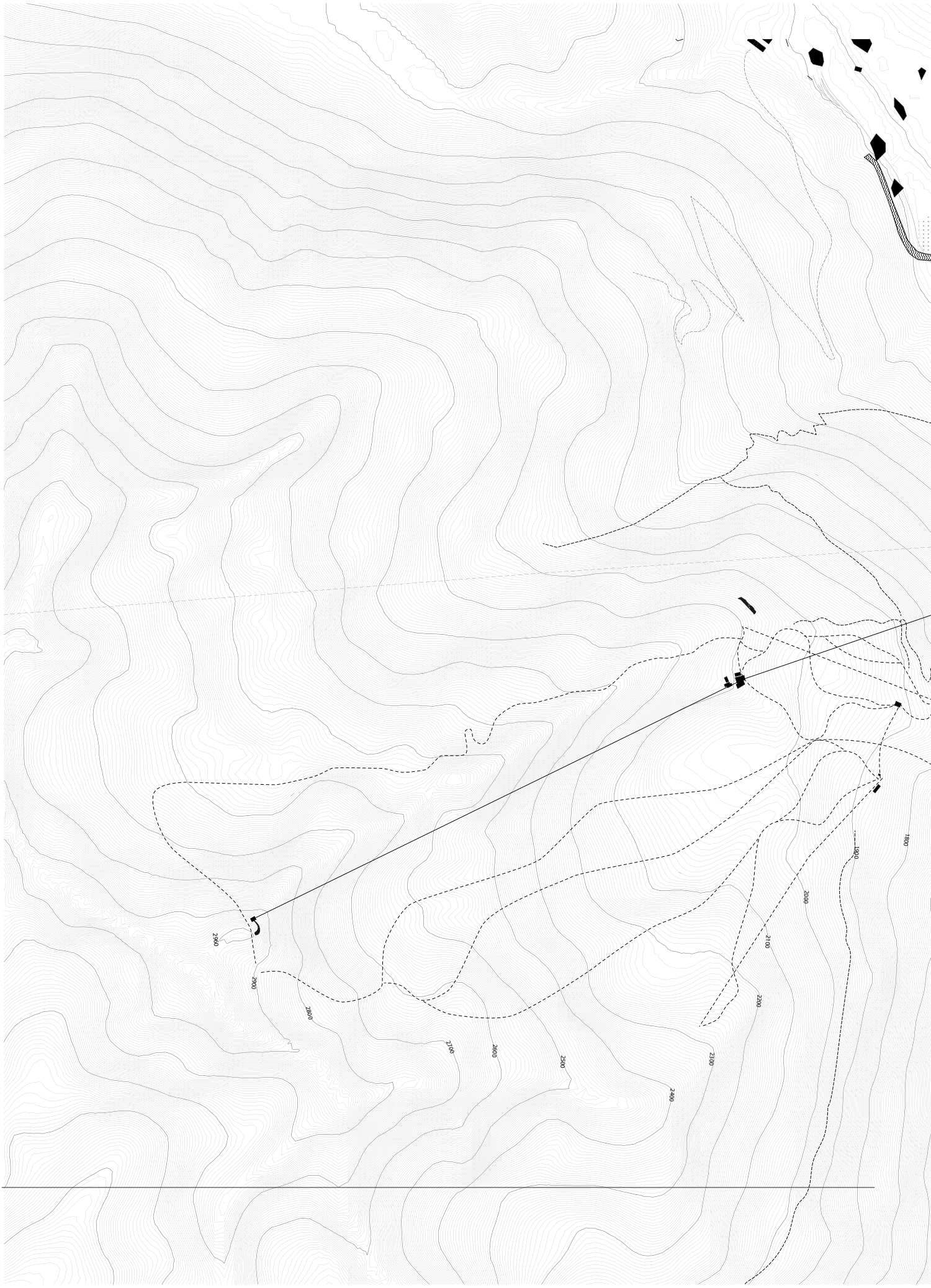
McKinsey&Company, The State of Fashion 2020.



C) Commitment to sustainability;

- Consumer shifting sentiment towards consumption due to environmental awareness
- Consumer wanting fashion that reflects their technological lifestyle.

McKinsey&Company, The State of Fashion 2020.


1800
1900
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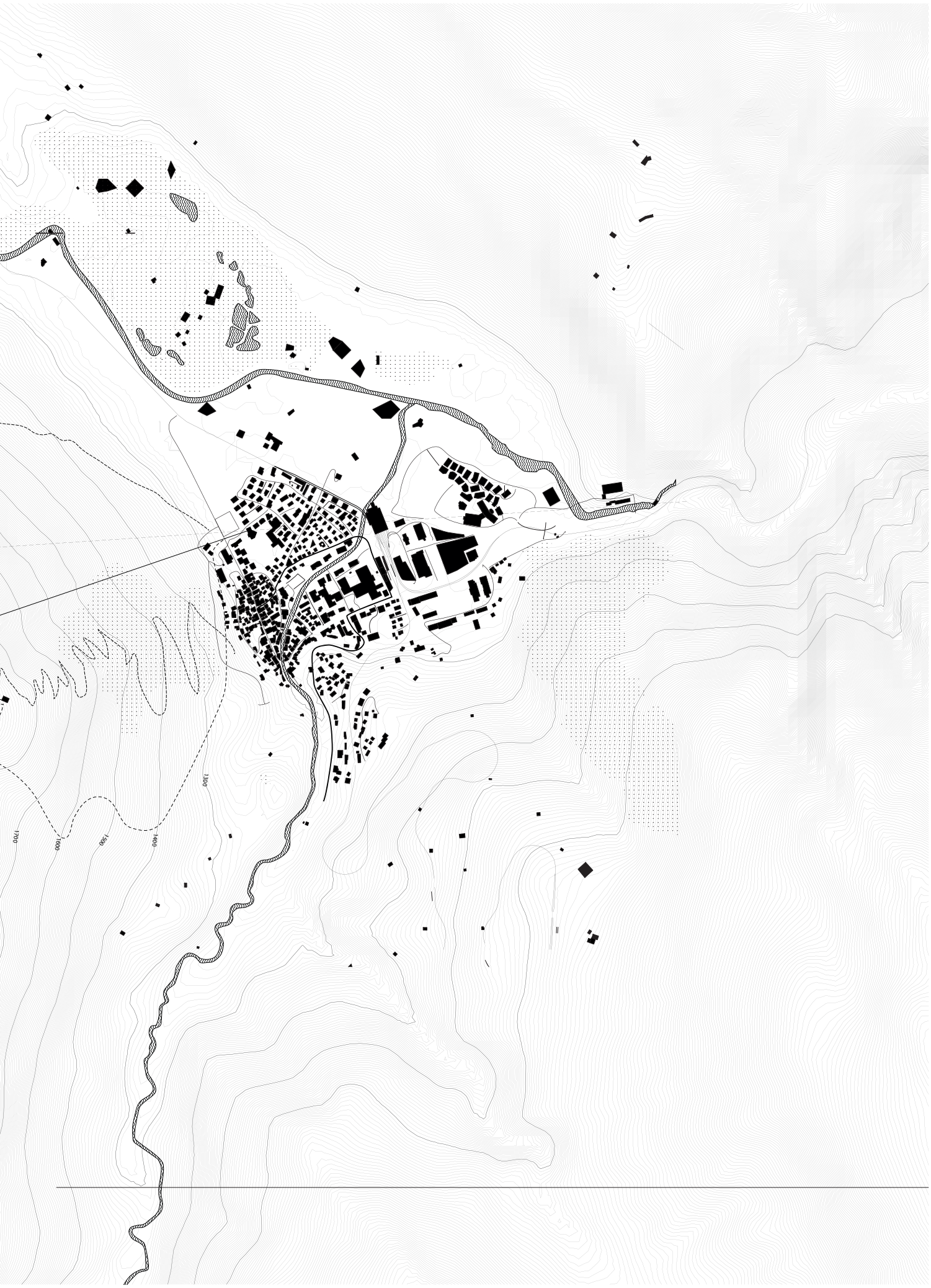
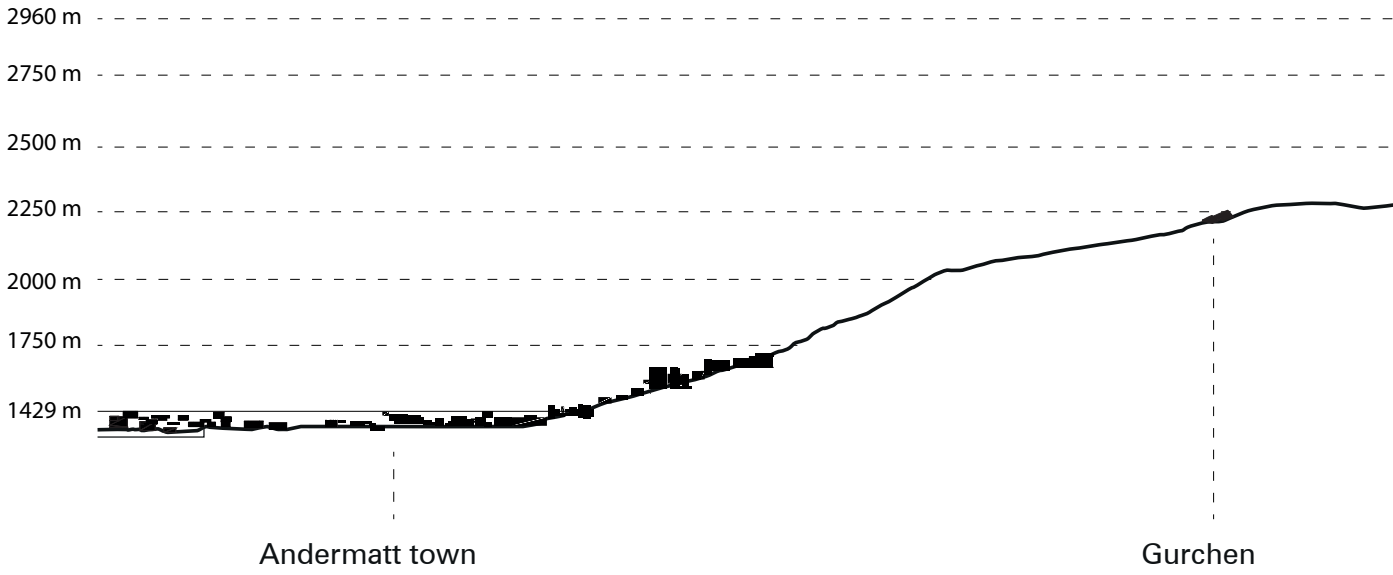
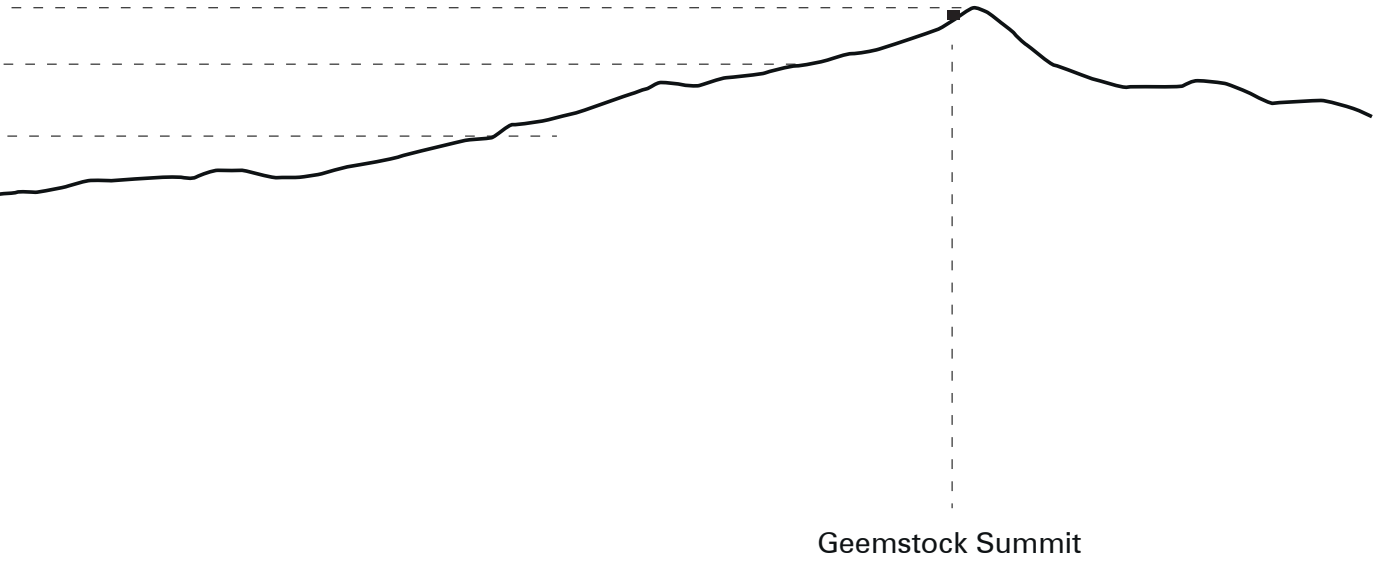

1300
1400
1500
1600
1700

Altitude Makes T



The section profile from Andermatt to Gemsstock summit shows the altitude that creates rel
test under extreme conditions

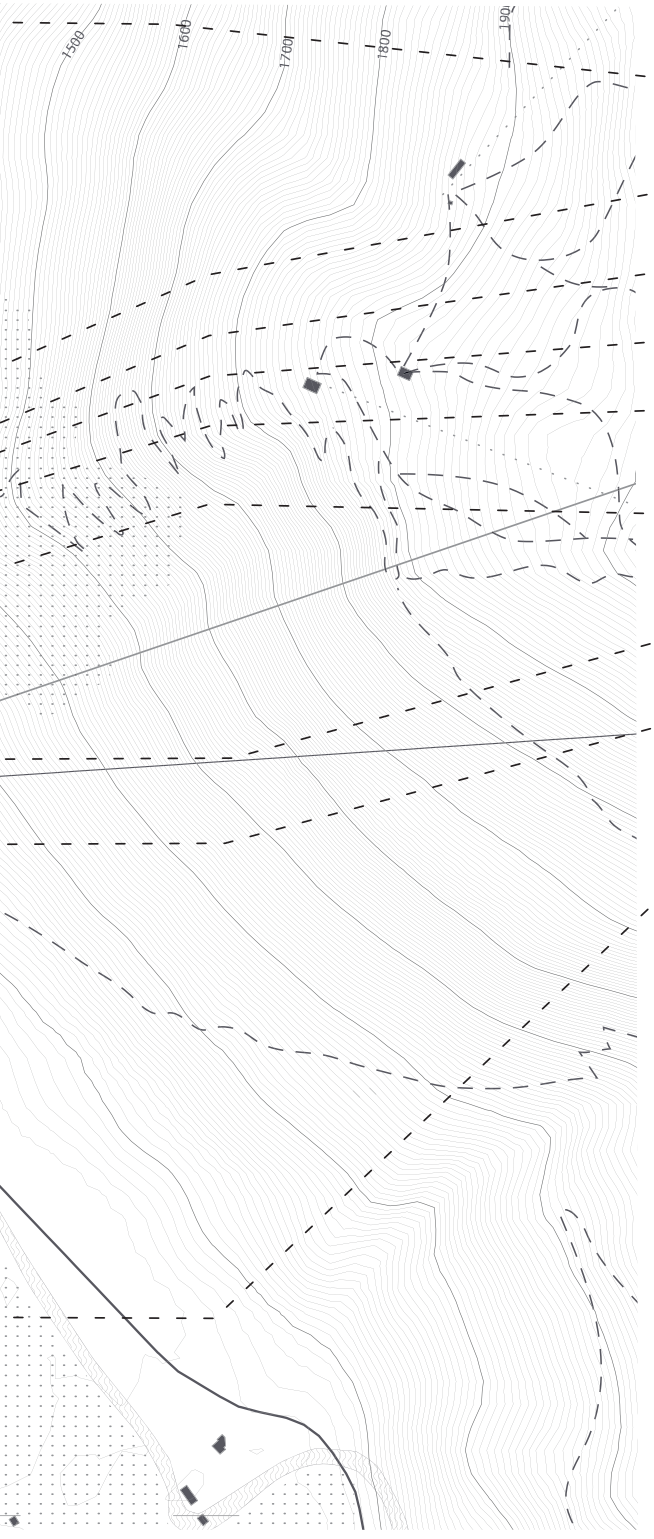
The Weather



iable snow coverage throughout all seasons, creating the ideal scenario to

Andermat

t Attractions



Michelin Star Dinning

Art Gallery

Wellness Center

Boutiques

Sports Center

Ice Ring

Cable car to Geemstock

Concert Hall

Golf Field

0 100 200 300 400 500m

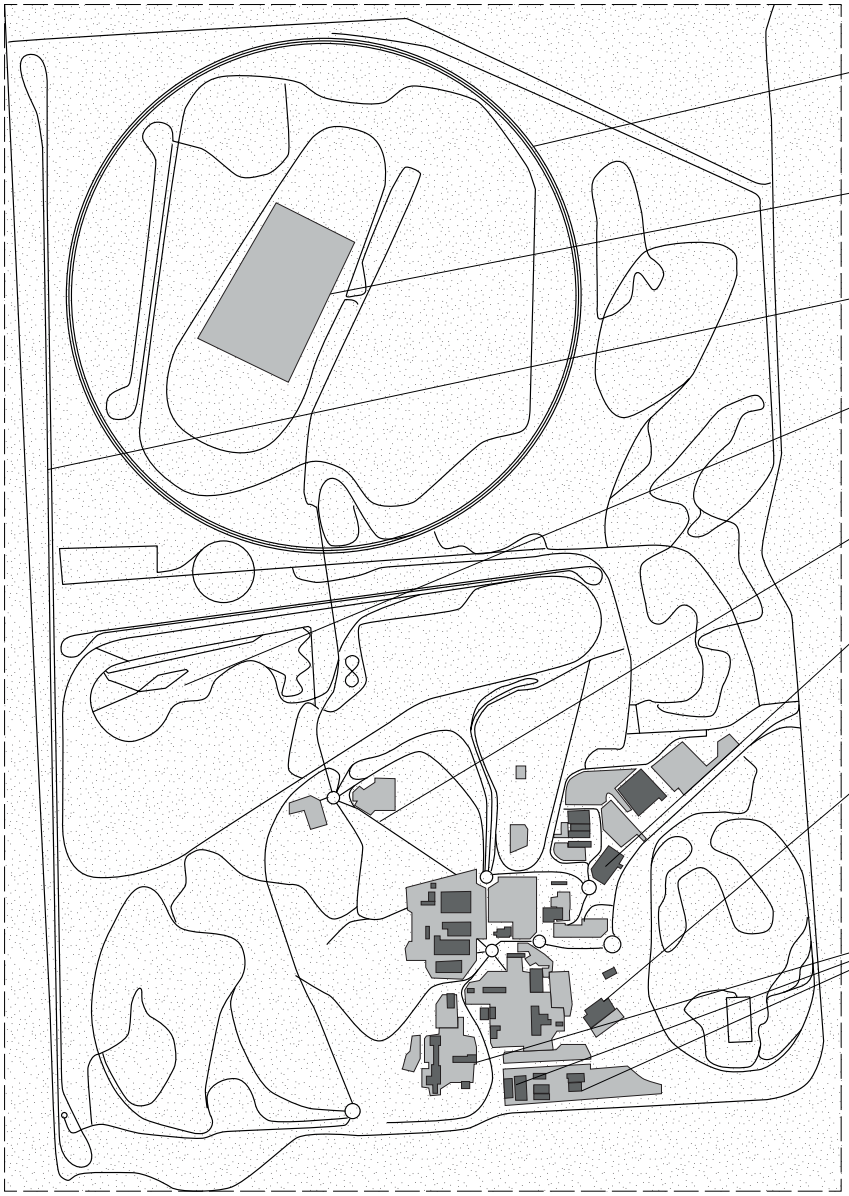
Andermatt

t City Context

0 1 5 10m

Yuma Desert Proving Ground GM Motors

Research and testing facility for cars on roads under extreme high temperatures



A wide banked track for high speed testing.
- 3.5 miles with 3 lanes

The "Black Lake", a large asphalt pad.

1.4 miles straight track

Seven sisters track
- 3.1 Ride road

A 16.8% grade

- Internal labs
- Interior Noise Road
- Noise Pass-by Facility
- Misc. Grades
- Garage (40 Hoists)

Facility entrance for personell and adminstrative
- 72,000 ft 2 Main Building
- Garage (40 Hoists)
- Office (120 Residents/Visitors)

- Product Electronics/Instrumentation Lab
- Alignment/Tire Facilities
- Transmission Build Room
- Machine/Fab Shop
- Parts Crib
- Warehouse 14,000 sqft2
- Sundrella (40 hoists)
- Covered Parking
- Fuel Facility
- Car Wash
- Scale House / Ballast Station

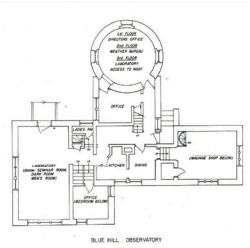
Site plan
Area: 2400 acres

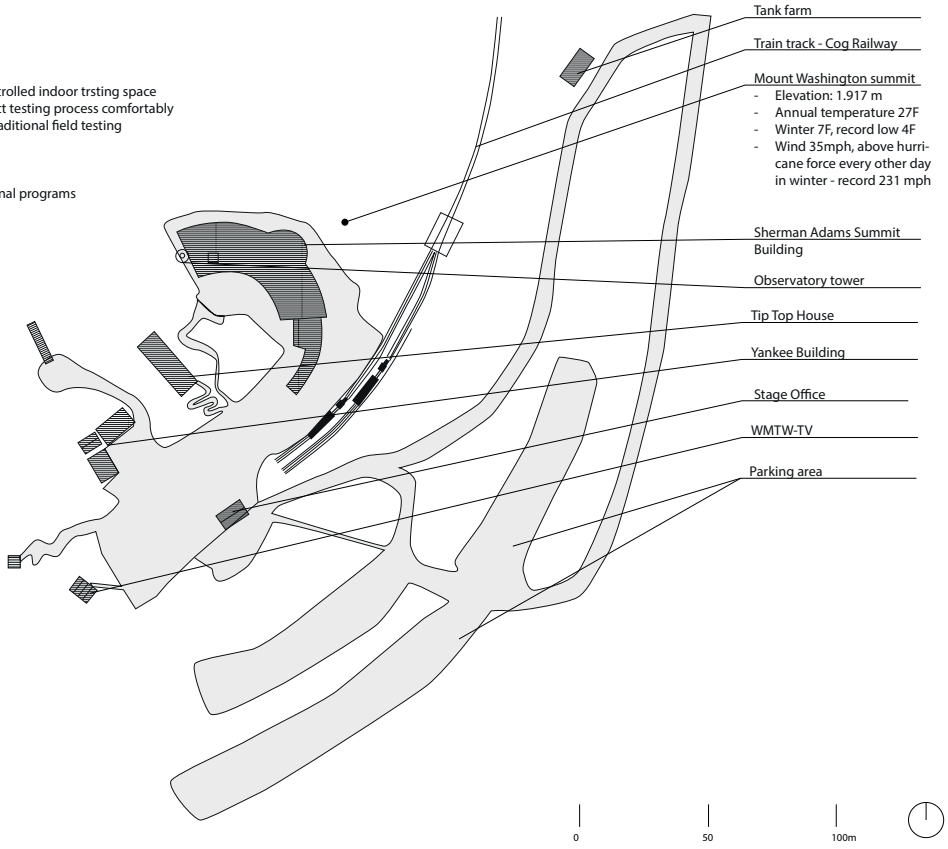
0 500 1km

Mount Washington Observatory

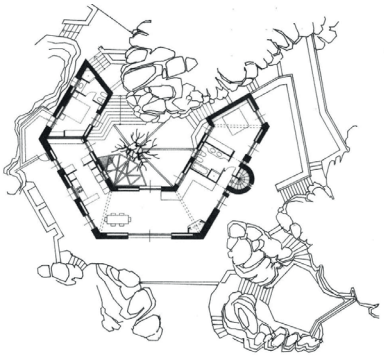
Research and testing facility under extreme low temperatures

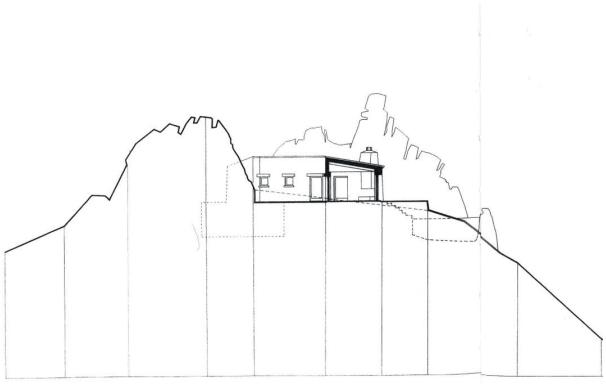
- Subartic environment
- Located days away from major cities
- 24/7 weather station
- State of art facility woth high-speed internet, phone, climate-controlled indoor trsting space
- Allow researchers and product designers to partake in the product testing process comfortably and affordably, eliminating many of the logistical challenges of traditional field testing
-
- Private, nonprofit, member-supported institution
- two crews alternate weekly
- Offers: weather research, product testing, summit tours, educational programs

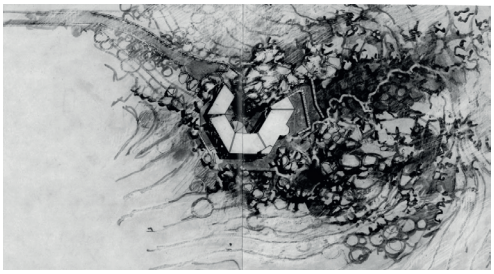




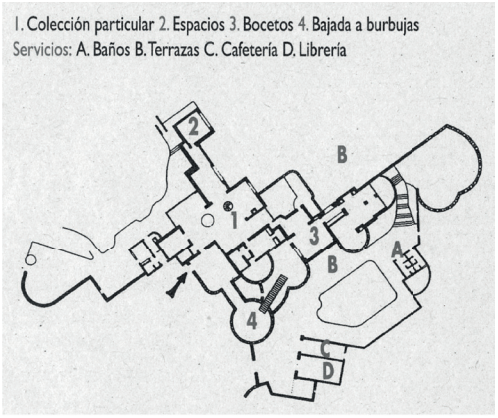
Alberto Poni
Casa Gostner - Sardegna, Italy, 1998

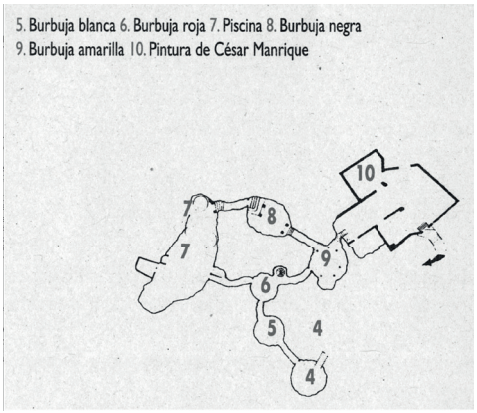




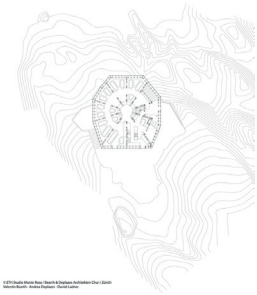


Cesar Manrique
Tahiche House- Canary Island, 1960





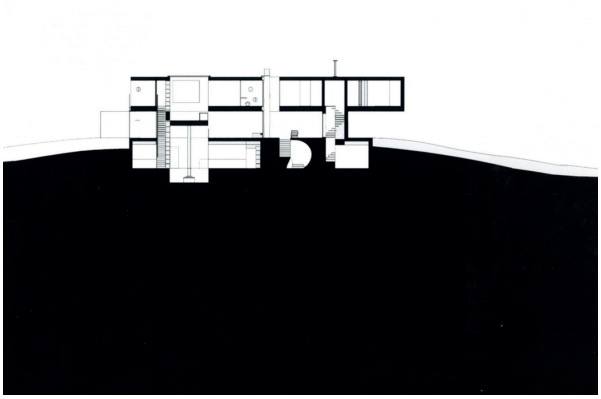
Bearth & Deplazes
Monte Rosa Hut - Switzerland, 2009





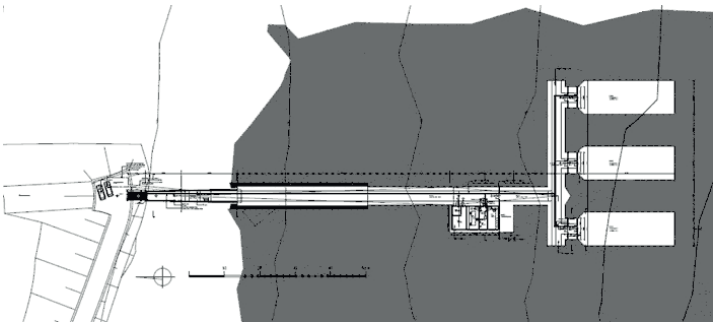


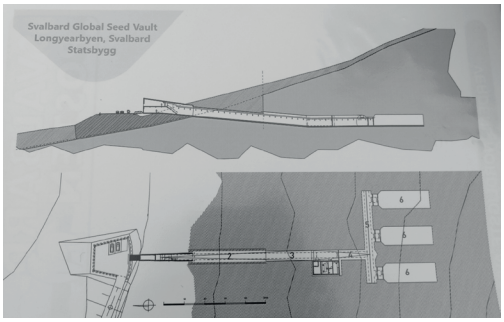
Rem Koolhaas
Villa Bordeaux - France, 1998

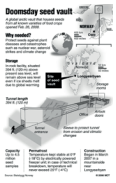




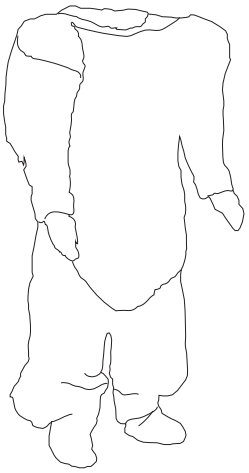
Atlas of cabins under extreme low temperatures

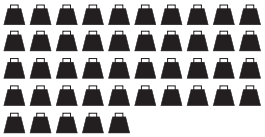


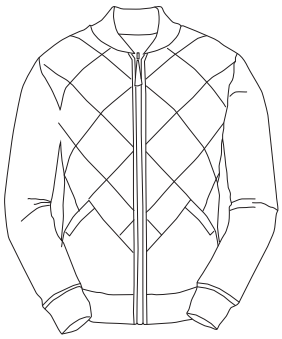




Evolution of the Winter Jacket



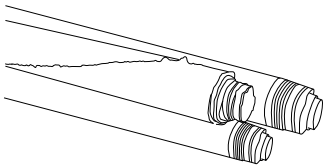




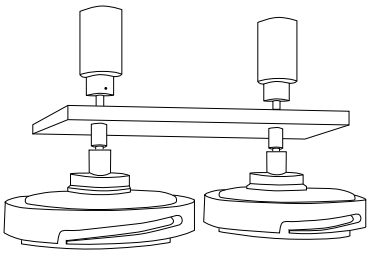
Weight	3-4.5kg	1 kg	116 g
Date	70,000 BCE	1936	Today
Garment	Neanderthals clothes speculation	The first down jacket	Wind jacket

 = 100 g

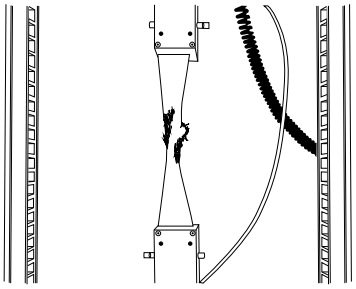
Textile Testing Procedure



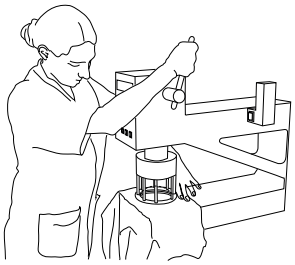
Textile Roll ready for testing



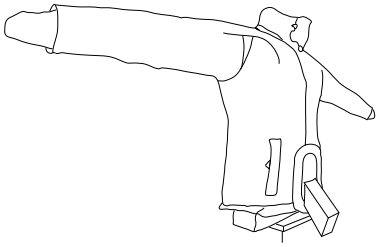
Abrasion Resistance:
Rubbing the textile against different surfaces to measure its duration



Stretch Resistance:
Stretching from both ends to measure the rupture point of the textile



Water Resistance:
Preassuring the textile against water to test impermeabilization capacity.



Air-tight:
Inflating the garment to test protection against wind and thermal capactiy

Approved Garment

@ThePowerOfTrust

ThePowerofTrust

Follow

1,528 Posts

1M Followers

500 Following

The Power of Trust

Find endorsed products from your favorite atlethe

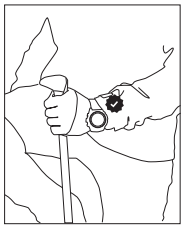
Worldwide to your house

Message

Email

Bear Grylls_Survivalist

Somewhere Int6 the wild



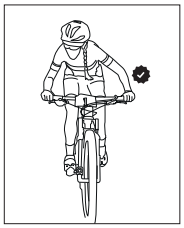
Followers: 5.2M

Bear Grylls_Survivalist The project was a true collaboration, with many design elements coming from Bear himself. He tested all the watches in the field during the production process and several design tweaks were made as a result of his feedback.

View all 3.000 comments

Pauline Ferrand-Prevot

Best World Biker 2022



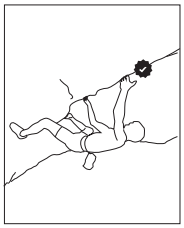
Followers: 498K

Pauline Ferrand-Prevot "I wanted a bike that was different, BMC and No Curves quicly understood that. I really thank him for the opportunity to create a new one-of-a-kind bike."

View all 1.000 comments

Adam Ondra

Andermatt - Geemstock Mountain



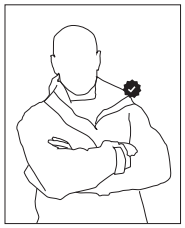
Followers: 873K

Adam Ondra_Climb "I made my frist climbing hold ever on EuroHolds."

View all 500 comments

Ed Stafford_Survivalist

Geemstock Sumimit



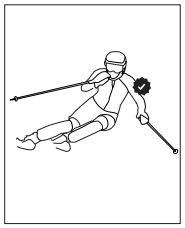
Followers: 291K

Ed Stafford_Survivalist Developed in collaboration with Ed Stafford, the legendary explorer and bushcraft survival expert, the Ed Stafford Forest Smock is an ultra-durable, waterproof and breathable shell for the very harshest conditions.

View all 700 comments

Mikaela Shiffrin_Ski

Best world skier 2022



Followers: 1.1M

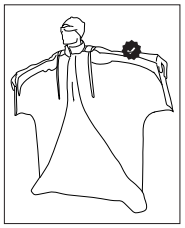
Mikaela Shiffrin_Ski "There's always someody great who came before you. Your goal is not to be them, but try to be yourself and be better." Flight Deck™ L Mikaela Shiffrin Signature Series Snow Goggles Developed in partnership with 6x World Cup...

See more

View all 700 comments

Douggs McDougall_Wingsuit

Geemstock - Andermatt



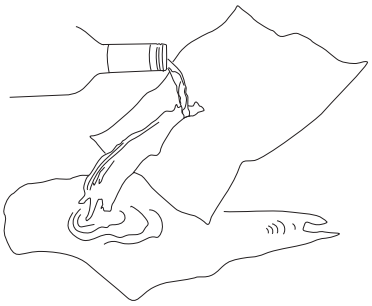
Followers: 51K

Douggs McDougall_Wingsuit Phoenix-Fly has a team of dedicated ambassadors who are chosen to represent us in the field. They are active and current wingsuit pilots in the skydive and/or BASE environment and experts in various fields such as coaching...

See more

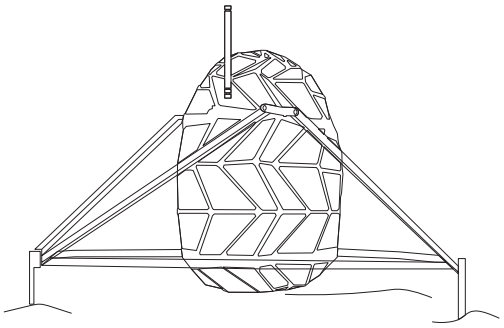
View all 700 comments

100 days 10 t-shirts _Moon-proof wear



Fabric:

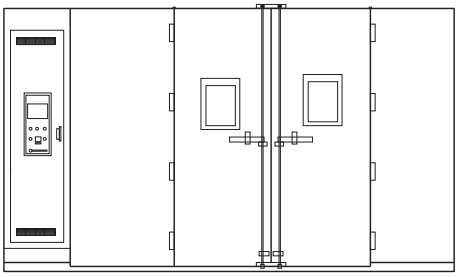
-Stain repellent
-Odour repellent
-Wrinkle-free
-Sweat-blocking



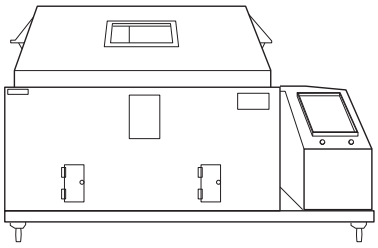
8 days using the same t-shirt testing moon environment conditions

Test Accelaration Machines

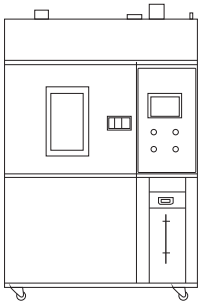
Chamber



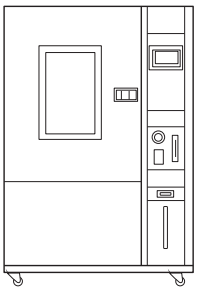
Temperature Test Chamber



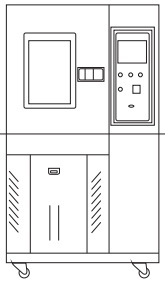
Salt Spray Test Machine



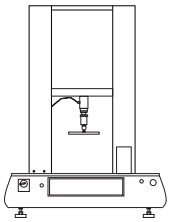
Weathering Chamber



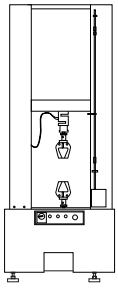
Rain Drop Chamber



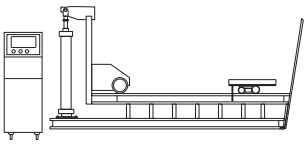
Standing



Compression Test Machine

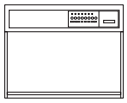


Rupture Test Machine

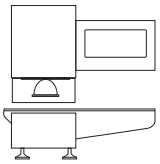


Impact Tester Machine

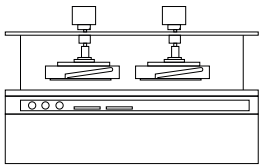
Table



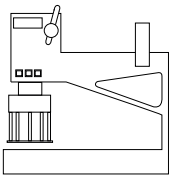
Yellowing Test Machine



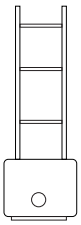
Burst Strenght Machine



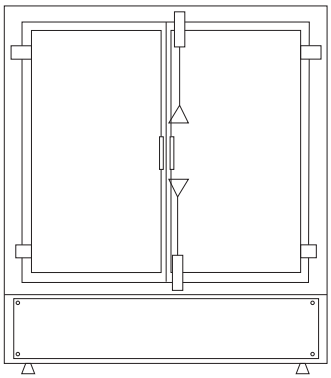
Abrasion Resistance



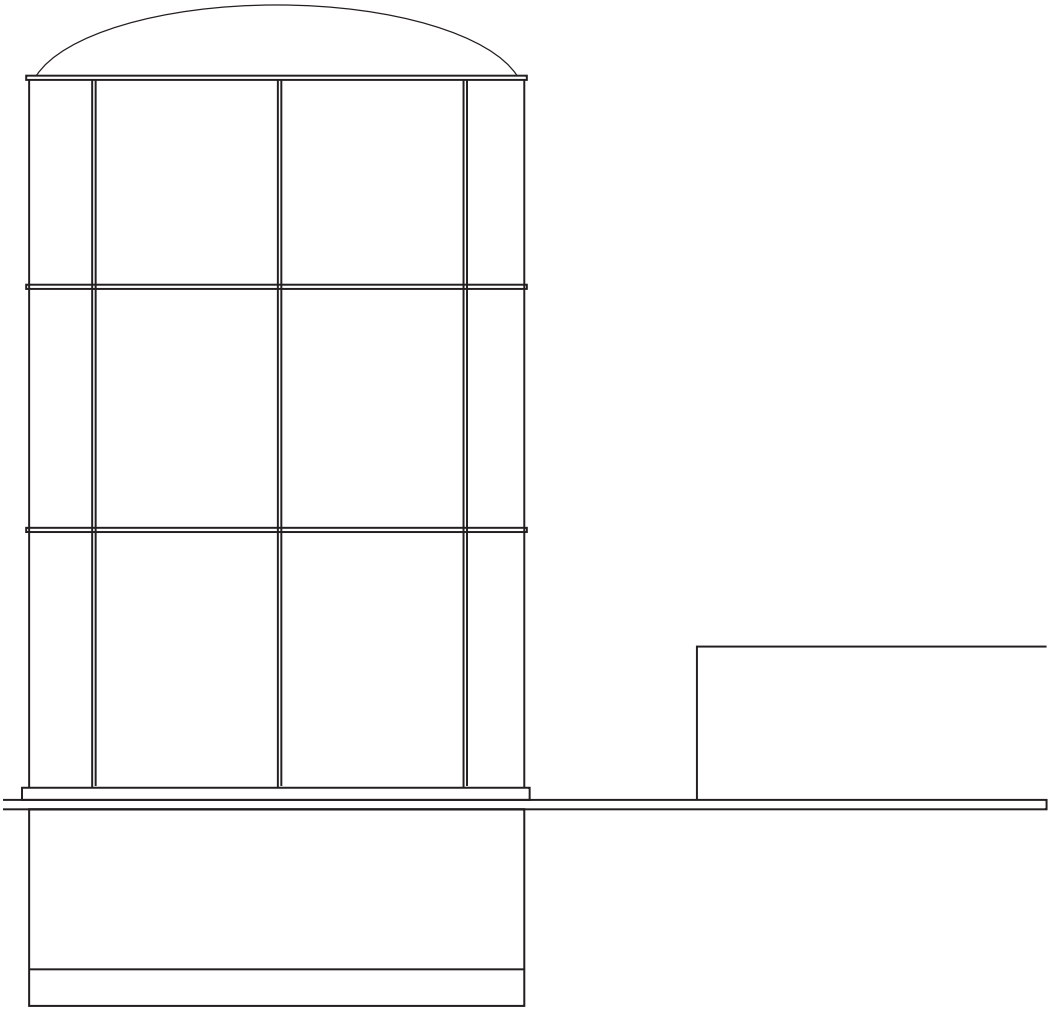
Water Pressure Resistance Test Machine



Inflating for Thermal Capacity Against Wind test



Abrasion Chamber



Vertical Wind Tunnel

Brian Fitzgerald
Director of Education of Mount Washington Observatory
Speaker CM - Cristhy Mattos
Speaker BF - Brian Fitzgerald

CM
Could you please start by stating your name and explaining your carries path at the Mount Washington Observatory?
BF
My name is Brian Fitzgerald. I'm the director of education for Mount Washington Observatory. I started my observatory career as an intern, an internship on the summit. So sort of learning about and supporting the main operations of the summit weather station. And then I was fortunate enough to become a weather observer myself. So I was a weather observer and had sort of a joint position as an educator. So it was education sort of focus. And so I carried out what is still the core responsibilities of our operation, which is measuring the weather. And so we're unique, particularly for North America, in that we're a weather station that has human beings manually recording weather observations every single hour of the day, 24 hours a day, seven days a year, 365 days a year, and we report that to the National Weather Service. So our federal government, we have a contract with them to provide that data, though we are a private, nonprofit organization, so it's unique for a variety of reasons, but those are sort of the big ones. The federal government collects lots of data. They also do purchase it from private organizations as well, like ours.
But to be a nonprofit mountaintop weather station is a little unusual. And to have human beings living and working up there is even more. So I know in many ways sort of inspired by some of the observatories that are out in the European Alps and things like that, where some stations that have continued to exist. But at any rate, yeah, we've been going for about 90 years now, 90 years as of this October, measuring the weather. And now we have a long term look at climate in the mountains of the northeastern United States for that reason. And since 2016, I've been the director of education. So not on the summit as much, but I basically help develop, carry out, and evaluate our educational programs. And those go for a variety of audiences. So school age children, but adult, general adult audiences. And then we connect with academia and things like that, and researchers, things besides. Yeah. So programming for a variety of ages and interests.

CM
That's really interesting.
Could you describe the main activities of the mountain Washington observatory? So there's the educational program, the weather monitoring, and also product testing.

BF
Yeah, so we kind of break it down into three different categories. One is the weather operations, so that's measuring the weather, but it's also forecasting the weather as well. So our observers put out a mountain weather forecast twice a day.

CM
Okay.

BF
The other piece is research projects and product testing. So either conducting research projects using our own data and measurements, collaborating with other researchers, or researchers might come and do a project on site using our data, or off site, they might use our data to conduct a project. And then we do product testing so that's everything from outdoor gear and clothing to things like wind turbines to windows, robots, hug, coffee machines, little automatic coffee machines, and medical devices too. So people aren't only coming just to test in the outdoors in the harsh environment. So high wind, cold temperatures, lots of ice, those sorts of things. We're a relatively high elevation for the Northeast, the highest peak in the northeastern United States, and so we sit at about more than a mile above sea level. And so there are some consumer products that are tested for high elevation. So in the case of, like, coffee machines and even, like, dialysis medical equipment and things like that, they're testing products that maybe it's a city like Boston that doesn't want to have to ship their stuff out to Denver. Colorado or in the mountains out west, we're a little bit closer, so they can go drive to the top and test that at higher elevations, because that.
CM
Directly I had no idea that would interfere on the performance of the coffee machine.
BF
Yeah, well, pressure pressure changes with height. So when we bring bags of even, like, potato chips to the summit, sometimes the bags will actually pop before we get to the summit. The pressure difference is that much? It's about 20% difference.

CM
That's a great difference. Okay.

BF
I forgot educational programs. And that's the last piece. Yeah.

CM
Okay. So just to clarify a little bit further, first, the product. A company could just hire the service to ask for the testing in specific items. Like, I want to see how performance in this and this and this. And then you also from.
The Mount Washington Home Observatory. If people from It wants to make projects or want to research these or university, say, like, hey, can we research? And then you do partnerships in this manner.
BF
Yeah, correct.

CM
Okay. And then the educational programs. What's the main goal of what you wanted people to get close to the takeaway?

BF
Yeah, very broadly, our mission is to advance the understanding of weather and climate globally, but more specifically to our work, we are definitely experts in mountain weather and climate. So we're trying to impart the specifics of how weather behaves in the mountains. And for our community, it's a tremendously popular place to recreate. We're close to lots of major cities that are within a day's drive, so there are just so many people who come to recreate in the mountains. And part of that is educating people how to do it safely. And that's through understanding the

weather. So, yeah, the big takeaways are the safety piece and the awareness around weather. But then from a climate perspective, it's how is the nature of climate and the mountains changing? So people are pretty familiar with climate change in major urban areas may be close to home, but they may not be as familiar with this unique environment that exists in the Northeast, how the climate is changing there.

CM
I'm going to squeeze in your question. Have you seen like a difference in the pattern of the snow or the cold since we started there, since you were there for such a long time?

BF
We have, yeah. So temperature is the most notable, so it's certainly warmed snowfall is well, I should say the winter season seems to be getting shorter. We can see that in our data for sure. But one thing that is kind of unusual is although we've seen significant warming and to some degree less snowfall, there's measurement even just at the base of the mountain. That's gone back almost 90 years now too. And there's a difference between what's happening at the top of the mountain and the bottom of the mountain, really. So what we're seeing through that and what we're kind of theorizing is that, again, mountains can kind of be a place onto themselves where they really stand out and are unique and sometimes they're subject to different exposure to different parts of the atmosphere. And so it may actually be a case that the top of Mount Washington is a little bit like a refuge in some senses from some effects of climate change, but not to a great extent and how long might that continue to exist and some of those things. So again, it's sort of the unique nature of mountains that seems to stand out here.

CM
That's very interesting, but otherwise it is yes. Consistent with global climate change.
Well, next question it is about the spaces of the Interior organization of the Monte Washington. I saw there were different buildings as an architect. Obviously, I researched to see if I could find, like, a floor plan to understand how a weather observatory that also test programs are organized, because, honestly, something type that I never studied. So I was curious to understand how the inside of it is organized. If you can share a little bit.

BF
Yeah, sure. Well, so I'm happy I can share my if you give me permission to share my screen, I could kind of describe a little bit, and there may be some interior photos that I could share after the fact.

CM
Okay. You were a host now.

BF
All right. Yes. Mel washington is a complicated place from a landowner perspective. Give you the full history because we'll be here all day. So Mount Washington Observatory, again, is a private organization. We're not for profit, and we exist within. Right here on the top of Mount Washington is a state park. It's state owned land by the state of New Hampshire, and then it's surrounded by national forest. So federally owns land. And then there are private roadways, a private cog railway that goes to the top of the mountain. So there's a number of different landowners. So we actually rent our space from the state of New Hampshire, and we share the Sherman Adams State Park building, which is this sort of semicircle building here. It was built with us in mind. We preceded the state parks incorporation. We were in a couple of different buildings over our history. One, that's a replica building here that still stands today.

CM
Nice. Oh, it's a replica.
BF
And then another building that used to exist here that we were in for 40 or 50 years.
So this is our observation tower here at the end of the building. And really, we kind of just occupy this I would say it's like a quarter or less of this overall building. This is the top floor that visitors can walk on the roof of.

CM
Okay.

BF
And the rest of the building is otherwise space for visitors and home of the Met, Washington State parks, living quarters, and staff as well. So we occupy this observation tower, the floor below the ceiling here, which is the weather station room and workspaces, and then the floor that's all the way down at ground level is our living quarters, kitchen, living room, bathroom, and bunk rooms. So we have 17 bunks total for staff and visitors there.

CM
What do you mean by 17 bunks?

BF
So individual beds.
CM
Oh, okay. Because you rotate who stays for one or two weeks straight, right? Something like that.
BF
Correct. We always we typically have three weather observers on duty on the mountain for one week at a time. So one week on, one week off is their schedule. And then we may have interns, visiting researchers, educational program participants, a number of different people who may use the rest of the beds.

CM
I see. Interesting. Thank you for sharing this. That's very nice. Yeah, I would love to see the photos as well. If you can share at some point.
BF
Sure. Yeah.

CM
Something that intrigued me. If the ongoing research projects are a consequence of the educational programs, if some people start doing educational programs and get interested in research or if it's that related or not, how that works?

BF
Yeah, that's a good question. I think it does go a little bit both ways. I think primarily it's our weather and research activities on the mountain that spur our educational programs. And so our educational programs meant to be almost like a translation service for what is happening and to either build appreciation or understanding for those services. But in some cases, like, in order to appreciate the research or understand the research, we need to help people build a baseline understanding for some of the concepts involved with some of that

work. So it's very much a part of our mission to, I guess, build that baseline understanding for basic weather concepts and climate concepts, things like that.
CM
So then they can move forward with.
BF
The precise way yeah, exactly.

CM
Makes 100% sense. And then how does the partnership with the universities, universities and the researchers work? Is there an elegance or they approach you or it's open for them to reach? How does that work?

BF
Yes, it happens in a variety of ways. We have an open internship experience that is really popular with undergraduate students at universities across the United States who typically come from atmospheric science or meteorology programs. But we do work that crosses over into environmental science, computer science, engineering education. So we'll get students that come from those programs, but that's open to different universities. So it's an open, competitive opportunity, largely in the summer. That's when a lot of university students have time to pursue those internships. For research projects, we may have either agreements that are already set in place for partnerships to either guarantee additional either internship or researcher positions for specific projects. So we have a couple of relationships like that now with universities that either might be nearby or further away, typically in atmospheric science programs. And then we'll have researchers even like yourself, who reach out out of the blue who say, I'm doing work related to data you collect, and it may not necessarily be atmospheric science related. We might have someone who's like a biologist who reaches out and says, I'm studying bird populations in the mountains, and I'm curious if you can share your climate data, because I'm wondering how climate may affect migration of birds or something like that.
CM
So we'll get researchers who are doing independent work who may just want our data. And I'm sure there are other situations like that, but anyways, those are kind of the most common situations that's extremely.
BF
CM
Yeah, it's neat when we see the science connect beyond our own sort of like narrower focus of just one aspect of Earth science.
Yes. And on that, do you think the educational problems do contribute to climate change mitigation?
BF
I would like to say yes, certainly in terms of literacy, yes. And helping people understand what are the evidence for climate change and climate change in our region and for some people in their own backyards. In terms of measuring how that may actually impact people's willingness to act, I'm not sure. But the optimist in me says yes, that for some people who may be on the fence or are looking or may come actually away from our programs, feeling like they not only have a better understanding of the science, but perhaps are a bit more motivated to protect the places that they care about. Because people don't really live on Mount Washington or in the mountains themselves, but people care a lot about the places where they recreate and have fun.
CM
Interesting. Yeah, I do. Just this idea of sharing the data and having the experience, I think it already impacts in different levels.
BF
Yeah. We don't have a political leaning and we don't advocate for specific policies. In some ways we might feel limited in our ability to really rally for action, but at the same time, I think there's a lot of public trust in the information that we share, so we're careful to protect that.
CM
Okay. And then I think that's perhaps the toughest one. What do you see for the future of the facility? Facility for nine there is there for 90 years or its ongoing for such a long time. How do you see the future of it? Do you think it's going to continue being the same? You think it's turning to something else or what's the future of the educational programs?
BF
Yeah, that is the million dollar well, hundreds of million dollars. Question so the building we are in now, has it was it's been occupied since 1980? So it's already been around for quite a while. In one of the more extreme climates in the world. There is constantly ongoing discussion around sort of that topic, what does the future hold? And so, I don't know. We could see ourselves in a building all on our own. We could be in another shared building in the future with other partners. There's a lot of conversation, and maybe I can share a news story or two with you around. There's a commission, a Mount Washington commission that's made up of all the stakeholders that have interests on Mount Washington, including the observatory, that have been going through a master plan process to basically do long term future planning. And there's a number of different interests and priorities that are all being, I guess, being weighed and balanced and things like that. So for the observatory, we want to stick around for another 90 years at least. And so I think in order to do that. We're looking for long term stability and that's everything from establishing and maintaining good relationships with partners or controlling energy costs and where possible, reducing our fossil fuel usage, which is not insignificant.

And we have challenges around implementing renewable energy given the climate and those sorts of things, but literally the climate on Mount Washington because solar panels and wind turbines don't function up there. So our options are somewhat limited there. But at any rate, a lot of it will be continuing what we're already doing. But I think we're understanding and seeing just a tremendous amount of, in some cases overuse and over visitation of the mountain. So I think moving forward, the discussion is really going to be around what is truly a sustainable operation on Mount Washington from a variety of ways and how do we either reduce or spread out the impacts related to our activities along with our other partners. So those are really the big discussions. And so some of that might be, I don't know, more virtual programming of some kind. From an educational perspective, it's, I think bringing students to the summit of Mount Washington where possible, but having our staff also go out to schools and visit them and sort of bring Mount Washington to them to some degree. So, yeah, it's a variety of those things.

CM
Yeah, thinking that bringing people

I can see how impactful it may be for students to just go there and see what's truly about and how it's powerful. I can imagine that. But I also understand it can be a big impact and probably the heating part is the hardest one. It's so too much heat, too much energy as well. Because it's 24 hours.

BF
Yeah, exactly. It uses a tremendous amount of heating oil to be able to keep the building warm through the winter months, even in the summer. It does not get particularly warm in the summer months on Mount Washington either. Very few days where you'd want to wear a T shirt and shorts outside.

CM
I can imagine.
What kind of products can be tested at the facility? Immediate surroundings of the facility and also inside the facilities. Do you have a laboratory inside how that works?
BF
Sure, yeah. So for product testing, I mentioned the other kind of a wide variety of both consumer and commercial products that might be tested. One thing I left out is weather instrumentation. So if you're a product manufacturer who makes anemometers or thermometer I mean, mostly anemometers really. But there are other things like visibility sensors, precipitation measurement. Basically, if you can get your instrument to work on Mount Washington, it will probably be good enough for anywhere. But we've tested anemometers that are now and even remote weather stations that are now on Mount Everest, they tested oh, wow, washington. Yeah. So for a lot of people, primarily the testing spaces on our instrument tower or out on the observation deck exposed to the elements, there's some amount of testing space. A little further down the mountain along the Mount Washington auto road, we do operate remote automated weather stations that kind of gives, like, a vertical profile of the mountain to look at the conditions as you go up and down. So people may test instruments at those locations, too, and sort of colocate them. And then indoors, we have some amount sort of like a pretty minimalist laboratory space that we may either rent out space we've actually been renting out space to wildlife biologists who have been raising in captivity a rare mountain butterfly in that lab space, which is pretty neat.

And as I mentioned, medical equipment that might be testing for its use at elevation robots were tested again, for elevation.
CM
Robot? You mean like robotic arms or robotic Mars robots?
BF
I don't even know how I describe it. I'm not sure if you're familiar with the company Boston Dynamics, but they make these fully capable, animal like robots that sort of look like almost like a dog, like some that jump really high. This one, if you took a mule or horse, like a pack animal. And I think this had probably military purposes for it to be able to carry equipment across rough terrain and things like that. So it was using an internal combustion engine, but again, they were testing it to see how it would do at elevation. So it was part testing it on the terrain, but also at the elevation. So, yeah, it's a whole mess of different things that might come to us.

CM
True. Completely different spectrum. That's very interesting because you also see it never gets boring, right?

BF
No, it never does.

CM
Okay. Could you explain a little bit what is the relation between testing inside and outside? Or you usually do more outside if it's products related.

BF
Probably outside more than inside, because mostly people are coming to experience the weather.

CM
I see. And is there prototyping at the facility or the person or client will already bring the idea done, and then you just test there.

BF
Usually they'll bring something that's a prototype already. We've in the in rare circumstances, we might work with a company or an academic to move through, like, an entire design process, but that's pretty rare.
CM
Okay, well, thank you. Any anything else that you, thought about sharing with me that I didn't perhaps ask?
BF
Yeah, I'm just trying to think what's most interesting for your purposes. I didn't touch on clothing much, but one of our two of our bigger sponsors, corporate sponsors, are clothing companies. So one is like an Eastern mountain sports, and so it's outdoor adventure type clothing. And so they get to basically outfit our staff and say, look at these really rugged people doing this cool thing in a really harsh environment. It's sort of like weather instruments. If it works on Mount Washington, it should work for you. And so it's a mutually beneficial relationship because then our organization gets clothing which is otherwise very expensive, and our observers wear a lot of it and beat it up a lot. So that's helpful.

CM
Do you guys provide feedback? Or if some product like this jacket is not performing that much, the other one was better, or something like that. Like this water going through or something like that?
BF
Yeah, we'll go through phases of that. When they're looking to do, like, a new product line, they may actually test out some prototype clothing. Or for footwear companies we've worked with, we've had experiences with that. And some products that never make it.

CM
To market that doesn't work.

BF
Didn't work out, or we don't know why, but sometimes we can have some very opinionated staff. So maybe they get a little more feedback than they're hoping for.

CM
I see.
Well, once again, I truly appreciate you making the time and sharing with me your work, your journey, and your knowledge.
BF
Yeah. Well, I appreciate your interest and curiosity, and I'll be really curious if there is anything that you decide if this is helpful in any way with your thesis work or anything like that. I'd be really curious to see how it all turns out. I hope it goes well.

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Description

Try It Out is a prototyping and testing facility for products that perform under extreme conditions. It combines cutting-edge equipment with the rapid growth of influencers reviewing products and emerges as a state-of-the-art facility, where the landscape is a scenario for broadcasting. Furthermore, it becomes a place where designers and influencers physically meet to showcase innovative products, leveraging their final virtual image.

In 2040, research in fiber technology is an integral part of clothing design. Meanwhile, influencers are valuable assets for product development due to their authority in disseminating highly performative products, whith consumers relying mostly on reviews when buying new products. The Research Centre, located in Andermatt, reflects the rapidly changing tendency of testing and dissemination directly in its architecture, with a kinetic facade that performs both regulating internal temperature, as well as, iconically in the landscape in contrast to the exposed excavated stones inside the technological testing laboratory.

Material research becomes increasingly paramount, as material innovation is one of the main drivers for the fashion industry to tackle environmental challenges. The Extra-Ordinary certification ensures the performance of textile used in the fashion industry is tested before moving into further scales of production, to improve the lifespan of fabrics, create better-performing garments, and revolutionize production processes.

1. In 2040 material research shall drive the fashion industry, as material innovation is key to tackle environmental challenges such as the increase of extreme weather.

2. Prototyping and testing textile performance are intrinsic part of clothing design and must precede scales of production.

3. Textile testing must intertwine cutting-edge laboratory equipment with influencers reviews in real ground, converting the landscape into building extension.

4. Within the Red Thread, the research center will revolutionize how fashion is consumed. Using Fashion House Extra-Ordinary certification to ensure long-lasting, higher quality products.

5. The reimagined research center must perform doubly. Iconically in the landscape serving as middle and background for influencers to review products as well as on behalf of energy efficiency.

Extra-Ordinary Certification

The certification guarantees individuals who have completed the requirements for—and have demonstrated appropriate demeanor to—become independent inspectors and reporters that unbiasedly test and promote fashion goods' performance, quality, and durability before mass-production approval. Certified individuals shall conduct performance testing—and disseminate their findings—in laboratory-based environments that consolidate variegated testing equipment, simulated real-world environments, and seductive broadcasting studios to convincingly and objectively report fashion good prototype results. Independently-reviewed, unbiased, and institutionally-endorsed performance testing exposes industry-wide malpractice, progressively safeguarding consumers and reinforcing more conscientious patterns towards a more sustainable fashion industry.

External FH Consultant: An athlete involved in extreme winter sports

Fashion House Zurich

Fashion House Zurich has granted the FH certification warrant to

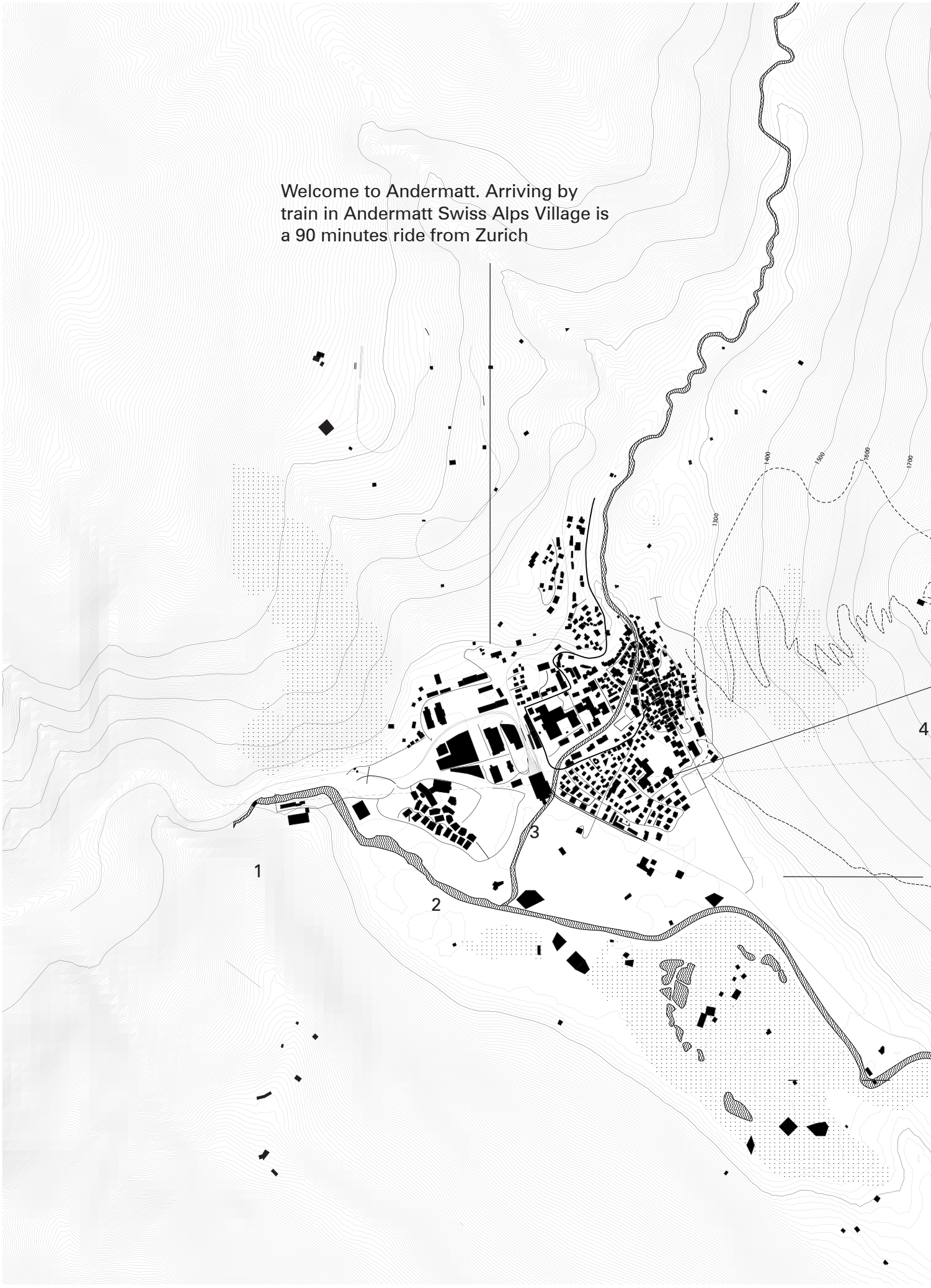
Extra-Ordinary Certificate

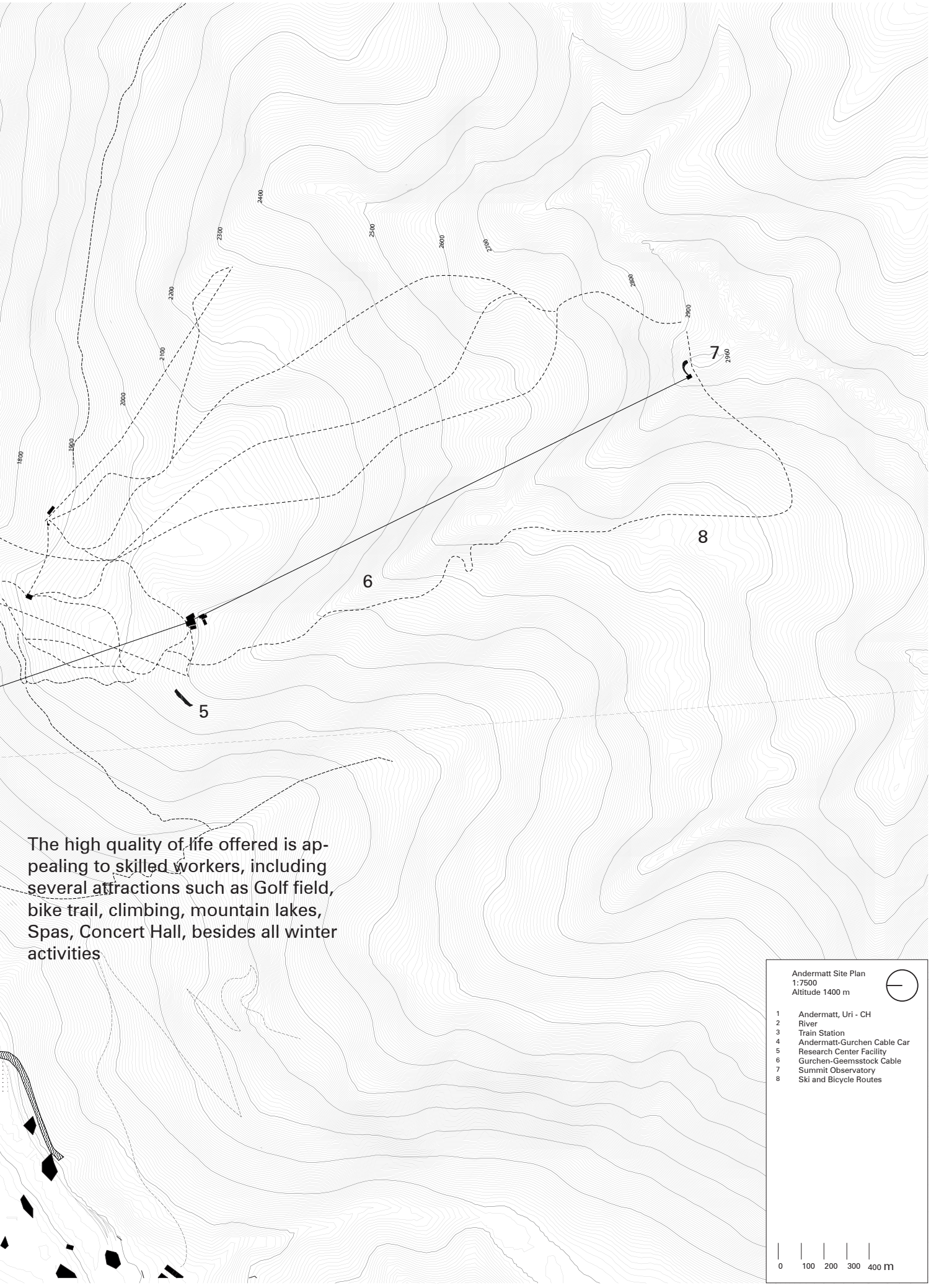
This is to certify that, based on the relevant documentation provided by the company, the materials and operations used for the product or service has been produced in accordance with discretionary standards which are recognized by Fashion House. Compliance with the standard has been audited and monitored systematically under responsibility of Fashion House Zurich and the Red Thread.

This certificate is granted to *Try It Out* trading under the title stated above and empowers the holder to display the certification warrant in connection with the business but does not carry the right to make use of the warrant as a trademark. The certificate is strictly personal to the Holder and will become void and must be returned to Fashion House in any of the circumstances when it is revoked.

Given under Fashion House Zurich this *twenty third* day of *September 2040* in the fourth year of the Fashion House

Fashion House Zurich


Welcome to Andermatt. Arriving by
train in Andermatt Swiss Alps Village is
a 90 minutes ride from Zurich
1
2
3
4
1300
1400
1500
1600
1700

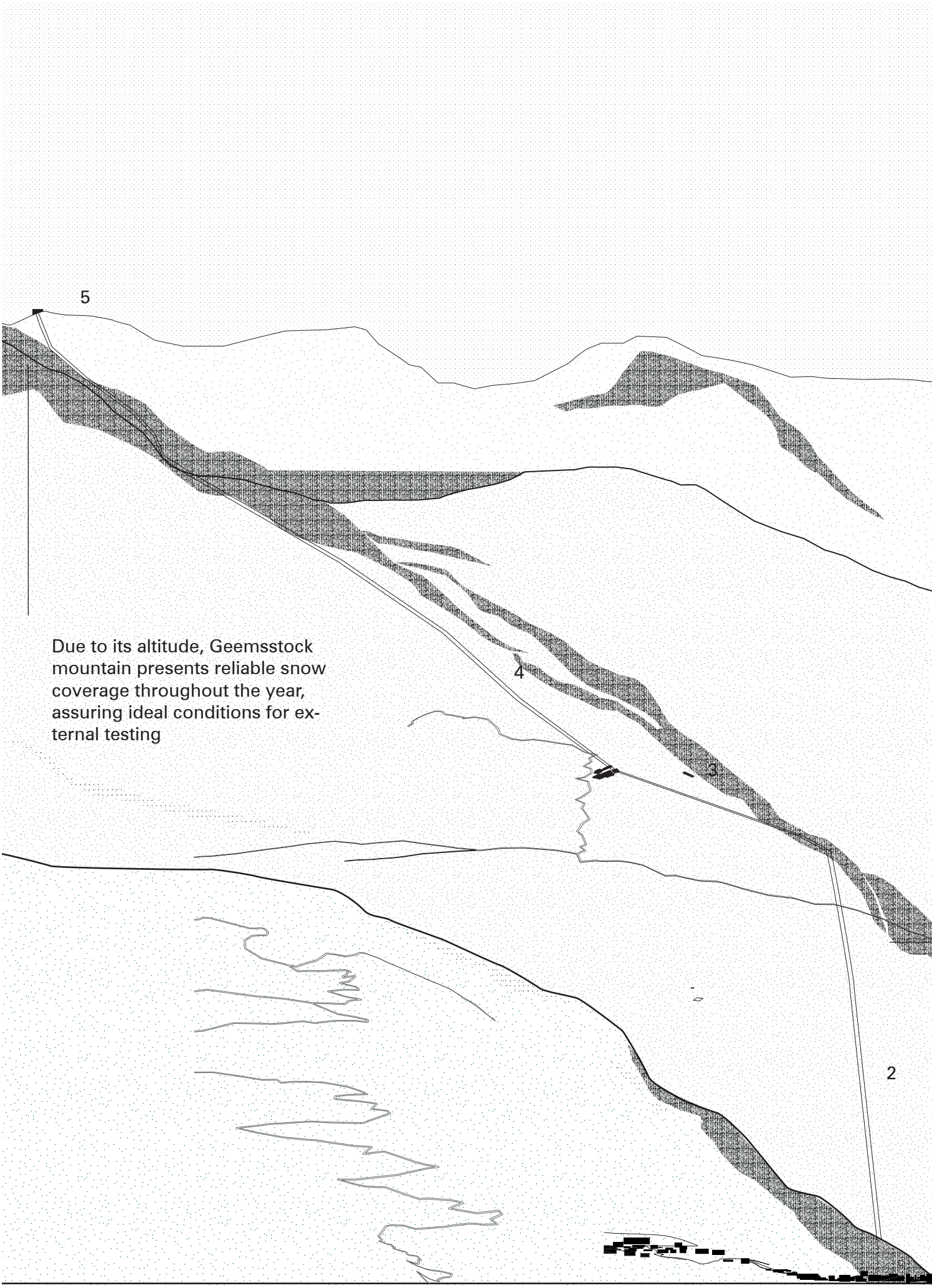


The high quality of life offered is appealing to skilled workers, including several attractions such as Golf field, bike trail, climbing, mountain lakes, Spas, Concert Hall, besides all winter activities

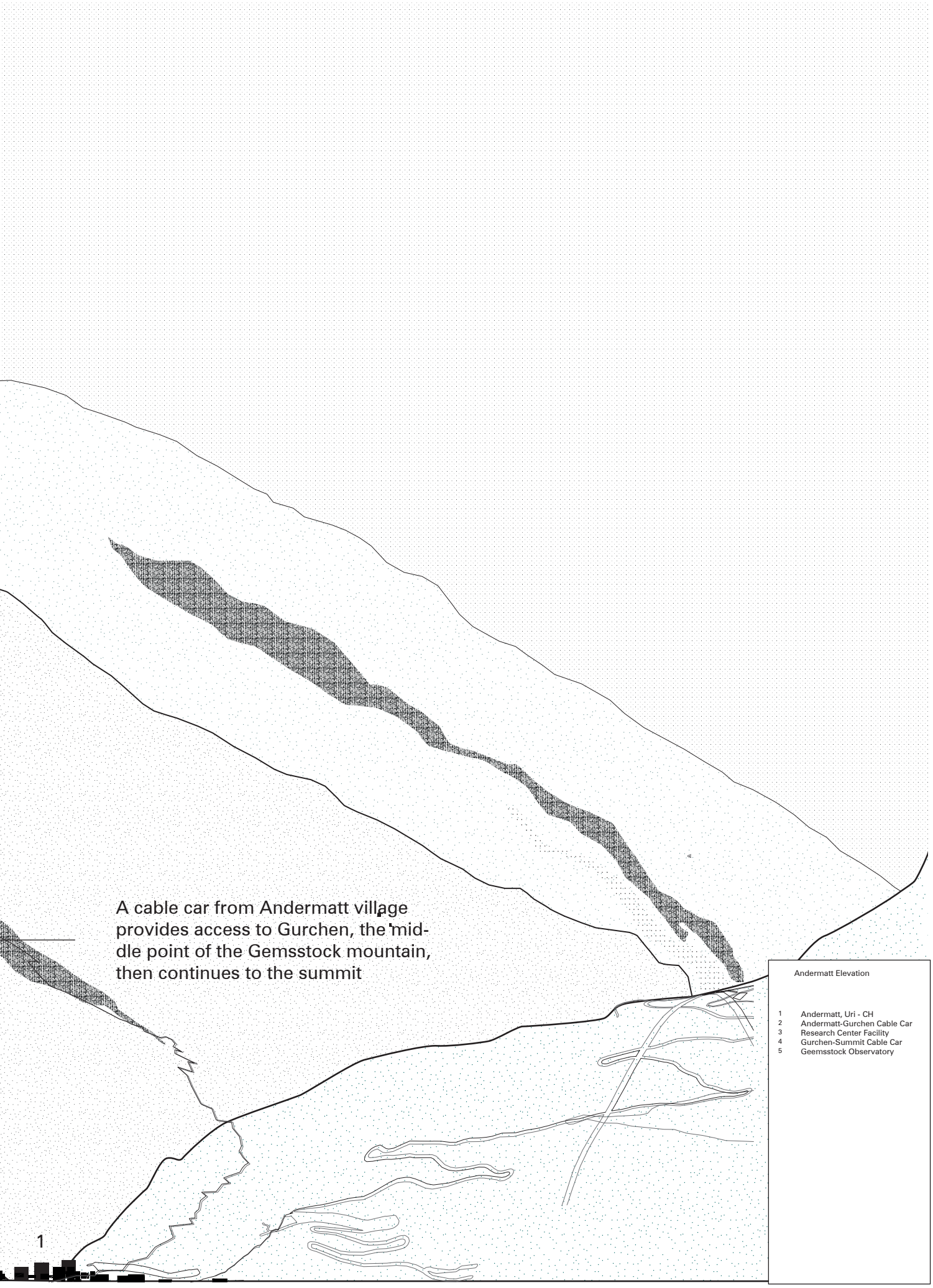
Andermatt Site Plan
1:7500
Altitude 1400 m

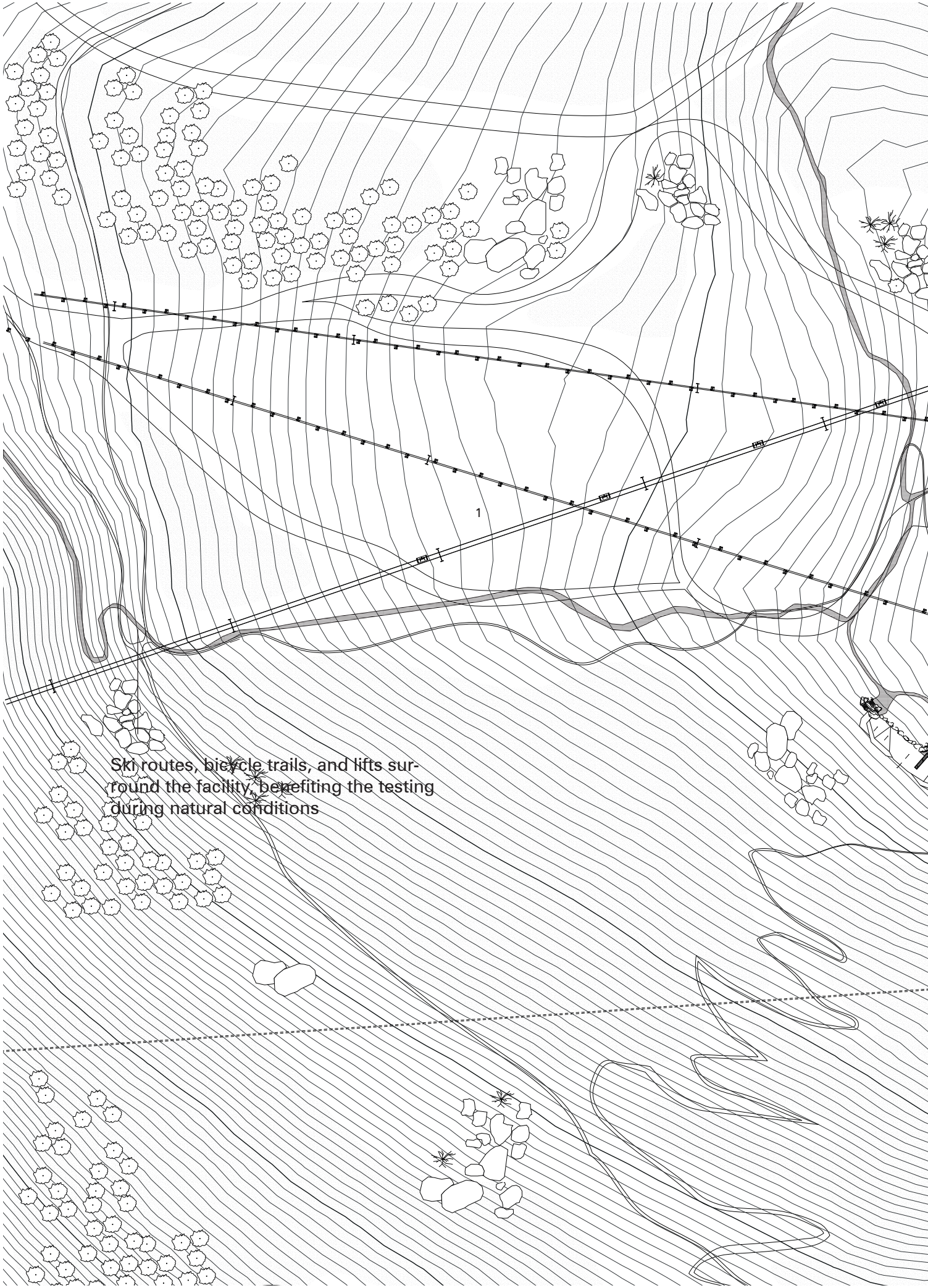
1 Andermatt, Uri - CH
2 River
3 Train Station
4 Andermatt-Gurchen Cable Car
5 Research Center Facility
6 Gurchen-Geemsstock Cable
7 Summit Observatory
8 Ski and Bicycle Routes

0 100 200 300 400 m

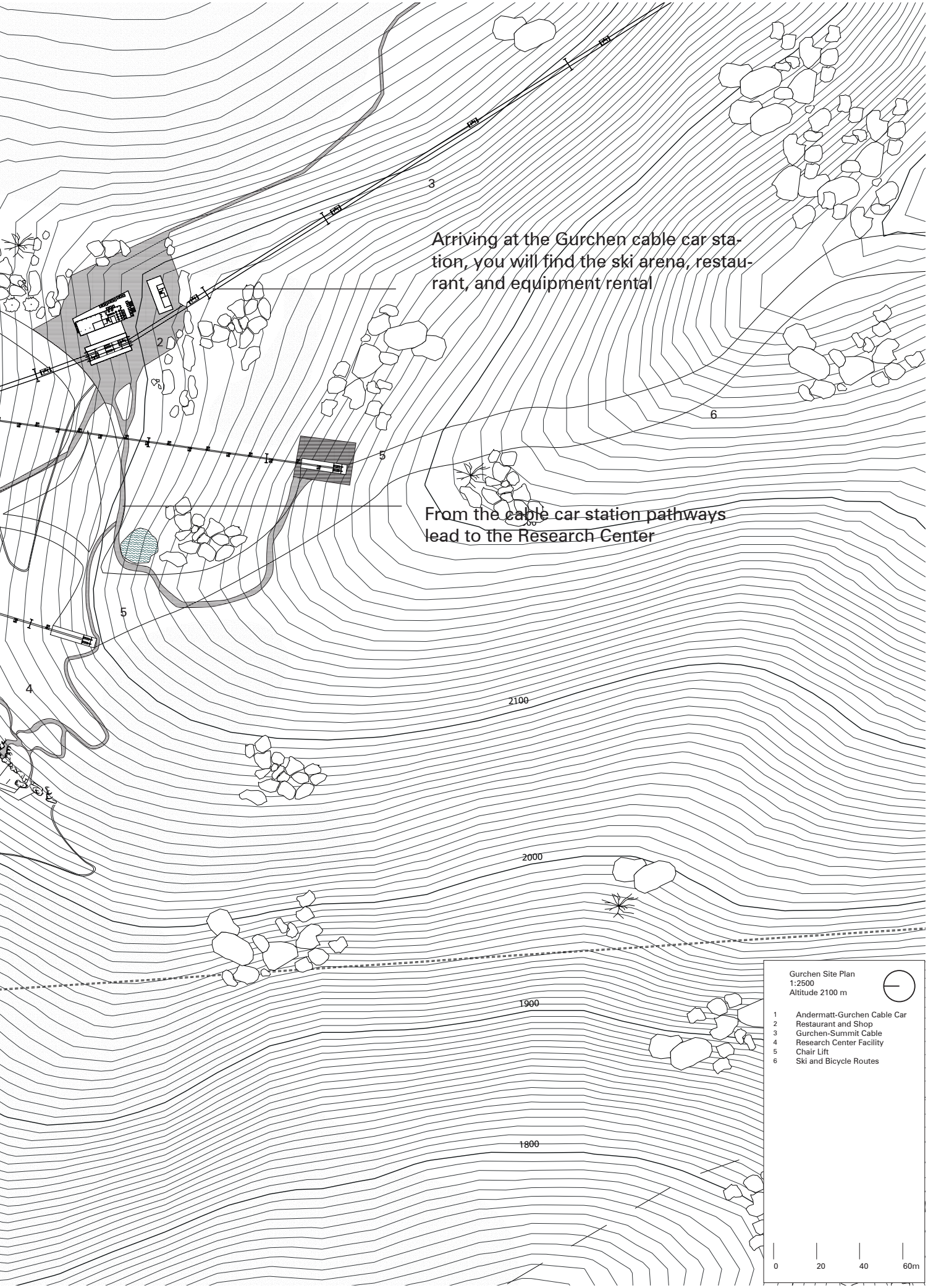


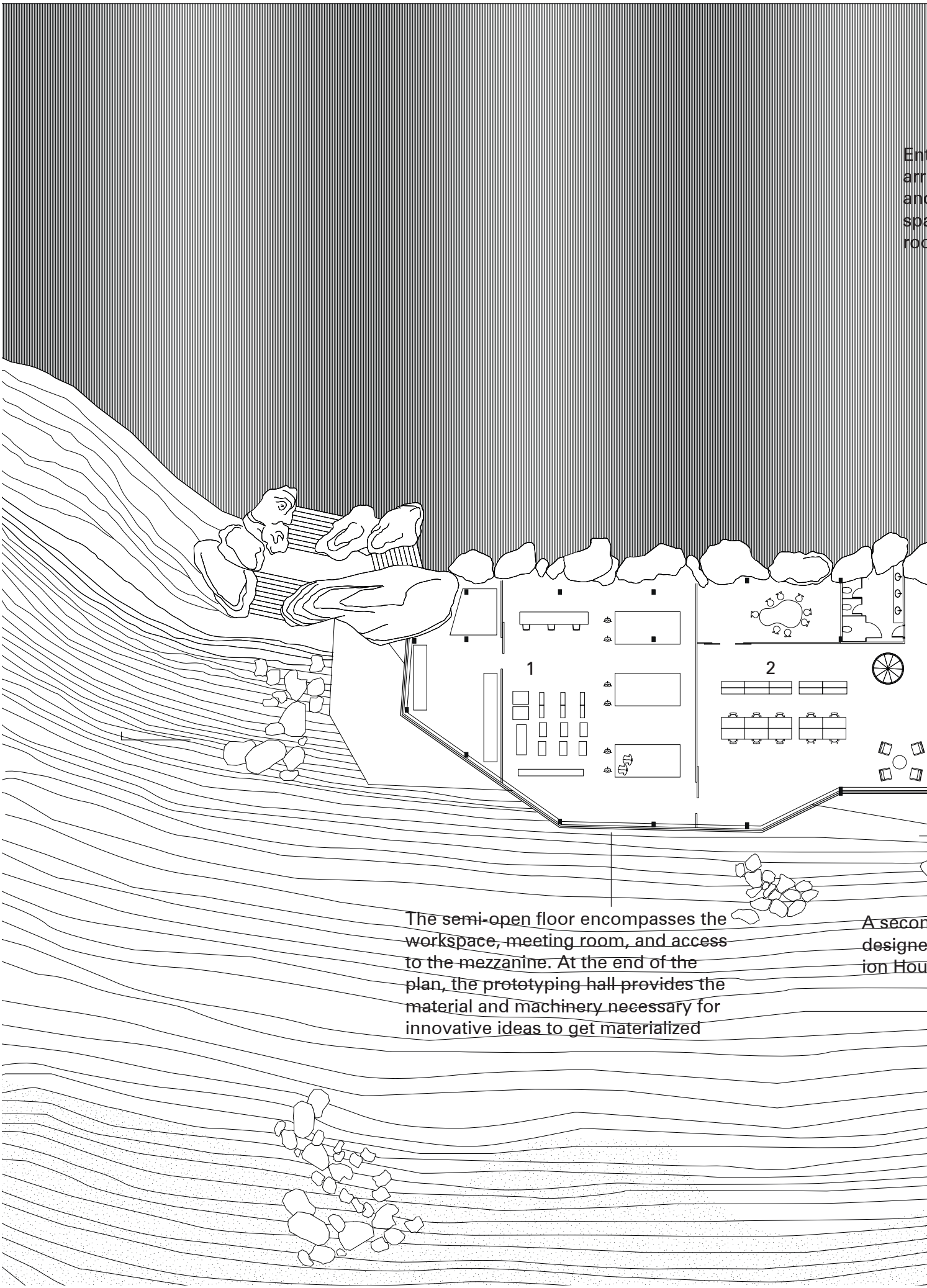
Due to its altitude, Geemsstock mountain presents reliable snow coverage throughout the year, assuring ideal conditions for external testing


A cable car from Andermatt village provides access to Gurchen, the middle point of the Gemsstock mountain, then continues to the summit
Andermatt Elevation
1 Andermatt, Uri - CH
2 Andermatt-Gurchen Cable Car
3 Research Center Facility
4 Gurchen-Summit Cable Car
5 Geemsstock Observatory
1



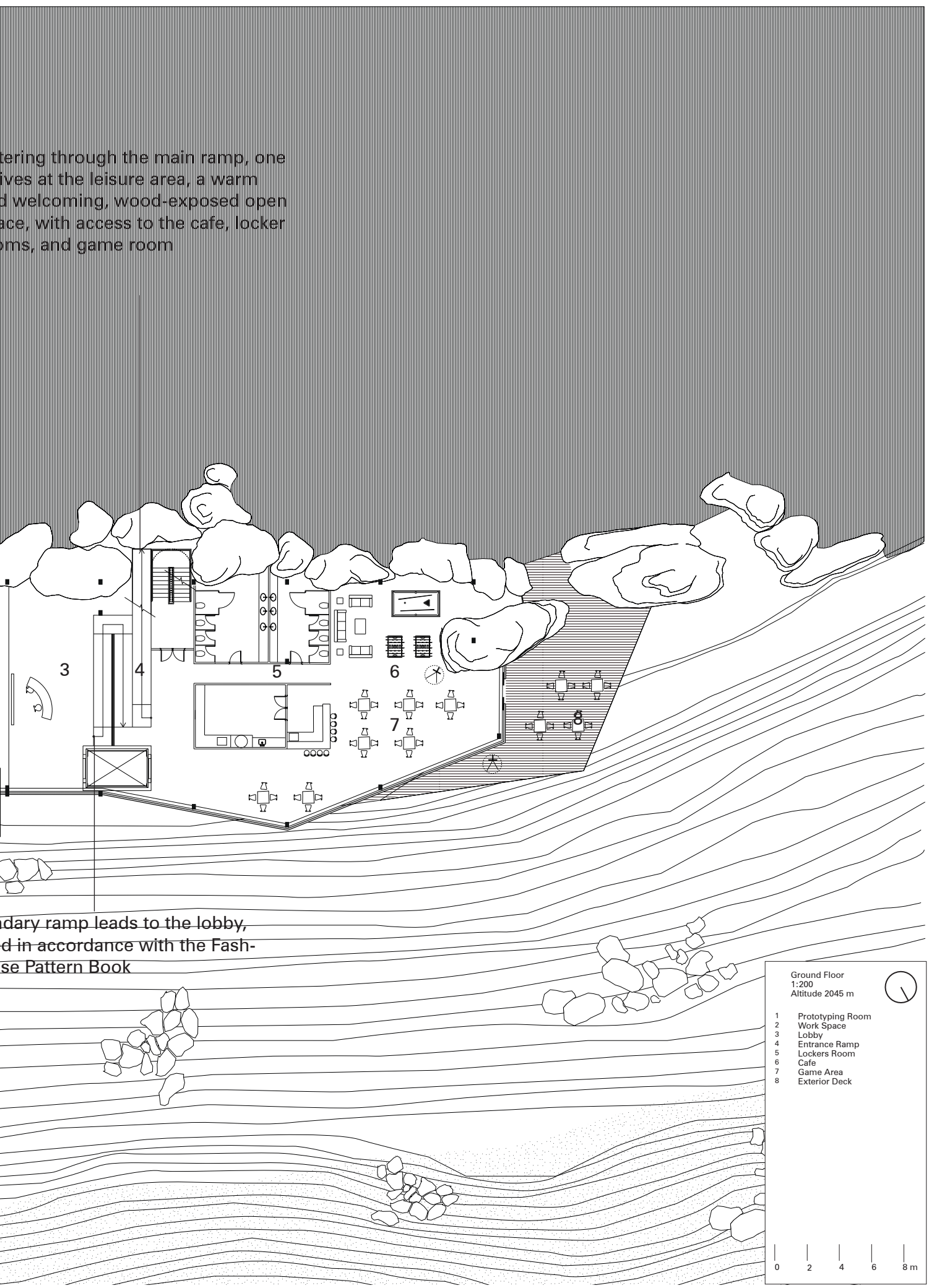
Ski routes, bicycle trails, and lifts surround the facility, benefiting the testing during natural conditions


Arriving at the Gurchen cable car station, you will find the ski arena, restaurant, and equipment rental
From the cable car station pathways lead to the Research Center
2100
2000
1900
1800
Gurchen Site Plan
1:2500
Altitude 2100 m
1 Andermatt-Gurchen Cable Car
2 Restaurant and Shop
3 Gurchen-Summit Cable
4 Research Center Facility
5 Chair Lift
6 Ski and Bicycle Routes
0
20
40
60m



The semi-open floor encompasses the workspace, meeting room, and access to the mezzanine. At the end of the plan, the prototyping hall provides the material and machinery necessary for innovative ideas to get materialized

tering through the main ramp, one
ives at the leisure area, a warm
d welcoming, wood-exposed open
ace, with access to the cafe, locker
oms, and game room

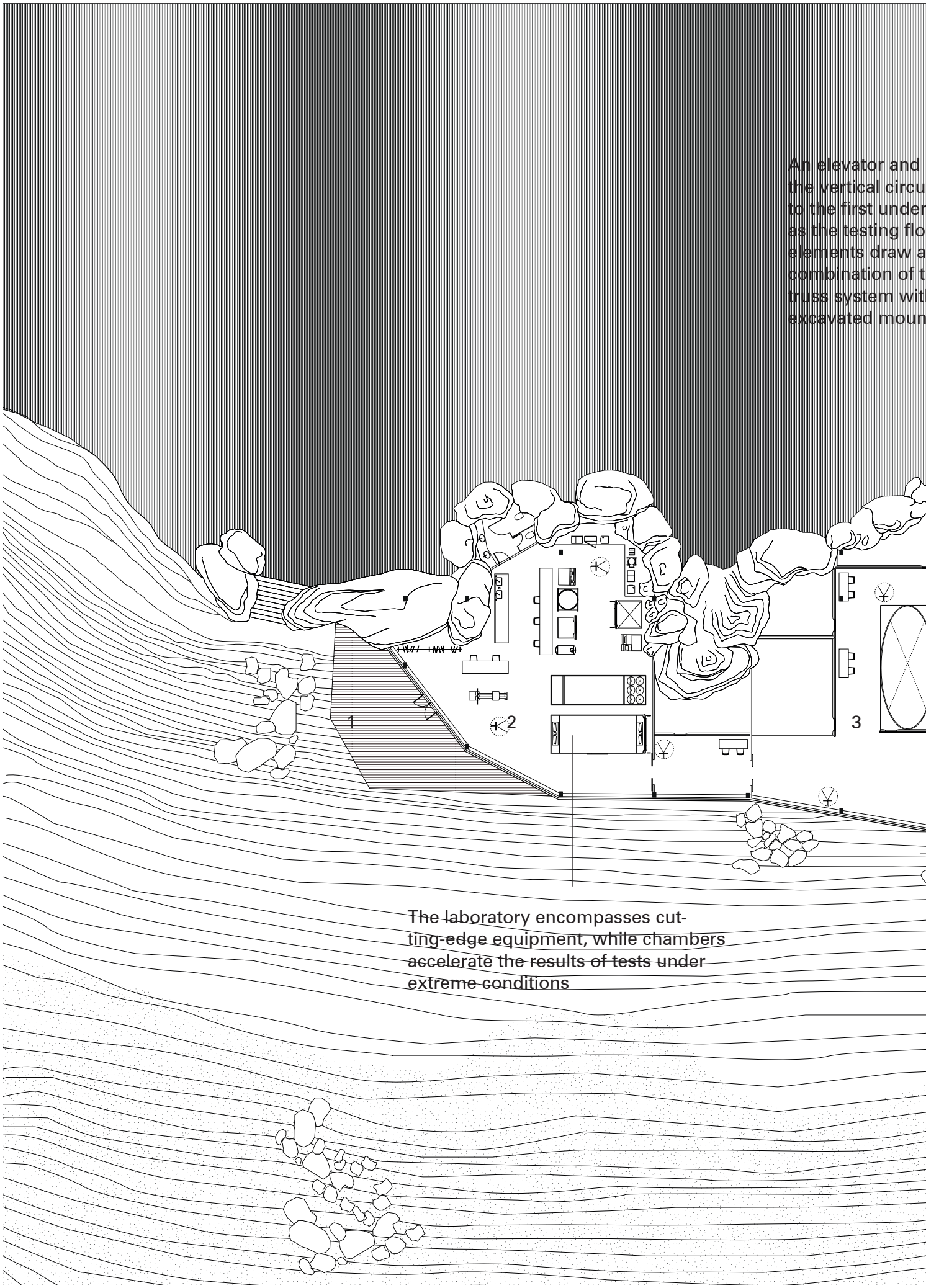


dary ramp leads to the lobby,
d in accordance with the Fash-
se Pattern Book

Ground Floor
1:200
Altitude 2045 m

1 Prototyping Room
2 Work Space
3 Lobby
4 Entrance Ramp
5 Lockers Room
6 Cafe
7 Game Area
8 Exterior Deck

0 2 4 6 8 m



An elevator and
the vertical circu
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as the testing flo
elements draw a
combination of t
truss system wit
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The laboratory encompasses cut-
ting-edge equipment, while chambers
accelerate the results of tests under
extreme conditions

staircase compose
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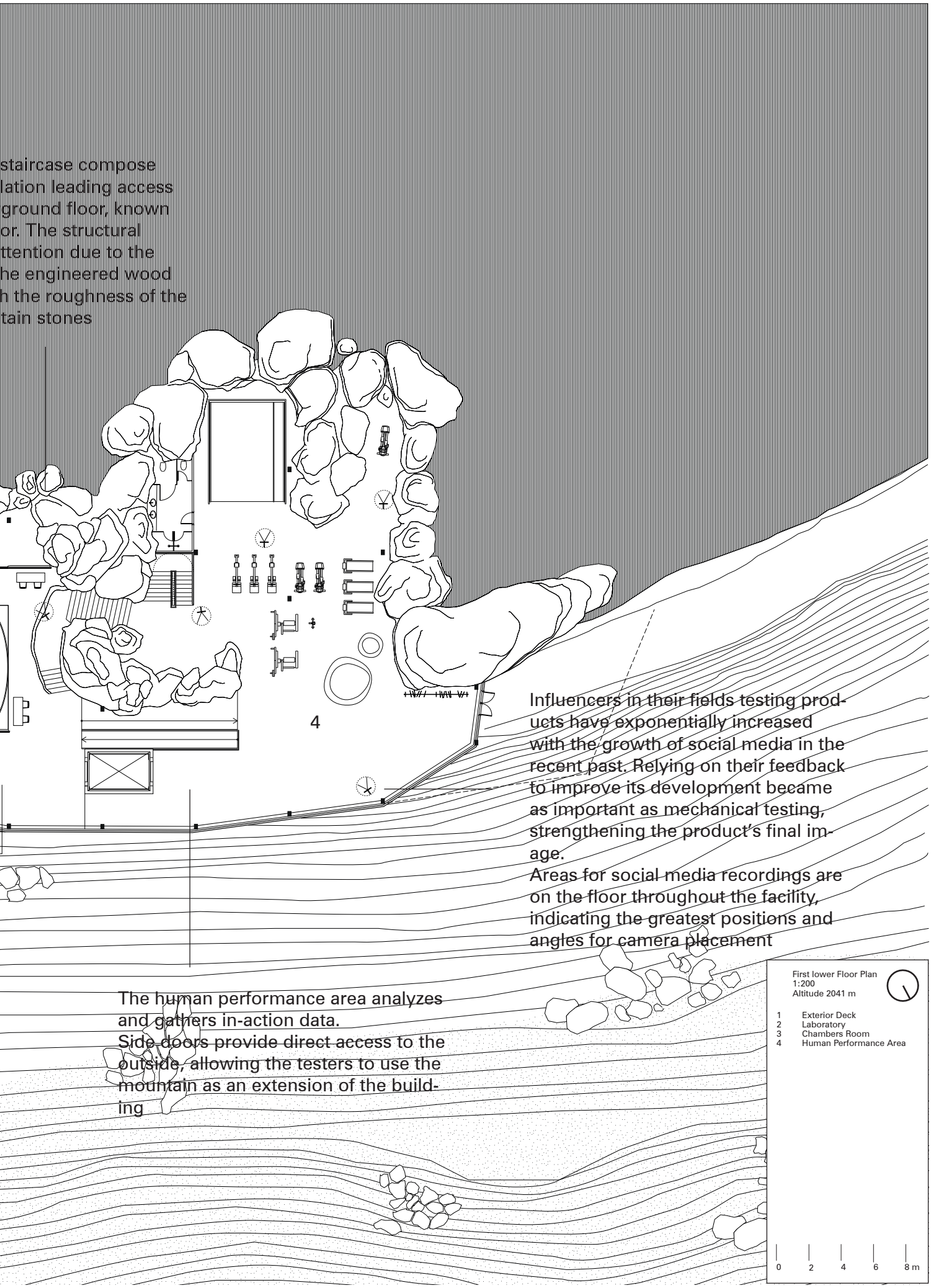


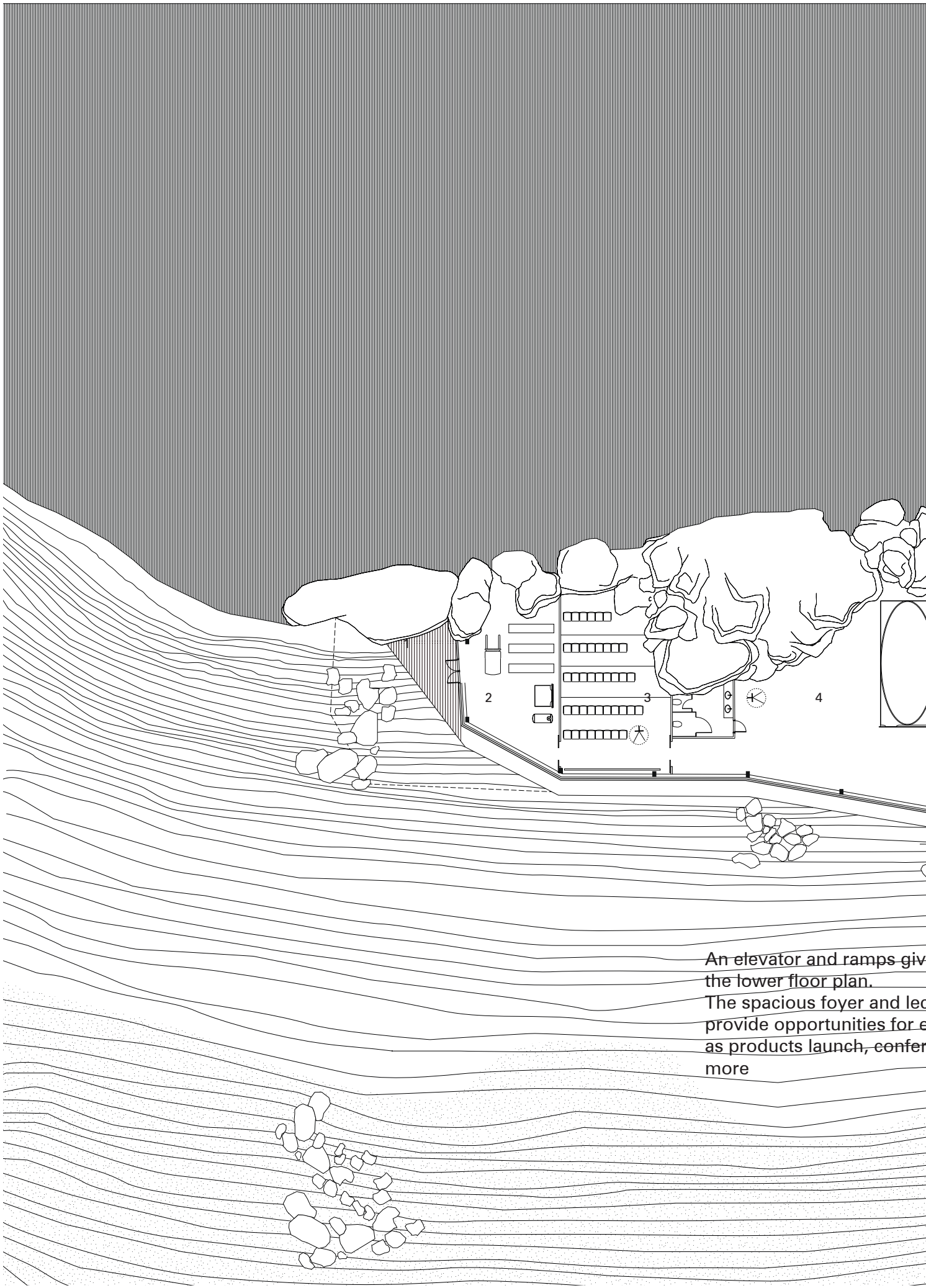
Influencers in their fields testing products have exponentially increased with the growth of social media in the recent past. Relying on their feedback to improve its development became as important as mechanical testing, strengthening the product's final image.
Areas for social media recordings are on the floor throughout the facility, indicating the greatest positions and angles for camera placement

The human performance area analyzes and gathers in-action data.
Side doors provide direct access to the outside, allowing the testers to use the mountain as an extension of the building

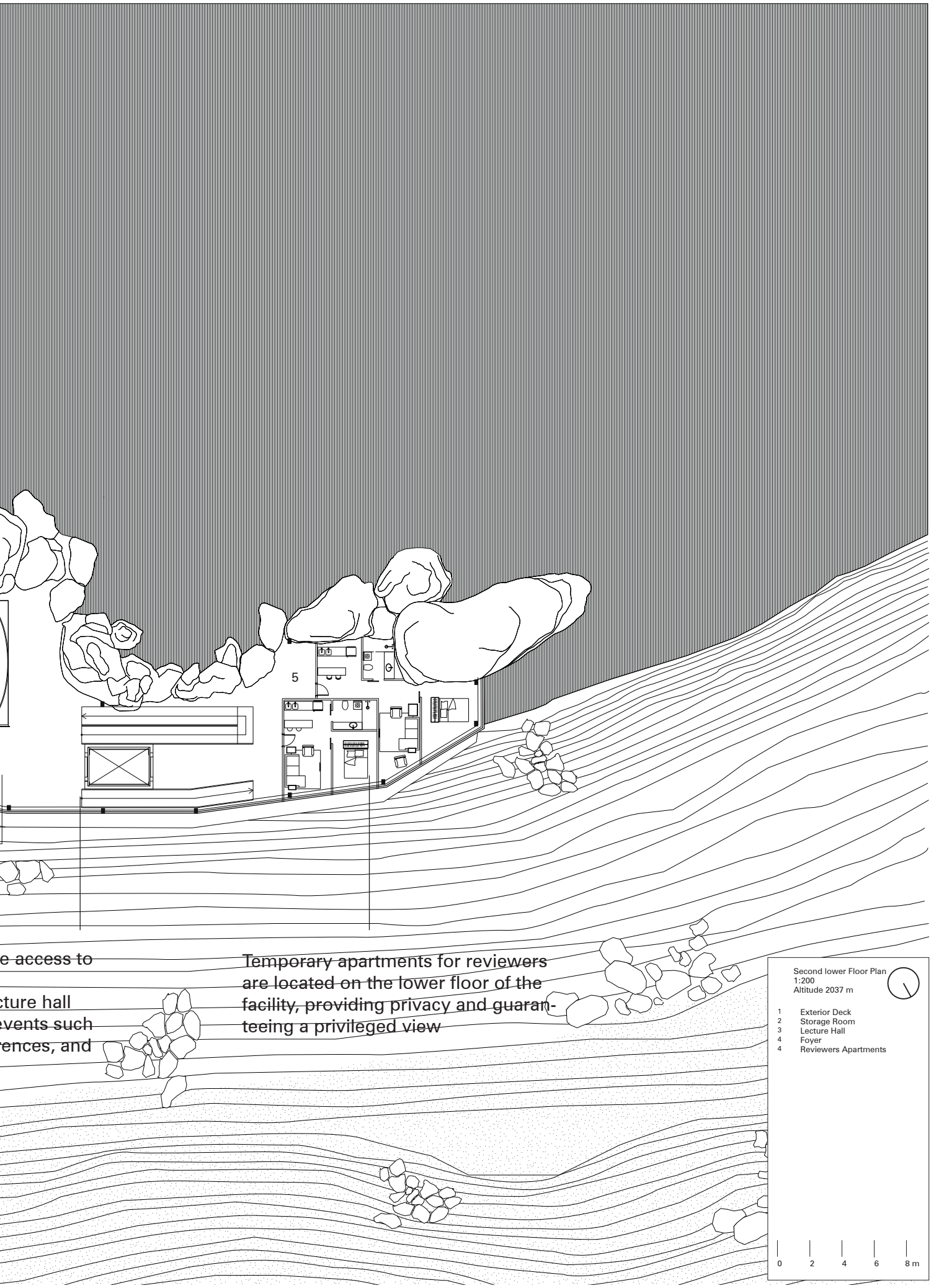
First lower Floor Plan
1:200
Altitude 2041 m

1 Exterior Deck
2 Laboratory
3 Chambers Room
4 Human Performance Area

0 2 4 6 8 m



An elevator and ramps giv
the lower floor plan.
The spacious foyer and lec
provide opportunities for e
as products launch, confer
more



e access to

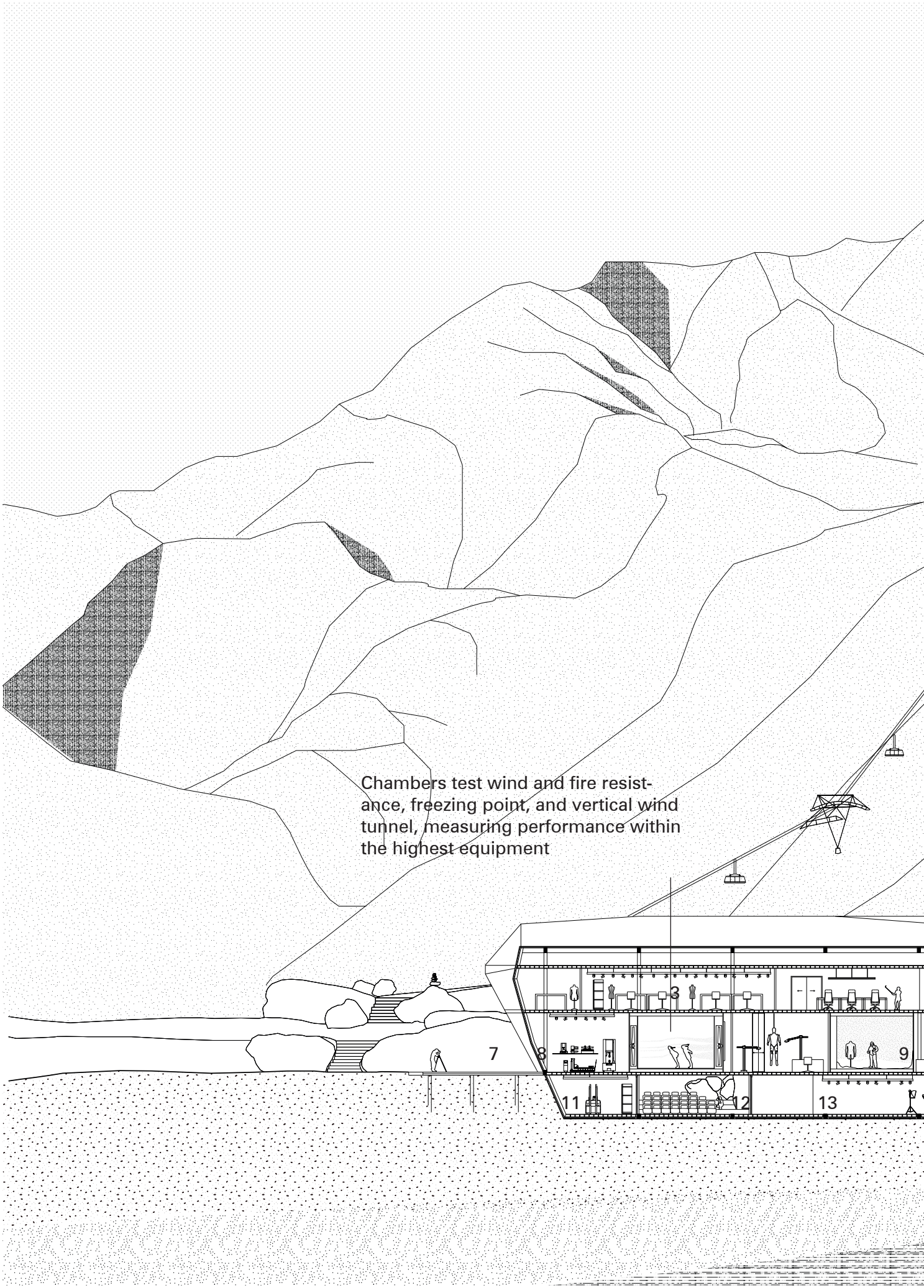
cture hall
events such
rences, and

Temporary apartments for reviewers are located on the lower floor of the facility, providing privacy and guaranteeing a privileged view

Second lower Floor Plan
1:200
Altitude 2037 m

1 Exterior Deck
2 Storage Room
3 Lecture Hall
4 Foyer
4 Reviewers Apartments

0 2 4 6 8 m


Chambers test wind and fire resist-
ance, freezing point, and vertical wind
tunnel, measuring performance within
the highest equipment
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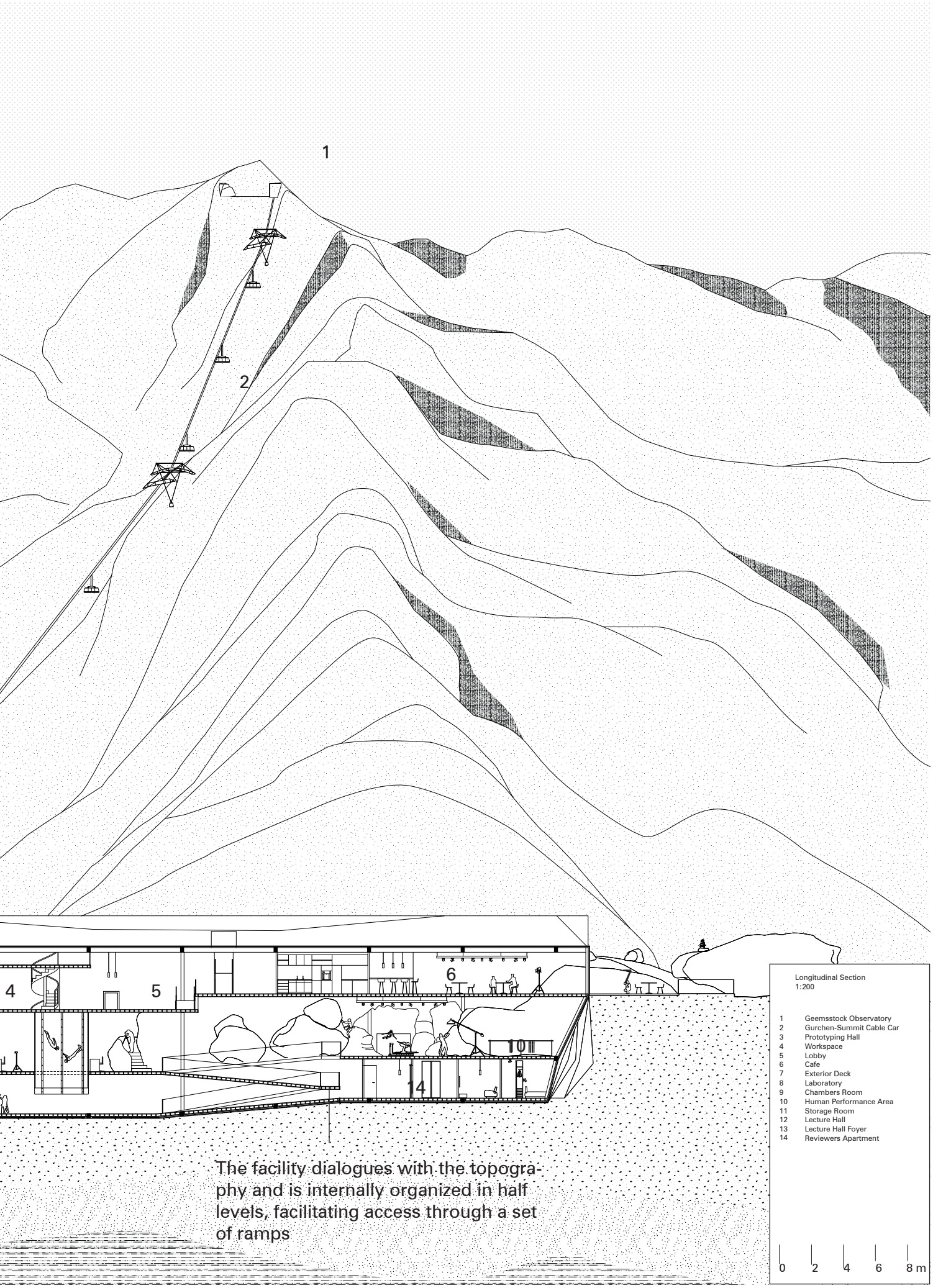
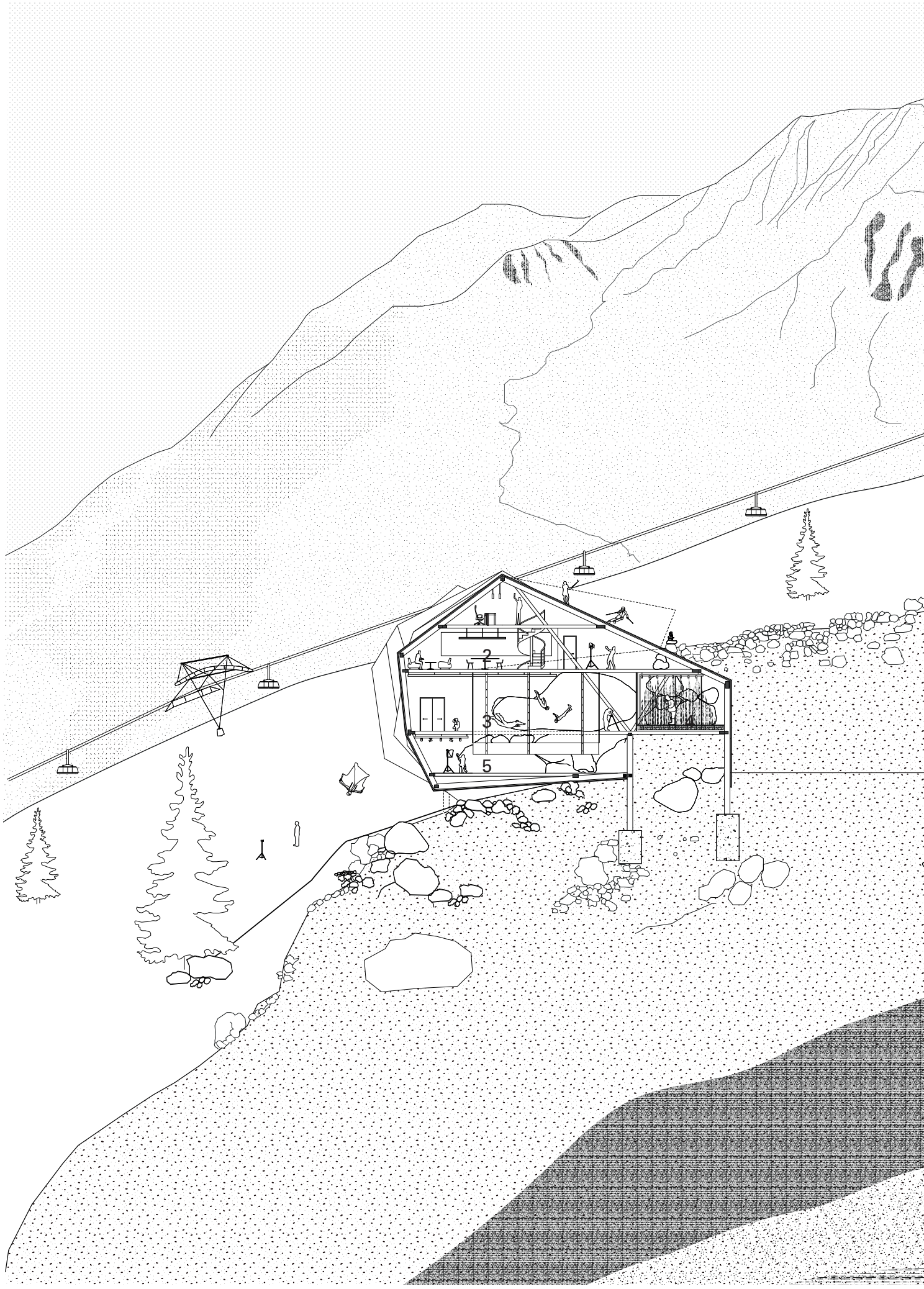


Longitudinal Section
1:200

1 Geemsstock Observatory
2 Gurchen-Summit Cable Car
3 Prototyping Hall
4 Workspace
5 Lobby
6 Cafe
7 Exterior Deck
8 Laboratory
9 Chambers Room
10 Human Performance Area
11 Storage Room
12 Lecture Hall
13 Lecture Hall Foyer
14 Reviewers Apartment

0 2 4 6 8 m

The facility dialogues with the topography and is internally organized in half levels, facilitating access through a set of ramps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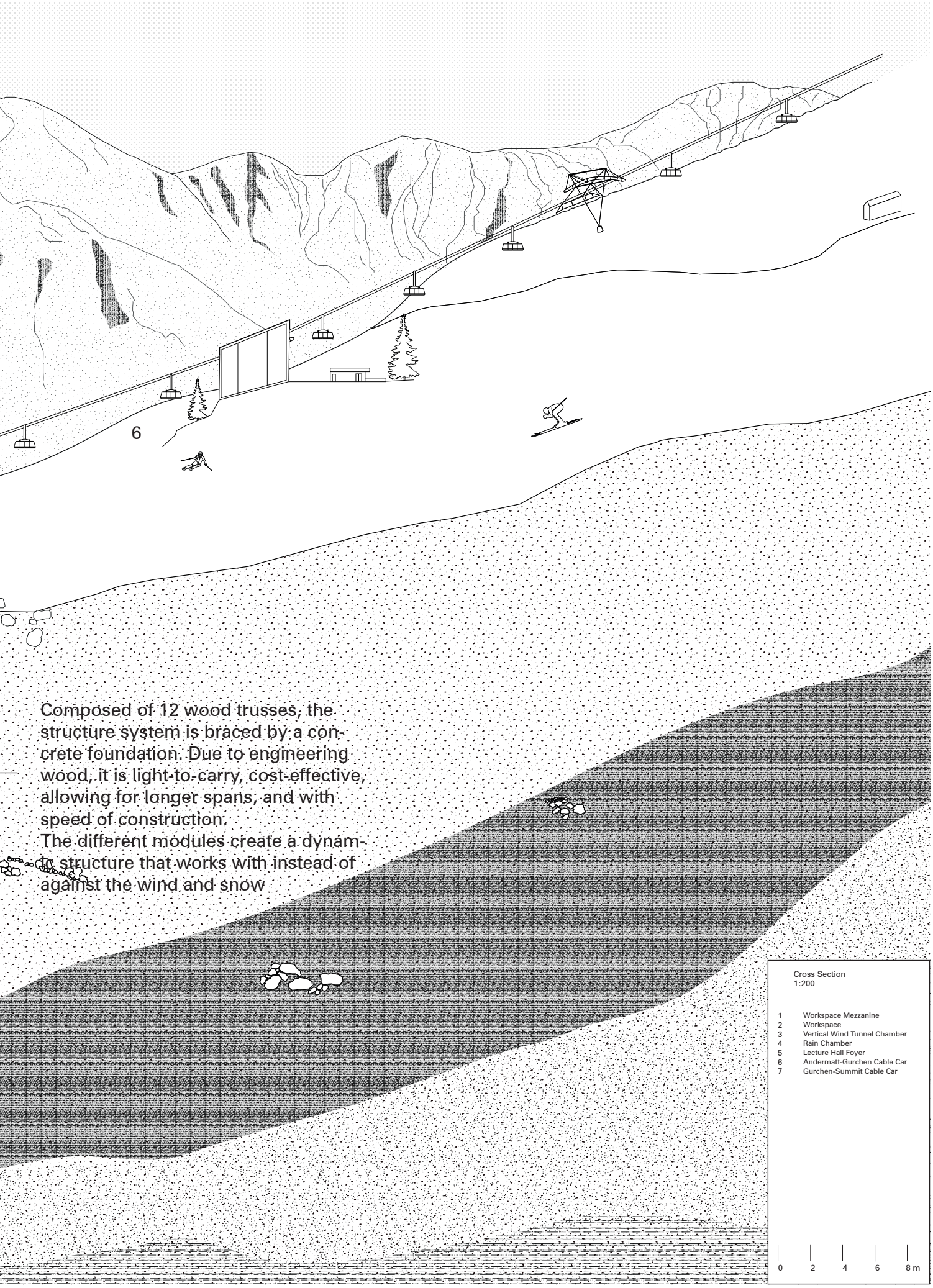
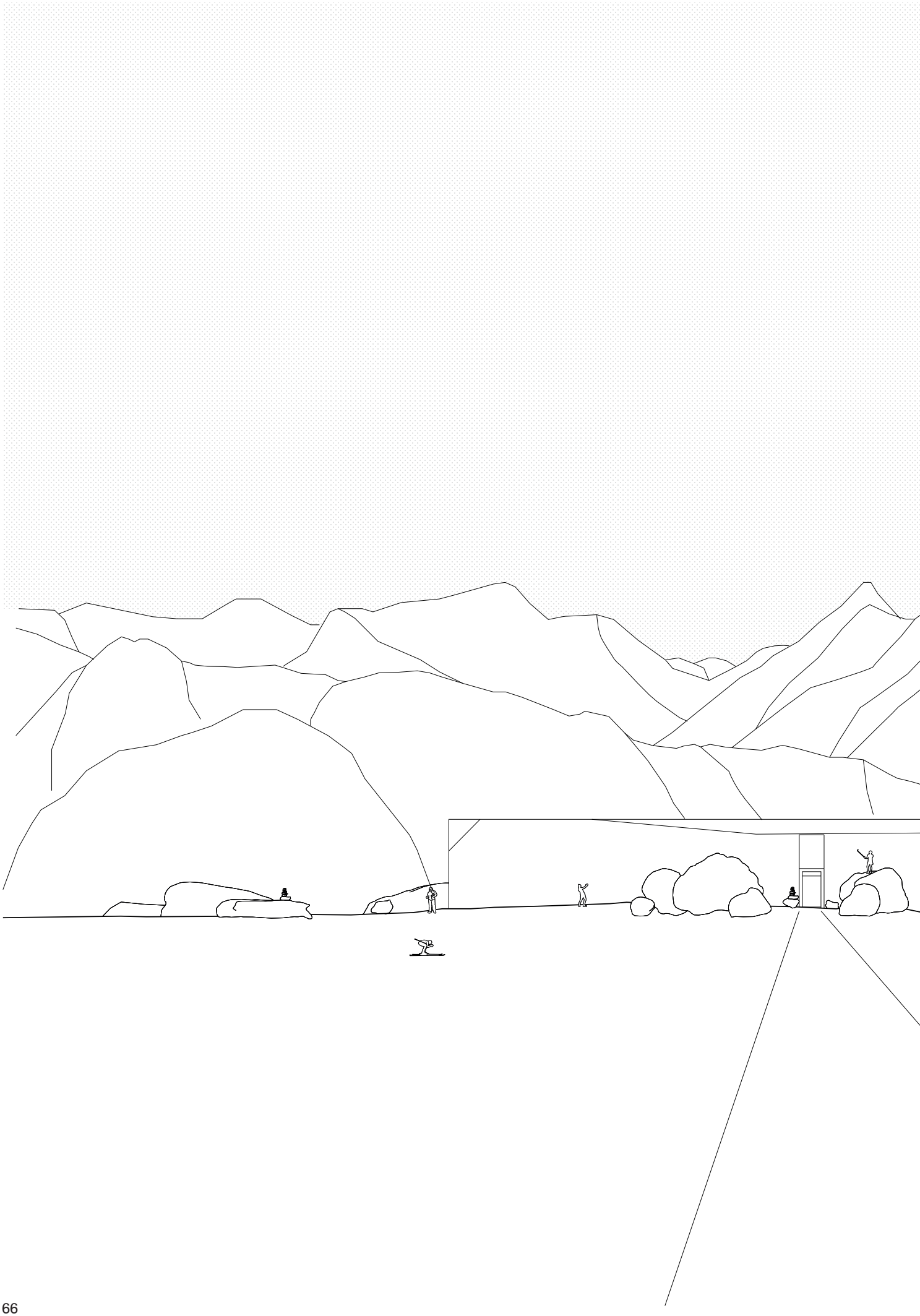


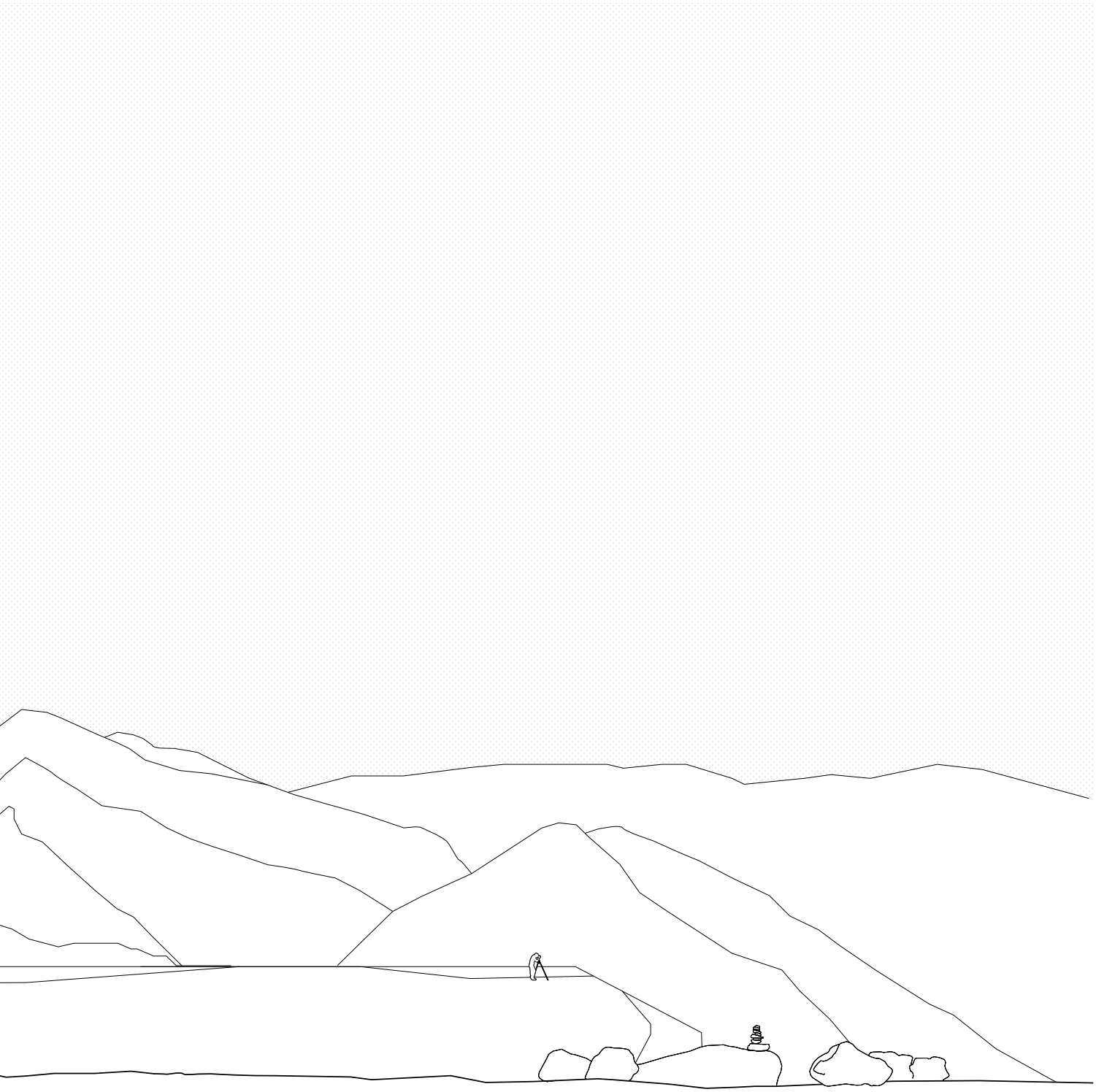
Composed of 12 wood trusses, the structure system is braced by a concrete foundation. Due to engineering wood, it is light-to-carry, cost-effective, allowing for longer spans, and with speed of construction.
The different modules create a dynamic structure that works with instead of against the wind and snow

Cross Section
1:200

1 Workspace Mezzanine
2 Workspace
3 Vertical Wind Tunnel Chamber
4 Rain Chamber
5 Lecture Hall Foyer
6 Andermatt-Gurchen Cable Car
7 Gurchen-Summit Cable Car

0 2 4 6 8 m

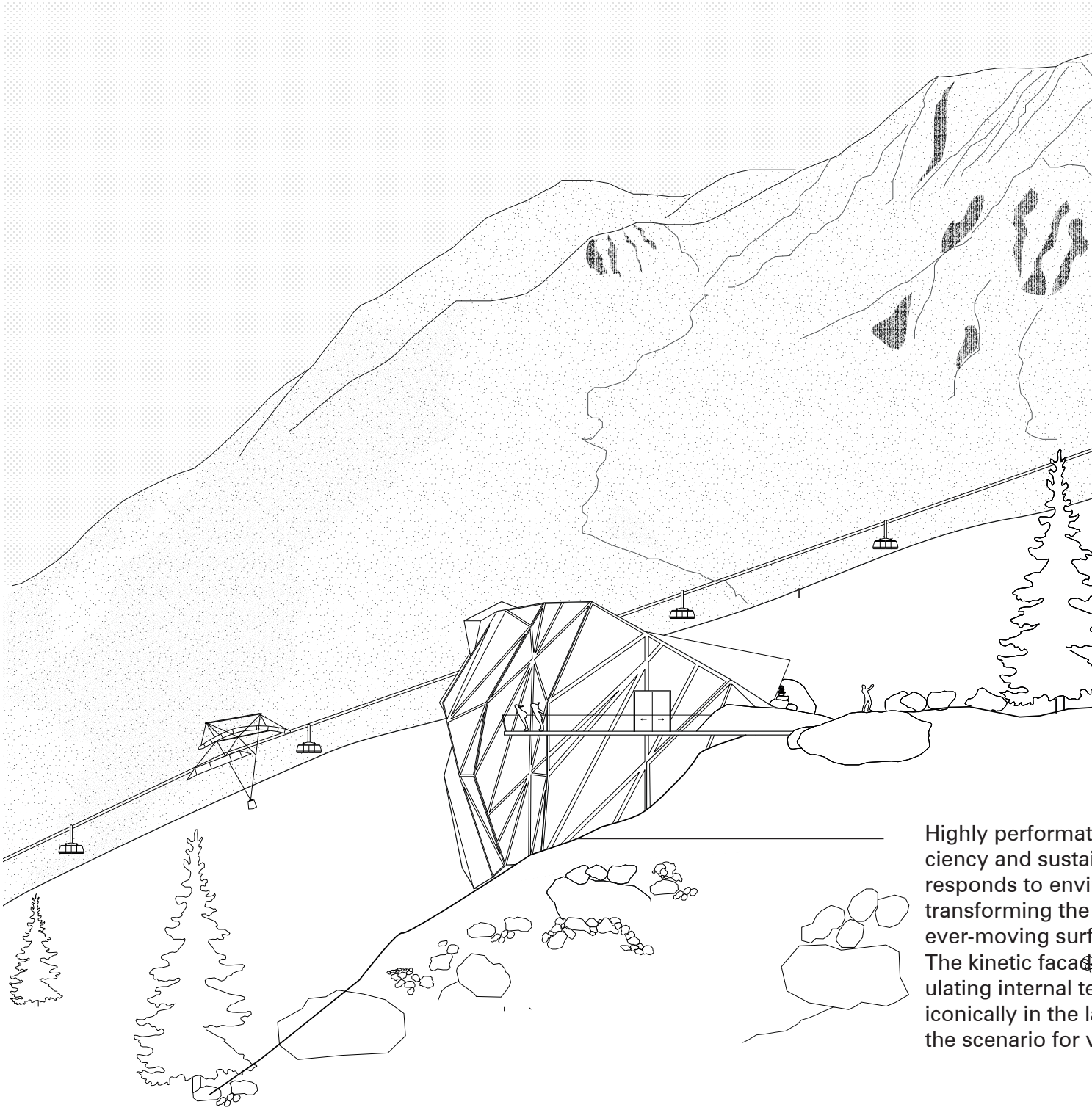




South Elevation
1:200

0 2 4 6 8 m

View of path from cable car station to research center facility.



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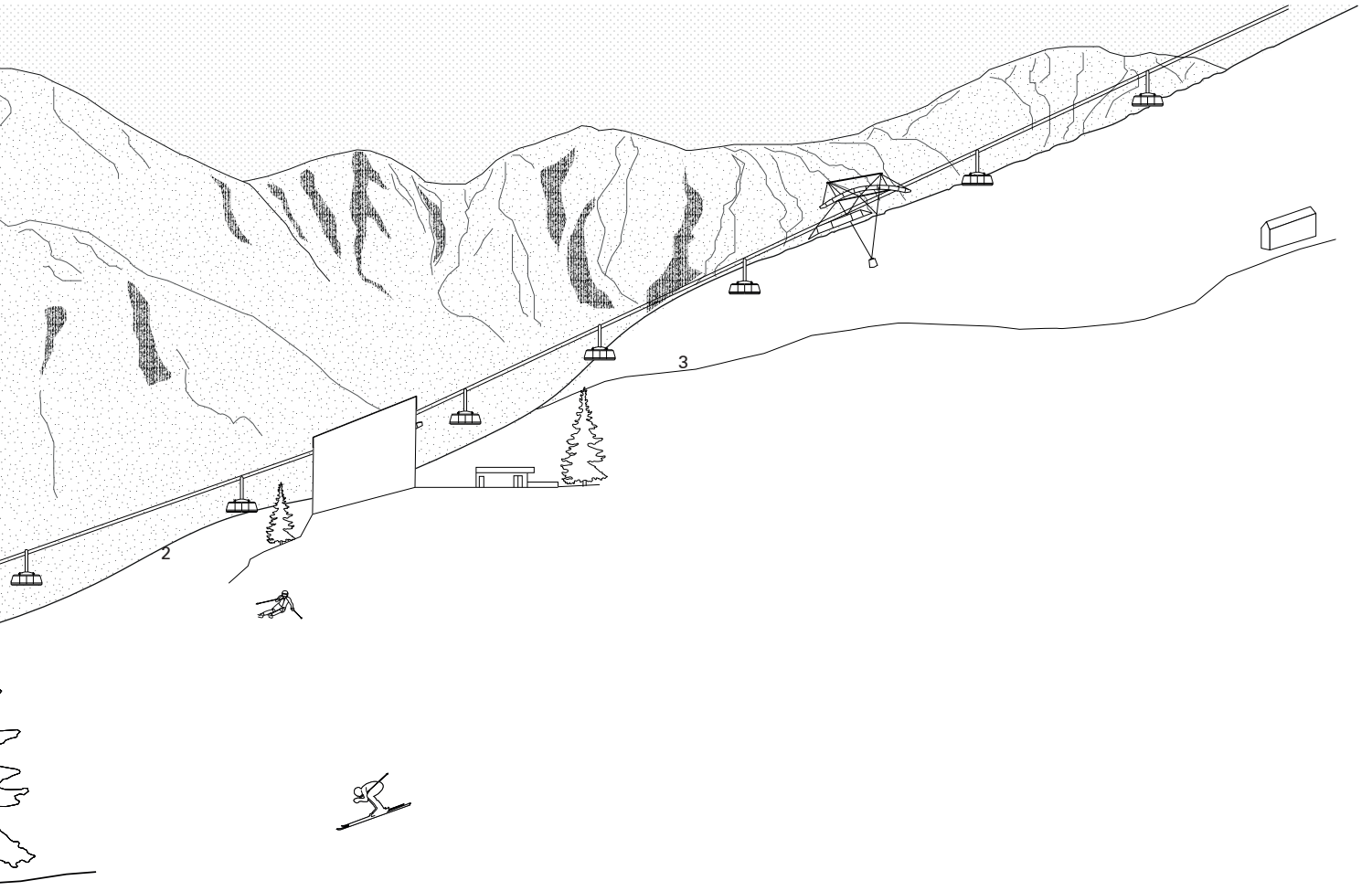

ive in energy effi-
inability, The facade
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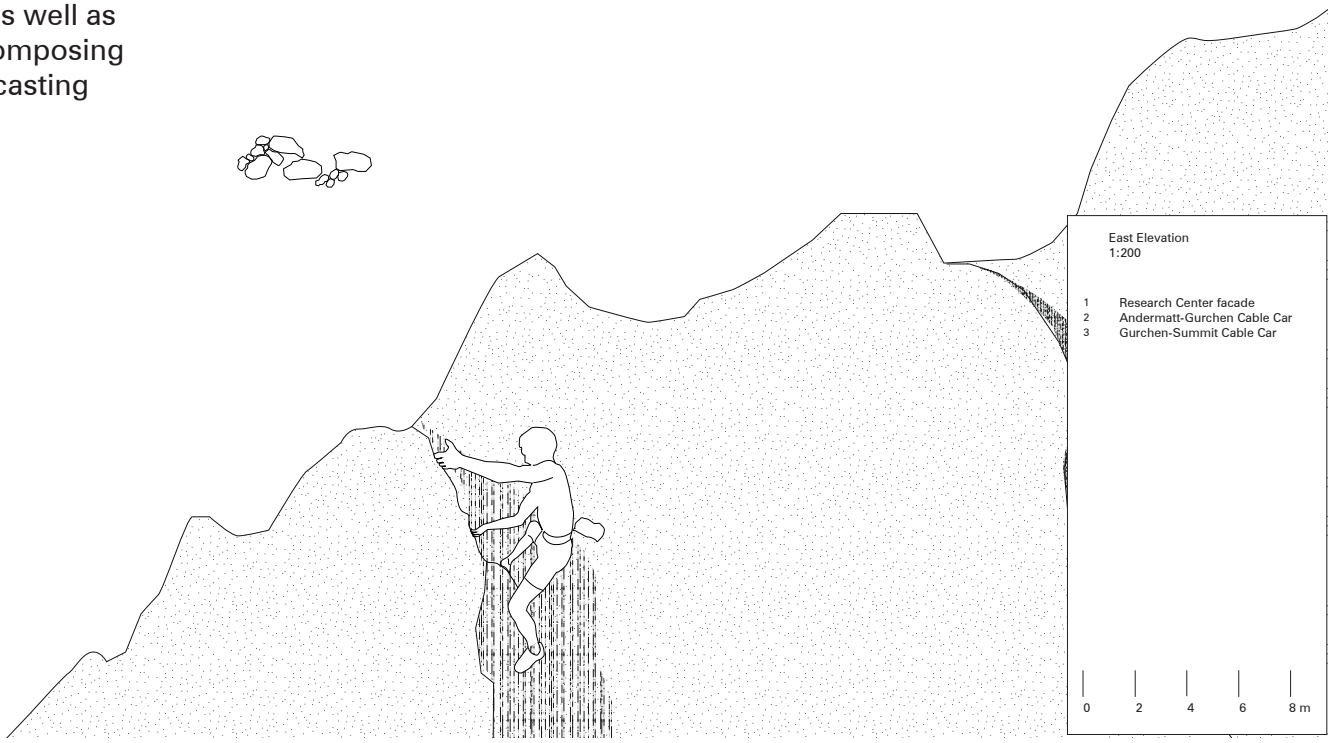
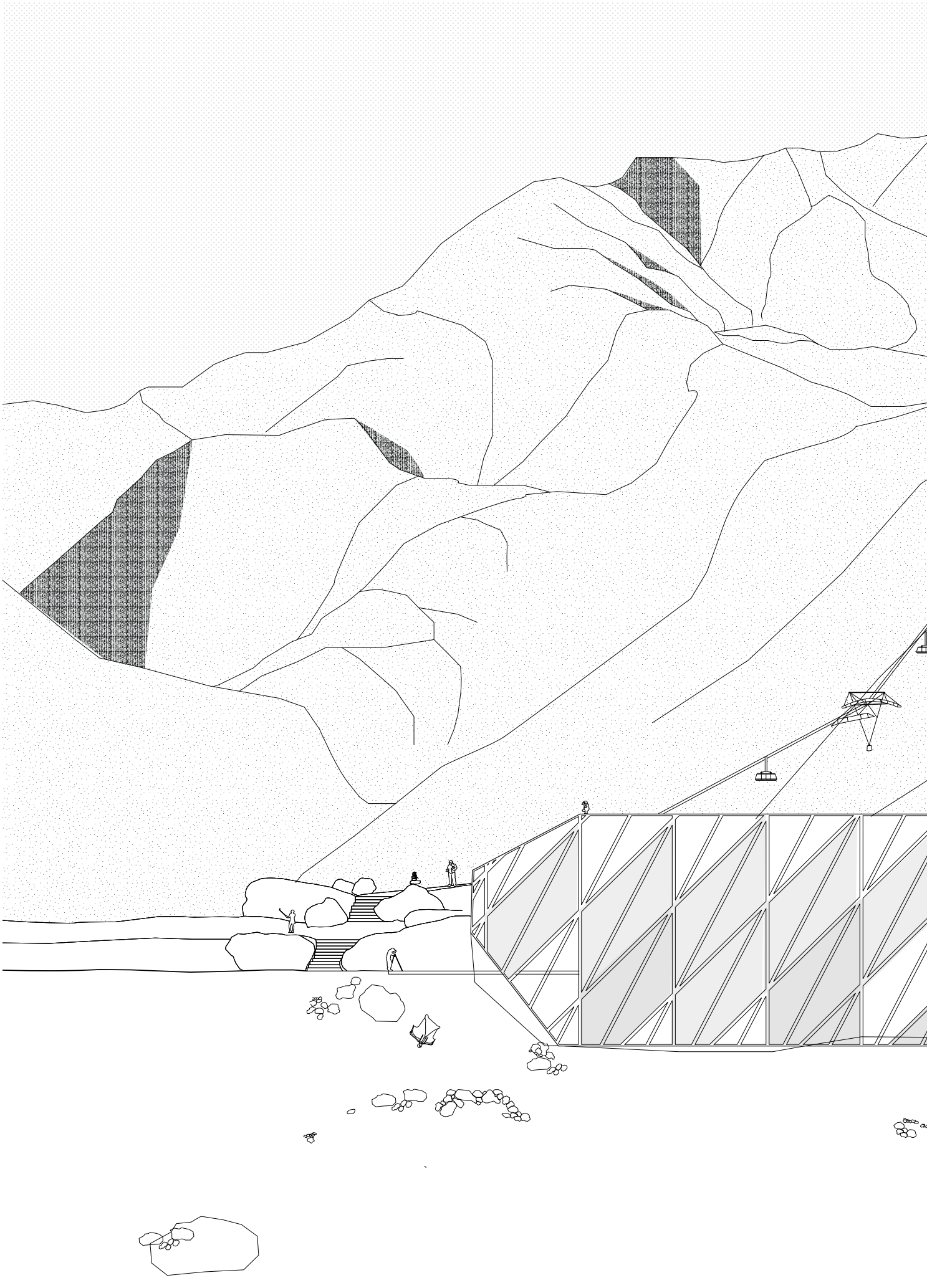
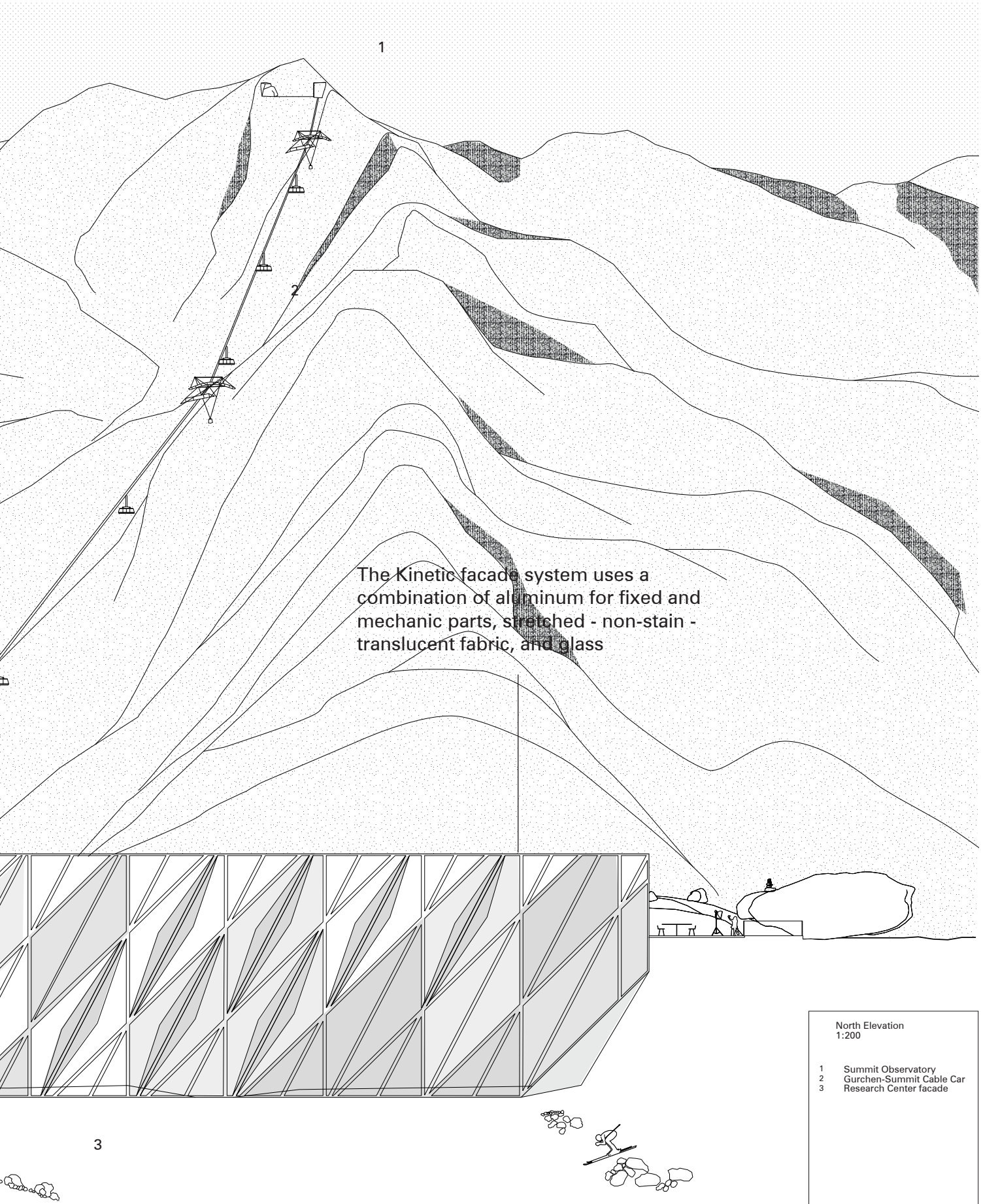
performs both reg-
emperature as well as
andscape, composing
virtual broadcasting



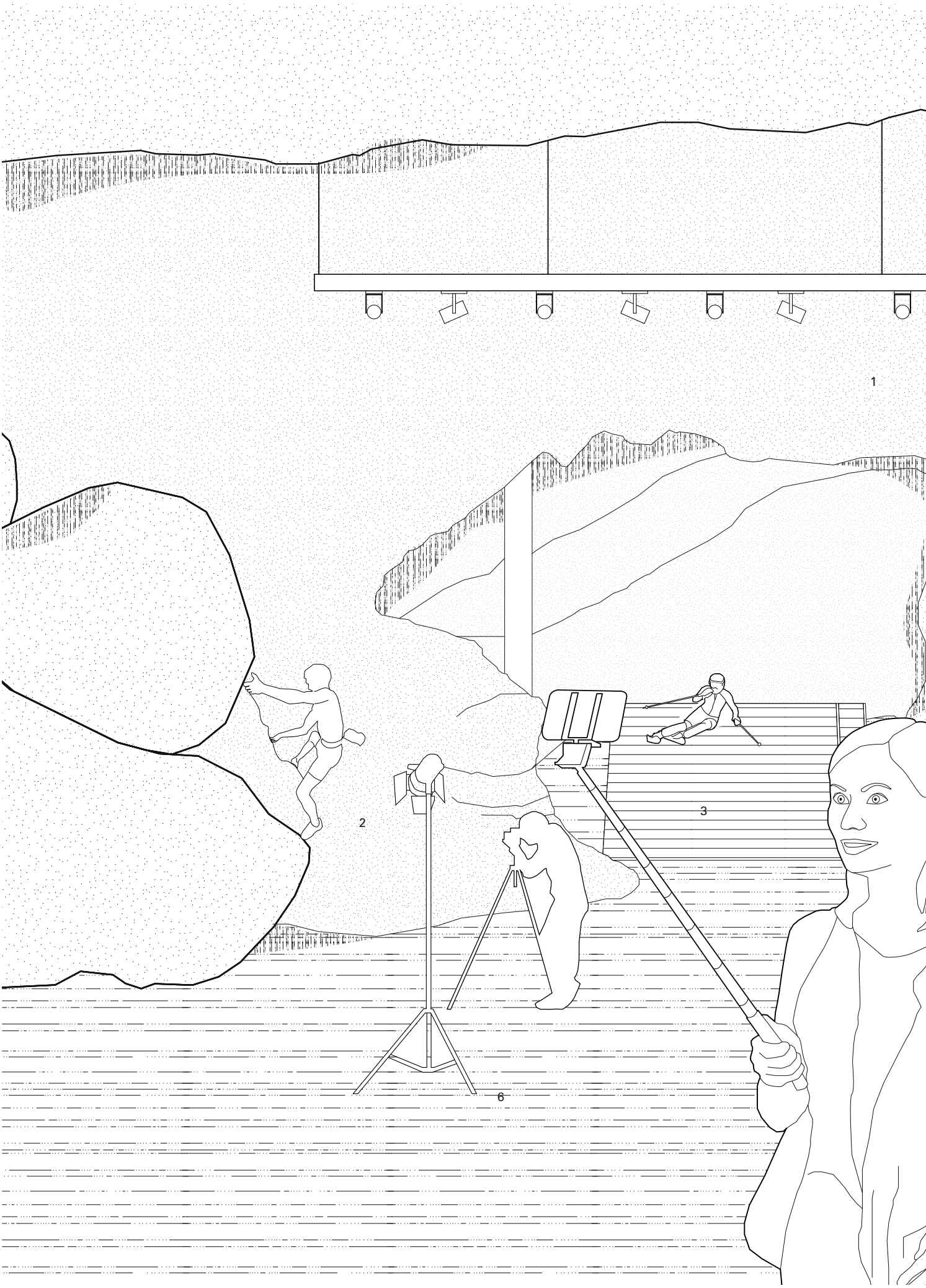




North Elevation
1:200

1 Summit Observatory
2 Gurchen-Summit Cable Car
3 Research Center facade

0 2 4 6 8 m


1
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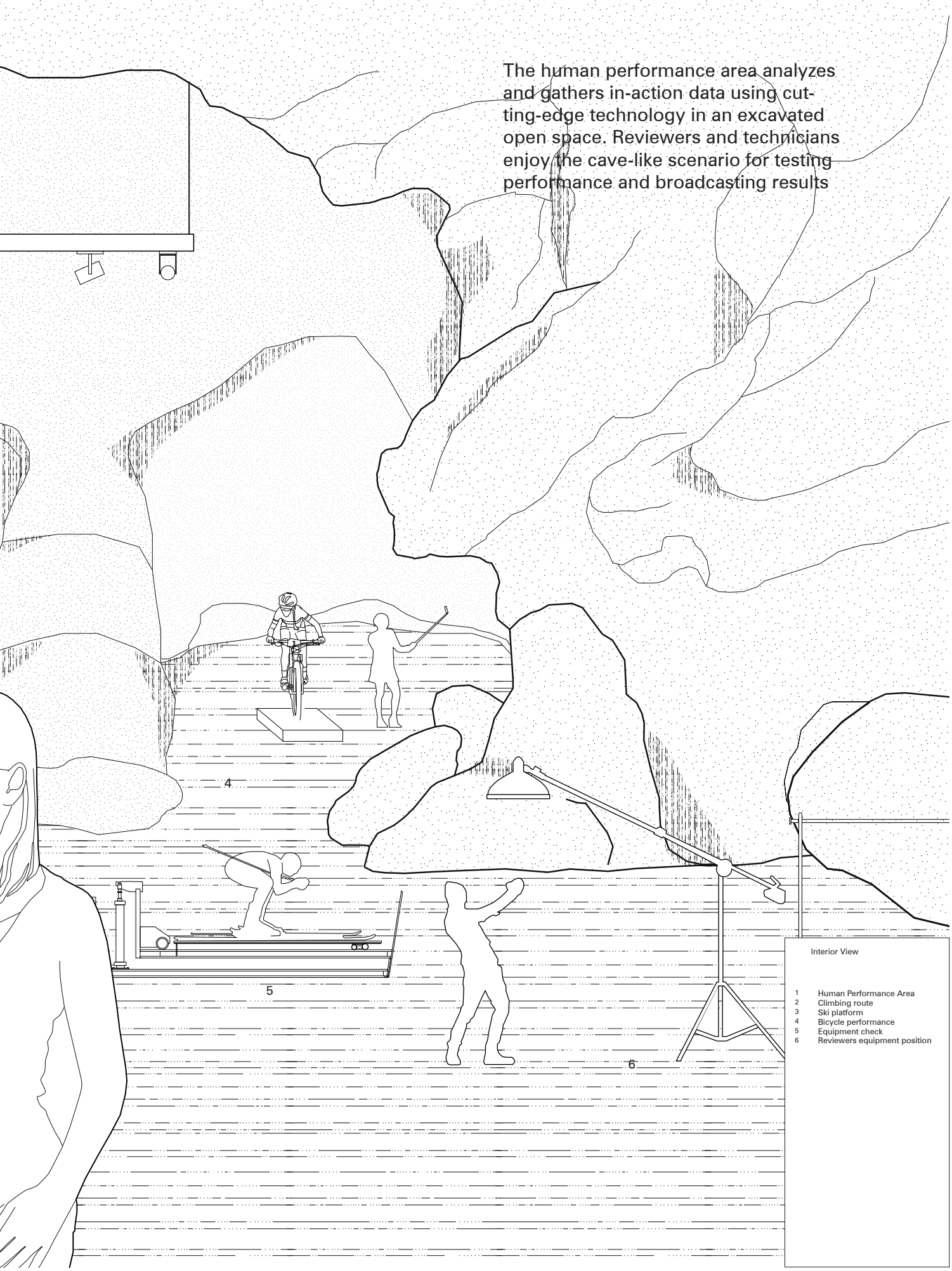
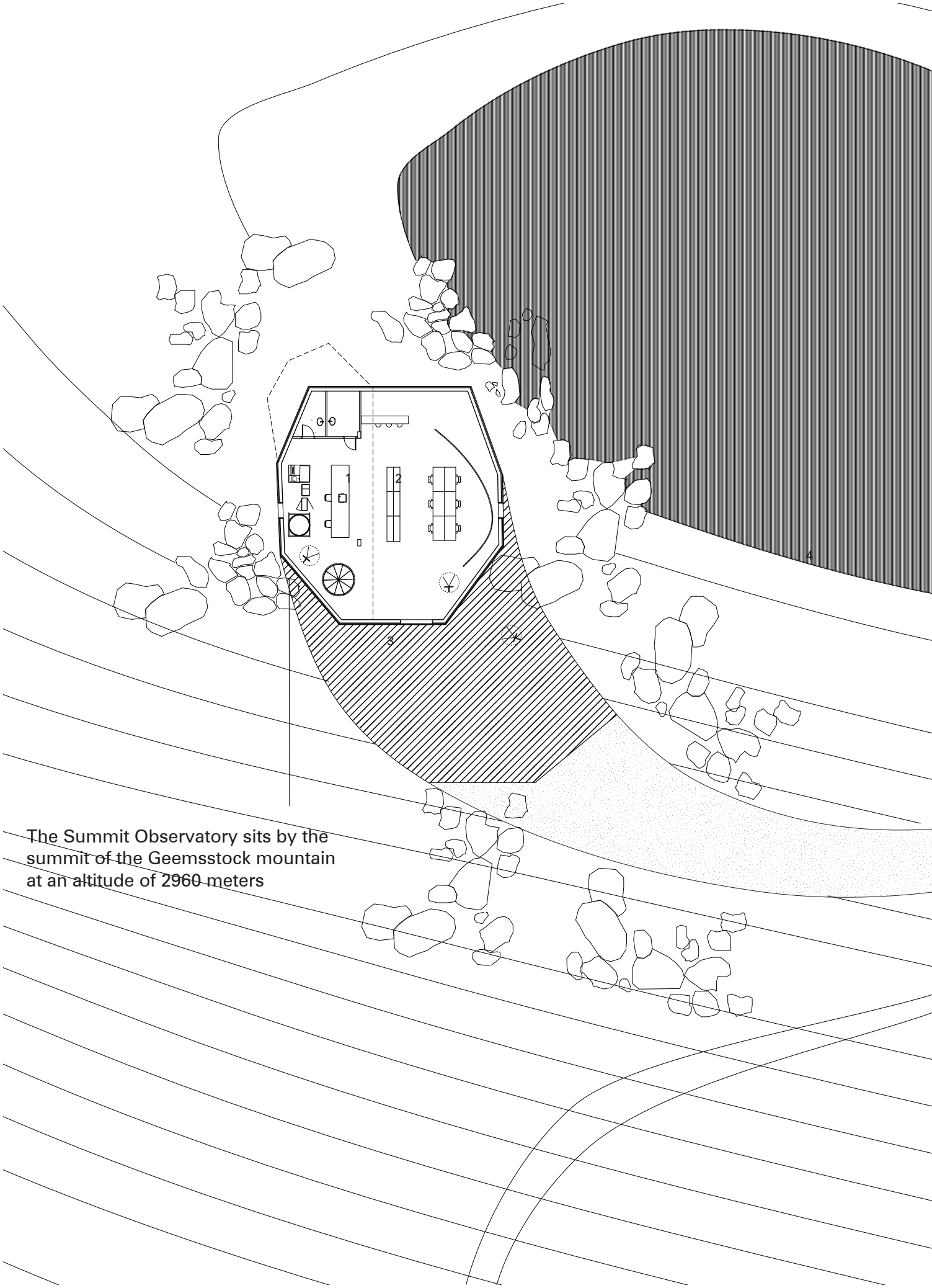
6

The human performance area analyzes and gathers in-action data using cutting-edge technology in an excavated open space. Reviewers and technicians enjoy the cave-like scenario for testing performance and broadcasting results



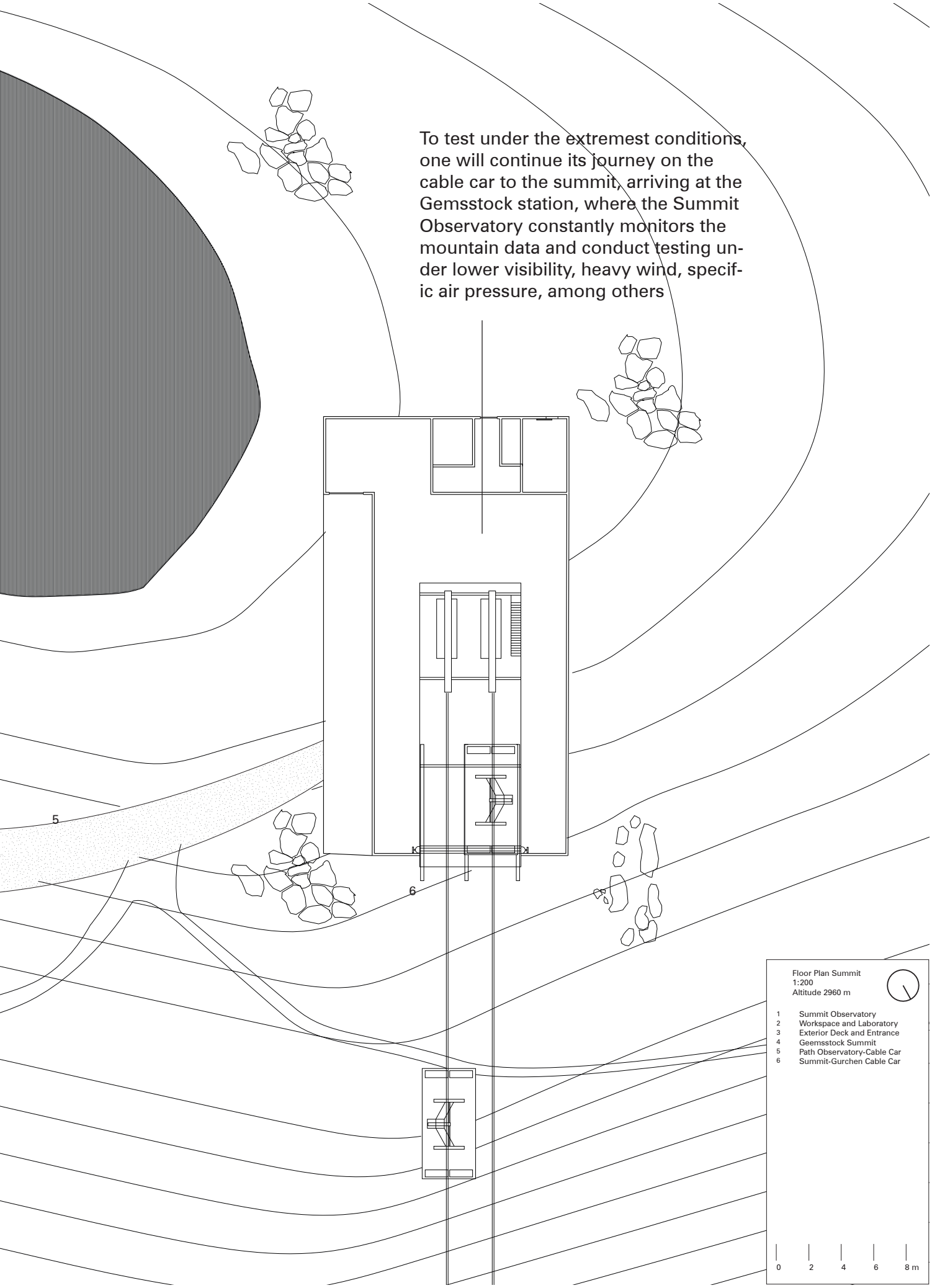
Interior View

1 Human Performance Area
2 Climbing route
3 Ski platform
4 Bicycle performance
5 Equipment check
6 Reviewers equipment position



The Summit Observatory sits by the summit of the Geemsstock mountain at an altitude of 2960 meters

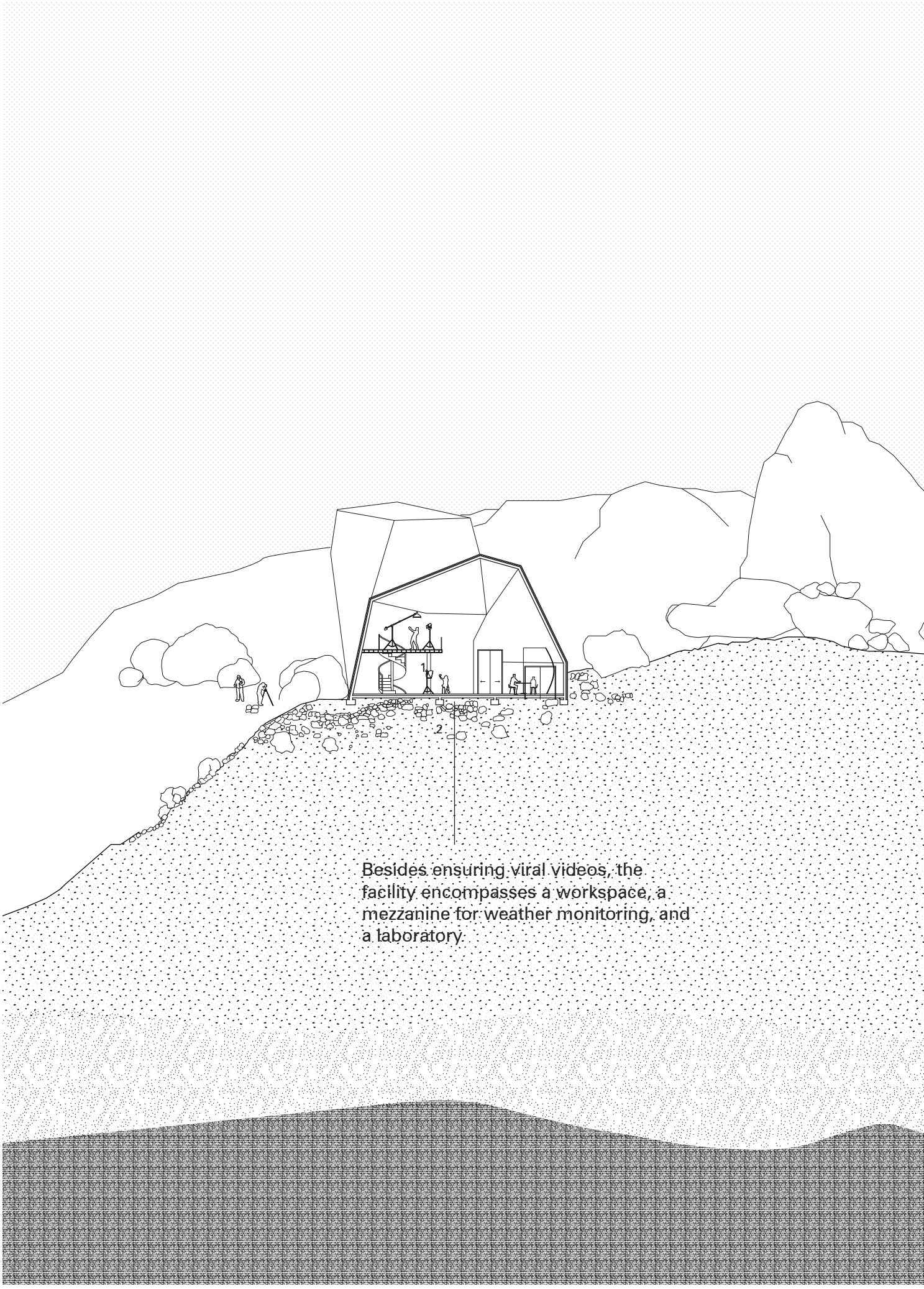
To test under the extremest conditions, one will continue its journey on the cable car to the summit, arriving at the Gemsstock station, where the Summit Observatory constantly monitors the mountain data and conduct testing under lower visibility, heavy wind, specific air pressure, among others



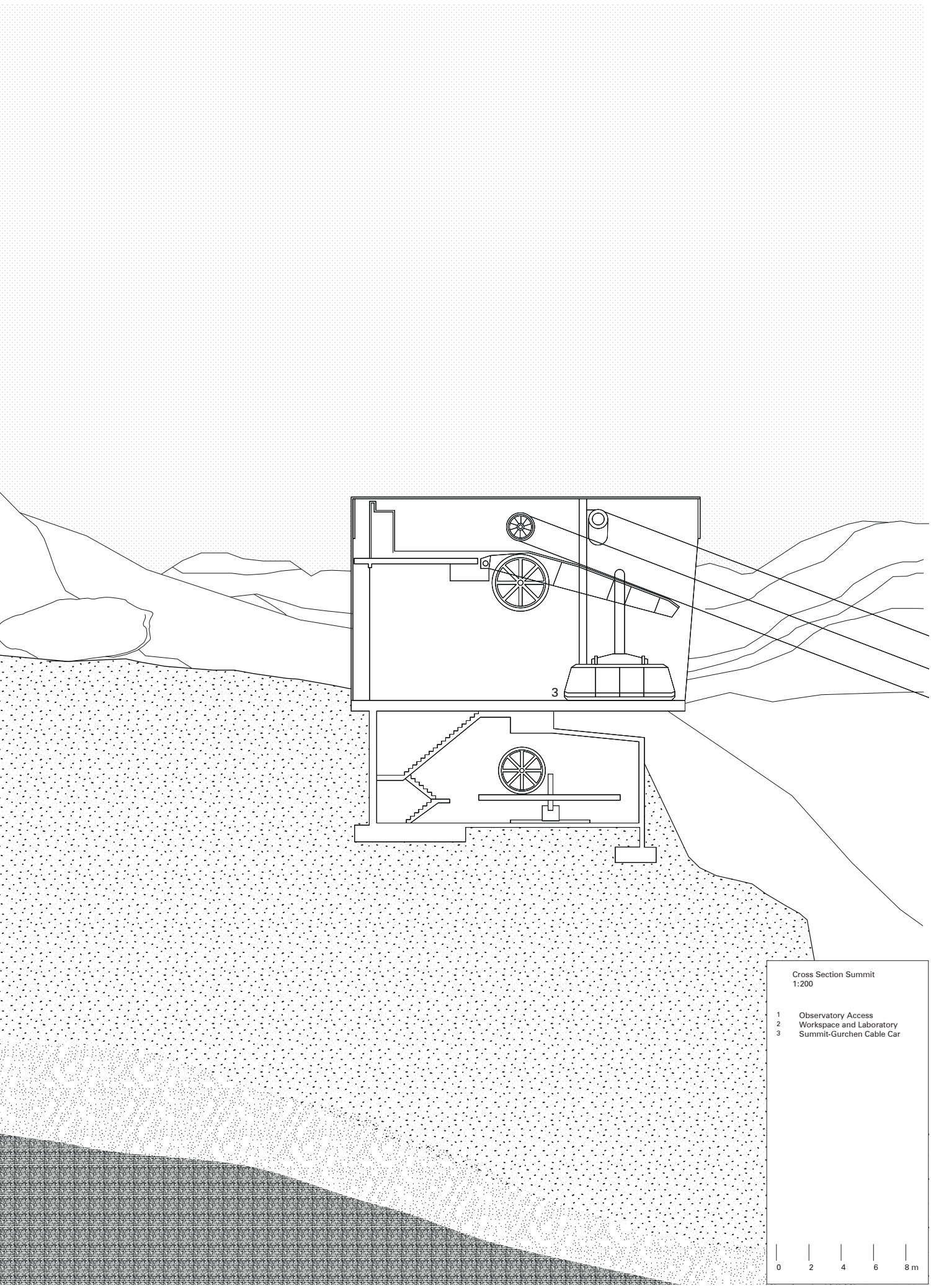
Floor Plan Summit
1:200
Altitude 2960 m

1 Summit Observatory
2 Workspace and Laboratory
3 Exterior Deck and Entrance
4 Geemsstock Summit
5 Path Observatory-Cable Car
6 Summit-Gurchen Cable Car

0 2 4 6 8 m



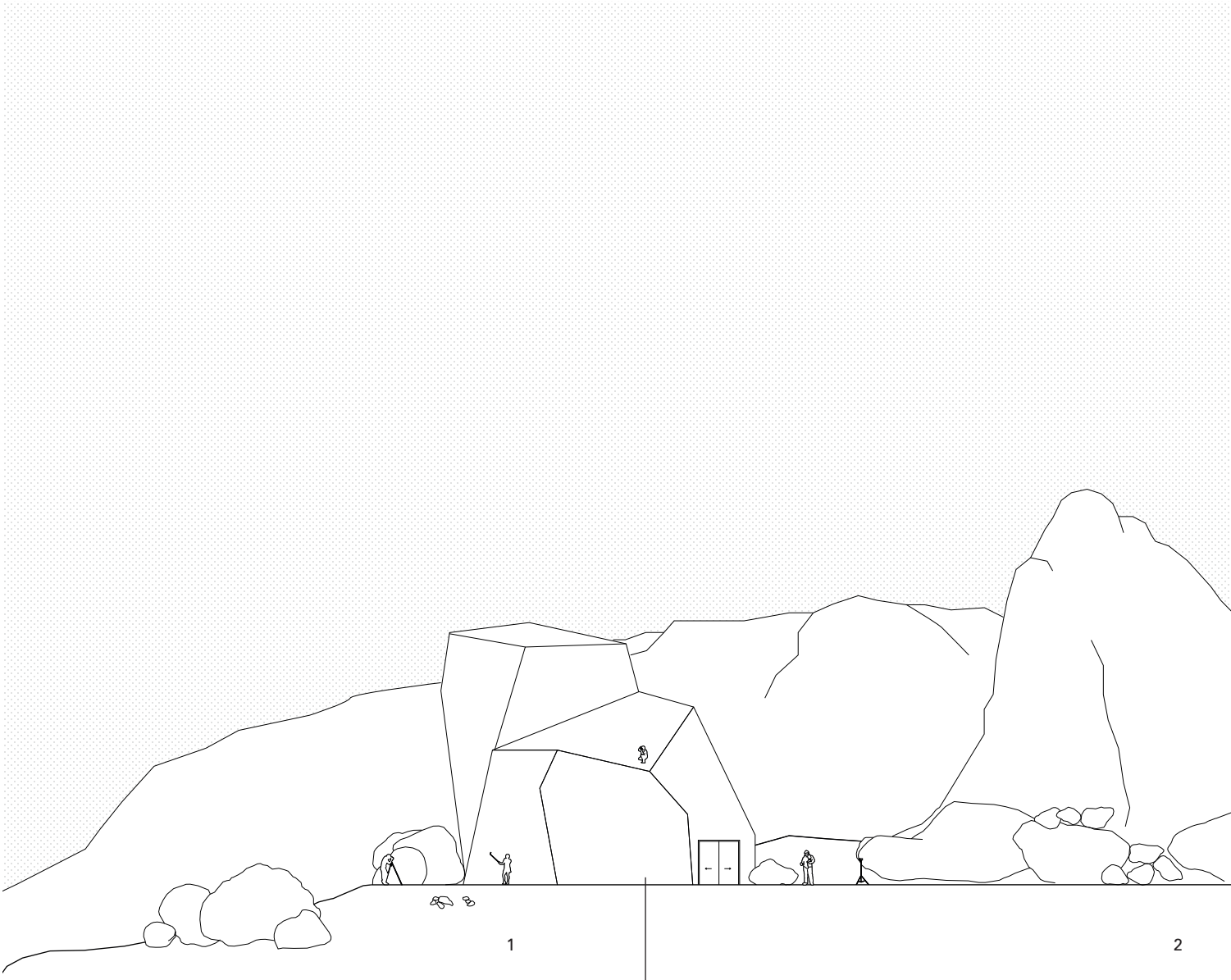
Besides ensuring viral videos, the facility encompasses a workspace, a mezzanine for weather monitoring, and a laboratory.



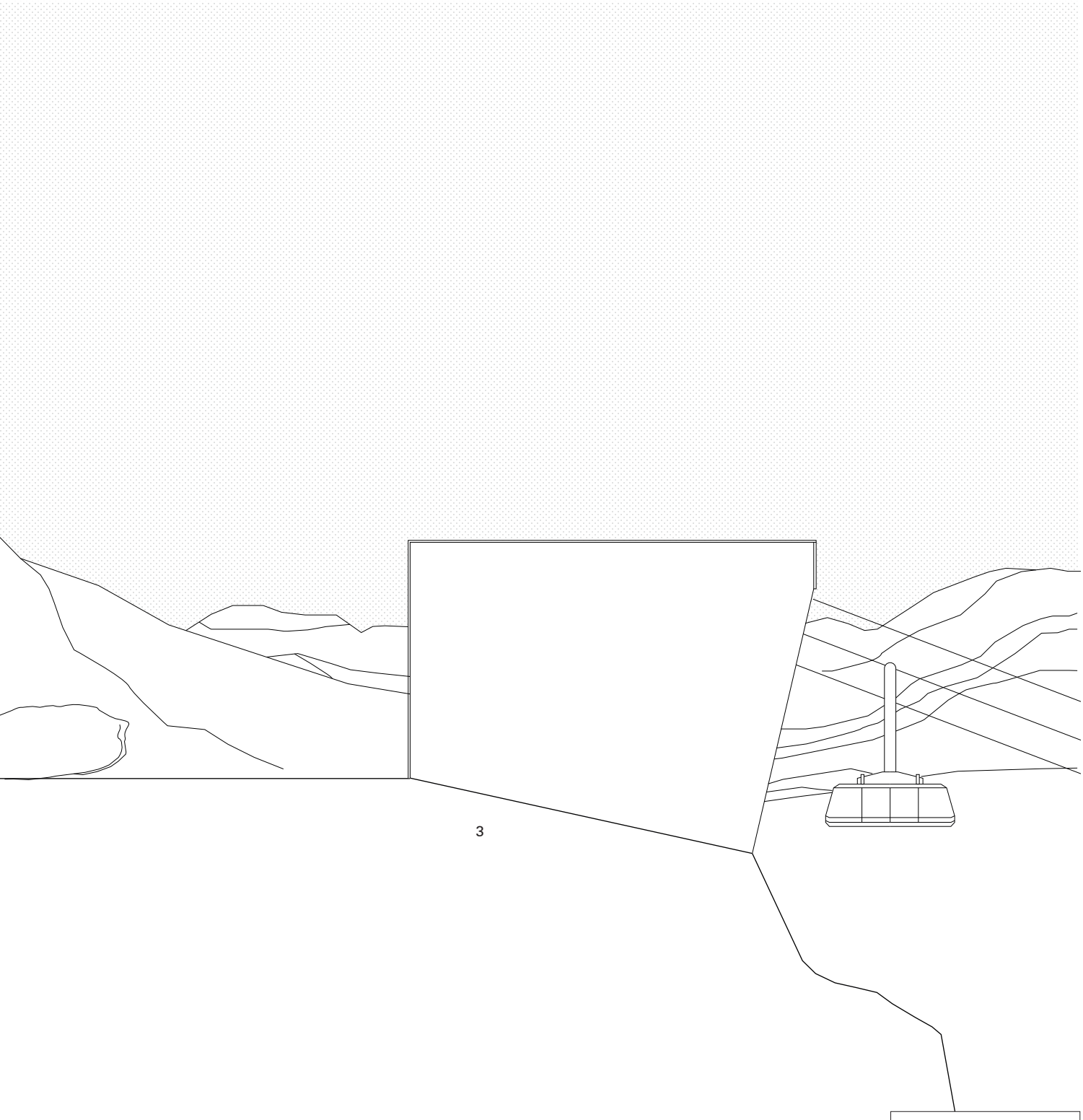
Cross Section Summit
1:200

1 Observatory Access
2 Workspace and Laboratory
3 Summit-Gurchen Cable Car

0 2 4 6 8 m



The Summit Observatory facility partially uses AI 3D technology in its design. It consists of robotically prefabricated interlocking wood panels covered with aluminum plate cladding



North Elevation Summit
1:200

1 Summit Observatory
2 Path Observatory-Cable Car
3 Summit-Gurchen Cable Car

0 2 4 6 8 m

This contribution is part of *Fashion House*, a collective project on the spatial implications of a decentralized and more tightly regulated fashion industry across Europe that reimagines the function and design for a fashion house.

Try It Out is a research center for prototyping and testing of products that perform under extreme conditions. It combines cutting-edge equipment with the rapid growth of influencers reviewing products. It is sited in Andermatt, Swiss Alps, Switzerland.

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