Reclaiming Beercraft- A Sensory Experience

Zishan Zeng

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Reclaiming Beercraft
a sensory experience

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Architecture is the art of reconciliation between ourselves and the world, and this mediation takes place through the senses.

- Juhani Pallasmaa
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abstract

Motivation
The senses are mainly a source of arousal, enjoyment and pain and are of vital importance for the human body. They are also important because sensory perception is typical of many cultural artifacts and is given unique intensities and extensions, shapes and meanings through them (Heywood, 2017). As Finnish architect Juhani Pallasmaa stated, "architecture is the art of reconciliation between ourselves and the world, and this mediation takes place through the senses" (Pallasmaa, 2012). To make architecture truly meaningful, it should be able to awaken all the senses.

Issue
The way we feel, smell, and even taste is hard to capture. This difficulty points to the deep-rooted position of visual tyranny (Lupton & Lipps, 2018, p. 14). Sensory studies incorporate a sensory approach to culture, the challenge here being to give full weight to the role of the senses in cultural life. It also includes a cultural approach to the senses, where this suggests setting impacts and uses of the senses within their cultural context, especially in how they are given and contributing to shared meanings (Heywood, 2017, p. 1).

Richmond's history has been intertwined with beer culture going back more than 150 years (Visit Richmond, 2018). Nowadays, people have the opportunity to visit the brewhouse to see the brewing process and enjoy the finished brewed beer. However, they can only see the equipment and the repeated operation of the workers, and cannot participate in it to feel the charm of the craft beer culture.

Methods
To utilize the interest in local craft beer culture, sensory design will be incorporated into the interior design. From the sense of the human body, sight, taste, smell and touch, it stimulates the sensory functions of beer lovers at multiple levels, enabling consumers to understand the brewing process of beer more realistically and deeply.

The plan is to carefully dissect several precedent studies concerning breweries, wine museums, cellars, and roastery. Previous studies include The Therme Vals by Peter Zumthor. Antinori Winery by Archea Associati and Surly Brewing MSP by HGA. In-depth interviews with employees of Hardywood Park Craft Brewery and Stone Brewery, local beer lovers and local designers who have designed breweries will be included in my methods of research. Researching designers who focus on sensory design, including Juhani Pallasmaa, Steven Holl and Peter Zumthor, will also be key.

Results
Sensory design or consciously designing a full range of sensory experiences can better connect us to the physical world and help people find the right place. The multi-sensory design concept not only brings a tactile experience to consumers, but also makes people feel sublimated in their hearts, realizes the integration of information, and maximizes the expression of product information.

Conclusions
The idea is to create a maker space of craft beer, which integrates education, production and entertainment. Here people can learn about the local craft beer history, participate in the beer brewing process through vision, smell, taste and sound, and absorb the knowledge of beer. During the process of experience and interaction, they could make their beer and even participate in the design of beer containers and packaging design, which allows people to experience a process from learning, production, designing to purchasing.
reclaiming beercraft-a sensory experience

Sensory Design

The senses are a source of stimulus, pleasure and pain and are therefore fundamentally essential to the human organism. Sensory design promotes everyone’s opportunity to receive knowledge, explore the world, and experience joy, wonder, and social connections, regardless of our sensory abilities (Lupton & Lips, 2018, p. 9). The Cooper Hewitt exhibition “The Senses: Design Beyond Vision” took on the idea that sensory design, or consciously designing for the full spectrum of senses experiences, can better connect us to the physical world and help us find the right place (Heywood, 2017).

The senses blend with memory. From infancy, human beings participate in countless acts of lifting, smelling, rubbing, sniffing, throwing, dropping, listening, balancing, and more, exploring the limits of nature to comprehend the universe we were born to explore. The brain activates neurons, prunes synapses, and forges pathways. Significance and memory thus take shape. If people experience an oddly shaped coffee cup or an updated operating system, they don’t see it as being completely alien but focus our attention on the differences between what is new and what we have experienced in the past (Lupton & Lips, 2018).

The senses move people in space. Our contact with the world takes place on the edge of the self via specialized parts of our body, and the senses intersect with the outside world. Vision disconnected from touch has no knowledge of distance, space or depth, or space or body as a result. The distant surfaces, contours and edges of our eyes and the unconscious tactile feeling determine the pleasantness and discomfort of the experience. Remote and near experiences are experienced with the same intensity and merge into a coherent experience. In Merleau-Ponty’s words: we see how deep, smooth, soft, and hard the objects are; Cézanne claimed we could see their smell. To convey the world, the continuum of its colors must reflect this indivisible whole, otherwise for us the picture would point only to objects and not give them to imiperious unity, life, insurmountable fullness, the sense of the true (Pallasmaa, 2012).

Sensory architecture rubs into the world of life. A space is not just a case of the doors and windows. It is a delicate creature with deep pockets and soft shades (Lupton & Lips, 2018).

The senses are also important as it is typical of many cultural artifacts that unique intensities and extensions, shapes and meanings are provided through sensory experience. As Pallasmaa stated, “architecture is the art of reconciliation between ourselves and the world, and this mediation takes place through the senses” (Pallasmaa, 2012). To make architecture meaningful, it should be able to awaken all the senses. Architecture should include and encircle the body with authentic materials and tactile forms, according to Pallasmaa. Sensory architecture slows down the heat, making it more dense than thin. An intimate room reverberates with shifting shadows and surfaces wrought from wood, wool, or stone. An atrium changes with the sun. Rough walls and dense fabrics absorb clatter and din” (Pallasmaa, 2012, p. 14).

Our contact with the world takes place on the edge of the self via specialized parts of our enveloping membrane. It is obvious that “life-enhancing” architecture must deal simultaneously with all senses and help fuse our self-image with the world’s experience. Accommodation and integration are the essential mental tasks of buildings. They project our human measurements and sense of order into space without calculation or context. Architecture does not make us live in worlds of mere manufacture and fantasy, it articulates the experience of our world and strengthens our sense of self and reality (Pallasmaa, 2012, p. 11).

The architectural work is not perceived as a collection of isolated retinal objects, but in its full and integrated material, embodied and spiritual essence. It provides pleasurable forms and textures molded for the contact of the eye and the other senses, but it also combines and blends physical and mental structures, offering enhanced coherence and purpose to our existential experience (Pallasmaa, 2012, p. 12).

The Therme Vals designed by Peter Zumthor, is an architecture of formal restraint with a rare sensual richness addressing all the senses simultaneously. (9.1) The project creates a case or quarry-like structure. The hotel and spa are celebrated for offering a sensory experience of hot and cold light and shadow, and materiality. Working with the natural surroundings, the bathing rooms lay below a grass roof structure half buried into the hill-side. Each pool has a different temperature, and visitors travel in different dimensions between low and high temperatures. Different design treatments are given different sensory experiences, including even the sense of smell, including the sound processing of stone wall echoes. In different bath spaces, people’s skin touches the warm and moist stone, feeling the changes in breathing climate, temperature, humidity and light.
The gneiss is carefully coated with visually neutral mortar in bands of varying depths. The spars of the constituent mica and quartz in the stone are shown by different levels of polished smoothness. The stone below the water level appears dark and viscous, and translucent and desiccated above the main pools where the light originates from above. But the opposite happens in the pools illuminated from below. Hot and cold rooms are lined in terrazzo so that the mind of the bather is focused first on the water and then only on the surrounding area. It emphasizes the sensory experience brought by the interior materials and structure.

Since sensory studies incorporate a sensory approach to culture, the challenge here will give full weight to the role of the senses in cultural life. It also includes a cultural approach to the senses, where this suggests setting impacts and employments of the senses in their cultural context, particularly in how they are given and contribute to shareable meanings.

"How Wine Became Modern" was commissioned by the San Francisco Museum of Modern Art and exhibited in the museum in 2010. (10. 1) It is the first exhibition to consider modern, global wine culture as an integrated and richly textured set of cultural phenomena through the lens of design. The exhibition, which explores developments in the visual and material culture of wine over the past three decades, offers a way of understanding the roles that architecture, graphic design, and industrial design have played in wine’s transformation into a cultural phenomenon. Exhibits of wine-related design—historical artifacts, design objects, examples of wine culture in popular media, label design, glassware design, and even architectural models of vineyard-related architecture—are joined with newly commissioned artworks and multi-media presentations to reveal the commercial and global dimension of modern wine culture. These objects and commentaries, which also deeply probe concepts of viticulture and terroir (a theory of place, soil, climate), are combined with sensory installations: a slow drip of red wine falling from the ceiling, a "smell wall" that allows visitors to inhale from flasks of wine, an installation of bottles showing how the addition of oak chips changes the wine, and the roots and growth of an entire grape vine (Chronicle, 2010).

Craft beer Process & Culture

Craft beer is one of the representative cultures of Richmond. Richmond has a community of people united by a love of beer since its establishment in the early 18th century. With more than 30 craft breweries (and more on the way), it is also clearly why the Wall Street Journal said Richmond is "home to one of the region’s fastest-growing beer scenes." The history of Richmond beer culture dates back to more than 150 years ago. Richmond was the first location in 1935 to sell beer in a can ("The Richmond Beer Trail, n.d."). Richmond’s brewing history was marked by changes between boom and bust much like the city of Richmond.

Nowadays, more and more people are interested in craft beer. (11. 1) In addition to enjoying beer, people are eager to learn about beer culture, including beer’s raw materials, historical development and production process. Most breweries do not offer people an immersive participatory beer tasting experience. Every step of the brewing process affects the final flavor of beer. malt is the main raw material of beer. The variety of malt and the temperature, humidity and time affect the color, aroma and taste of beer. Wooden barrels can also bring different flavors to beer. In addition to the pure fermentation function, different barrels can bring unique aromas to beer. For example, some barrels may have been used to make other drinks, and even some were used to hold chocolate. These residual flavors will gradually infiltrate into the wine body during the process of still fermentation of beer, and finally get a special taste.

Because of different types of beer, the shape of the glass used must be considered. The first is the aroma. The glass with a wide mouth and an open glass will spread the aroma; while the glass with a narrow mouth will lock the aroma. Rich-flavored, unstrained beer is suitable for open-type glasses; complex-flavored beer is suitable for narrow-mouthed glasses. Furthermore, if you drink with a large-caliber wine glass, you can put the nose into the glass and enjoy the aroma of all beer.

Then there is the foam. Depending on the shape of the wine glass, the foam layer will be different. With a tulip-shaped wine glass, the foam will increase from the narrow part of the glass, showing a beautiful shape. If you use a flute-shaped glass, you can enjoy the bubbles slowly rising from the bottom. The shape of the mouth of the cup will affect the irritation of beer into the mouth, because it will affect the part of the tongue that is first touched by people. Depending on where you touch your tongue, your taste will be different, and your impression of beer will change.

Beer & Sensory Experience

People have opportunities to visit brewhouses to see the brewing process and enjoy the finished brewed beer in breweries. However, the sensory experience that most craft breweries bring to people only stays in the sense of taste. They can taste different
types of beers, but their sensory experience only stays in the beer itself. They only see the equipment and the repeated operation of the workers in the brewhouse and cannot participate in it to feel the full expanse of the craft beer culture.

Compared to industrial beer, people can get a very wonderful sensory experience in the world of craft beer. Good craft beer often has a beautiful appearance, a complex and pleasant aroma, a balanced and harmonious taste and a unique overall style. It will impact both the perception of beer and the impressive tip of the tongue.

Also, the craftsmanship of craft beer is very complicated, including malting, mashing, boiling, cooling and fermenting. (12. 1) Due to the freedom of choice of process and raw materials, the world of craft beer is very diverse. According to the classification guide of Beer Judge Certification Program, the current world beer can be divided into 34 categories and hundreds of styles. The smell, taste, body and aroma are different. To produce different flavors of beer, the main thing is the richer raw materials and the arrangement between them.

(Pallasmaa, 2012, p. 45). A rich sensory experience can inspire people’s curiosity and interest, and let people have a deeper understanding of the craftsmanship and make a deep impression on people.

Design Goals and Programming

By participating in the brewing process, people are able to appreciate craft standards and enjoy the craft beer. A fuller sensory experience may incite respect for beer culture and is also conducive to the inheritance and development of beer culture. People can learn about the local craft beer history, participate in the beer brewing process through vision, smell, taste and sound, absorb the knowledge of beer, such as raw material, classification, storage, tasting, identification and so on. During the process of experience and interaction, they could customize beers and even participate in the design of beer containers and packaging design, which allows people to experience a process from learning, production, designing to purchasing.

The design goal is to incorporate a multi-sensory tasting experience to awaken all senses. People could know and taste different types of beer through senses of vision, taste, hearing and touch by images, interactive devices, music, material and so on. From the sense of the human body, sight, taste, smell and touch, it stimulates the sensory functions of beer lovers at multiple levels, enabling consumers to understand the brewing process of beer more realistically and deeply.

The project will focus on the study of materials. Not only in the use of indoor space materials but also furniture and even brewing equipment. The materials not only bring people a good visual experience but also encourage people to interact, give people a sense of touch, smell and even hearing.

Combining beer-related design exhibits, including beer raw materials, brewing equipment, glassware, etc., with multimedia presentations and sensory devices, to explore the concept of beer brewing in depth. It will show people how malt changes the color, aroma and taste of beer, how different barrels add different aromas to beer and let people feel the fermentation of beer in interaction.

By creating a comprehensive experience space that integrates education, history, experience, production and entertainment, more beer knowledge is communicated to people. They can learn the difference of crafts and raw materials between different beer types, and how to taste and distinguish the quality of beer, which is conducive to people’s better choice of beer and improve the industry standards of the beer market.
THE THERME VALS
Peter Zumthor
Graubünden, Switzerland
1996

The project intended to create a cave or quarry like structure. Working with the natural surroundings the baths lay below a grass roof structure half buried into the hillside (ArchDaily, 2009).

The building embraces elements of heat, light and sound in different distributions and combinations. Each pool has a different temperature, and bathers travel between low and high temperatures. Different design treatments give different sensory experiences, including the sense of smell and the sound of echoes of the stone wall. In different bath spaces, people’s skin touches the warm and moist stone, and senses changes in breathing, temperature, humidity and light (ArchDaily, 2009).

The high contrast in the space is an important factor in the sensory experience of a bather. The combination of linear walls’ rhythm, light and shadow and closed and open spaces give people contrasting experiences. For bathers to fully understand the positive aspects of things, they must be allowed to understand the opposite. For example, to let bathers feel the light and open first, let them feel the darkness and closure first (ArchDaily, 2009).

In addition to high contrast, Zumthor also emphasizes the circulation that allows people to explore space. He mentioned: “Underlaying the formal layout is a carefully modeled path of circulation which leads bathers to certain predetermined points but lets them explore other areas for themselves.” With structural stone “tables” being so loosely assembled, the plan encourages the freedom of circulation for the bathers upon entering (ArchDaily, 2009).
The rhythmic spatial distribution, by controlling the local spatial landscape, maximizes the stimulating interest of exploration.

From a narrow space to an open space, it brings a strong sense of change, which emphasizes the concepts of release and compression in beer making.

Partial views through the space are controlled to create heightened interest.
Bathers move from dark areas to bright areas, and the high contrast of space light brings a strong contrast to people's visual experience.
The aim of the project is to merge the building with the rural landscape. The industrial complex seems to belong to the latter, thanks to its roof which is converted into a field of farmlands, overgrown with vines, and interrupted by two horizontal cuts along its outlines that give light to the interior and provide the building with a view of the landscape (ArchDaily, 2013). The winery’s interior is divided into two main floors. The lowest standards are for storing and producing wine, while the top-level include a museum, library, auditorium and wine tasting and shopping areas (ArchDaily, 2013).

The numerous facilities are displayed, so the visitor can watch and feel part of the production activities which are kept at the same time independent from the visitor’s itinerary. The design successfully integrates and segregates the production facility through elevated routes, so as visitors ascend through the complex from the terrace, they walk over and above the various production spaces (ArchDaily, 2013).

The interior of the winery is divided into two main storeys. The lowest levels are dedicated to the storage and production of wine, while the upper level contains visitor facilities that include a museum, a library, an auditorium and areas for wine tasting and shopping.
An analysis of winemaking as steps in a process was created to inform the layout of the production facility. The circles change in scale due to changes in volume and vessel size. For example, grape is smaller than fermentation tank, which is larger than a wine bottle.
These double-height cellars are arranged in three rows and are lined with terracotta on every side. Visitors are also exposed to the production spaces in the elevated tasting room, which cantilever out into the cellars.
precedents

SURLY BREWING MSP / HGA
Minneapolis, MN, USA
2013
50,000 ft²

Surly Brewing MSP is designed as a destination brewery in Minneapolis’s Prospect Park neighborhood. It combines brewery production and different public gathering areas. The concept of this project is based on transparency throughout, displaying the brewing process so that people can be immersed in the brewery experience within the building and garden (ArchDaily, 2015).

The Surly choreographs an entry experience to the front door of the building. Visitors are exposed to a portion of the brewing process in the “chamber” entrance with dramatic floor-to-ceiling walls of glass surrounding the cellar (ArchDaily, 2015).

Further into the city, there is an open beer hall with long tables for drinks and meals with the windows looking at the brewing house at one end and the beer deck and gardens at the other. On the western side of the beer hall, a powered glass wall (10-40 feet) lifts and slides to allow visitors to get to the patio, beer garden and amphitheater. At the upper level, space is divided into a more formal restaurant and an event center. The event center contains a prefunctional area and a bar has views of the beer and brewing space. Besides, the restaurant and the event space on the second floor with a view of the amphitheater and the gardens below (ArchDaily, 2015).

This project provides an overview of programs of a brewery with a large green space and would help with space planning (ArchDaily, 2015).

27.1 The concept of transparency runs through the entire project, and people can still see the activities of interior from outside.
The square choreographs an entry experience to the front door of the building. Visitors will be exposed to a portion of the brewing process in the “chamber,” entrance with dramatic walls of glass floor to ceiling surrounding the cellar.

The event center contains a prefunctional area and bar with views of the beer and brewing space.
existing building

INTERMEDIATE TERMINAL WAREHOUSE NO.3
3101 Wharf St, Richmond, VA 23223
Built 1937
30,652 SF

The building was once the storage place for raw sugar for cigarettes, which is a rare resource associated with Richmond’s important history as a thriving port on the James River. The city of Richmond, Virginia was founded at its location because of its port, and grew and thrived as a city since its port made possible the economical transport of goods. The building has become an abandoned haven for homeless people since 2007.

Selected due to:
• Space is large enough to meet the program requirements
• Close to the James River which contains the best beer-water in the country
• The James River Steam Brewery, the first large scale brewery in Richmond, was built in the south part of this building in 1866
• Open space for parking nearby and close to public transportation hubs
neighbourhood history

A. SHOCKOE BOTTOM
The neighborhood was once the center of Richmond’s commerce during the 19th century and began to decline in the 1920s. Now more vacant buildings in this neighborhood have been repurposed with residential dwellings and new ones have been built.

B. JAMES RIVER
The river acts as an edge, separating Shockoe Bottom from the Manchester neighborhood, and also a water path, connecting Richmond to other cities. Because of its port, Richmond was built at its site. Richmond has grown stronger in the city of James Falls because its ports make economic cargo transportation possible (Pool, 2008).

C. JAMES RIVER STEAM BREWERY
The James River Steam Brewery was located in the south part of the building. It was once operated by David G. Yuengling, Jr., who attempted to bring German beer to the people of the South. The recent recognition of Richmond’s beer scene is putting the spotlight on this brewery that dates back 150 years (Gorman, 2016).
building history

A. LOCATION
The building is an iconic landmark associated with Richmond’s vital port on the James River. It sits along the James River beside Main Street and stretches on pillars over Dock Street and located between Rockett’s Landing and the City Dock (Pool, 2008).

B. HISTORY
It was built in 1937 and used to be the warehouse for commodities imported (such as sugar from Cuba) and exported (such as tobacco) (Pool, 2008). It also linked Richmond with Havana harbor and Pennsylvania chocolate makers. In 1939, 1.5 million tons of sugar passed through the warehouse, some of which were transferred to the railroad and transported to Hershey, Pennsylvania for candy. Now it has become a haven for homeless people since 2007.

C. STRUCTURE
The building is built with steel-reinforced concrete. Some plans indicate that reinforcing steel bars was used in all concrete forms, including the concrete piers and flooring (Pool, 2008).

43. 2  Detailed Blueprint Plans

43. 1 Intermediate Terminal #3 in 1944
photographic studies

Northeast

Southeast

Southwest

Northwest
According to the infographic, most of the people who drink craft beer are white men and their annual income is mostly between 100K-149.9K.
site visit

ARDENT CRAFT ALES
3200 W Leigh St, Richmond, VA 23230
Area: 4,368 ft²

Furniture Type
The taproom is divided into outdoor and indoor spaces with different types of tables and chairs.

Special f&f
Beers are served over a counter.

Adjacency- Walkin Comp/ Brewery Space
Walk-in Comp - It is the place to compensate for beer and connect taps of the taproom.
Brewery Space - It guarantees beer supply of taproom which also offers an open view into the brewery.
site visit

HARDYWOOD WEST CREEK
820 Sanctuary Trail Dr, Richmond, VA 23238
Area: 60,000 ft²

The West Creek taproom provides views of the brewhouse, fermentation hall, quality assurance lab, ingredient processing area, and packaging hall. There are shuffleboard, arcade games, board games and two regulated bocce courts to entertain the entire family.
brewing process

milling

mashing

boiling

cooling

fermentation
project statement

The project is to create a maker space of craft beer, which integrates education, production and entertainment. People can know about the local craft beer history, have a great tasting experience and participate in the brewing process through vision, smell, taste and sound.

concept statement

The project celebrates beercraft. The brewing process includes malting, mashing, boiling, cooling and fermentation, which is a process of repeated compression and release, and also a strong sense perception. The process of transformation informs the strategies within the project to heighten the sensory qualities of spaces.
High contrast brings people a strong sense of change. The combination of light and shadow, closed and open, hot and cold give people great contrast experiences.

- **diagrams**
  - ceiling height
  - expansion & contraction
  - bright & dark
  - visible & invisible
  - warm & cold
  - quiet & noisy
code summary

GROSS AREA
Main Floor: 15,326 SF
Second Floor: 15,326 SF
Total: 30,652 SF

NET AREA: 18,400 SF
OCCUPANT LOAD: 449
assuming 50% female, 50% male, occupant load used to determine necessary plumbing fixtures

PLUMBING REQUIREMENTS
Toilets
female: 1 per 75 (IBC)
224 females: 3 fixtures
male: 1 per 75 (IBC)
224 females: 3 fixtures
Water Fountains: 1 per 500 (IBC)
449 occupants: 1 fountain

RECEPTION
A place for welcoming and providing space maps and visit information. It aids in the orientation of the occupants and facilitates entry into the spaces beyond.
Occupancy Type: A-3
Max. Occupancy: 30
Area: 900

BEER ACADEMY
A time tunnel demonstrating knowledge of beer and history of Richmond breweries. A variety of multimedia interactions encourage people to learn while playing. After learning the basics and history, you will be awarded a certification and qualified to access to the next space.
Occupancy Type: A-3
Max. Occupancy: 40
Area: 1200

TAPROOM
A taproom for challenging senses and enjoying beer. Different types of beer are displayed to people through senses of vision, taste, hearing and touch through images, interactive devices, music, material and so on. After looking for a favorite beer through a multi-sensory experience, people could sit down to enjoy a beer.
Occupancy Type: A-2
Max. Occupancy: 160
Area: 2,400

CONNOISSEUR ROOM
A private connoisseur space for tasting with a personal guide. People could reserve a private connoisseur room for a tasting experience like no other. The expert staff will take them on a journey leading right to the heart of the beer. Exquisite space and private professional guidance give beer lovers an unforgettable experience.
Occupancy Type: A-2
Max. Occupancy: 32
Area: 1600

QUALITY ASSURANCE LAB
A space to ensure quality and consistency of beer.
Occupancy Type: B
Max. Occupancy: 12
Area: 600

COLD STORAGE ROOM
A space for storing keg, hop and serving vessels with low temperature.
Occupancy Type: S-2
Max. Occupancy: 16
Area: 800
DRY STORAGE ROOM
A space for storing grain and malt.
Occupancy Type: S-2
Max. Occupancy: 20
Area: 1,000

BREWERY
A space for customizing your own beer. This is a space where people could learn and participate in the brewing process.
Occupancy Type: S-2
Max. Occupancy: 58
Area: 7,000

PACKAGING ROOM
A space for people to participate in the design of beer containers and packaging design.
Occupancy Type: S-2
Max. Occupancy: 5
Area: 600

MULTI-PURPOSE SPACE
Flexible space for lectures, presentations, parties and collaborative meetings.
Occupancy Type: E
Max. Occupancy: 50
Area: 1,000

ADMINISTRATIVE OFFICES
A space for executive staff to conduct research and development for the brewery and hold private meetings.
Occupancy Type: B
Max. Occupancy: 16
Area: 1,000

STAFF ROOM
A space for staff to take breaks, have lunch and store personal items.
Occupancy Type: S-2
Max. Occupancy: 10
Area: 300

BEER GARDEN
A variety of unique events and festivals that unite the community and support local artists, makers, and musicians will happen in rooftop.
Location: Rooftop
Area: 4,500
color expansion

Photograph by Wild Wonders of Europe
Photograph by Richard Woldendorp
milling

The milling in beermaking informs the design of the reception area. As the first step, it is about the processing of ingredients. In the space, the curves used in the interior remind people of the twisting wheat. The space is wide, warm and welcoming, making people feel as if they are in the wheat field.
The wallpaper made from malt and exudes the aroma of malt, which encourage people to touch.
mashing
Mashing is to mix malt with hot water to form wort. A new chemical reaction occurred. Many sensory interaction devices are placed in this space. Reflective materials are used to express a sense of future and technology.
beer wall
Arrayed by hue in clear glass bottles, the wall serves as a colorful reminder of the vast continuum of beer. It’s like an alcoholic swatch.

beer speaker
People can pick up the ball on the device to smell and listen. Each one emits a scent of beer and also plays music inspired by different types of beer.

beer fountain
The water mist of beer is emitted from the device. People can taste the flavor of different beer with their tongues.

stainless steel

ceramic tile

concrete

mirror

paint

view from front stair
Boiling is revealed in airy, exuberant zones, like the taproom. It is a very intense process. The intense taste and smell experience people have in the busy and lively tasting room echoes the boiling in beermaking.
Fermentation is a slow, gradual process. Brewery space is a visible but enclosed space. One wall facing the taproom is transparent glass, and the other walls are translucent. People can see the activities inside the brewery more and more clearly when walking from entrance to taproom.
People can see how the beer is generated in tanks.
Cooling is revealed in enclosed, intimate spaces, like the connoisseur room. Hot water needs to be cooled with ice. Similarly, dark colors can be lightened by mixing with light colors. The light-colored glass covers the dark glass to express the cooling in beermaking.
east connoisseur room

1. leather
2. paint
3. carpet
4. wood panel
5. marble
6. cooper
bibliography


image credits

Adapted from
6.1 https://gbphotos.photoshelter.com/image/I0000NxTjk4A5rfg


41.2 http://allaboutbeer.com/article/yuengling-janes-river-steam-brewery/


54.1 & 55.1 https://infogram.com/who-drinks-craft-beer-the-infographic-1g143mn741n42zy

72.1 https://www.nationalgeographic.com/photography/photo-of-the-day/2012/9/landmannalaugar-iceland-haftberg/

74.1 https://www.kensculture.com/articles/richard-woldendorp-abstract-earthslider-17