

# The Future of Living

As the health of our planet continues to be one of the most pressing concerns for Australians, it's clear that businesses and consumers alike have a shared responsibility in addressing environmental issues.

As insurers, investors and asset managers, the Allianz Group worldwide plays a role in managing the associated economic and social risks imposed on our planet, and to promote the transition to a climate-friendly economy. We also know that Australians are more sustainability conscious than ever before and many are looking for inspiration and education about sustainable living solutions in all areas of life. These factors led us to commission the *Future of Living* Report, in partnership with University of Technology Sydney (UTS). The *Future of Living* Report brings to life what Australians can expect to see in sustainable homes of the future and how the socio-economic and environmental factors impacting us today will transform the way we live.

The Report is just one step in supporting our goal and responsibility to help educate, support and inspire Australians to live sustainably.

We hope you enjoy reading.

***Rachael Poole, General Manager of Home and Lifestyle at Allianz Australia***

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## Executive Summary

Millennials and Gen Z will put sustainability first when living in and building their future homes. The traditional family home model will be deconstructed; outdoor and indoor living will be combined; an eclectic, new interior decorating style created; and the impact of harsh financial realities may lead to a 'sharing economy' approach to housing.

The *Future of Living* report, commissioned by Allianz in partnership with UTS, has revealed how the socio-economic and environmental factors our younger generation are navigating, will affect house design and home-living.

The *Future of Living's* key findings include:

- **Sharing Life:** With the sharing economy taking over everything from accommodation to cars, we can expect to see this trend transforming our concept of 'living arrangements'
- **Managing Climate:** Sustainable materials and neutral carbon footprints no longer be considered alternative thinking
- **Naturalised Interiors:** Native sustainable plants will take over Australian homes, inside and out
- **Reusing New Materials:** Timber is the material of choice for Aussie homes, over brick
- **Austerity Chic:** Mismatched furniture made from a mix of flat-packs and second-hand stores is the leading style of modern homes

The *Future of Living* Report has uncovered two structures in which these notions will come to life.

1. **The *Future of Living* hut** features an open plan — a flexible space composed with no facade, an exposed structure, curtains, plants, furniture and rocks - a true representation of bringing the outdoors, in.
2. **The *Future of Living* tower** maintains the qualities of the hut and translates them to the city. Staggered interior spaces, neither inside nor outside, provide many possibilities for how each room can be used.



Sharing Life



Managing Climate



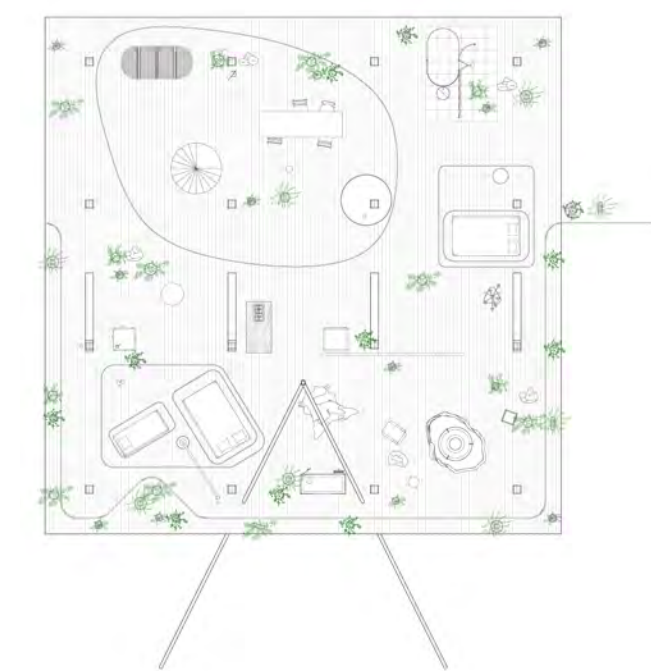
Naturalised Interiors



Reusing New Materials



Austerity Chic



Future of Living Hut Blueprint



Future of Living Tower Blueprint

## The Future of Living







**Introduction**

How do Australian Gen Z and Millennials, who are currently shaping their future life, imagine their home? What are the domestic values and hopes of two generations that had their coming of age in the Information Age, and who naturally embrace digital technology and social media? What do size, scale, material and technical innovation mean for a climate-conscious group of people that have lived through COVID-19 confinement, an endless real estate bubble and recurrent economic crises?

The research indicates five transversal values that Gen Z and Millennials share.

**1. Sharing Life**

Unaffordable real estate markets and the dissolution of the nuclear family have reorganised the traditional Australian home. New forms of sharing life, based on alternative ownership models, question who might cohabit and how they could arrange a life together.

**2. Managing Climate**

Sustainability, recycling, environmental awareness, and carbon footprints are now everyday concerns. Australian Gen Z and Millennials fight climate change from the interiors of their homes.

**3. Naturalised Interiors**

Gen Z and Millennials welcome nature in. Challenging traditional divisions between the garden and house, between interior and exterior, and between nature and artifice. They imagine their domestic spaces as part of Australian landscape and the biosphere at large.

**4. Reusing New Materials**

The phenomena that has flooded our lives with hipster bread and barber razors has reached the house. Natural materials that combine nostalgia with contemporary models of consumption define Gen Z and Millennials' preferred material palette.

**5. Austerity Chic**

Instead of highly fashionable and trendy furniture coming in and out of style, homes will be decorated with flashes of exquisite design as well as a mix of ad-hoc furniture sourced from IKEA and Gumtree. This will be a new type of sophistication focused on function over matching pieces.

*Future of Living* is a proposal for a home that responds to these needs, hopes, and aspirations. Designed around five main areas of research: sharing life, managing climate, naturalised interiors, reusing new materials and Austerity Chic, the project aims to construct the Australian house of the future for Gen Z and Millennials.

**How We've Gotten Here**

The first section of The Report is an atlas of precedents that explores how architects have dealt with similar challenges over the last ten years. Spanning between Australian examples and international sites, the list of projects outlines the state-of-the-art in contemporary domestic architecture.

**Where We're Going**

The second section of The Report includes the blueprints and images of the *Future of Living*. This style of living has been presented as both a stand-alone home and how it could live as a tower in a city context. The domestic desires of Gen Z and Millennials are complex. The childhood memories of their parents' single family house compete with the seductive powers of urban life.

**The Future of Living**

# Notion

# 1

# Sharing Life



**Notion 1**

In Sydney, hundreds of thousands of people live in shared apartments. Students, workers, and young professionals are embracing how this style of living includes sharing costs, life and space. Sharing a home is more common among Gen Z and Millennials. Friendship, new family models, informal agreements, and collective dinners outline models of ownership yet to be translated to the marketplace. According to the research, two models of shared ownership have emerged in the last few years.

1. The service provider model substitutes traditional ownership for a membership model in which users pay a weekly fee for the amount of domestic space they use. Membership contracts define levels of access, facilities and personal space. Co-working experiments in recent years have laid the foundations for the emergence of this model in the domestic realm.
2. Collective ownership eliminates the sole owner and distributes initial investment, risk and decision making among a group of members. Cooperatives like the Commons in Melbourne or La Borda in Barcelona lead the way in exploring how architecture can facilitate negotiations between the members of a cooperative. These successful projects also prove that participatory processes not only help to customise the homes of each member; they also develop community bonds and define, and often increase the amount of space that members agree to share. This could mean either a communal kitchen or bathroom, or instead private.

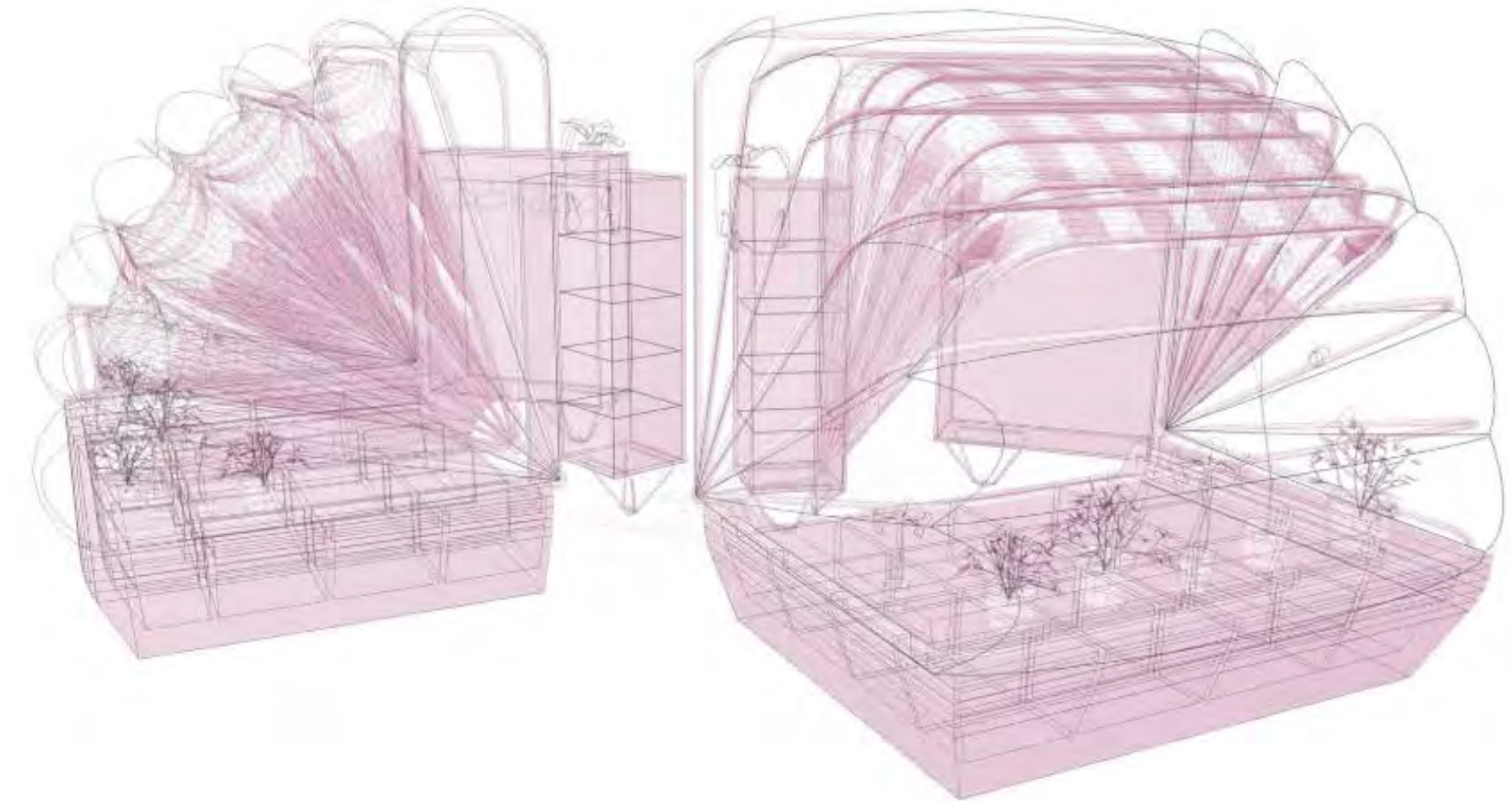
The architecture of the *Future of Living* makes it suitable for both ownership models. Thermal curtains, translucent enclosures, transparent veils, recycled fabrics, stone partitions, timber studs, and metal sheets divide its open plan and allow for a wide range of spaces, with various levels of privacy and publicness. These temporary partitions facilitate everyday activities and adapt to its changes. Their effortless flexibility suits the demands of ordinary, contemporary life.



A Co-Working Space

**Sharing Life**



**Case Study 1A****Office for Political Innovation Rolling House for the Rolling Society (2009)**

The *Rolling House for the Rolling Society* explores how shared apartments challenge traditional notions of house-sharing, ideas of privacy and family models. Focusing on the life of its inhabitants, it illustrates the implications of this model of ownership.

For Gen Z and Millennials, shared apartments are typically their first home away from the family home. This experience shapes their domestic aspirations.



**Case Study 1B**

La Col  
Cooperativa d'habitatge La Borda  
(Barcelona, Spain, 2018)



The *Cooperativa d'habitatge La Borda* proves how participatory design is an essential part of a housing cooperative. Design workshops are the means to adapt each unit to the needs of its users but they also define the amount of space the community is willing to share.



The architecture of a cooperative is a system, not a finished design. It welcomes the user's feedback during the design process and is responsive to future changes.



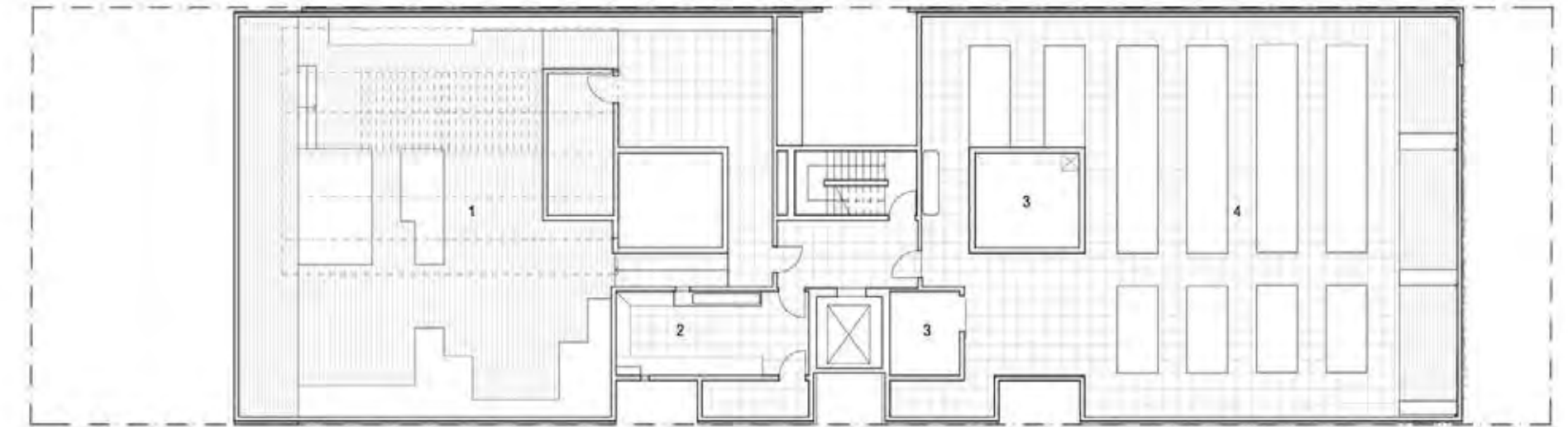
Case Study 1C

Breathe Architecture The Commons  
(Melbourne, Victoria, 2013)



LEGEND

- 1 Winter Deck
- 2 Communal Laundry
- 3 Tool Shed
- 4 Productive Garden



Roof Deck  
1:200



The experience of *the Commons* in Melbourne, a sustainable, shared-ownership building, shows how alternative models of collective development and ownership are viable in the Australian context.

The success of Nightingale Housing developments, following the Commons model, demonstrates that a public, hungry for this type of project, exists and is ready to join.



# Notion

# 2

# Managing Our Climate

**Notion 2**

In less than four months Gen Z and Young Millennials have endured the Australian bushfire crisis and the COVID-19 global pandemic. They have also grown up aware of climate change. They rightfully, and finally, begin to question humanity's relationship with Earth, predominantly our consumption of energy and dependence on carbon.

1. Energy consumption and comfort levels are closely linked. Temperature, light intensity, relative humidity, noise levels and air velocity define climatic comfort. These conditions vary throughout the year. Inside a house, how much we control our climate defines how much energy we consume. To reduce energy consumption, instead of acclimatising an entire house, we can attain comfort by ensuring that only selected areas of a house enjoy a stable climate.
2. The rest of the house can use a combination of passive and natural means to adapt to changing climate conditions. For example, Sydney's summer period requires an architecture that reduces heat (by increasing shading), decreases humidity (with absorbent materials and sheltering from rain) and ameliorates polluted air (by adding plants that filter the air and reduce environmental noise).

**Managing Our Climate**

As a result, the *Future of Living* does not have a unified facade (typically, the facade represents up to 30 per cent of the overall construction cost). Rather, it has multiple layers that protect small, acclimatised spaces. Each layer plays an active role: Plants, thermal curtains, polycarbonate, stone, wood, air, heating, and cooling appliances adjust to maintain the comfort of the home. They require the dwellers to actively participate in the control of the house's internal climate and by extension, in the management of energy consumption.



Sauna (2014) Meyer-Grohbrügge & Chermayeff with Arno Brandhuber



## Case Study 2A

Lacaton Vassal  
96 logements, Chalon-sur-Saône  
(Chalon-sur-Saône, France, 2016)



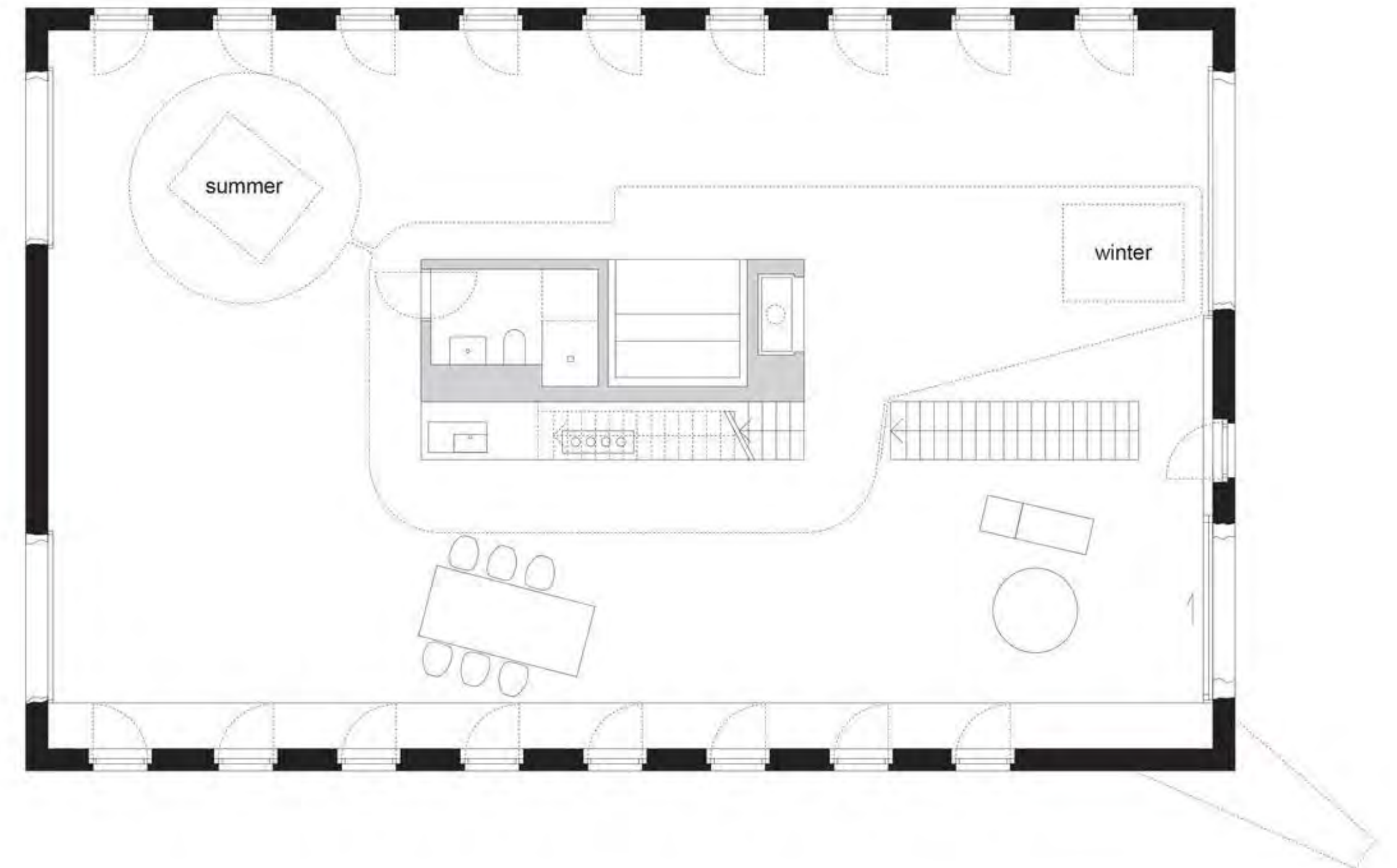
*96 logements, Chalon-sur-Saône* uses industrial materials like corrugated polycarbonate and exposed concrete to optimise the climatic performance of the housing unit. The concrete collects heat during the day and releases it during the night. The polycarbonate facade opens during the hot season and closes to become a greenhouse during the cold months.

The combination of passive climatic systems and traditional active solutions are essential to improve the house's energy performance.



## Case Study 2B

Brandhuber+Emde, Burlon  
Antivilla  
(Potsdam, Germany, 2014)



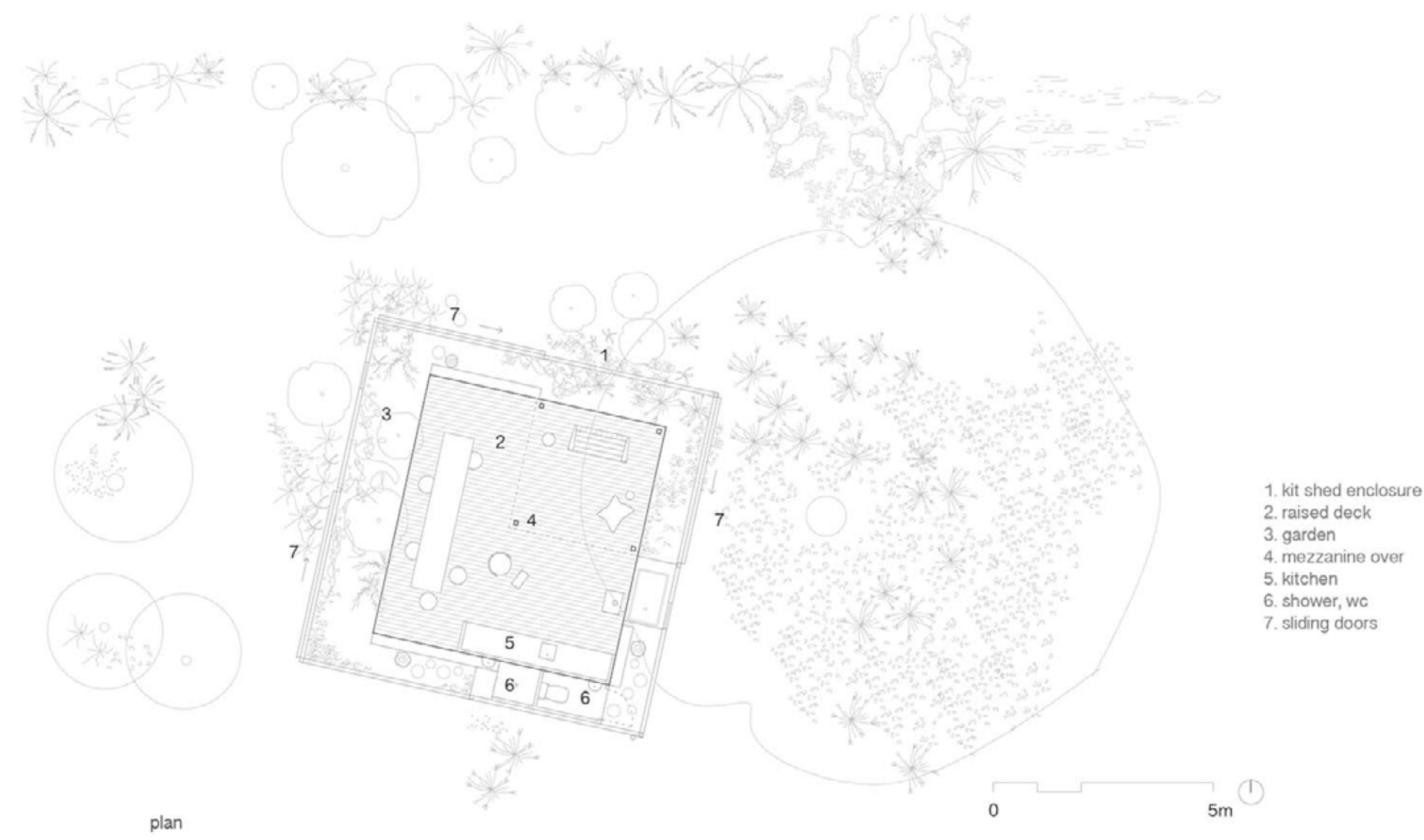
Only a third of the *Antivilla* total area is acclimatized by mechanical means. Its warm core provides climatic comfort to some areas such as the toilet, the winter bedroom or the kitchen. The remainder of the house hosts activities that permit variable temperature and humidity.

Defining the acclimatized areas of the house by activity optimises climatic performance and energy consumption.



Case Study 2C

Barraco Wright  
Garden House  
(Westernport, Victoria,  
2014)



The *Garden House* illustrates how the climatic solutions tested by Lacaton Vassal in France or Brandhuber in Germany can be successfully translated to the Australian Context.

The mild climate of our context allows for even more radical solutions than these European experiments.



# Notion

# 3

# Naturalised Interiors

**Notion 3**

Gen Z and Young Millennials recognise their home as an extension of the natural environment. They welcome birds, plants, rocks, micro-organisms and organic matter in. This empathic relation with the biosphere is evident in their domestic life, as the house becomes the site to connect with multiple species. Caring for plants and working the soil are activities that mediate between the world of insects and birds, the scale of the human body and the territory. The care is reciprocal. The plants and the soil are essential for the house's climatic performance. They are a diffuse barrier that reduces wind velocity, blocks direct sun, screens excessive noise and filters pollutants. Local species benefit from local environmental conditions and perform essential roles in controlling interior climates. Specifically, species endemic to the ubiquitous heathland that fringes Sydney's coastline are well adapted to the climate and perform similar roles within their native ecosystem.

**Naturalised Interiors**

1. Well adapted to periods of drought and long summers, species such as *Grevillea Oleoides*, *Banksia Ericifolia*, *Casuarina Equisetifolia*, *Callistemon 'silver cloud'* will tolerate the pressures of a warming climate.
2. A move away from the facade that demands species that thrive in lower light levels and the increased humidity induced by domestic programs such as bathing, cooking and washing. This microclimate, akin to the Sydney region's temperate rainforests, could host such species as *Cordyline stricta*, *Lomandra longifolia*, *Schefflera actinophylla*, Staghorn Fern (*Platycerium spp.*).

The *Future of Living* acknowledges the appeal of plants for Gen Z and Young Millennials. Flowering plants bring seasonal cycles, blooming and dormancy into the domestic realm along with a diverse ecosystem of pollinators and microorganisms. It also introduces thermal mass through a palette of local rocks, minerals and organic materials. The house becomes a complex ecosystem that includes the architecture, its users, organic and inorganic matter. Native plants, rocks and fauna replace traditional insulation and reaffirm a connection with local ecologies.



Photography by Tanya and Zhenya Posternak

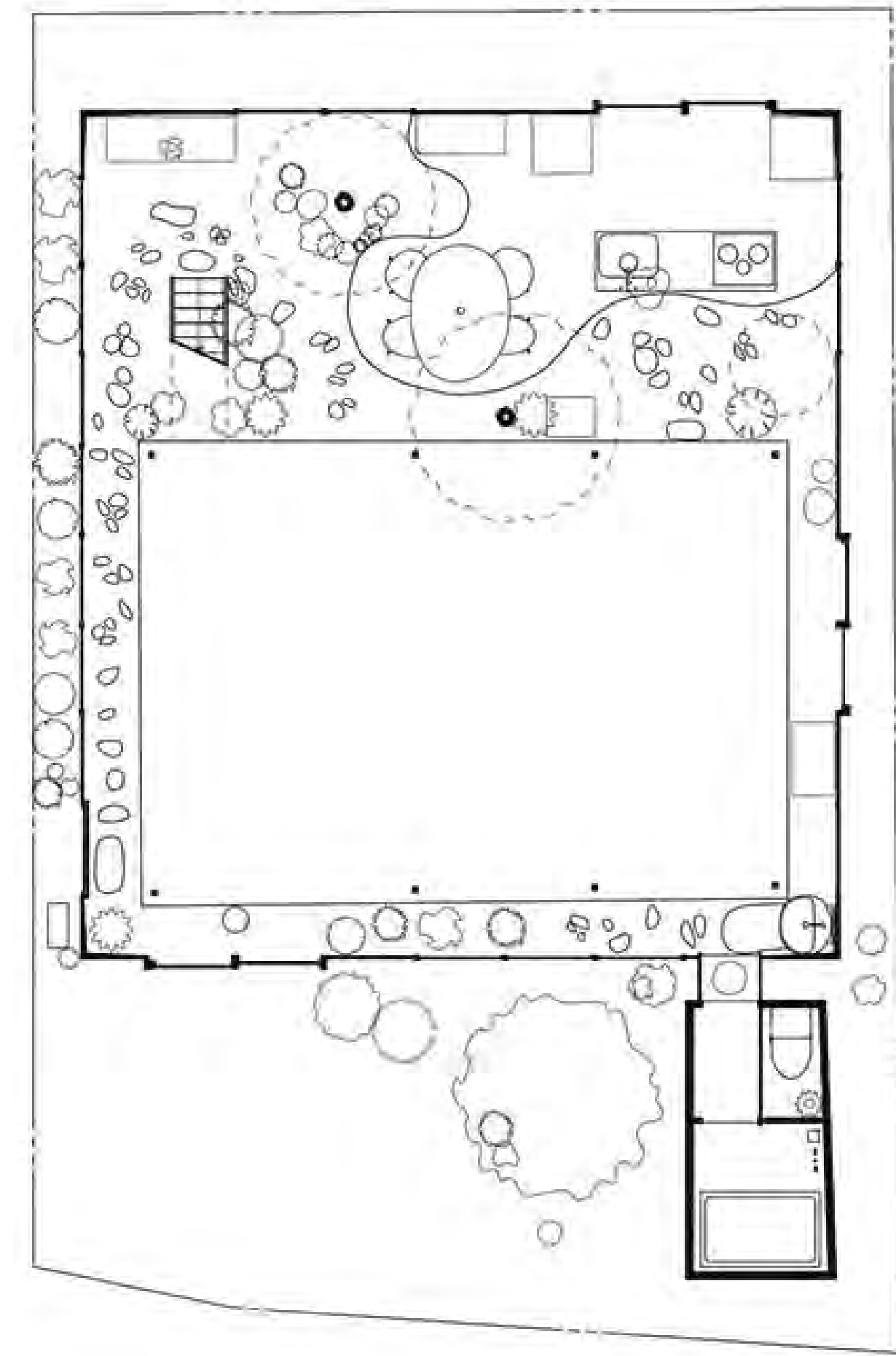


## Case Study 3A

Junya Ishigami  
House Designed for a Young Couple in  
Tokyo (Tokyo, Japan, 2013)



*House Designed for a Young Couple in Tokyo* welcomes the garden into its living room, literally. On the interior a miniature forest grows in the corner, becoming an organic playground for its inhabitants.

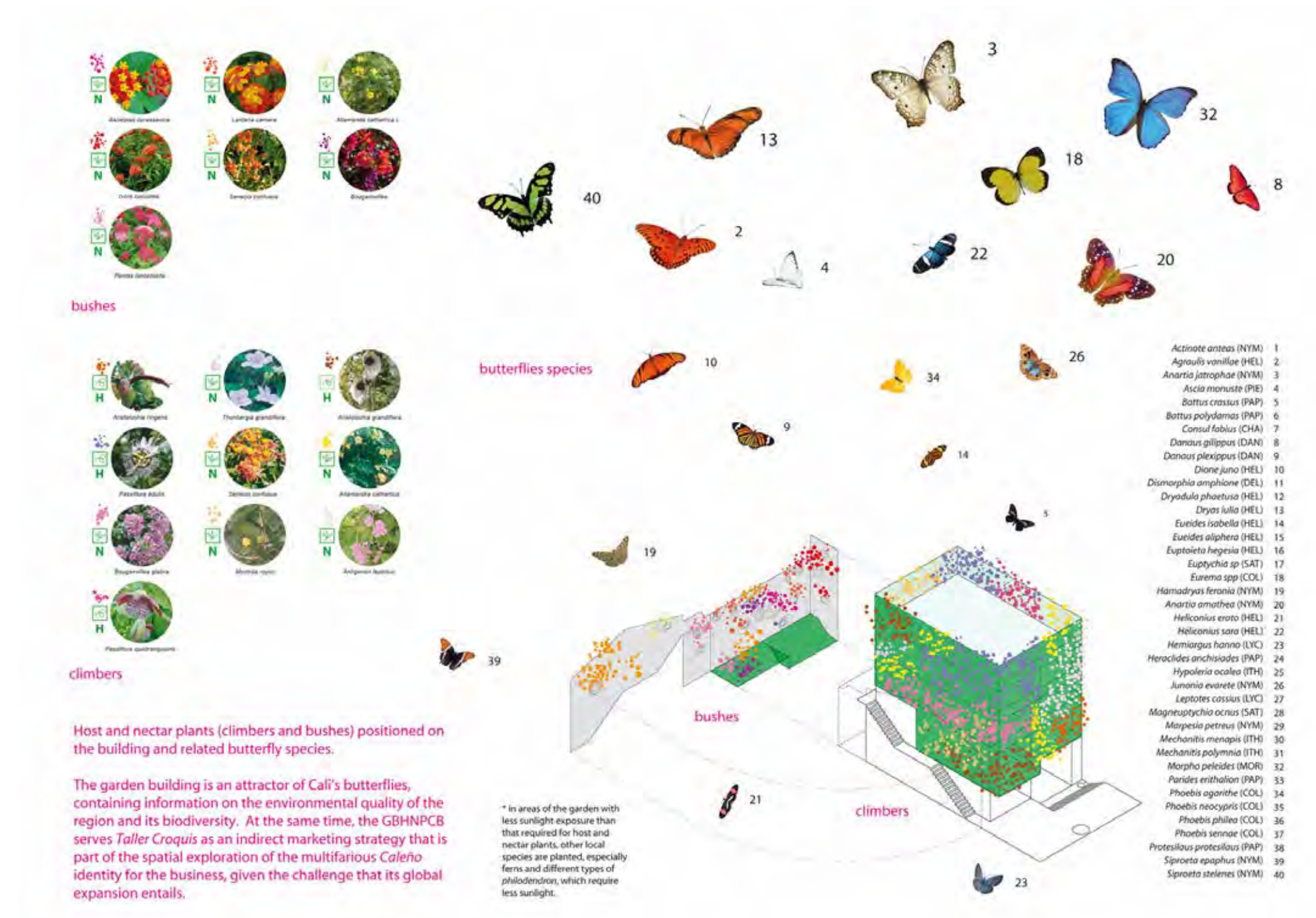


A house designed as an extension of the biosphere inserts a microcosm of nature into the deeply artificial environment of the urban dwelling.



Case Study 3B

Edificio Jardín Hospedero y Nectarífero  
HUSOS  
(Cali, Colombia, 2012)



The *Edificio Jardín Hospedero y Nectarífero* uses local vegetation and an open facade to ensure that the endemic butterflies of Cali use the building as much as its human inhabitants.

Buildings do not need to displace local nature but rather construct a symbiotic relationship with it.

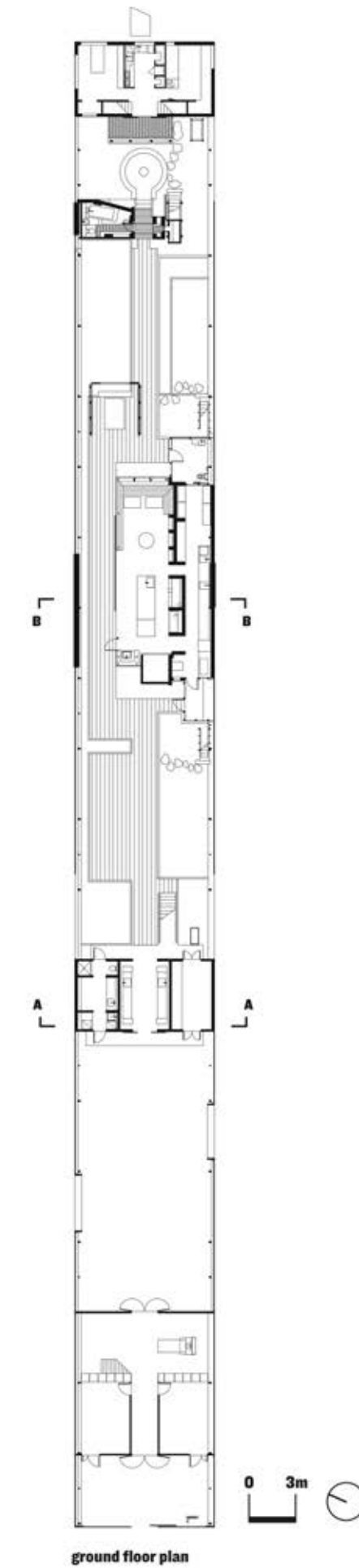


## Case Study 3C

Partners Hill  
 Daylesford Longhouse Residence & Working Farm  
 (Daylesford, Victoria, 2018)



The *Daylesford Longhouse Residence & Working Farm* reimagines the agricultural shed as a home in which the line separating garden and living quarters no longer exists.



Learning from local technologies but also from local precedents like Robin Boyd's Featherston House, The *Daylesford Longhouse Residence & Working Farm* continues the lineage of house conceived as extensions of the Australian landscape.

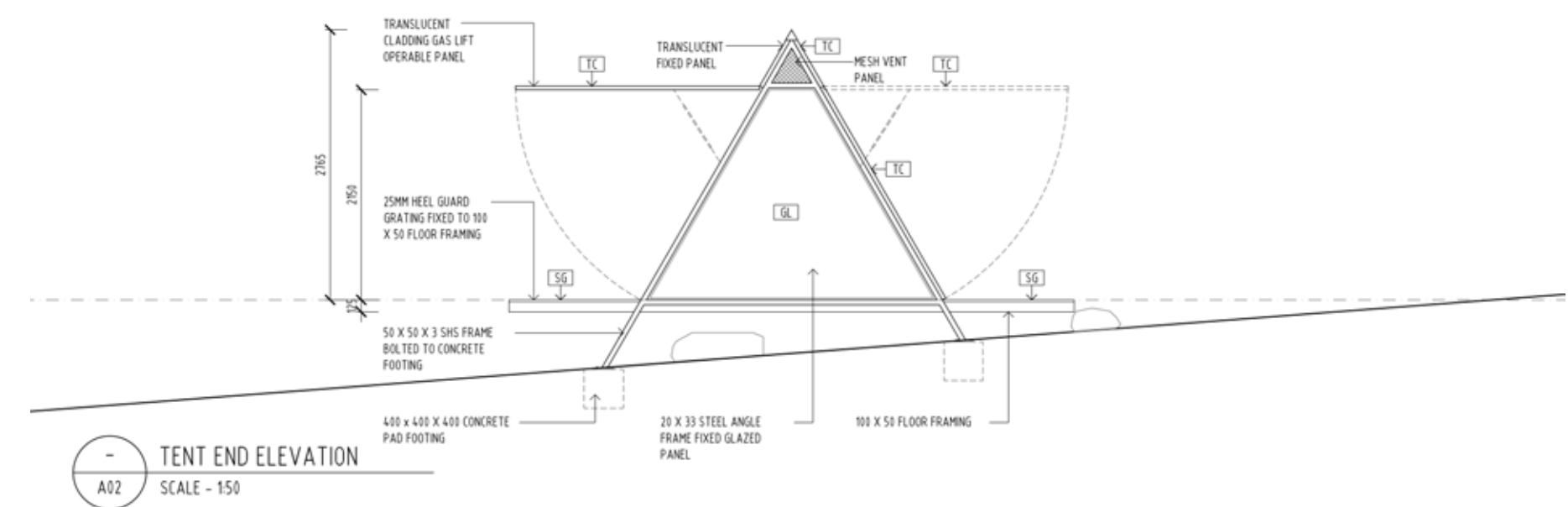


## Case Study 3D

Richard Stampton  
 Bush Camp  
 (South East Victoria, 2018)



*Bush Camp* disperses the functions of the traditional house in a series of pavilions in the middle of the bush. It proposes a house that takes the shape of a campsite.



Inverting the logic of the *Daylesford Longhouse Residence & Working Farm*, *Bush Camp* assumes that the Australian land is already a home in which only a few limited interventions are required to accommodate human life.



# Notion

# 4

# Reusing New Materials



**Notion 4**

The predicted growth of the Australian population in the coming decades will accelerate housing construction and increase its carbon footprint. Gen Z and Millennials' growing environmental awareness calls for a shift toward more sustainable standards in the building industry. As a starting point, we need to change the way we build by shifting towards new construction systems and new forms of material reuse.

1. Mass timber embodies this generation's new paradigm of construction, much like steel and concrete did in the rise of modernity. Timber has a litany of benefits including carbon sequestration, lower embodied energy than steel and concrete, psychological benefits for inhabitants and more streamlined on-site construction.
2. Recycled or reused materials reduce carbon footprint by stimulating a circular economy. Through a practice of material reuse, the city itself is considered as a repository, not just of materials but also of vintage furniture, second-hand appliances and as-found objects.

The *Future of Living* uses standard cross laminated timber grid (CLT), locally produced in Tasmania, as the main structural component. The skeleton, designed to last 100 years, is balanced with other structural elements that add horizontal stability. CLT is a relatively new technology that has emerged most prevalently in Europe and North America. In recent years, the market for CLT in Australia has grown considerably and Australian-based manufacturers are currently making the shift toward local production of the material using the native species *Eucalyptus Nitens*.

With the ability to bypass the economic and environmental impacts of global importation, a move to local production positions CLT as a sustainable option for the next generation of buildings in Australia.

The *Future of Living* also embraces material reuse. Apart from collecting and recycling construction materials and obsolete objects, the proposal imagines material reuse as part of new assemblage-constructions that combine unlikely elements and assign them new purposes. This approach addresses urgent questions of sustainability. It also recognises Gen Z and Millennials' different view of history and technology as a resource for future innovation in the domestic realm.

**Reusing New Materials**

Max Lamb and Gemma Holt's  
live-work space

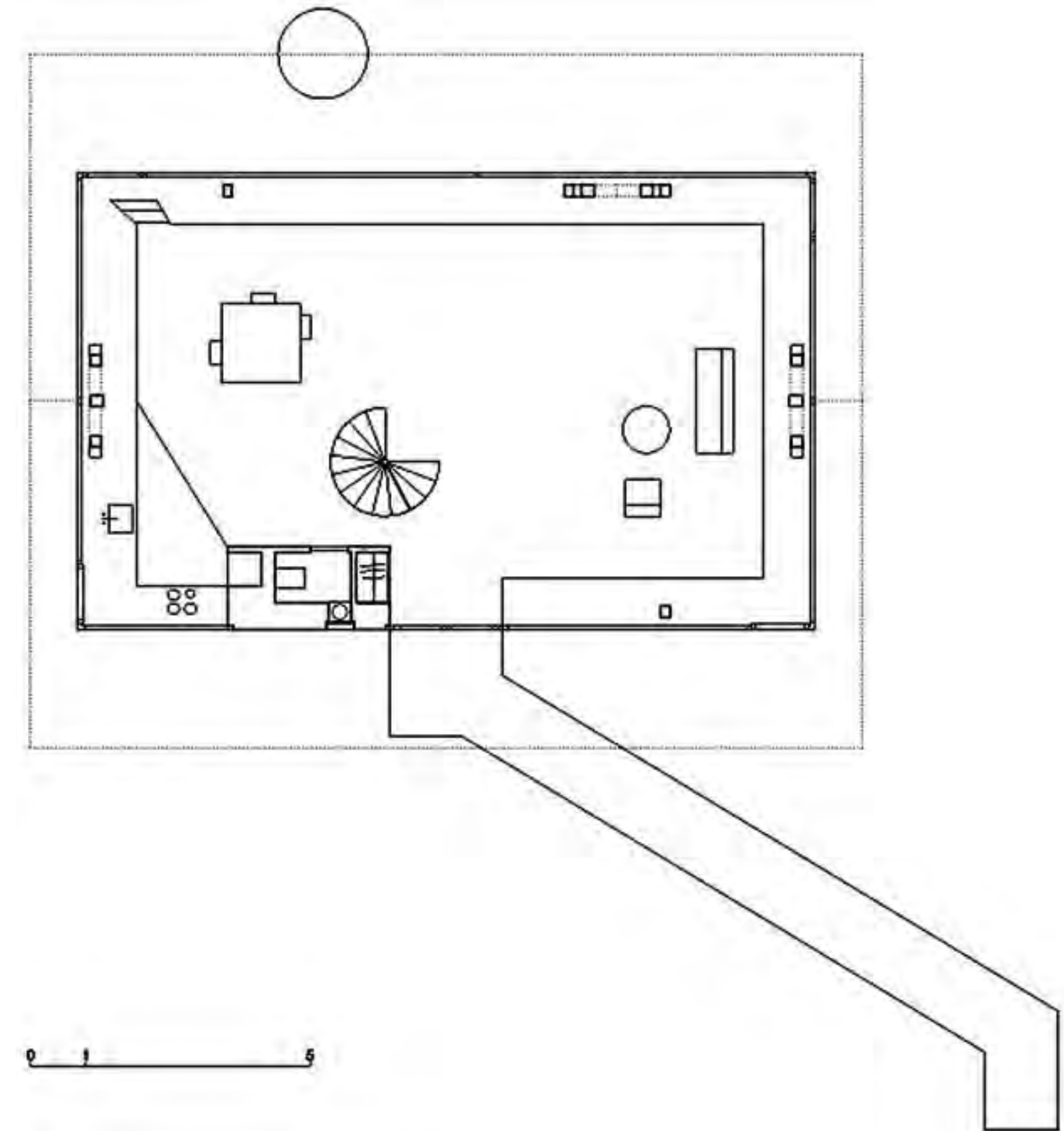


## Case Study 4A

Pascal Flammer  
House in Balsthal  
(Balsthal, Switzerland,  
2013)



*House in Balsthal* is a perfect example of the possibilities of CLT technology in the domestic space. The structure, pavements, slabs and furniture of the entire building use the same material.



Wood, a carbon neutral and sustainable material is a crucial alternative for the future of construction.

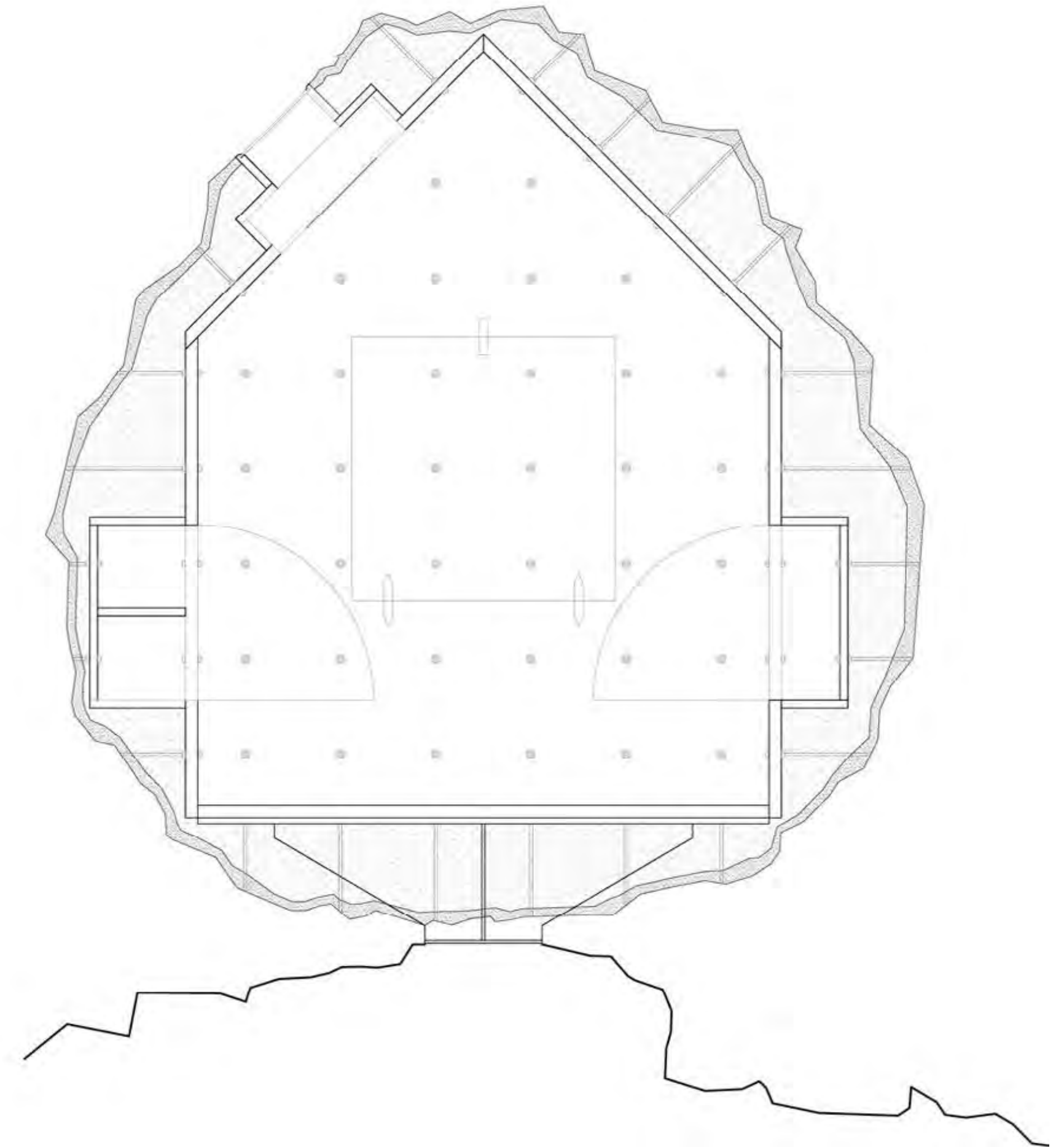


## Case Study 4B

Leopold Banchini  
**ANTOINE**  
(Verbier, Switzerland, 2014)



*ANTOINE* is a hollow artificial rock that hides a wooden cabin inside. The building unveils the sophisticated logics behind CLT, a hybrid material both natural and artificial.



As Gen Z and Millennials do not subscribe to the traditional split between nature and artifice, their houses (and the materials they are made of) follow the same logic.



## Case Study 4C

Minimod Curucaca / MAPA  
(Curucaca, Brazil, 2018)

*Minimod Curucaca* is a CLT home in a rural area in Brazil that illustrates the availability of CLT technology and the possibilities of prefabrication. Built on a factory and assembled on site in three days, its interior differs from the limited dimensions and grim atmosphere often associated with prefabricated housing.



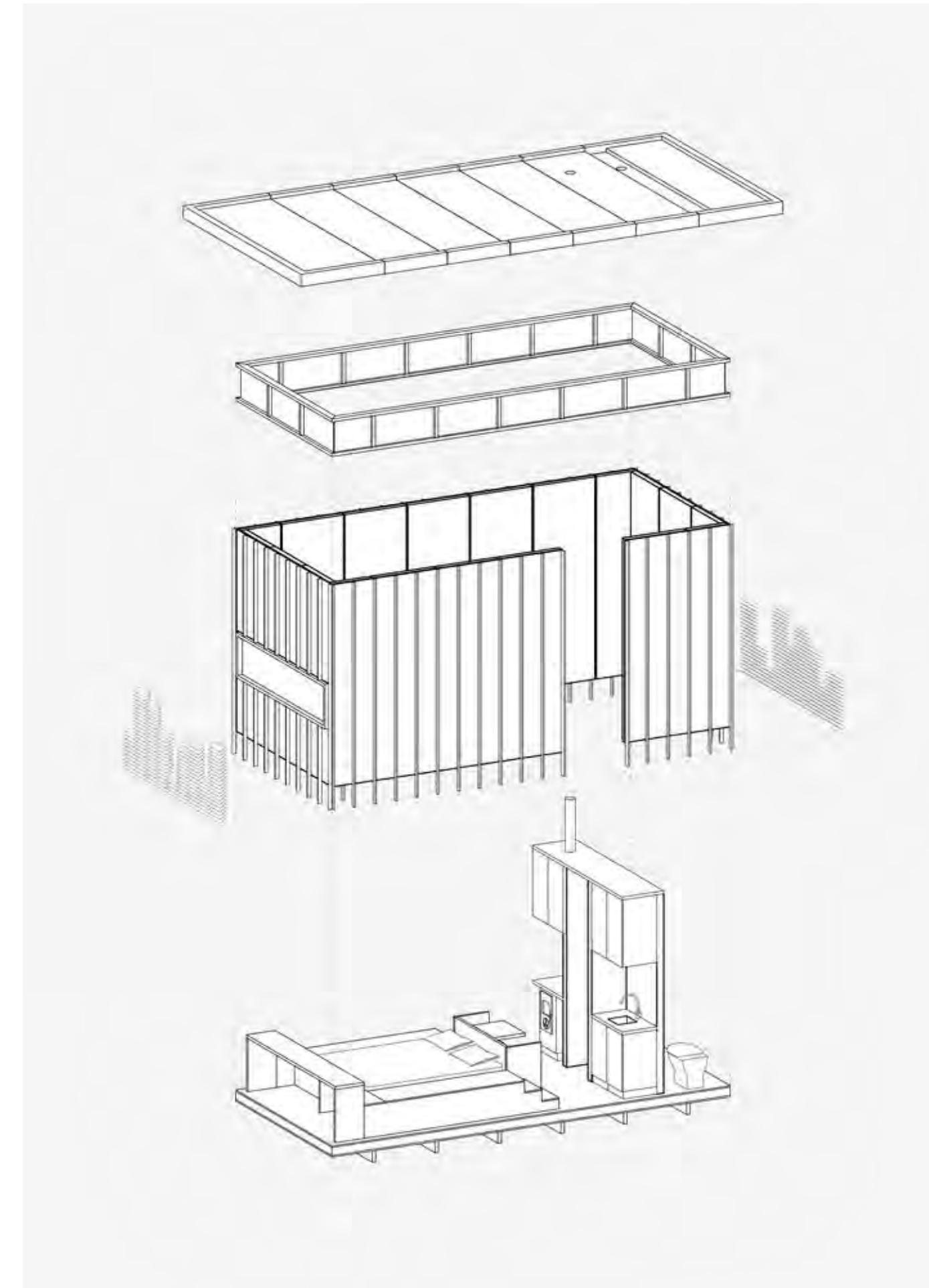
The challenges associated with housing demand need to be tackled with innovative approaches to mass production that avoid past mistakes.



## Case Study 4D

Slate Cabin TRIAS  
(2017)

*Slate Cabin* is an example of how an Australian firm has approached wooden construction. Designed with the care of a carpenter, *Slate Cabin* is a piece of custom furniture.



CLT allows for a recovery of "craft" in the architecture of the house.



# Notion

# 5

# Austerity Chic



**Notion 5**

Austerity Chic is a home decorating style that best captures Gen Z and Millennials' move away from the need to constantly buy new products. Especially as this type of consumerism is being named as just another pressure on Earth's limited resources. Rather than an iconic design of pristine finishes, Austerity Chic deploys a sort of assembly of furniture brands and styles. Instead of trying to make these come together traditionally, such as re-painting, each item will tell its own story. A mix of items that the individual simply enjoys and others that elicit a sense of nostalgia of things their family or friends once owned.

The *Future of Living* is a rag-tag mix of items which become their own distinct style through the mis-matched nature. It suddenly makes the style look as deliberate as it would if they matched perfectly. This also assists with new technology, which can look out of place in a perfectly pristine home, fitting in with this sensibility. Through the curtains, water management, plants, enclosures, stones, appliances, heating devices, found objects and pieces of furniture, their own individual character is created. Each element becomes an ad-hoc piece of a larger assemblage, a mode of operation that resists any attempt to make a consistent whole. The deliberate aesthetics of the unfinished is throughout the house, mixing the functional with fashionable, collector objects.

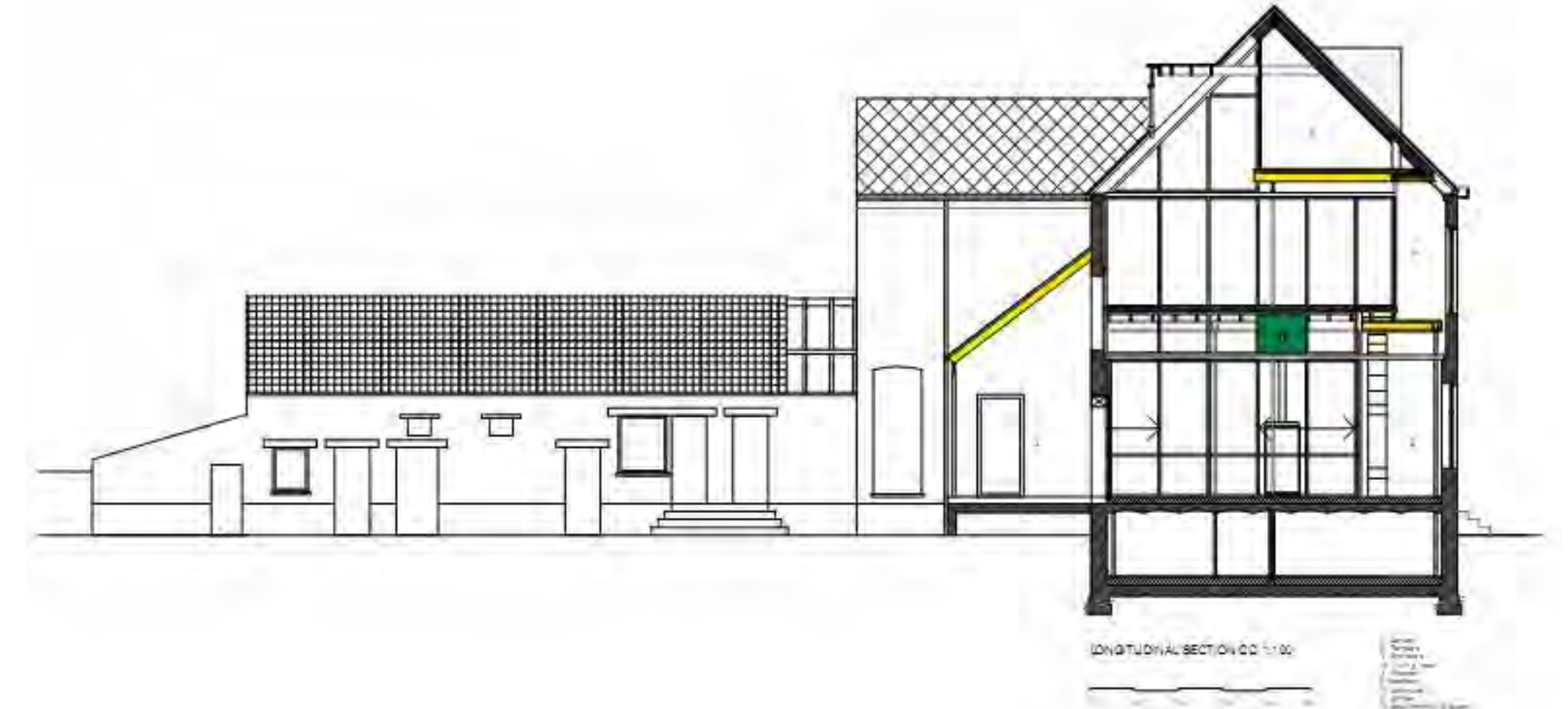
**Austerity Chic**

Muller van Severen's home and studio in Ghent



## Case Study 5A

De Vylder Vinck Taillieu  
House Rot Ellen Berg  
(Braives, Belgium,  
2013)



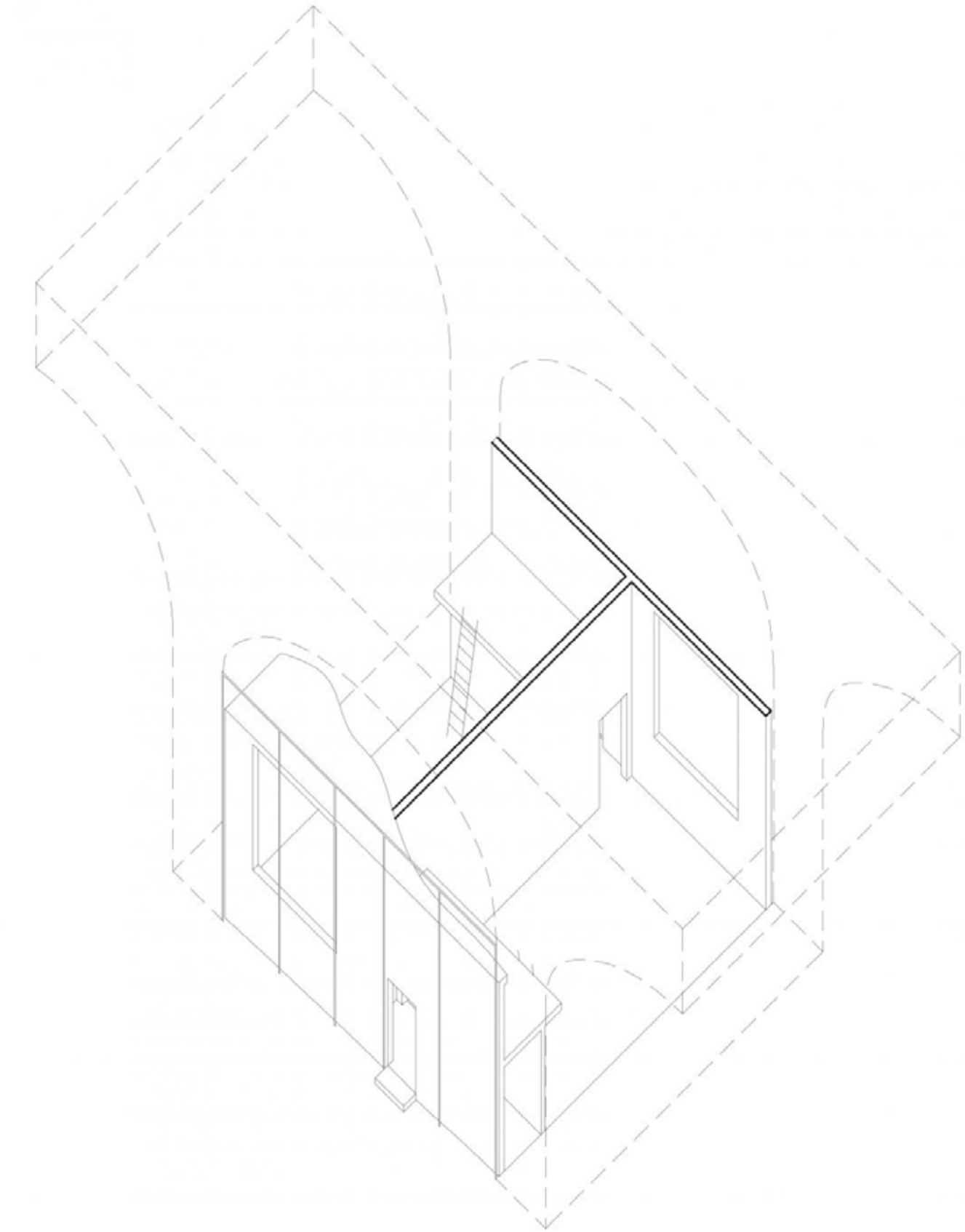
*House Rot Ellen Berg* is an intervention in an existing house that uses materials typical of construction sites to enclose the areas of the house that require climatic control. The sources of heat, on the other hand are exquisite design objects that combine traditional ceramic stoves with contemporary industrial design.

In this context, “unfinished” is not a pejorative qualifier but a natural condition of the contemporary home.



**Case Study 5B**

Dyvik Kahlen Architects  
Twin Arch  
(Muswell Hill, UK, 2015)



*Twin Arch* is a structure built using off the shelf materials in an approach that can also be described as industrial vernacular. The use of existing products and technical solutions shifts the focus from pristine finishes towards architectural quality: spacious, practical and well insulated spaces with views and lots of natural light.

The apparent precariousness of the Gen Z and Millennials' home hides a set of values that often escape the eye.



## Case Study 5C

Andrew Power  
House with a Guest Room  
(Taree, NSW, 2018)



*House with a Guest Room* is an Australian house self-built by the architect and his father. It combines the precariousness of self construction, a deep knowledge of the history of architecture and a collection of furniture that includes found objects and collector pieces.



The natural cohabitation of different objects, formal decisions and architectural values do not result in a fragmentary collage but rather in a difficult whole negotiated through design decisions.



# How *Future Living* Will Come To Life



**A Hut in the Bush or a Tower in the City**

The *Future of Living* unit is the result of bringing together new ways of sharing life, energy management protocols, relationships with nature, new materialities and austerity chic. Appliances, plants, furniture, structure, materials, and objects join in visible and unfinished assemblages. They are scattered around the house and provide a variety of spatial conditions. They perform climatically, they provide privacy, they include plants and rocks, they allow us to gather. This collection of objects defines an ambivalent living environment. It is neither an interior nor an exterior, but it is certainly a part of the Australian landscape. A great deal of care and maintenance is required for this new domestic Australian dream. Whether in isolation or as part of a tower, this dispersed domesticity proposes a new type of relationship between the user, the environment and the raw architecture for the future. A relationship that many Gen Z and Millennials are already experiencing.

This section opens with the blueprints for the hut and the tower, that includes an analysis of energy performance in several future climatic scenarios and digital images of both proposals. An appendix of technical solutions describing in detail the performance of the facade and domestic assemblages follows. Two videos of the *Future of Living* and a conclusion complete The Report.



*1909 theorem: the Skyscraper as utopian device for the production of unlimited number of virgin sites on a single metropolitan location. Published in Life magazine's "Real Estate Number" of March, 1909, the full-page cartoon by A.B. Walker shows conventional houses stacked on an open skyscraper frame. Highrise of Homes, New York, NY, United States. 1981 Architect: James Wines.*



# Proposal

# A

# The Hut in the Bush



## Proposal A

The *Future of Living* hut has an open plan — a flexible space composed with no facade, an exposed structure, curtains, plants, furniture and rocks. It enables one to tailor their system of living through a negotiation with the position of the sun, views, the need for privacy, the pursuit of pleasure and the desire for a life together with the wilderness.

A square grid of 16 CLT columns supports a wooden roof. The house barely touches the ground and is balanced by an inhabitable heated rock above — a sauna. The ground floor is connected to the surrounding environment, blurring the boundary between inside and outside. A few fixed elements — a cooking-dining module, curtains around the beds, light enclosures, a bathtub, some fancy chairs and a fireplace suspended above the wooden roof — give us an idea of how to live.

## The Hut in the Bush

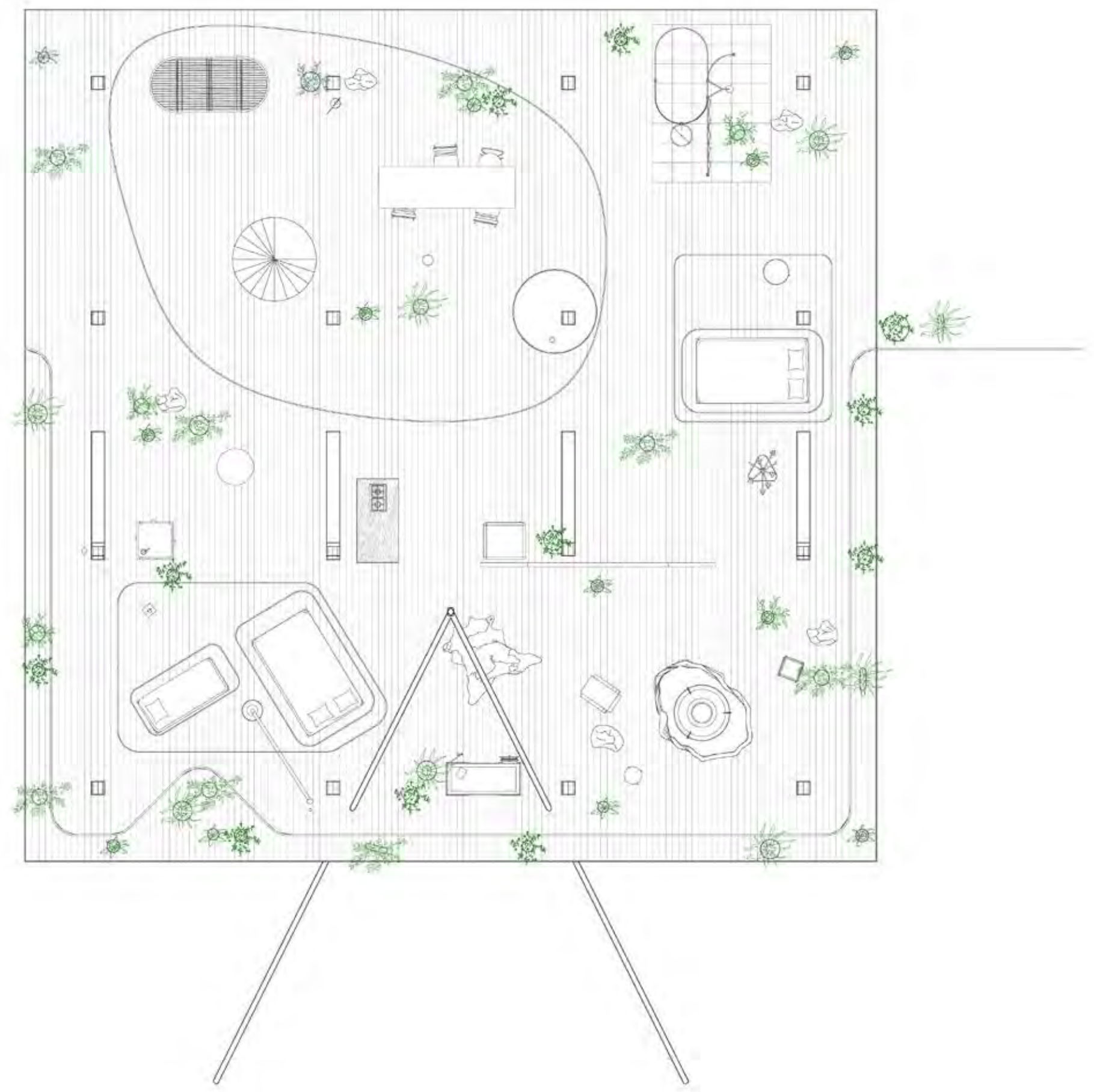


Proposed hut in the bush

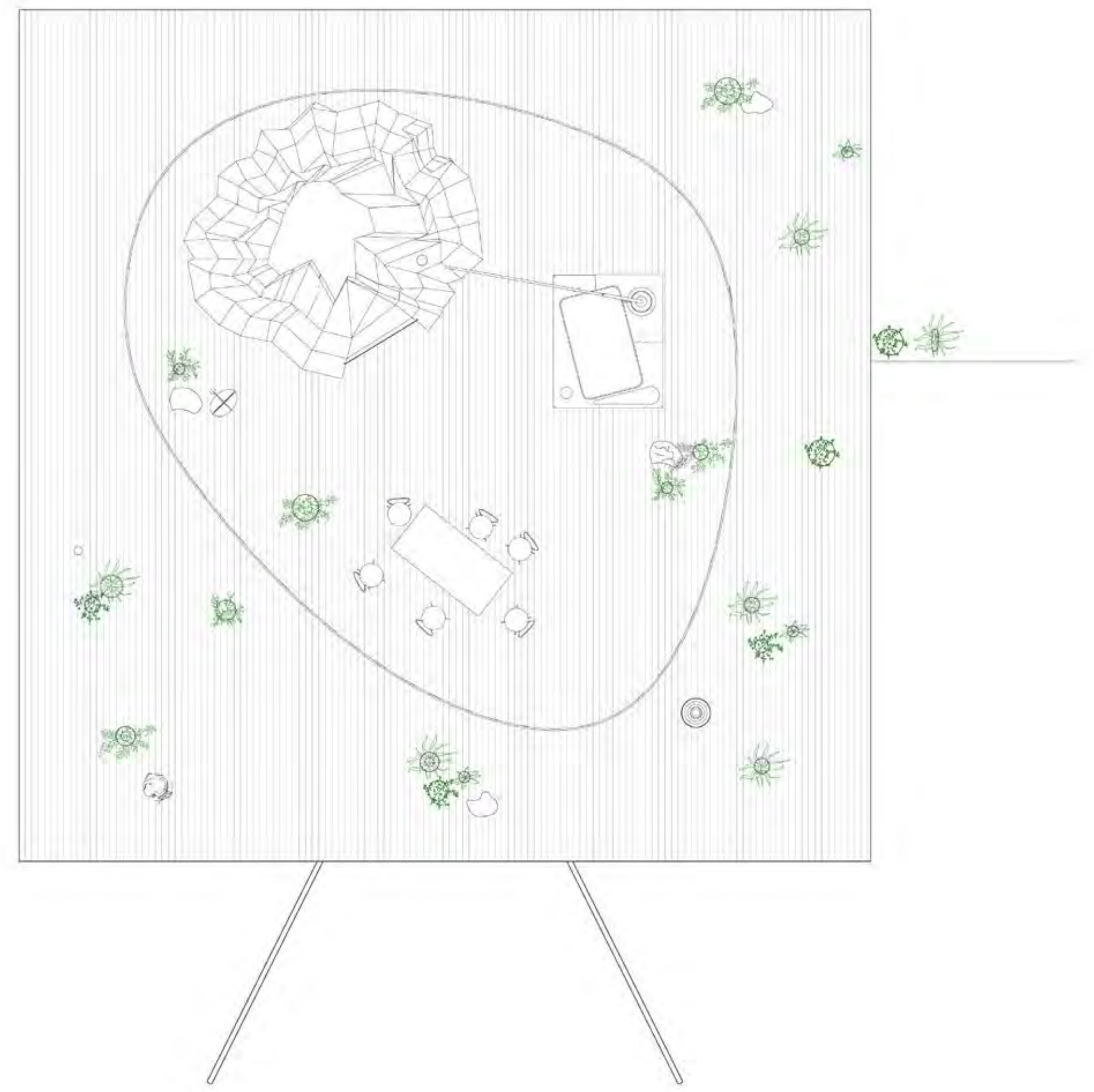


Lobster Bay House by Ian McKay. Photography by David Moore





Ground floor plan



Level 1 plan



**On Heating Mode**

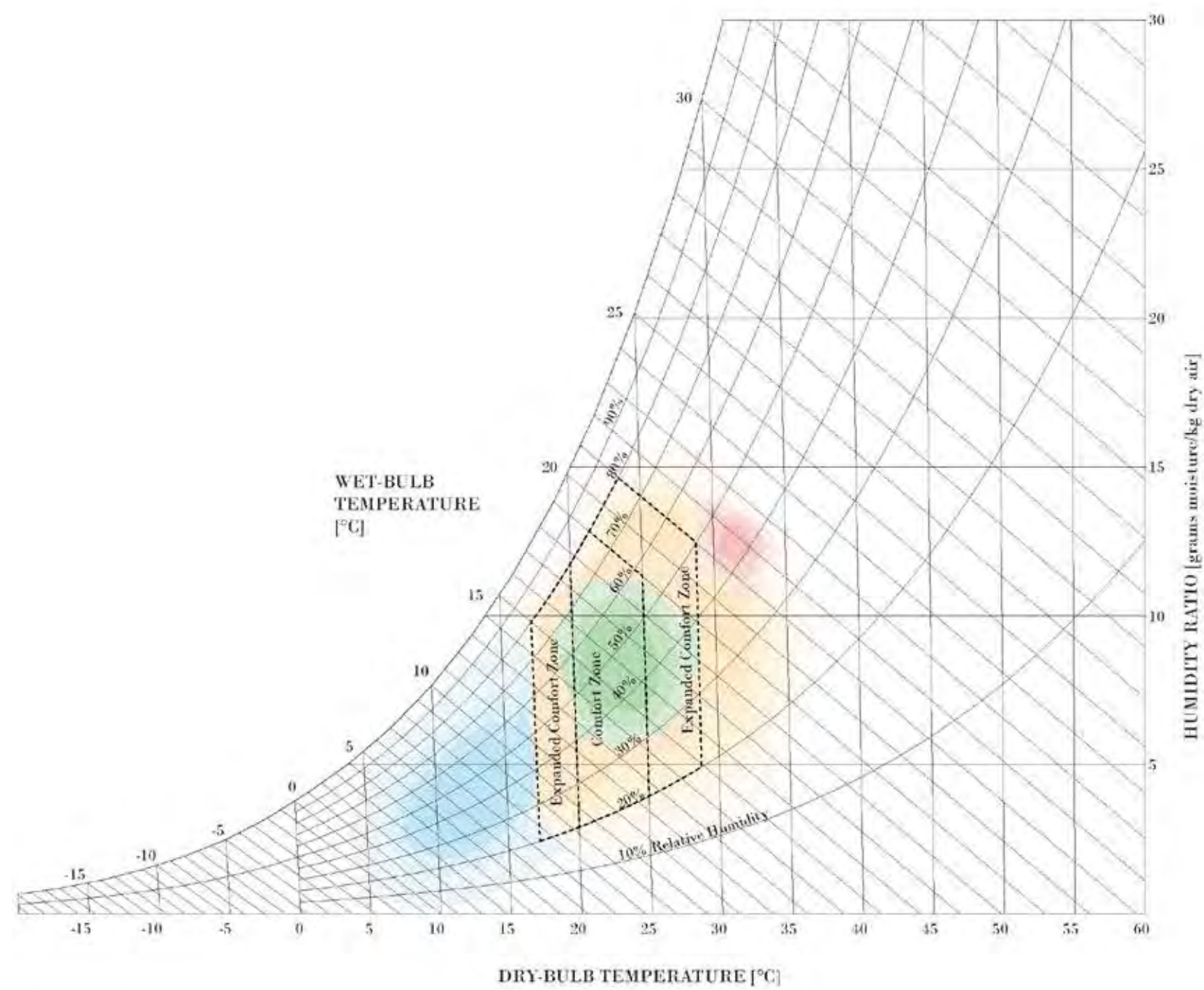
*Psychrometric Axonometric*



*Ambient Conditions:  
Temperature: 5-17°C, Relative Humidity: 20-90%*

*Predicted Operations:  
Radiant Modules Filled with Heated Water, Electric Blankets Turned On, Thermal Curtains Closed, Thermal Mass Moved Into Direct Solar Radiation*

*Psychrometric Chart*



*Interior Climate Zones:*

*Zone 1 [Temperate] - Temp: 18-26°C, Rel. Humidity: 30-70%, Max.Noise: 20-50 dB, Max.Wind Vel: 0.1 m/s*

*Zone 2 [Mixed] - Temp: 16-28°C, Rel. Humidity: 20-90%, Max Noise: 50-60 dB, Max. Wind Vel: 0.3 m/s*



**Light Cooling Mode**

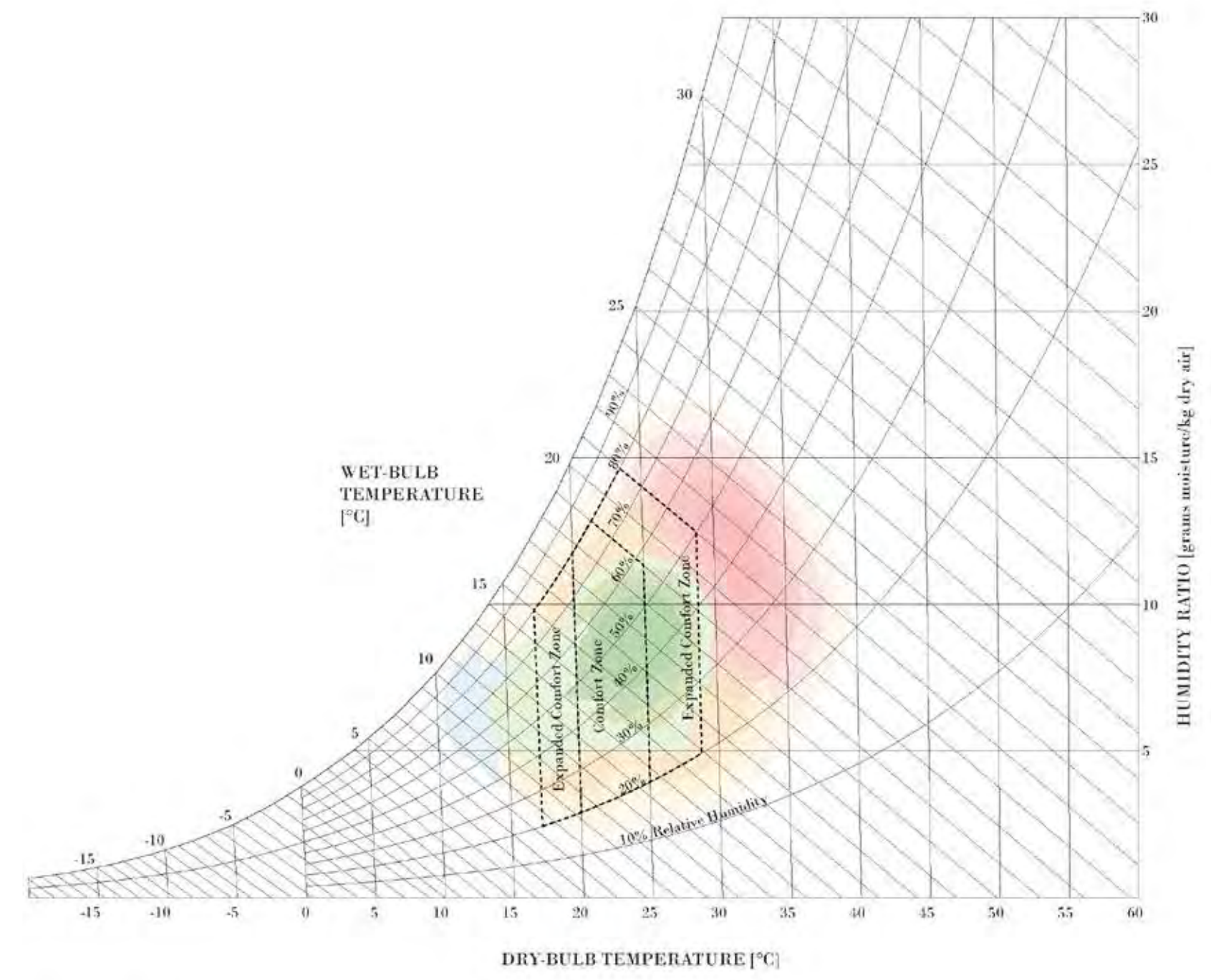
*Psychrometric Axonometric*



*Ambient Conditions:  
Temperature: 28-35°C, Relative Humidity: 20-90%*

*Predicted Operations:  
HVLS Fans Turned On, Radiant Modules filled with Chilled Water, Thermal Curtains Partially Closed  
Thermal Mass Moved Away from Direct Solar Radiation*

*Psychrometric Chart*



*Interior Climate Zones:*

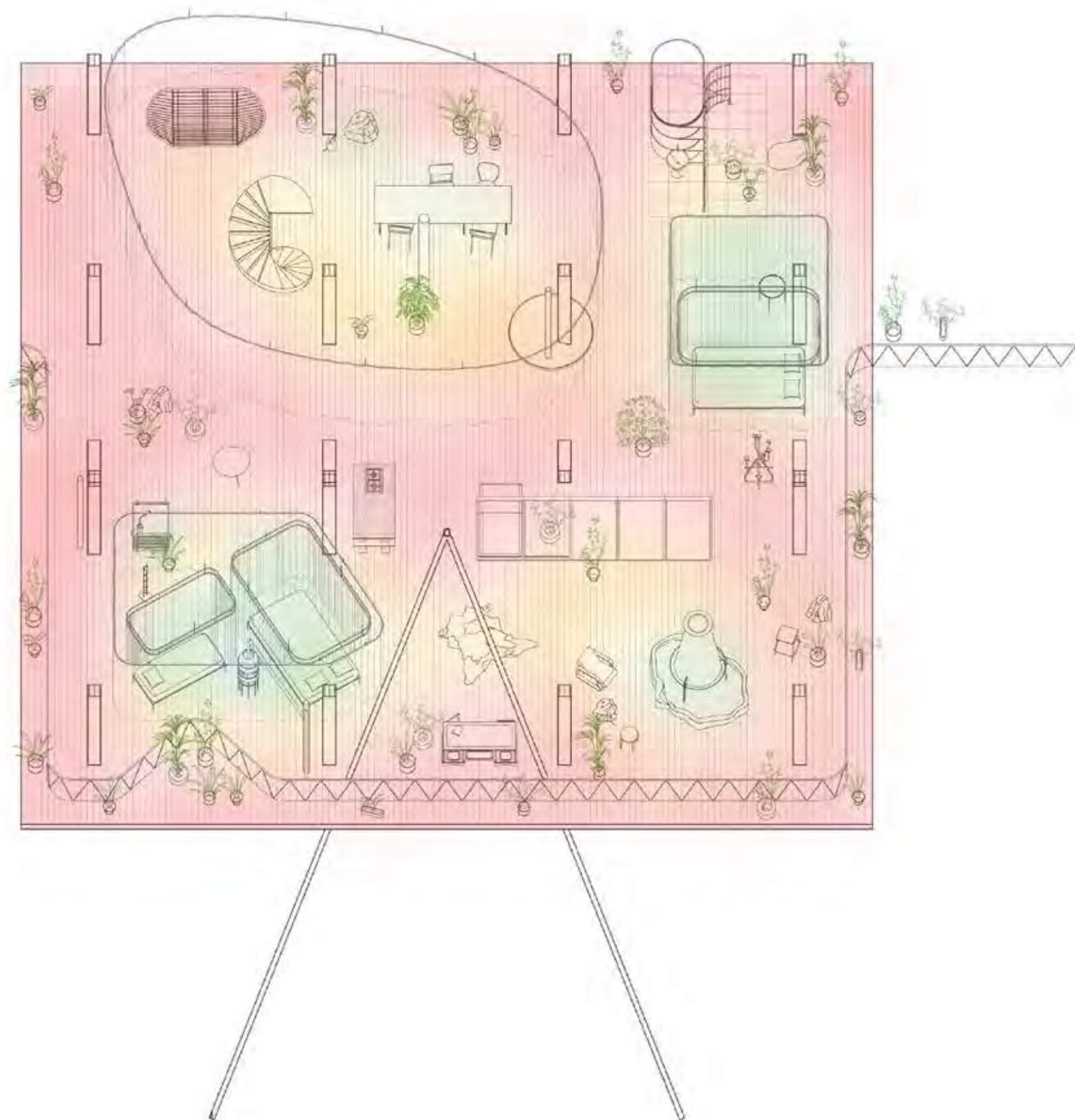
*Zone 1 [Temperate] - Temp: 18-26°C, Rel. Humidity: 30-70%, Max.Noise: 20-50 dB, Max.Wind Vel: 0.1 m/s*

*Zone 2 [Mixed] - Temp: 16-30°C, Rel. Humidity: 20-90%, Max Noise: 50-60 dB, Max. Wind Vel: 0.3 m/s*



09:00 AM Mode

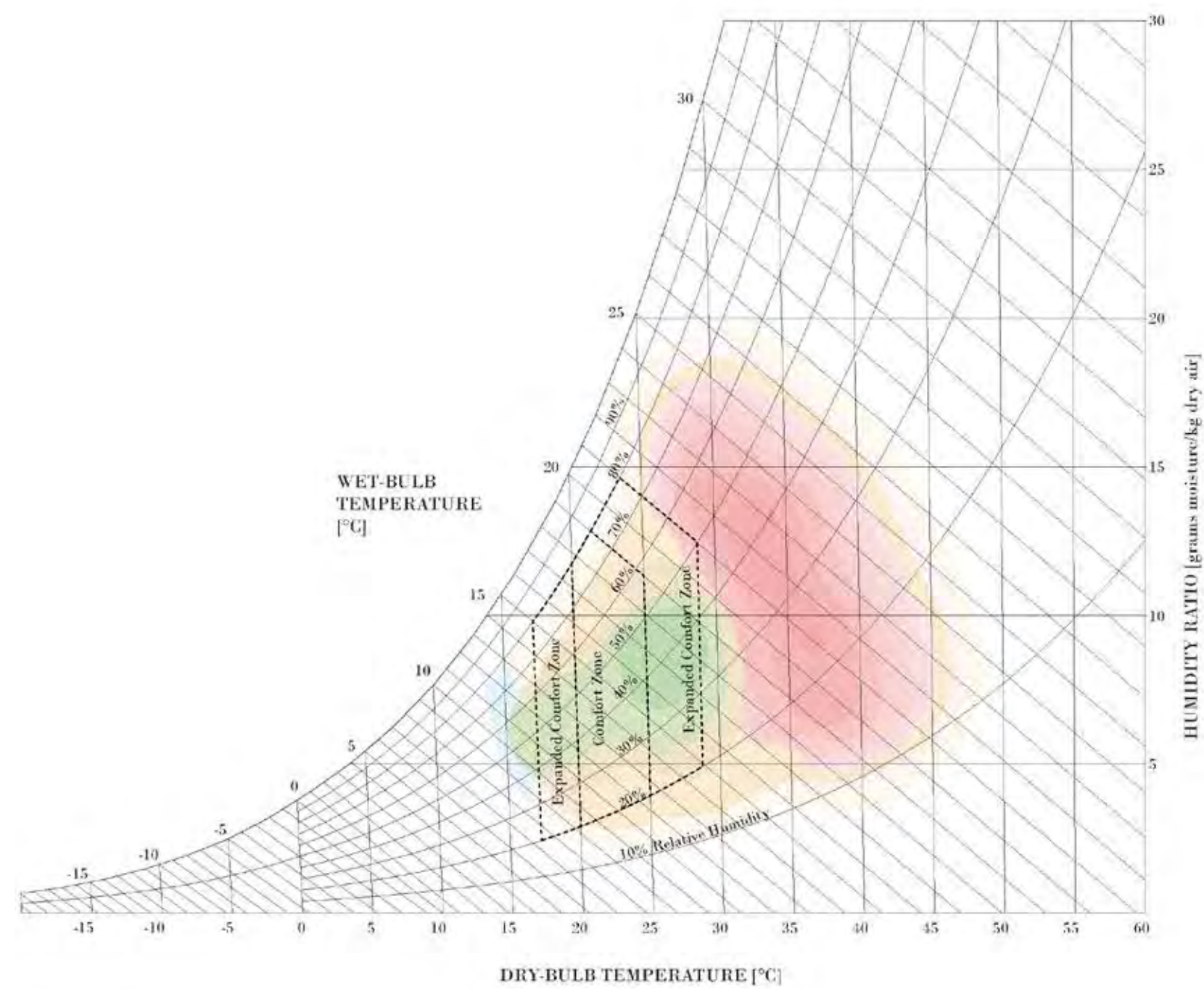
Psychrometric Axonometric



Ambient Conditions:  
Temperature: 35-50°C, Relative Humidity: 10-90%

Predicted Operations:  
HVLS Fans Turned On, Personal Fans Turned On, Radiant Modules filled with Chilled Water, Thermal Curtains Fully Closed, Thermal Mass Moved Away from Direct Solar Radiation

Psychrometric Chart



Interior Climate Zones:

Zone 1 | Temperate | - Temp: 18-28°C, Rel. Humidity: 30-70%, Max.Noise: 20-50 dB, Max.Wind Vel: 0.1 m/s

Zone 2 | Mixed | - Temp: 18-32°C, Rel. Humidity: 20-90%, Max Noise: 50-60 dB, Max. Wind Vel: 0.3 m/s











# Proposal

# B

# The Tower in the City



**Proposed Case Study B**

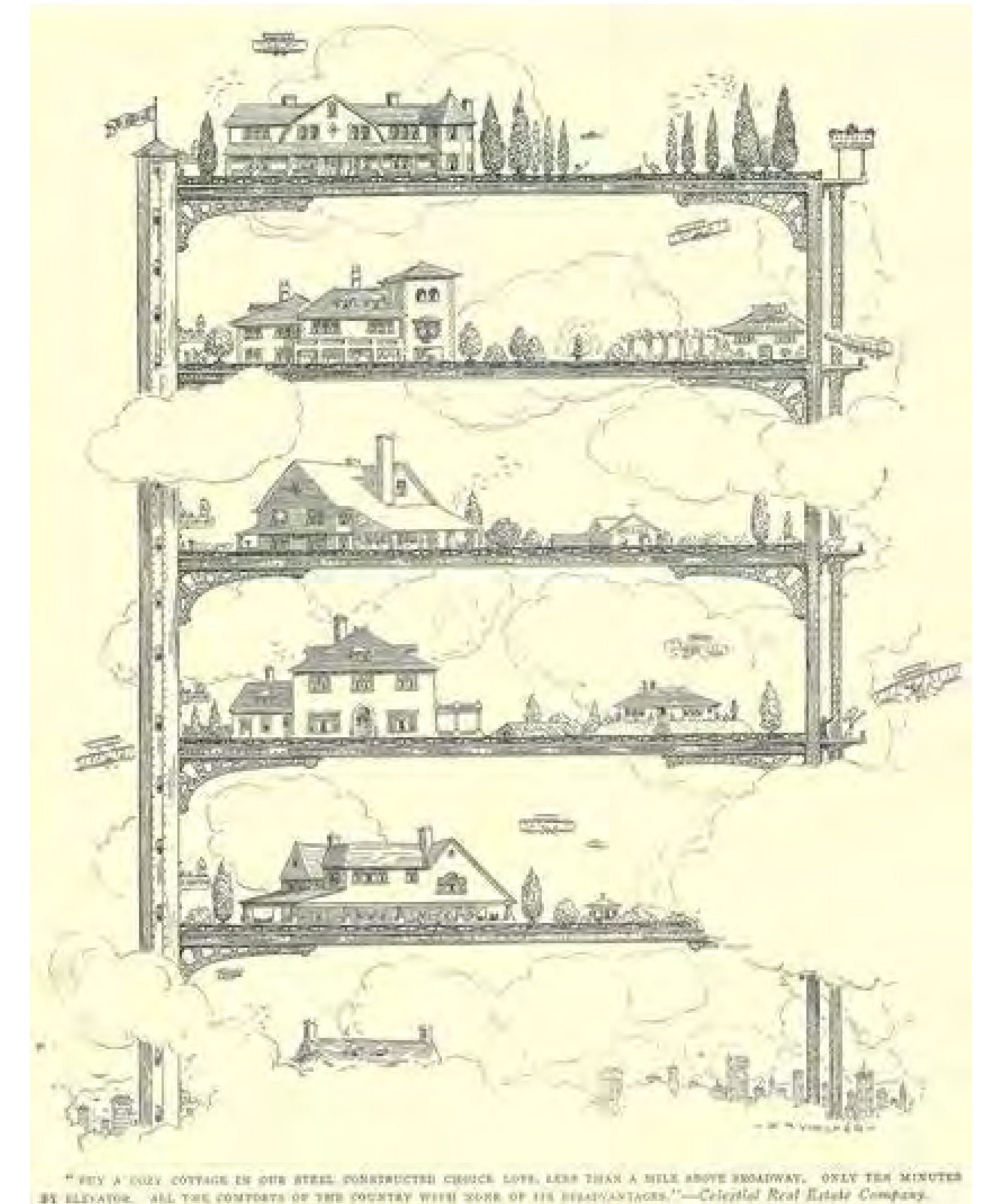
The *Future of Living* tower increases its density to respond to the Gen Z and Millennials' increasing demand for urban dwellings. Yet it preserves the qualities of the hut and translates them to the city by developing outdoor spaces that extend the indoor rooms. Staggered interior spaces, neither inside nor outside, redefine how we typically understand those terms, widening the possibilities for usage, increasing the diversity of spaces and allowing for multiple climatic conditions.

Materialised as a flexible and generous open plan. The CLT structure is designed as a wood skeleton, rigidised by a series of concrete cores and diagonal cross bracing. The twenty five square telescopic columns in a square grid, wooden slabs and three concrete elevator shafts are almost identical in each floor. The diagonal cross-bracing and a tilted fire stair make each level unique and specific.

**The Tower in the City**

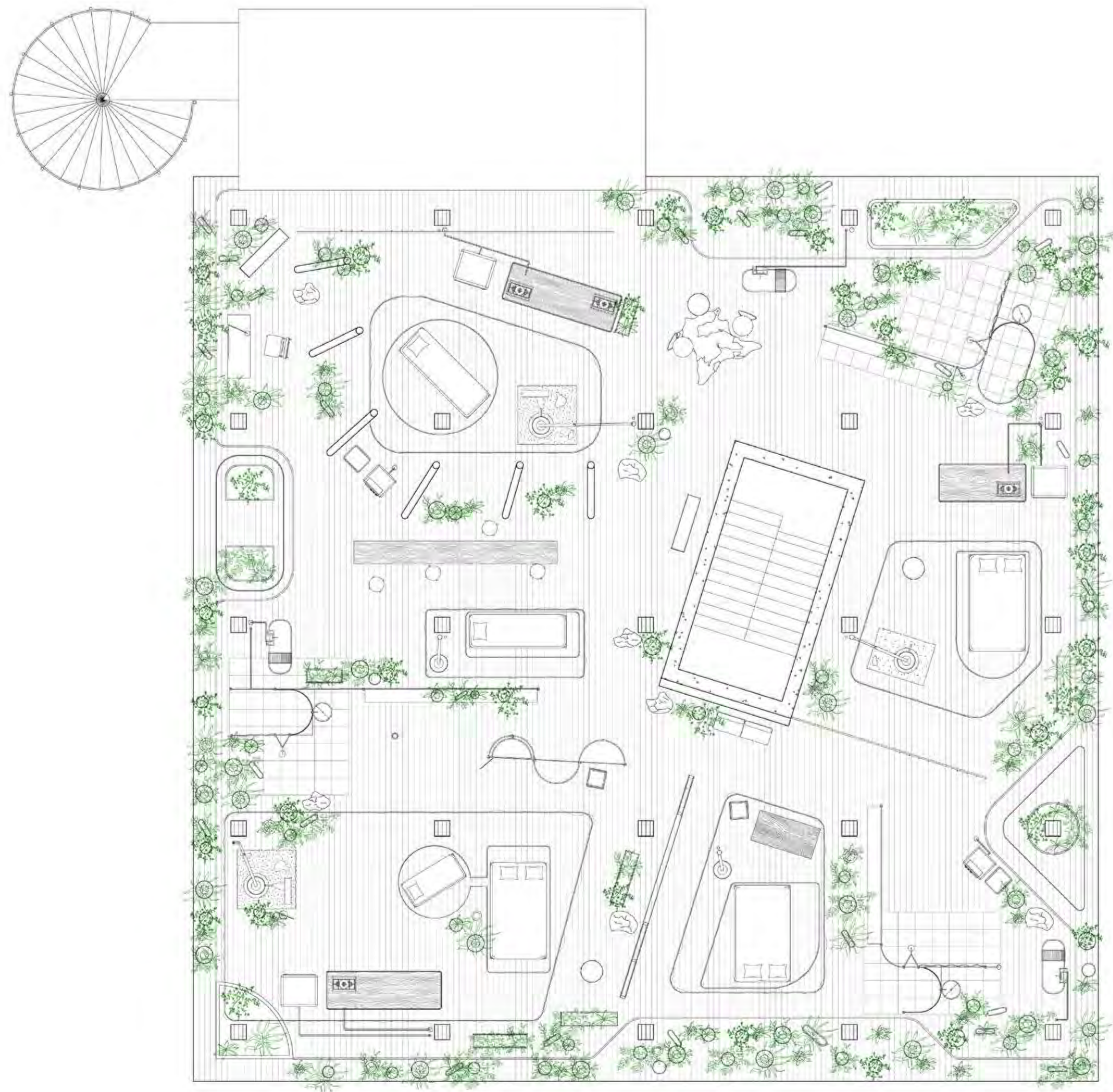


Proposed tower



Published in Life magazine's "Real Estate Number" of March, 1909, the full-page cartoon by A.B. Walker shows conventional houses stacked on an open skyscraper frame.



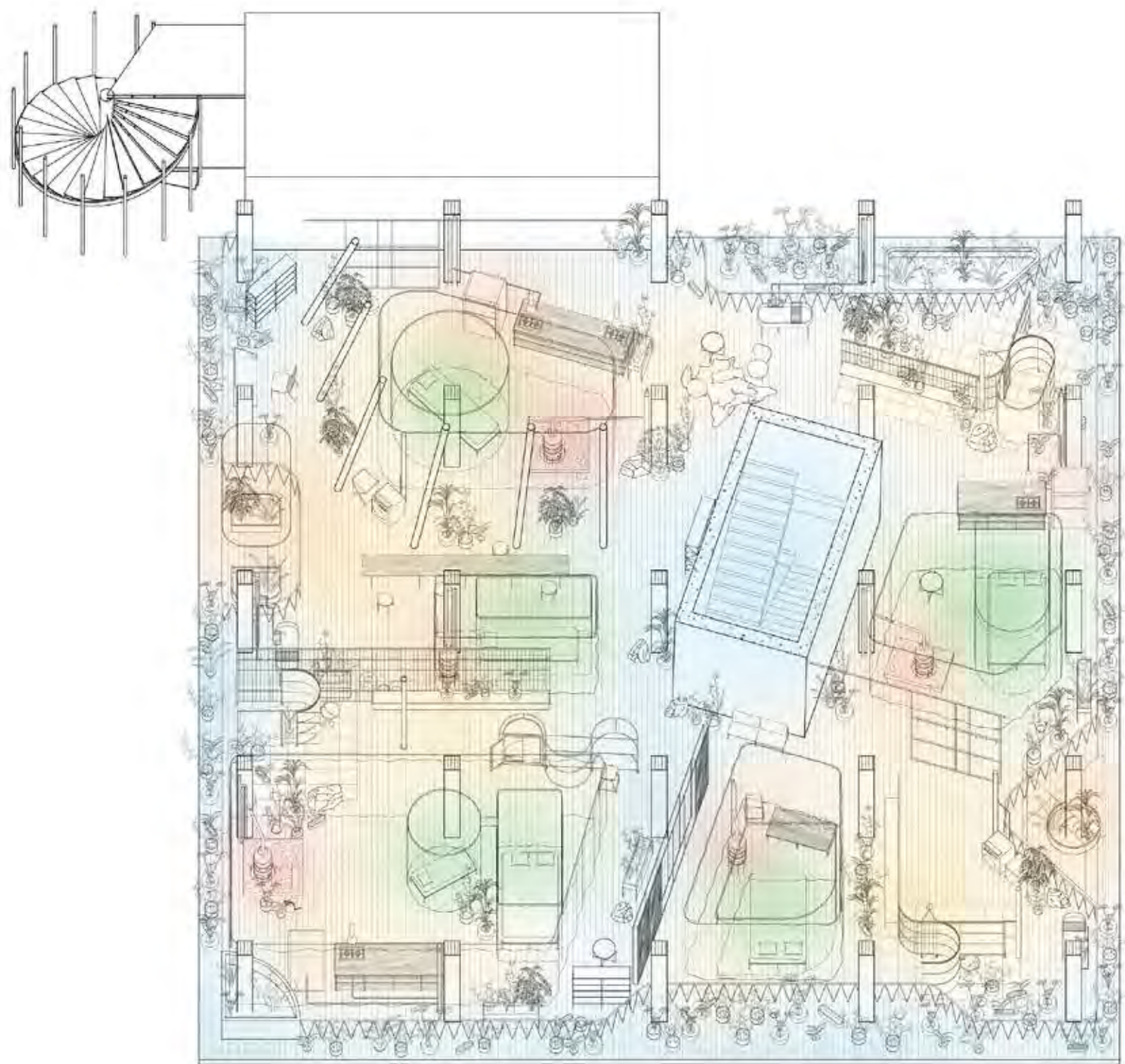


Generic plan



**Heating Mode**

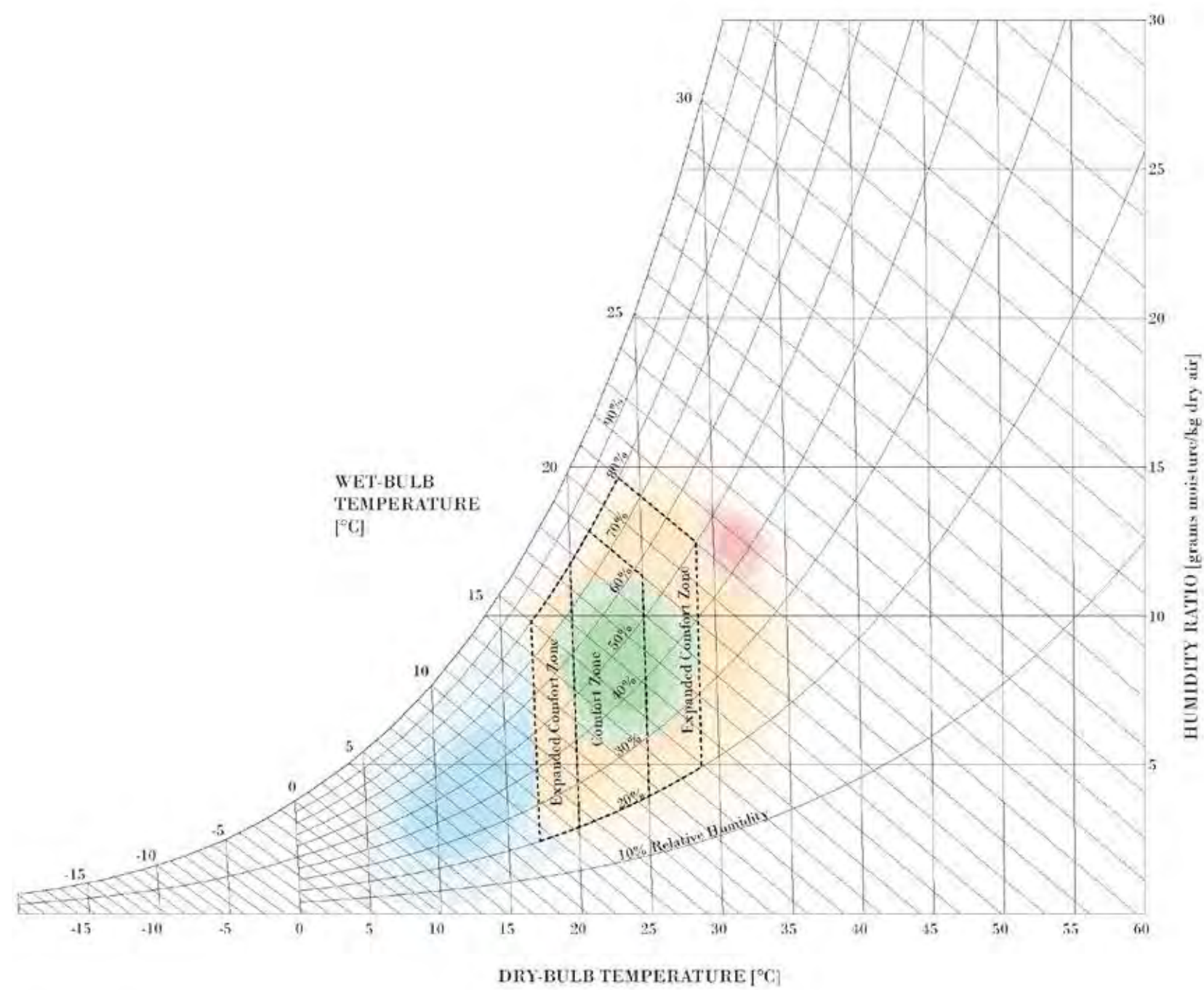
*Psychrometric Axonometric*



*Ambient Conditions:*  
Temperature: 5-17°C, Relative Humidity: 20-90%

*Predicted Operations:*  
Radiant Modules Filled with Heated Water, Electric Blankets Turned On, Thermal Curtains Closed, Thermal Mass Moved Into Direct Solar Radiation

*Psychrometric Chart*



*Interior Climate Zones:*

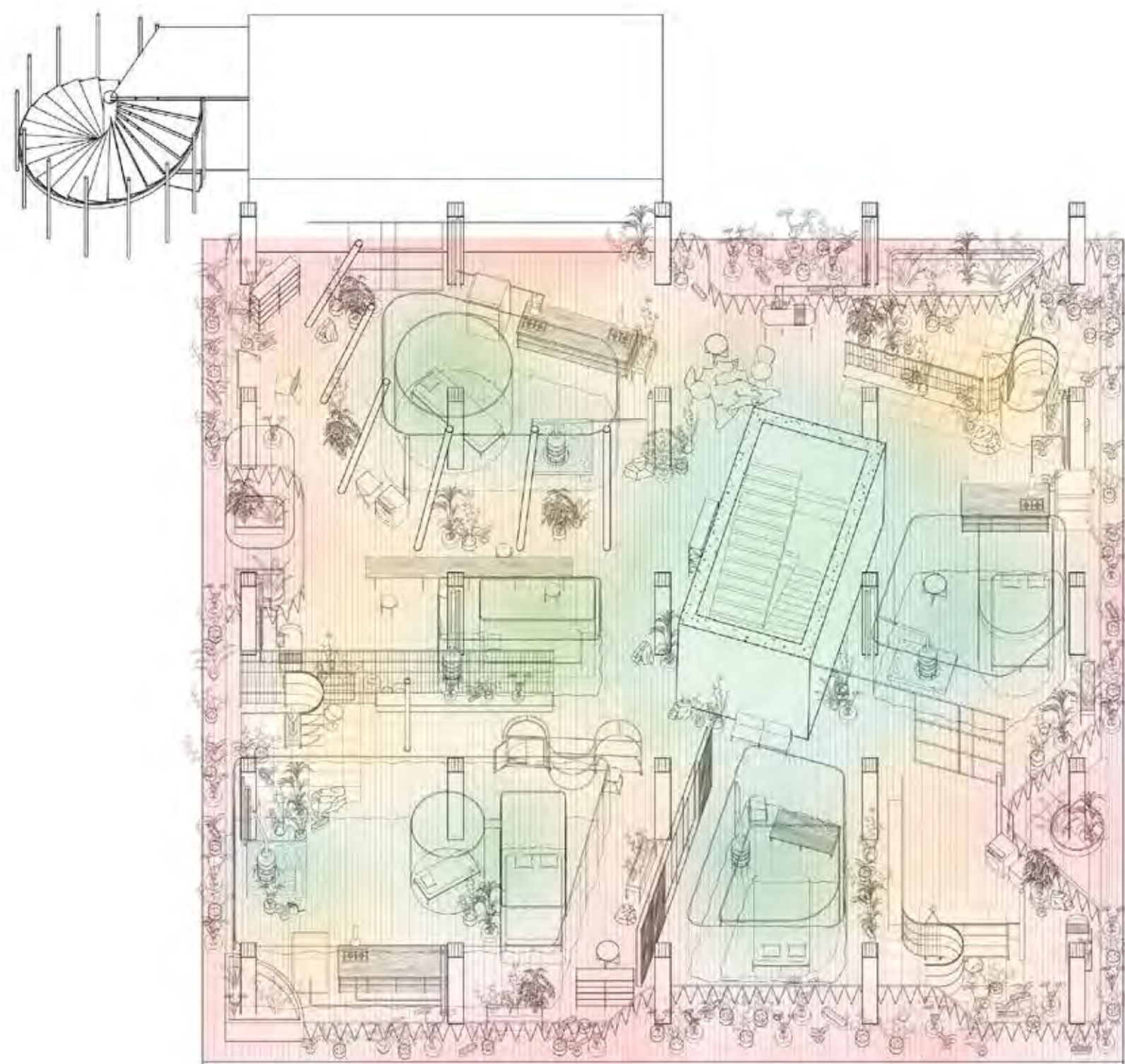
*Zone 1 | Temperate | - Temp: 18-26°C, Rel. Humidity: 30-70%, Max.Noise: 20-50 dB, Max.Wind Vel: 0.1 m/s*

*Zone 2 | Mixed | - Temp: 16-28°C, Rel. Humidity: 20-90%, Max Noise: 50-60 dB, Max. Wind Vel: 0.3 m/s*



**Lighting Mode**

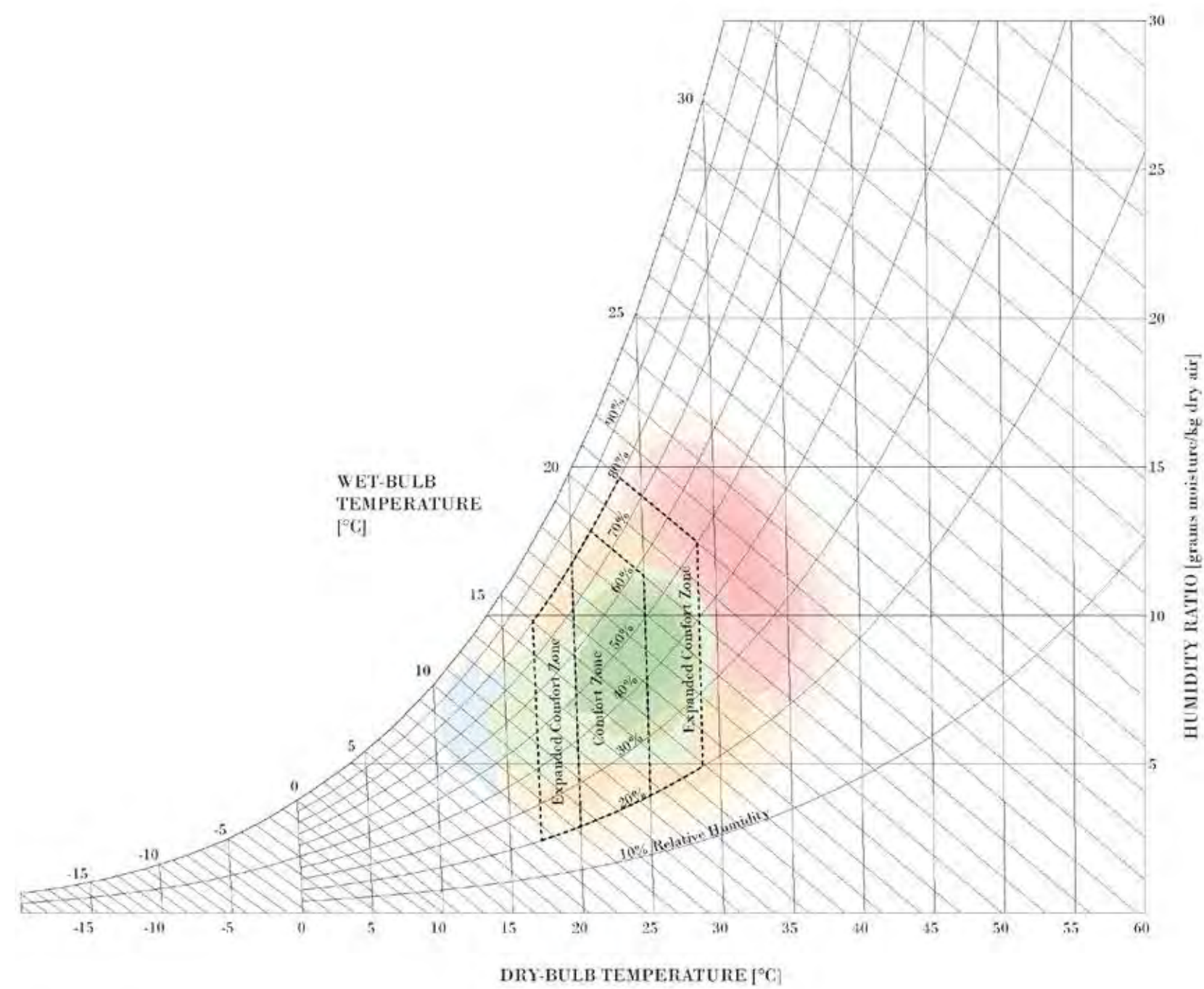
*Psychrometric Axonometric*



*Ambient Conditions:*  
Temperature: 28-35°C, Relative Humidity: 20-90%

*Predicted Operations:*  
HVLS Fans Turned On, Radiant Modules filled with Chilled Water, Thermal Curtains Partially Closed, Thermal Mass Moved Away from Direct Solar Radiation

*Psychrometric Chart*



*Interior Climate Zones:*

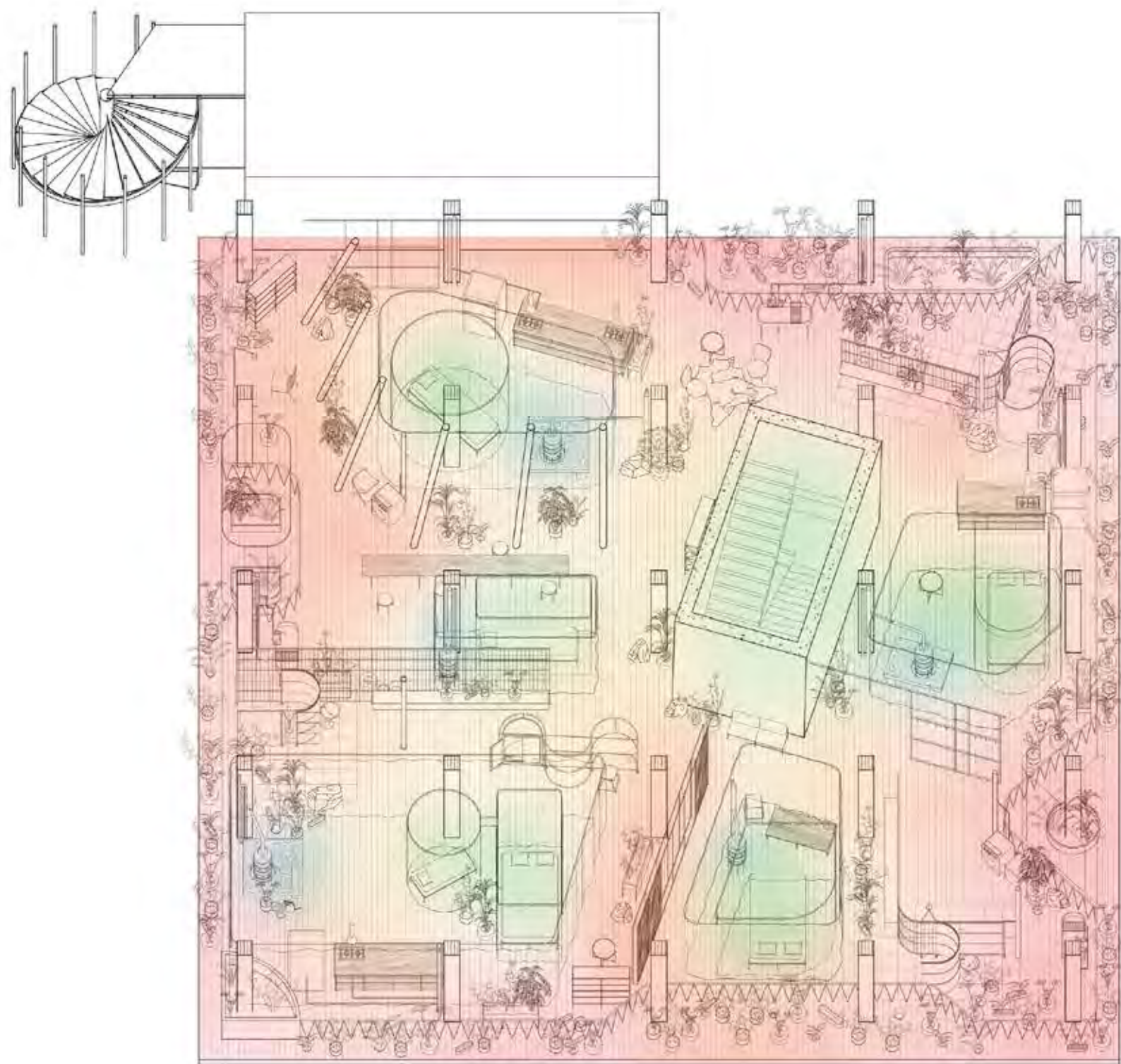
*Zone 1 | Temperate | - Temp: 18-26°C, Rel. Humidity: 30-70%, Max.Noise: 20-50 dB, Max.Wind Vel: 0.1 m/s*

*Zone 2 | Mixed | - Temp: 16-30°C, Rel. Humidity: 20-90%, Max Noise: 50-60 dB, Max. Wind Vel: 0.3 m/s*



09:00 AM Mode

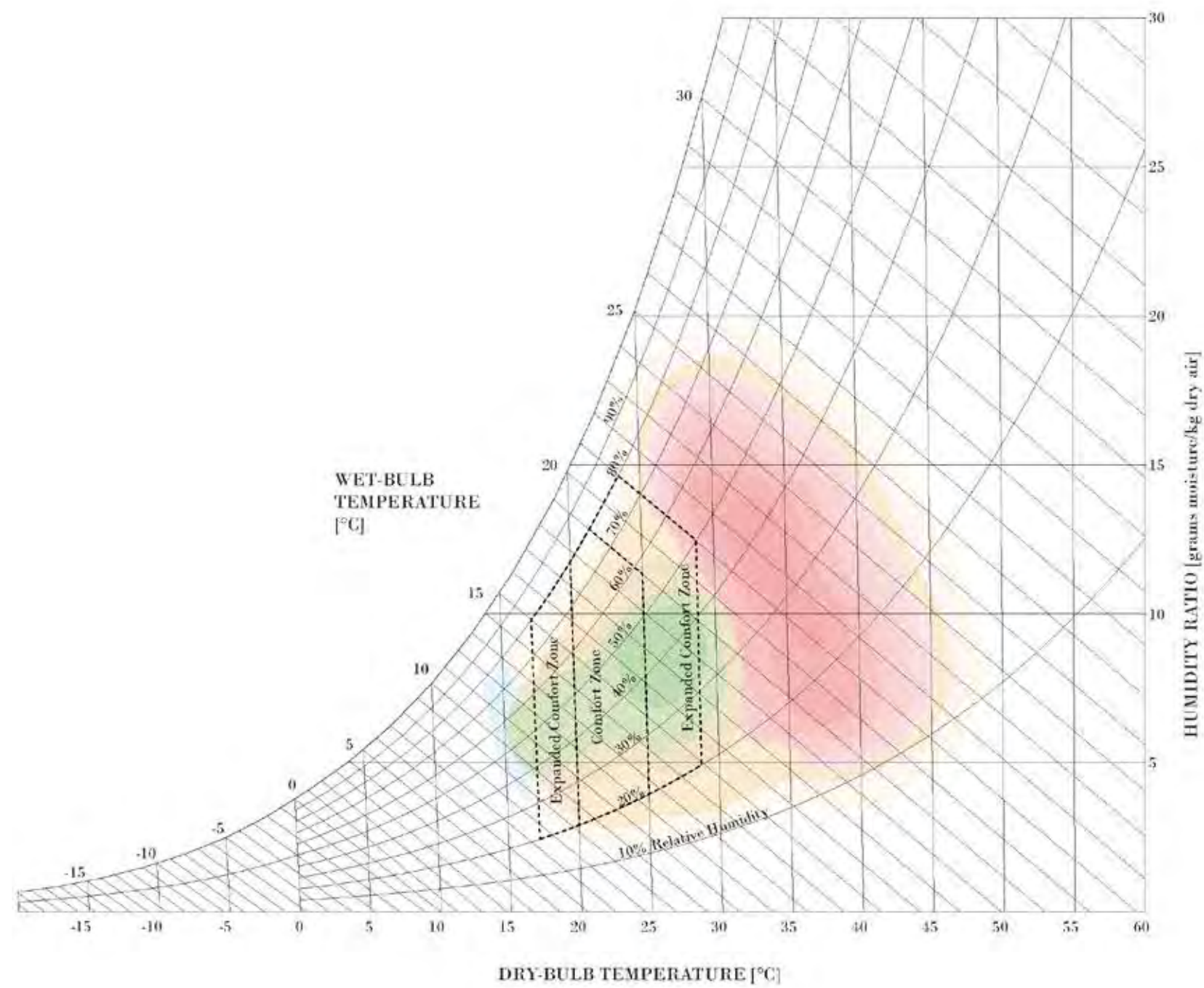
Psychrometric Axonometric



Ambient Conditions:  
Temperature: 35-50°C, Relative Humidity: 10-90%

Predicted Operations:  
HVLS Fans Turned On, Personal Fans Turned On, Radiant Modules filled with Chilled Water, Thermal Curtains Fully Closed, Thermal Mass Moved Away from Direct Solar Radiation

Psychrometric Chart



Interior Climate Zones:

Zone 1 [Temperate] - Temp: 18-28°C, Rel. Humidity: 30-70%, Max.Noise: 20-50 dB, Max.Wind Vel: 0.1 m/s

Zone 2 [Mixed] - Temp: 18-32°C, Rel. Humidity: 20-90%, Max Noise: 50-60 dB, Max. Wind Vel: 0.3 m/s










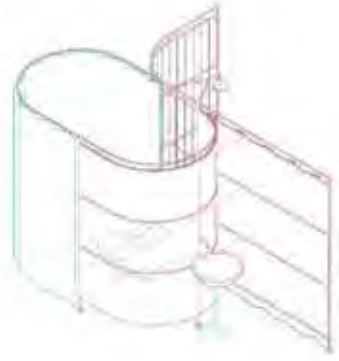


















# Proposal

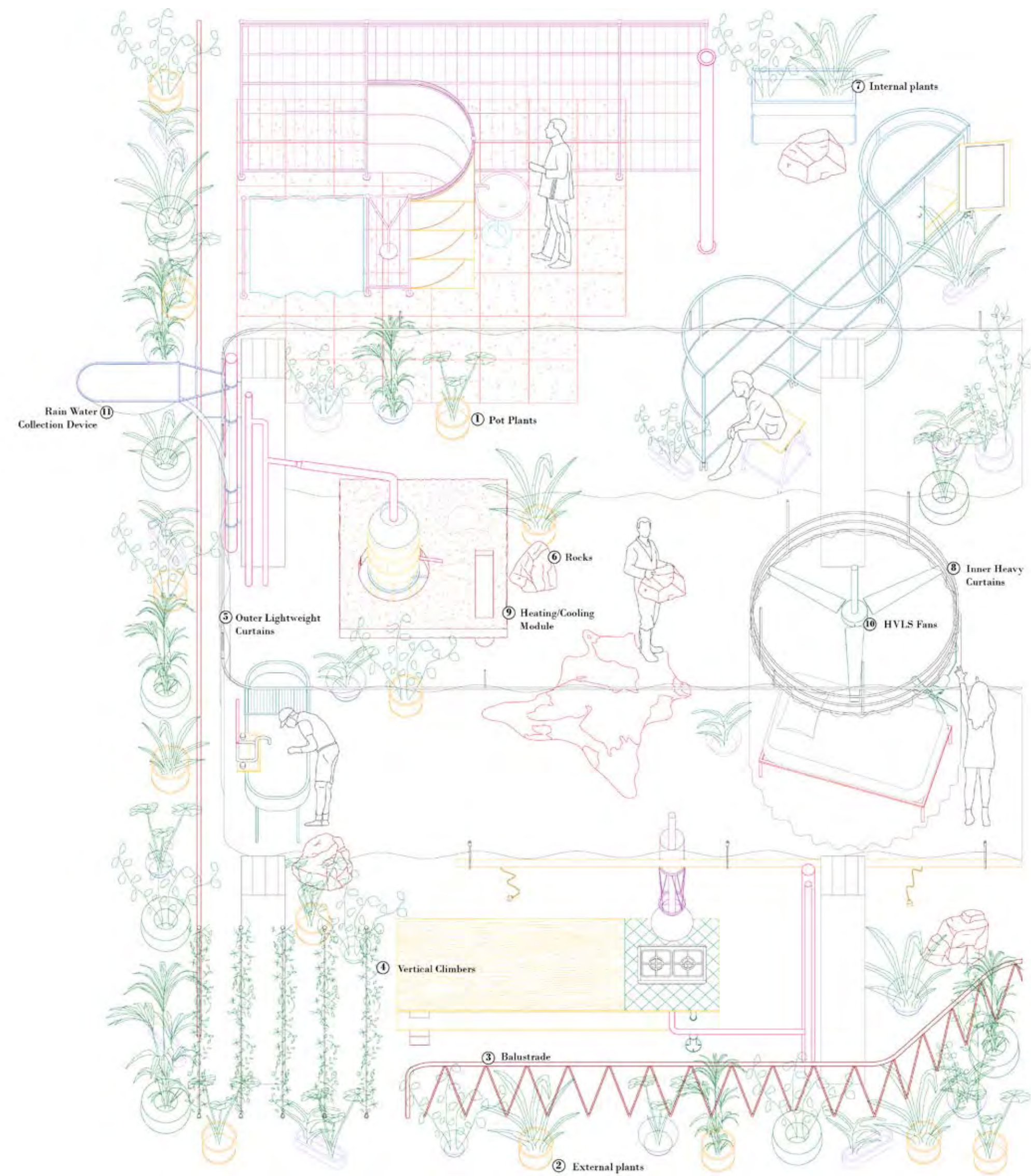
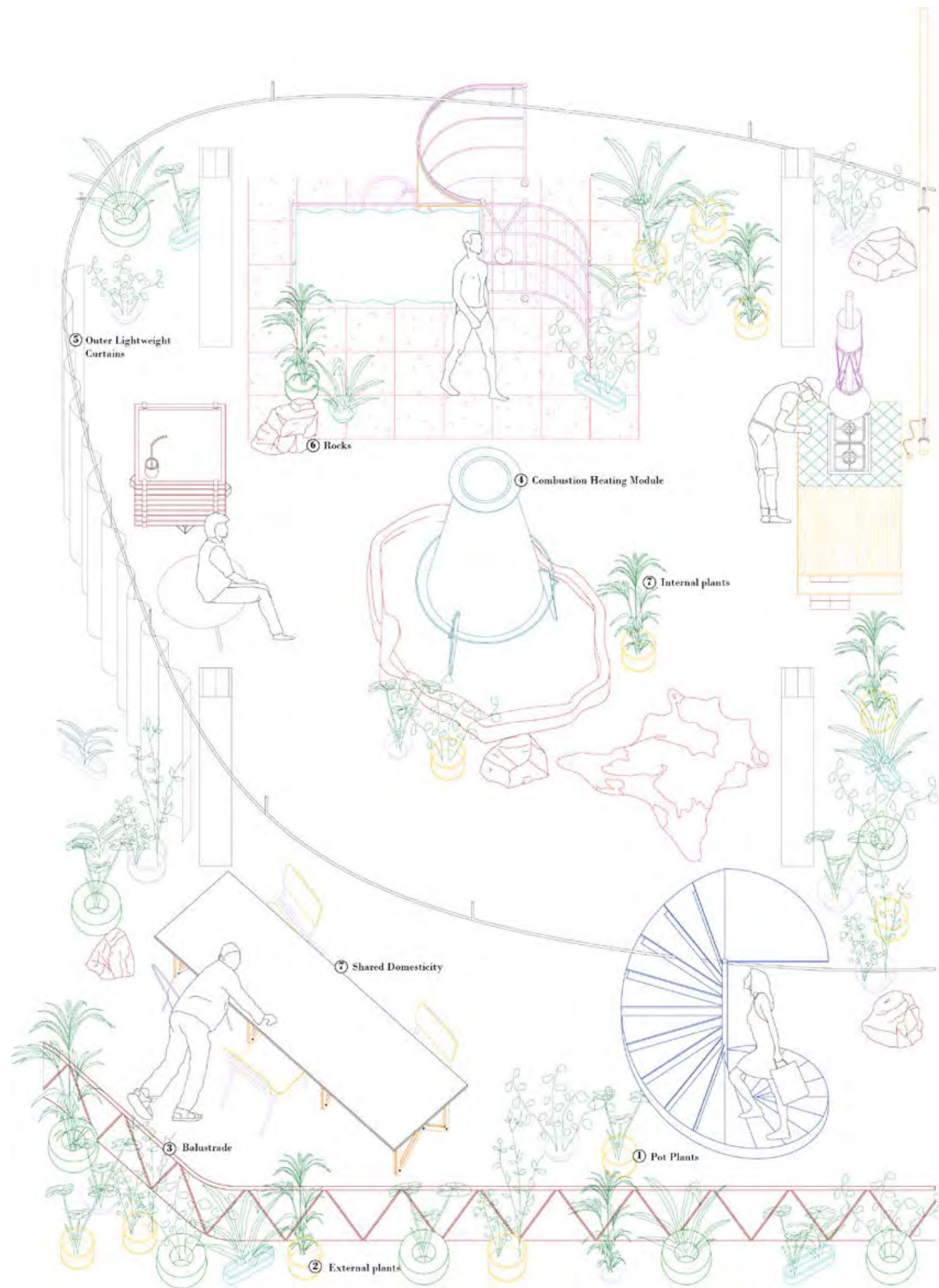
# C

# Technical Solutions



 <p><b>Resting Module</b> <i>A space to rest in a tailor made climate</i></p>	 <p><b>Hygiene Module</b> <i>Maintaining hygiene is a daily ritual, the byproducts of which can help to climatise the building and maintain its interior natures.</i></p>	 <p><b>Dining Module</b> <i>A heavy table, the perfect moment for sharing life</i></p>	 <p><b>Relaxation Module</b> <i>A spot for one. Sometimes, to share, you need time alone.</i></p>	 <p><b>Combustion Heating Module</b> <i>Managing climate and sharing life come together around a common hearth.</i></p>	 <p><b>Pot Plants</b> <i>Extensions of the natural environment, pot plants welcome the biosphere into domestic life</i></p>
 <p><b>Radiant Heating/Cooling Module</b> <i>Managing our climate starts in the home. The module is a both a piece of furniture and an infrastructure for comfortable, sustainable living.</i></p>	 <p><b>Timber Stud/Rockwool Partitions</b> <i>A shared life relies on moments of separation. Reusing new materials, the partition is a screen, a mount and a frame all in one.</i></p>	 <p><b>Laundry Module</b> <i>The laundry module contributes large quantities of grey water toward the maintenance of interior natures.</i></p>	 <p><b>Washing-Up Module</b> <i>Sharing life means sharing chores. Plants can share the grey-water too.</i></p>	 <p><b>Cooking Module</b> <i>Simple and austere, this module strips cooking down to its raw elements.</i></p>	 <p><b>Rocks</b> <i>Minerals are an important part of any ecosystem. Thermal mass has never been so mobile.</i></p>
 <p><b>Storage Module</b> <i>The collectors of Gen Z require a place to store their things. On wheels, this module allows one to navigate dispersed domesticity with ease.</i></p>	 <p><b>Water Collection Module</b> <i>Local weather plays an important role in the operation of a building. The collection of water allows inhabitants to manage dry periods with locally harvested resources.</i></p>	 <p><b>Study Module</b> <i>An assembly of raw elements and an old chair, the study module performs its simple role in simple fashion.</i></p>	 <p><b>Shelving Module</b> <i>A simple frame for the collectors of Gen Z to both store and showcase their things.</i></p>	 <p><b>Rail Module</b> <i>A simple frame [and sliding screen] for the collectors of Gen Z to both store and showcase their clothes, accessories, towels and fabrics.</i></p>	 <p><b>Water Filter Module</b> <i>The filtered grey water provided through this module links human and non-human inhabitants in symbiosis.</i></p>

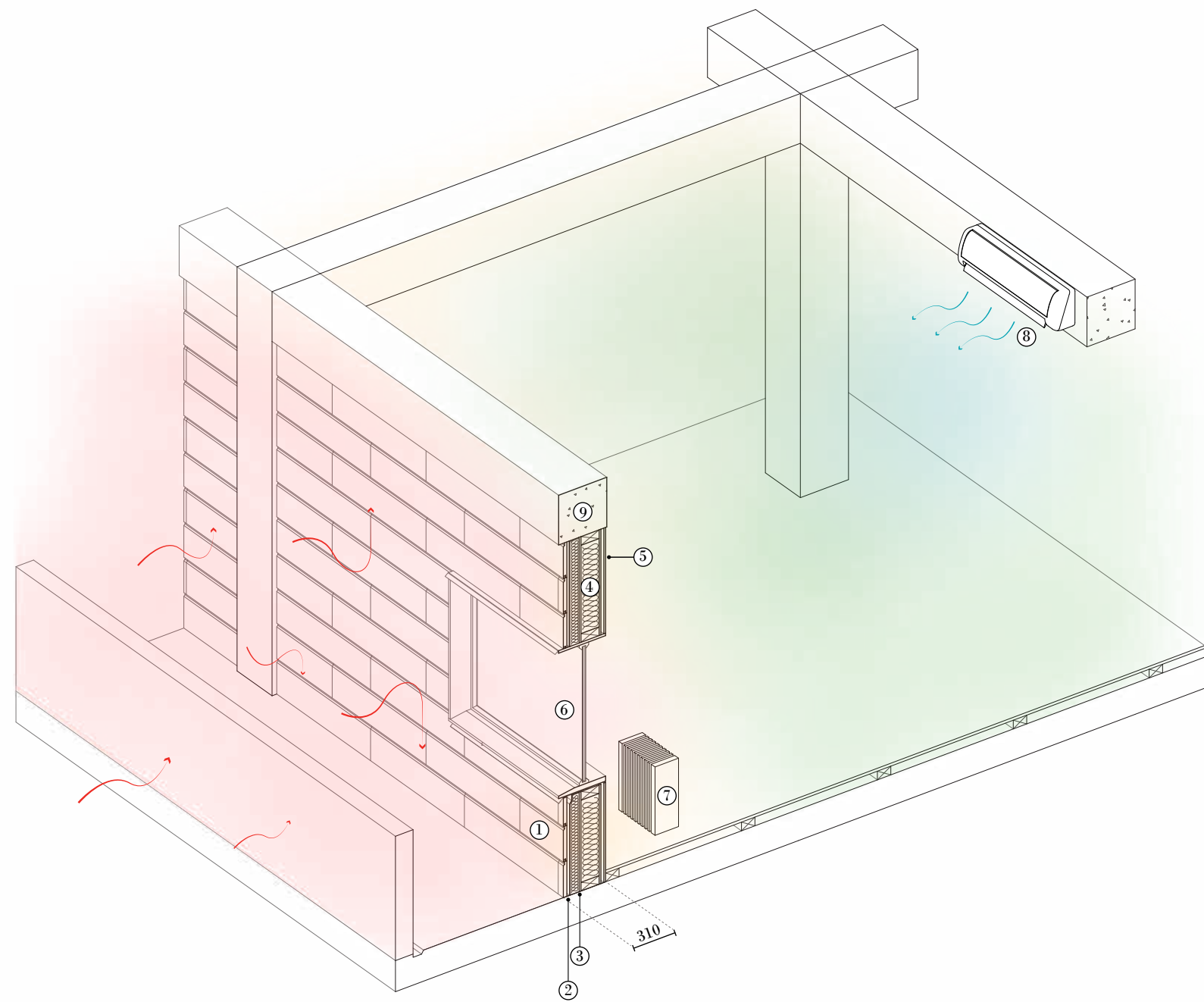




Two scenarios deployed

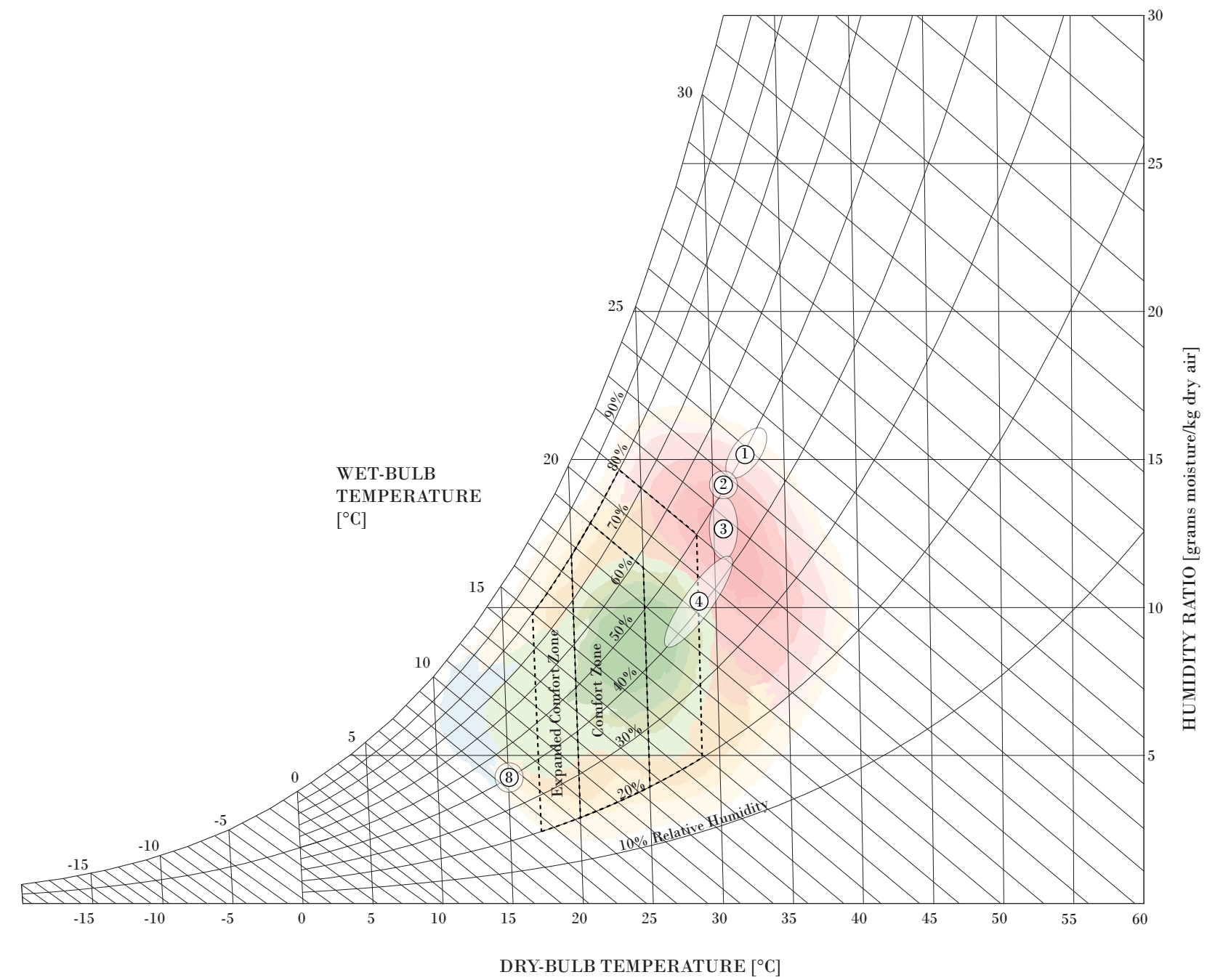


Hypothetical Psychrometric Axonometric  
Traditional Facade - Cooling Scenario



- ① External Cladding  
*Rainscreen, windbreak and shading*
- ② Air Gap  
*Insulation and water management*
- ③ Vapour Barrier  
*Reduces infiltration of moisture*
- ④ Insulation  
*Thermal and acoustic barrier*
- ⑤ Internal Finish  
*Typically a plasterboard finish*
- ⑥ Glazing  
*Transparent interface to allow for transmission of light between interior & exterior. Poor insulating qualities.*
- ⑦ Conventional Radiator  
*Typically electrically powered heat source to manage cooler periods*
- ⑧ Conventional Air Conditioner  
*Electrically powered convection device for management of temperature and humidity*
- ⑨ Concrete Beam  
*Structural element that can create a thermal bridge between exterior and interior*

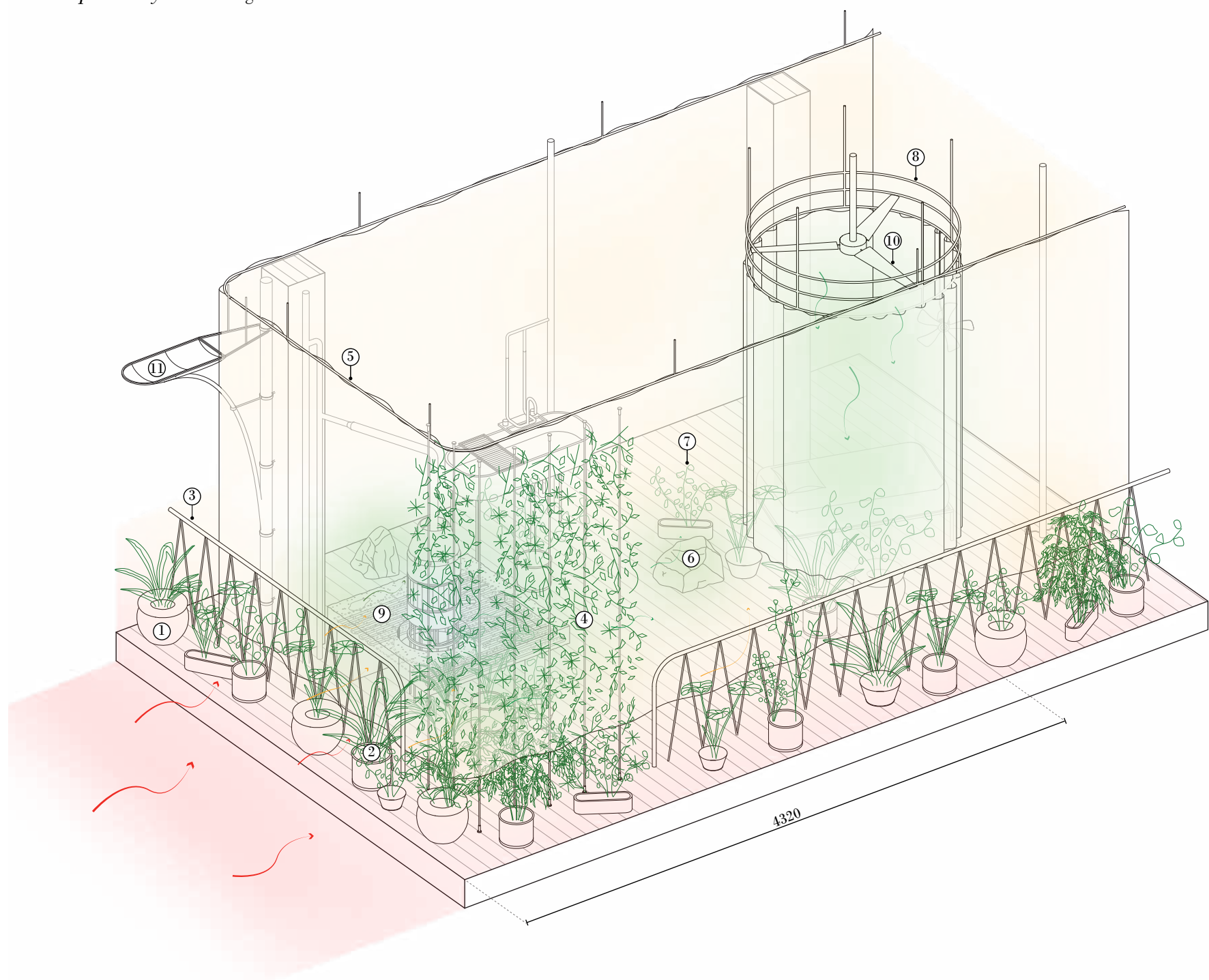
Hypothetical Psychrometric Chart  
Traditional Facade - Cooling Scenario



- Indicative Scenario**
- External Temperature*  
**33°C**
  - External Windspeed*  
**5 m/s**
  - External Rel. Humidity*  
**50%**
  - Conditioned Air Output Temperature*  
**15°C**
  - Conditioned Air Output Humidity*  
**40%**

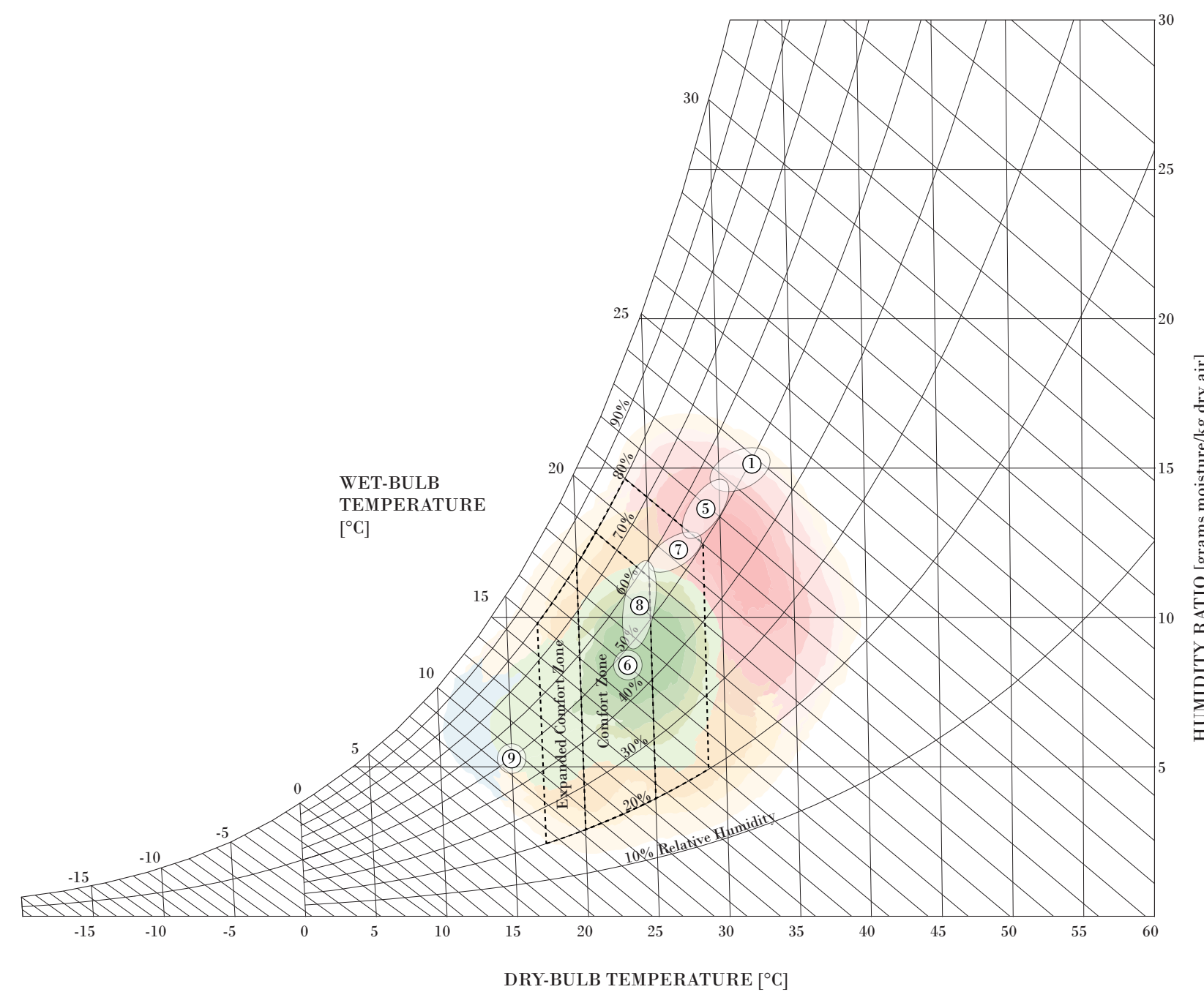


Hypothetical Psychrometric Axonometric  
Dispersed Layers - Cooling Scenario



- ① Pot Plants  
*Shading, thermal mass, acoustic buffer, windbreak, evaporative cooling and rain screen*
- ② External Plants  
*Grevillea Oleoides, Banksia Ericifolia, Casuarina Equisetifolia, Callistemon 'silver cloud'*
- ③ Balustrade  
*Device to secure objects and occupants from falling*
- ④ Vertical Climbers  
*Shading, acoustic buffer, windbreak and rain screen*
- ⑤ Outer Lightweight Curtains  
*Initial thermal barrier, shading, acoustic buffer, privacy screen, windbreak, rain and insect screen*
- ⑥ Rocks  
*Mobile elements for the management of thermal mass*
- ⑦ Internal Plants  
*Cordylone stricta, Platycerium spp., Lomandra longifolia and Schefflera actinophylla*
- ⑧ Inner Heavy Curtains  
*Thermal barrier, privacy screen and acoustic buffer*
- ⑨ Heating/Cooling Module  
*Radiant temperature management device using circulated heated/cooled water*
- ⑩ HVLS Fan  
*Electrically powered, slow moving fan for ventilation, humidity regulation and cooling*
- ⑪ Rainwater Collection Device  
*Device to collect rainwater for water-using modules*

Hypothetical Psychrometric Chart  
Dispersed Layers - Cooling Scenario



**Indicative Scenario**  
 External Temperature  
33°C  
 External Windspeed  
5 m/s  
 External Rel. Humidity  
50%  
 Radiant Module Water Temperature  
15°C



**Conclusion**

A new type of domesticity is emerging in Australian cities defined by a shift towards hedonistic collective housing. As a preliminary framework for action, the *Future of Living* proposes a series of protocols for management, an honest constructive system, an anthropogenic environment and a raw design. These tools allow us to address the resignification of normative domestic spaces such as kitchens, gardens, bedrooms, and living rooms in ways that break the mould of the traditional household. Rather than by rooms, the *Future of Living* is organised by assemblages of furniture, plants and construction materials.

Each one might facilitate gatherings, privacy, climatic control, social life or individual confinement. It is for the users to discover. It is important to remark that the resulting domesticity is not a 'collective house' but rather a step-by-step devolution of the household property towards the possibility of commoning. The implications of this model are deeply rooted in the Australian culture and climate, as they blur the boundaries between the interior and the exterior as the next step for exploring new ways of living.

The project sets its future inhabitants as a collective that, together, must become involved in a continuous definition of their domestic environment. It provides them with the ability to define their own comfort through manipulable infrastructures; appliances, curtains, plants, spaces and climates. The ability to shape one's domestic interior recognises this generation's desire to adapt to the day, the night, the seasons and the mood.

**The Future of Living**

Dispersed domesticity case study A



**Notion 1**

**Sharing Life**





**Notion 2**

**Managing Our Climate**





**Notion 3**

**Naturalised Interiors**





**Notion 4**

**Reusing New Materials**





**Notion 5**

**Austerity Chic**







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# A new domesticity