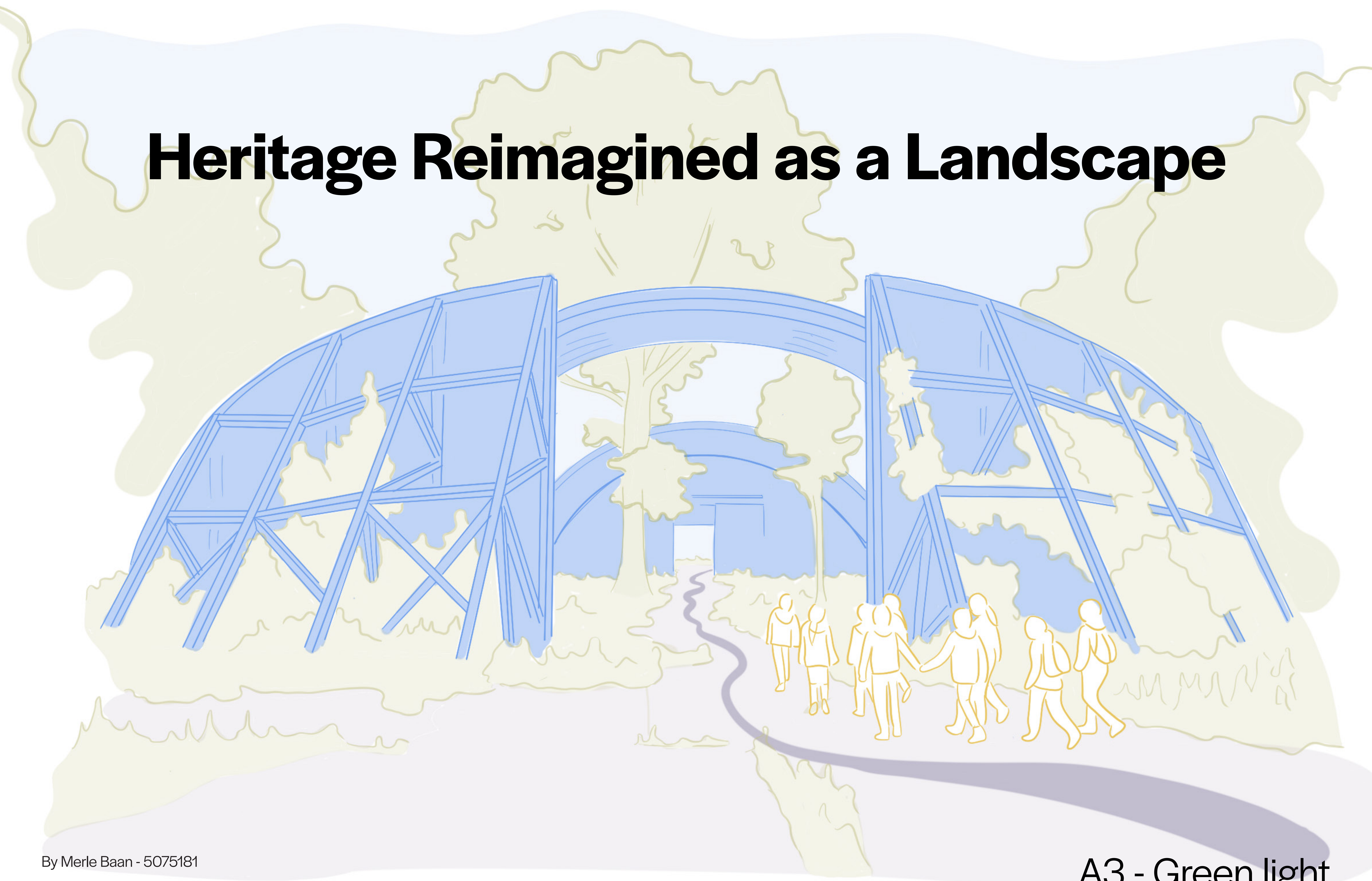
Heritage Reimagined as a Landscape



By Merle Baan - 5075181

Tutors: Lidy Meijers and Thijs Bennebroek

Studio: AR4AH120 Adaptive Reuse of Heritage Graduation Studio (2025/26 Q2)

A3 - Green light

4 June 2026

Hollandse Waterlinie

Problem Statement

*The reciprocal relationship between **culture** (people) and **nature** (ecology and environmental processes) grows in disbalance.*

....nature is dominated by people

Source: CLO (2025)

...people are becoming increasingly separated from nature.

Source: generated by Chat GPT

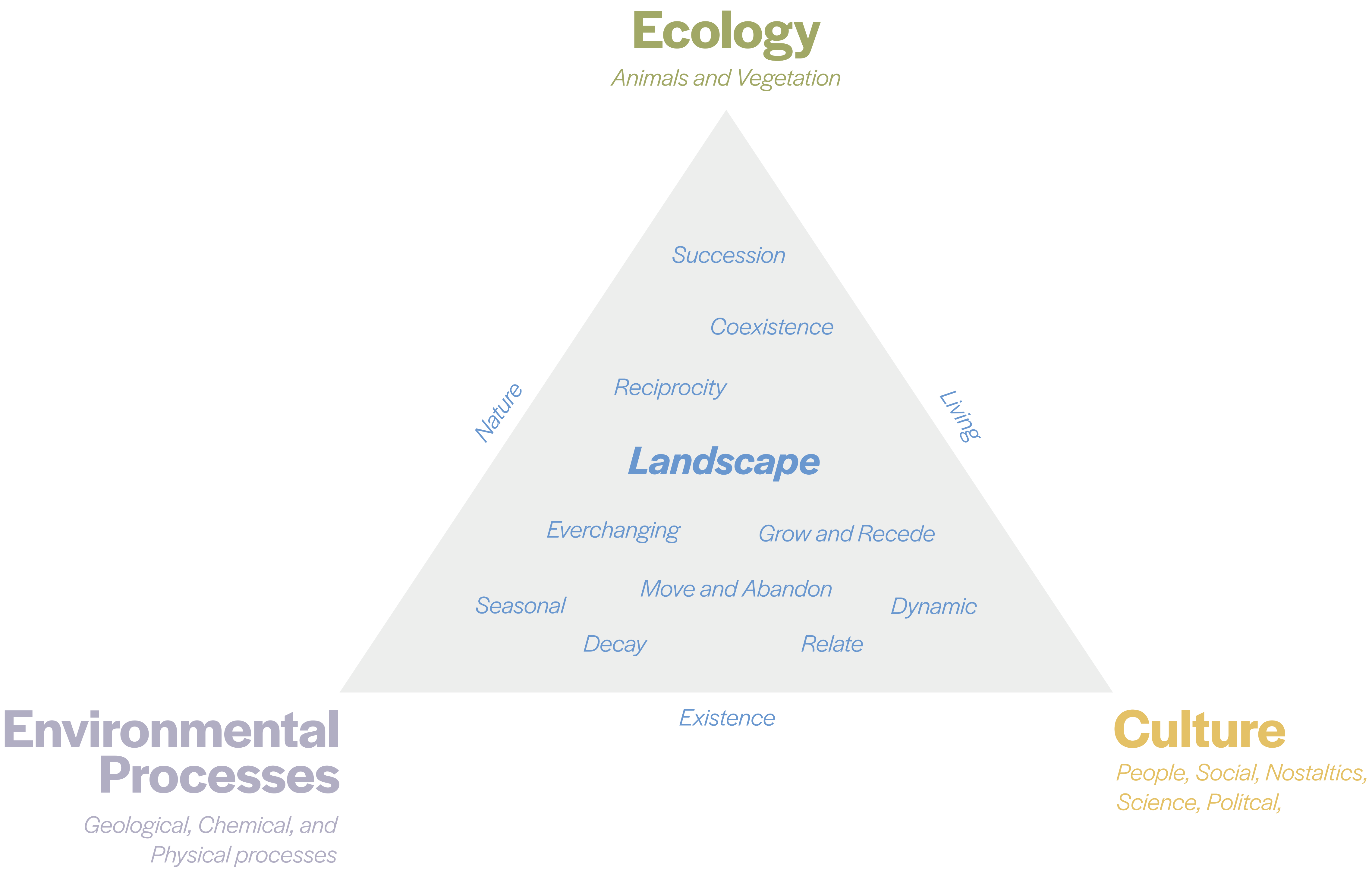
...culture-nature imbalance also shows within the field of heritage architecture

Source: Mirna Pavlovic

How can architectural ***heritage interact with natural processes*** *rather than resist them?*

Theory

..."Heritage Reimagined as a Landscape"



Source: NIMH

...nature school is proposed as new cultural actor

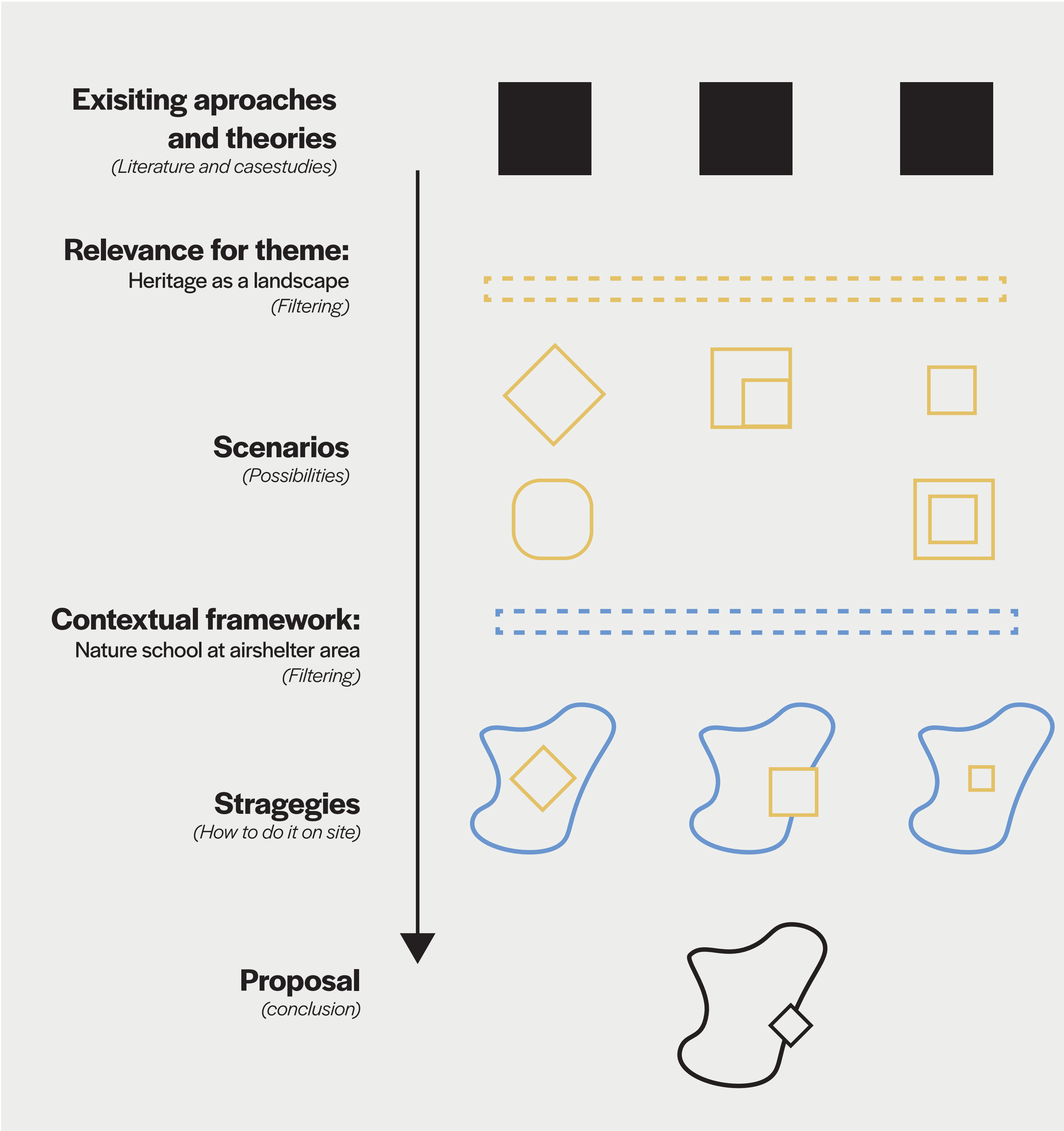
Source: I Uhr och Skur

Nature School “de Shelter”

Central Question

*How can **adaptive reuse of heritage, reimagined as a landscape,** transform the **Air Shelter Area** of Airbase Soesterberg into a **nature school** that restores a **reciprocal relationship between culture, ecology, and environmental value?***

Method


Exisiting aproaches
and theories
(Literature and casestudies)
Relevance for theme:
Heritage as a landscape
(Filtering)
Scenarios
(Possibilities)
Contextual framework:
Nature school at airshelter area
(Filtering)
Stragegies
(How to do it on site)
Proposal
(conclusion)

Colour coding

..."Heritage Reimagined as a Landscape"

DESIGN APPROACH

From Value Assessment to Design Approach

*How do **values** of nature and culture coexist in the Air Shelter Area?*

Coexistence of natural and cultural values

	'Life from'				'Life in'					'Life with'		'Life as'	
	Economic	**Health**	**Scientific**	**Education**	**Age**	**Historic**	**Aesthetic**	**Commemorative**	**Nostaltic**	**Existence**	**Biocultural diversity**	**Spiritual**	**Symbolic**
Surroundings *Utrecht, Soesterberg Airbase*	Animal and plants get basic needs from surroundings Public park and Tourism	Park with space for biking, walking, running, exercise and slow down	Biology and biodiversity studies	Learn about history in nature, culture and environment and biodiversity	- Relief of morraine and plain landscape - Layers of human interventions (landingstrip)	Napoleon Stratetical point much military activity Vliegerheide	Scenic nature relief and depth. Openness vs. enclosure - sight lines	Museum and memorial statue is commemorative	Limited acces Sound of overflying airplane Peak inside - Open Vliegerdagen	Utechts Landschap protects the green space in the provence	High biodiversity - ecology routes to Natura 2000		Using nature as camouflage technique
Site *Air shelter area*	Advertisement Utrechts landschap	Much vegetation results in clean air and relaxation	Numbers of animal species tracking trough	Learn about cold war history and biodiversity	Big mature trees Footprint 'German landingstrip' and other paths	NATO and WO2 activity	Contrasting nature and concrete scene		American military NATO activity Mysterious	Originally heather, the planted forest creates more habitat diversity and shelter	Along concrete strips more calcium rich species		Reciprocity of culture and nature
System *Air shelters*	Head quarters and storage Utrechts Landschap Rentable event or work space		NATO air shelter placement system Generation 3 shelter	Learn about cold war history and reciprocity with nature (nature camouflage plan)		NATO activity	Randomness in orientation			Random orientation create different habitat circumstances	Diversity in placement and orientation of aishelters		
Structure *Wondr building*	High carrying capacity				Water traces on the steel plates	Wondr structure from chicago	Rythmic arch structure		Construction process, quick assembleing of the shelters	Environmental processes of steel weathering			
Space plan *Floorplan*	Open flexible space				Worn painted guidelines		Emptyness		Teamwork Orginised Loud noises Air flow	Exhaust vault creates habitat for mosses			
Skin *Concrete*						Hardened shelter as reminder from conflict in Egypt	Shadow of trees on the concrete			Weathering of concrete and moss growth			
Service *Ventilation, mechanics, etc.*	Operational systems, like door mechanism and electricity				Weathering stains old electrical system for opening door		Scene of story of use		Ventilation noise Teamwork: Hoisting the airplane inside Opening process of the door	Empty ducts spaces for nests and animal species			
Stuff *(removed)*									Spitfire- airplanein middle Tools behind the Yellow painted line-marking				
Spirit of Place *Stories and atmosphere*	Tourism and investors attractor	Sense of identity and perspective development		Learn about the old stories and memories		Americans under dutch command	Contrast of former activity and current abandonment		Orderness Teamwork Respect Discipline	Cultural identity			

High Value
Average Value
Low Value

...symbolic value in camouflage methods

...existence and biodiversity value

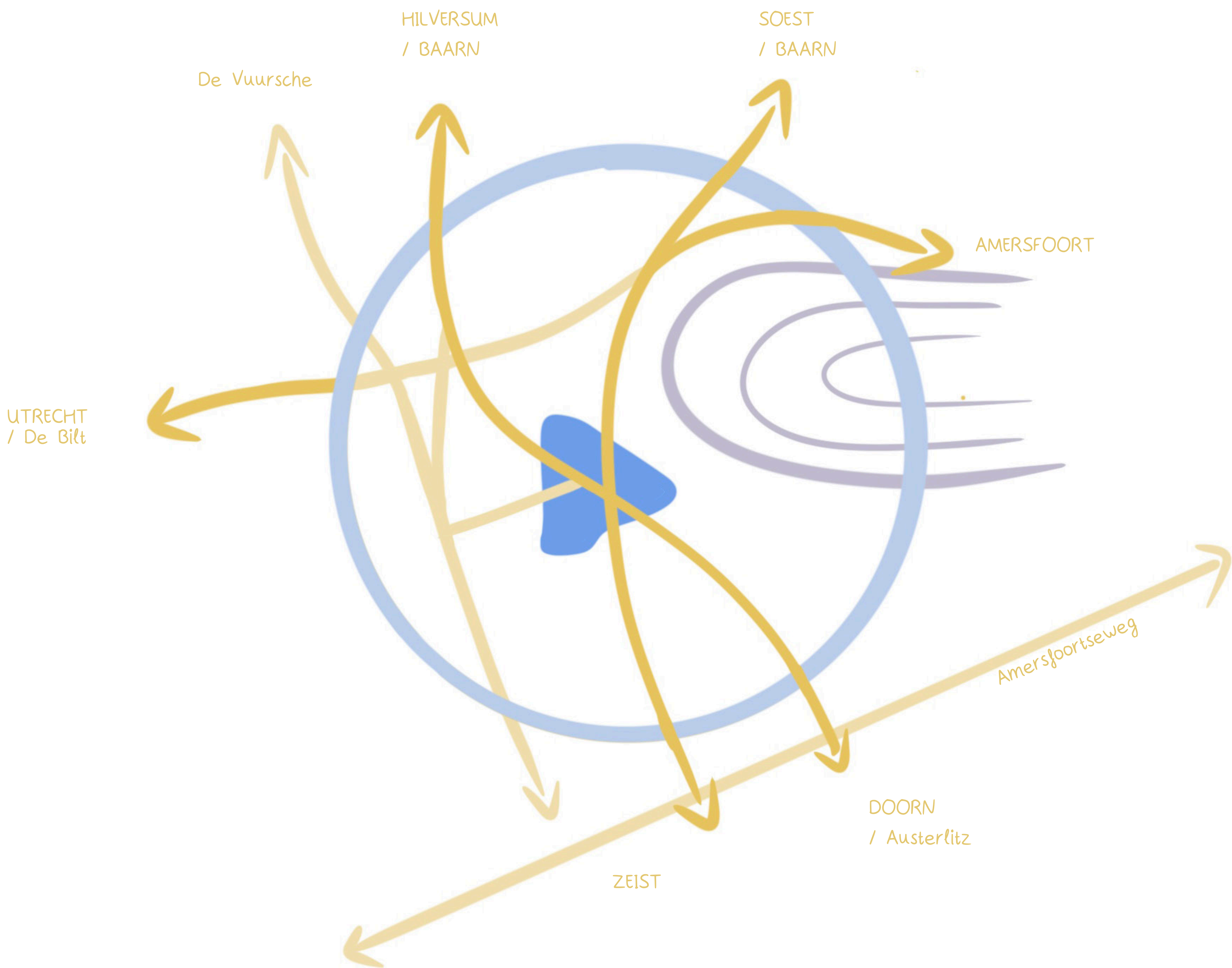
...educational, historical and nostaltic value

Source: NIMH

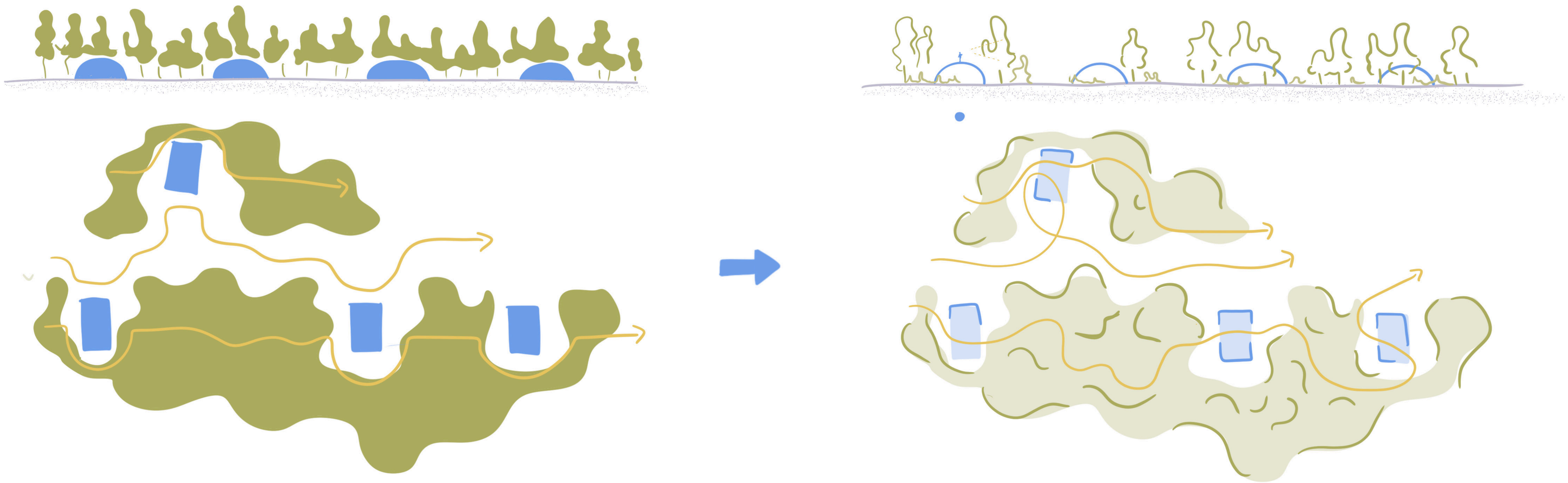
How can (landscape) architectural ***design approaches,*** *existing within the field of adaptive reuse, support the balance of natural and cultural values at the Air Shelter Area?*

Approach of Landscape Architecture

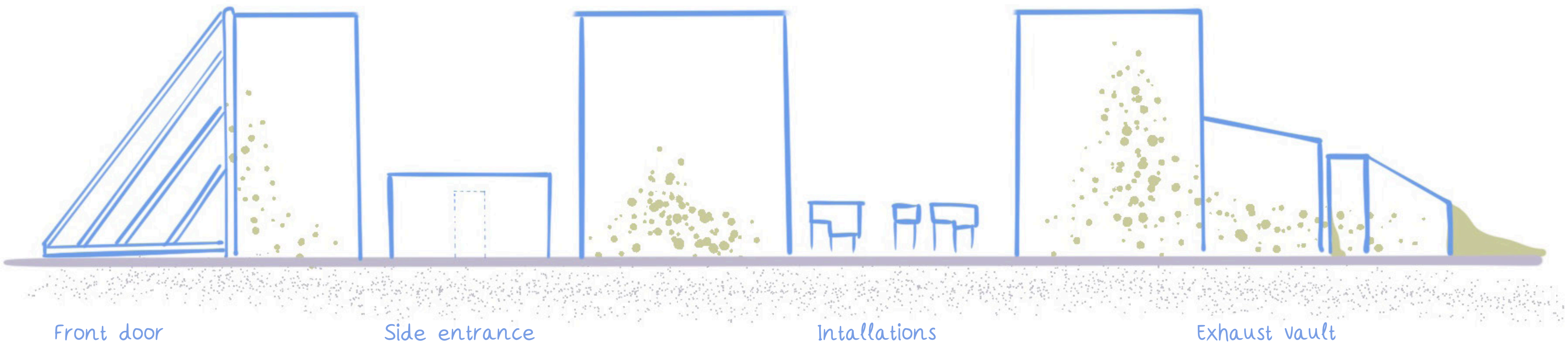
...articulation of time layers

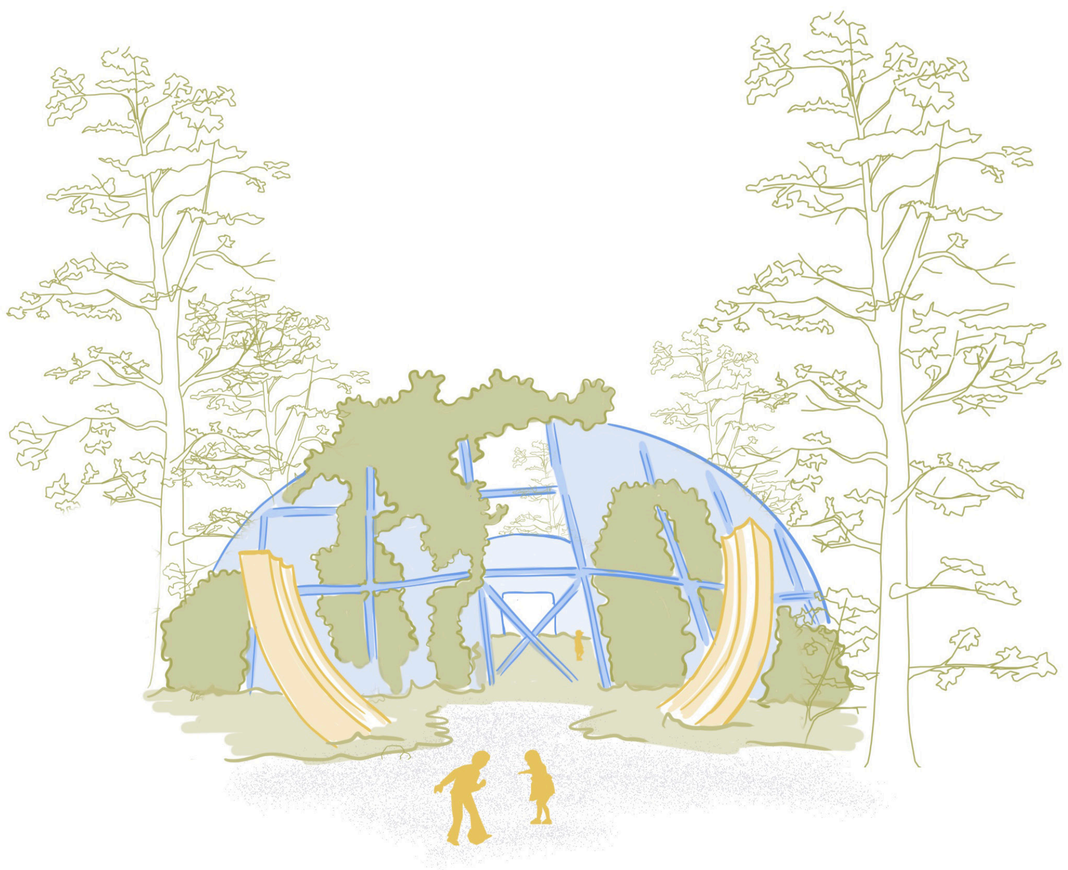


...adding ecological value by opening up



...fragmentation of the air shelter

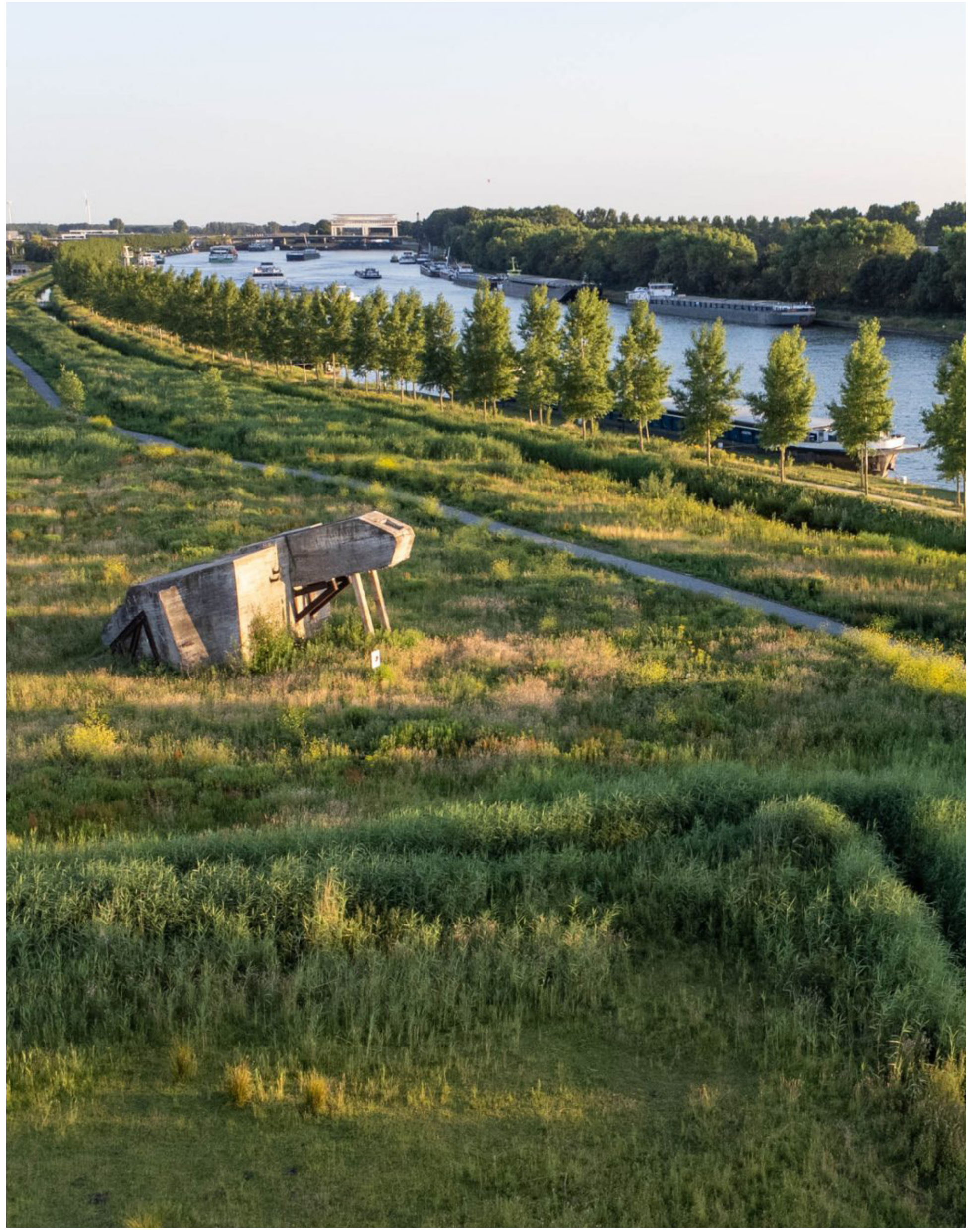




Arches fragmented from context

...adding cultural value through wonder

Source: RAAAF



Source: B+B and H+N+S

Design Approach in Heritage Architecture

...a continued story to be continued story

Reuse by creating an analogue

Source: Ofiice Winhov

...removing and adding through its identity, type, catalogue and pallete

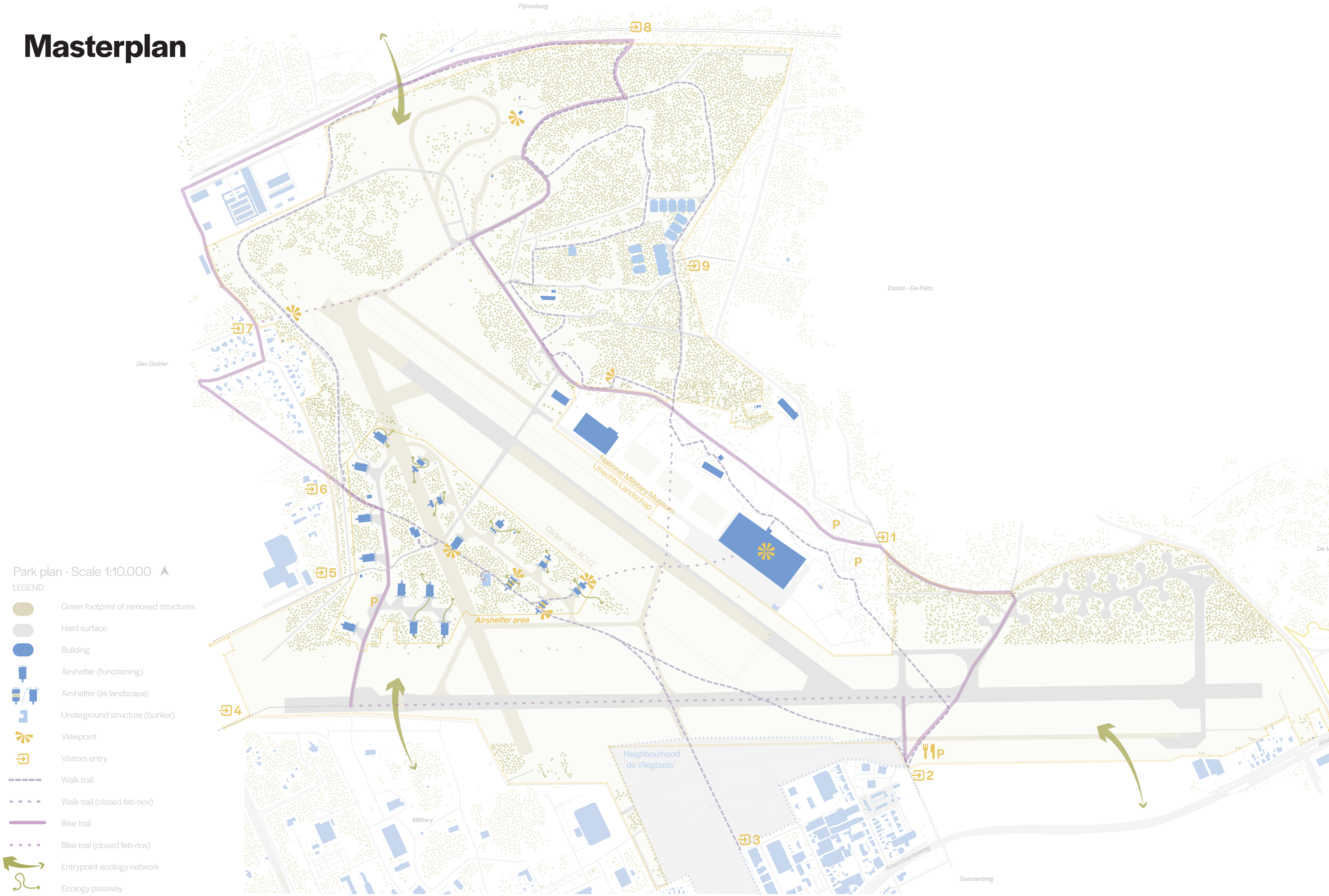
Source: NIMH

Mistakes create wonder and enhances awareness

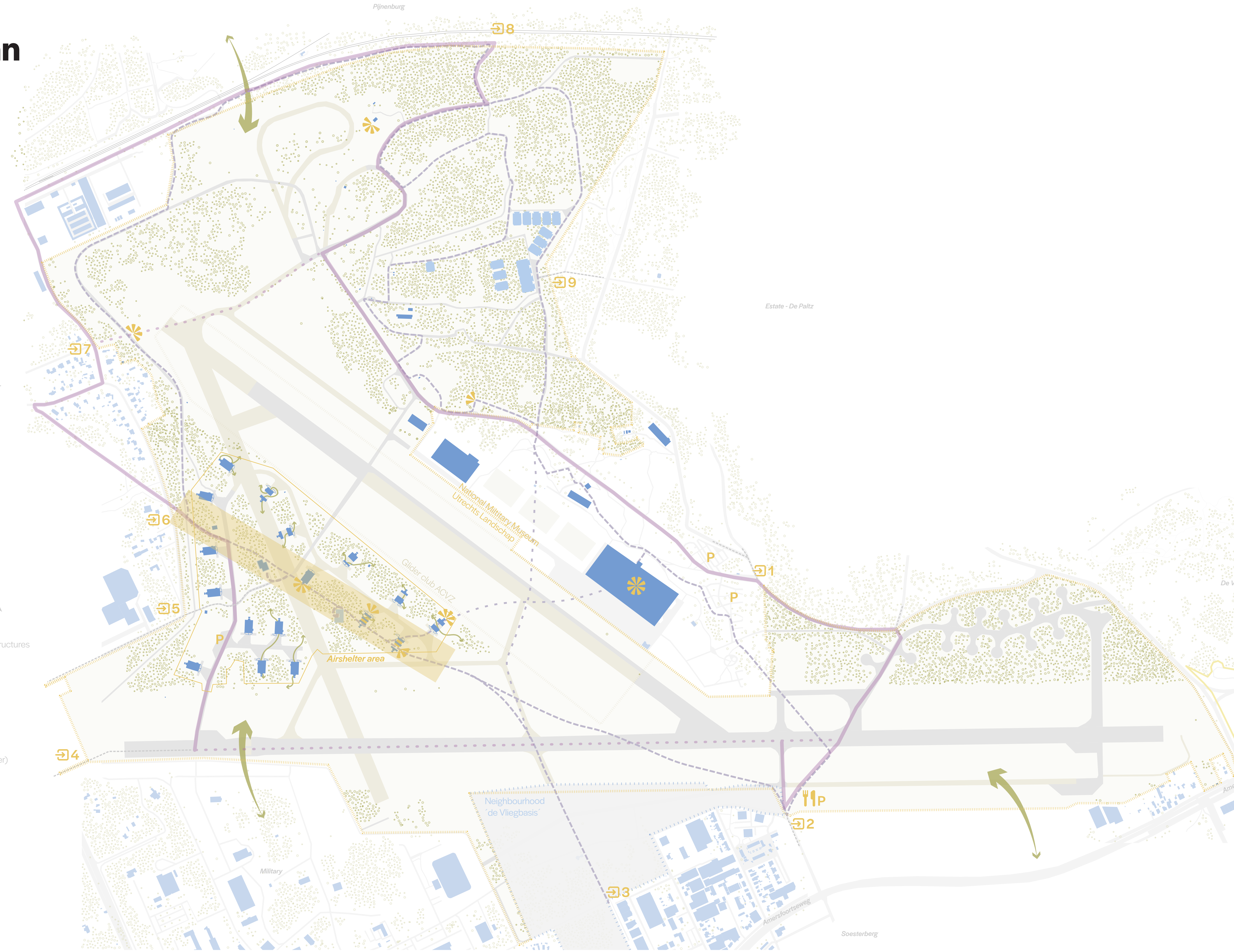
Source: jdviv


DESIGN PROPOSAL
Nature School 'De Shelter'

Masterplan


Pijnenburg
8
9
7
Den Dolder
Estate - De Paltz
National Military Museum
Utrechts Landschap
Glider club ACVZ
6
P
1
P
5
P
Airshelter area
4
Neighbourhood
'de Vliegbasis'
P
2
3
Military
Amersfoortseweg
Soesterberg
Park plan - Scale 1:10.000
LEGEND
Green footprint of removed structures
Hard surface
Building
Airshelter (functioning)
Airshelter (as landscape)
Underground structure (bunker)
Viewpoint
Visitors entry
Walk trail
Walk trail (closed feb-nov)
Bike trail
Bike trail (closed feb-nov)
Entrypoint ecology network
Ecology passway

Masterplan



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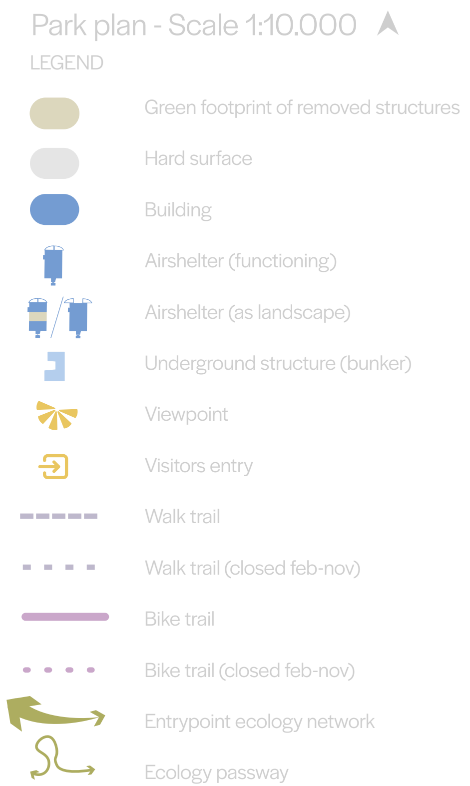

Park plan - Scale 1:10.000
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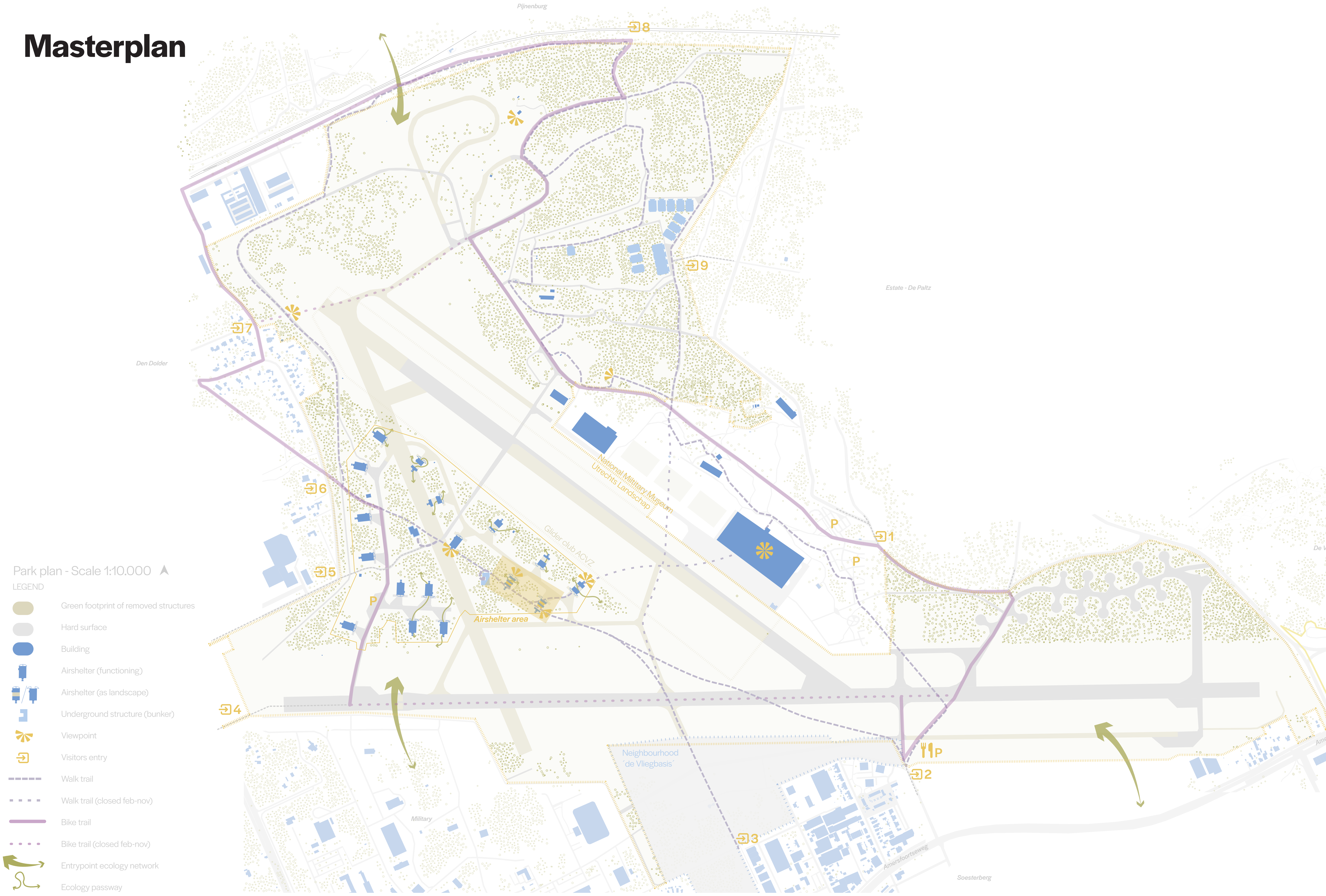
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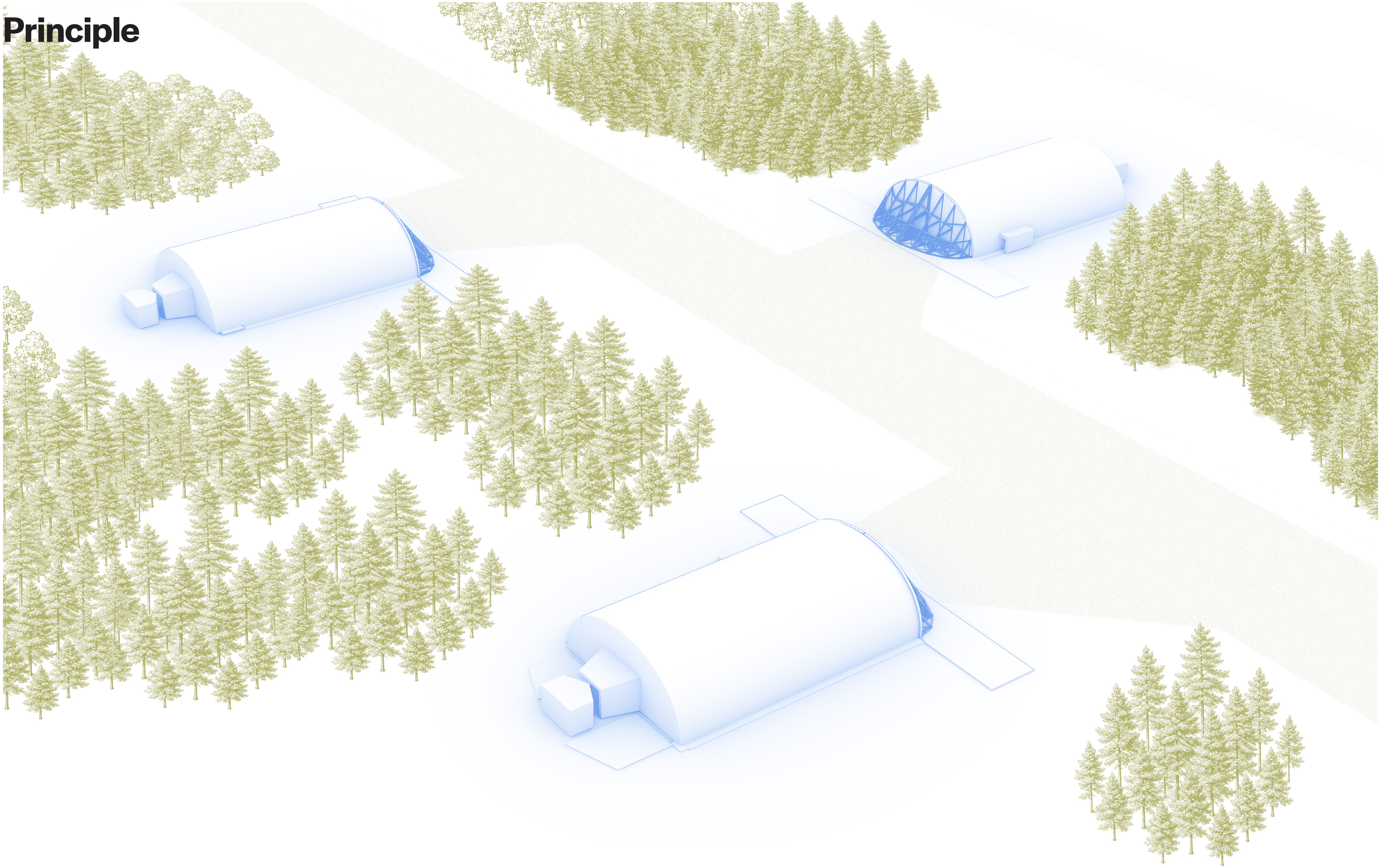
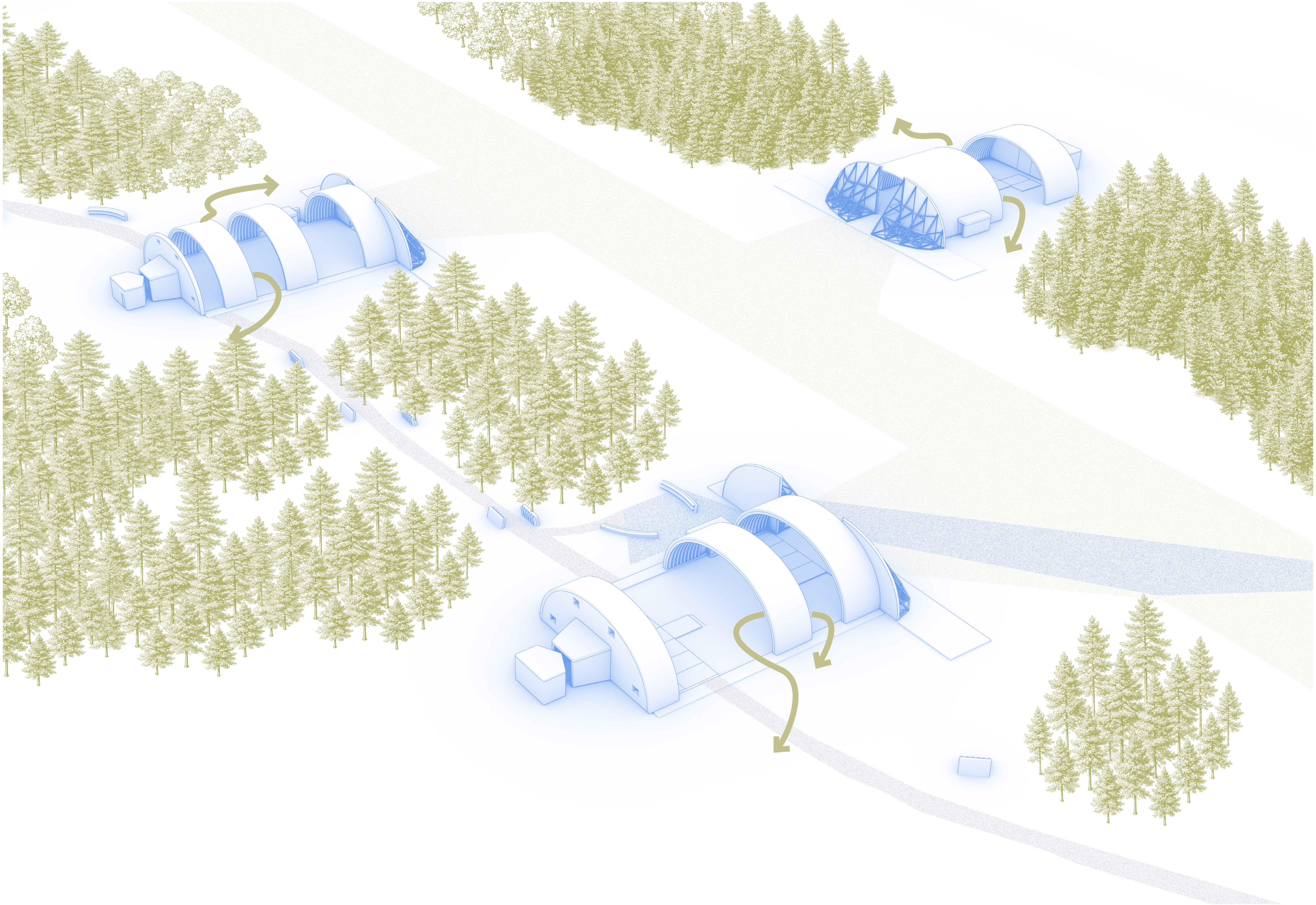
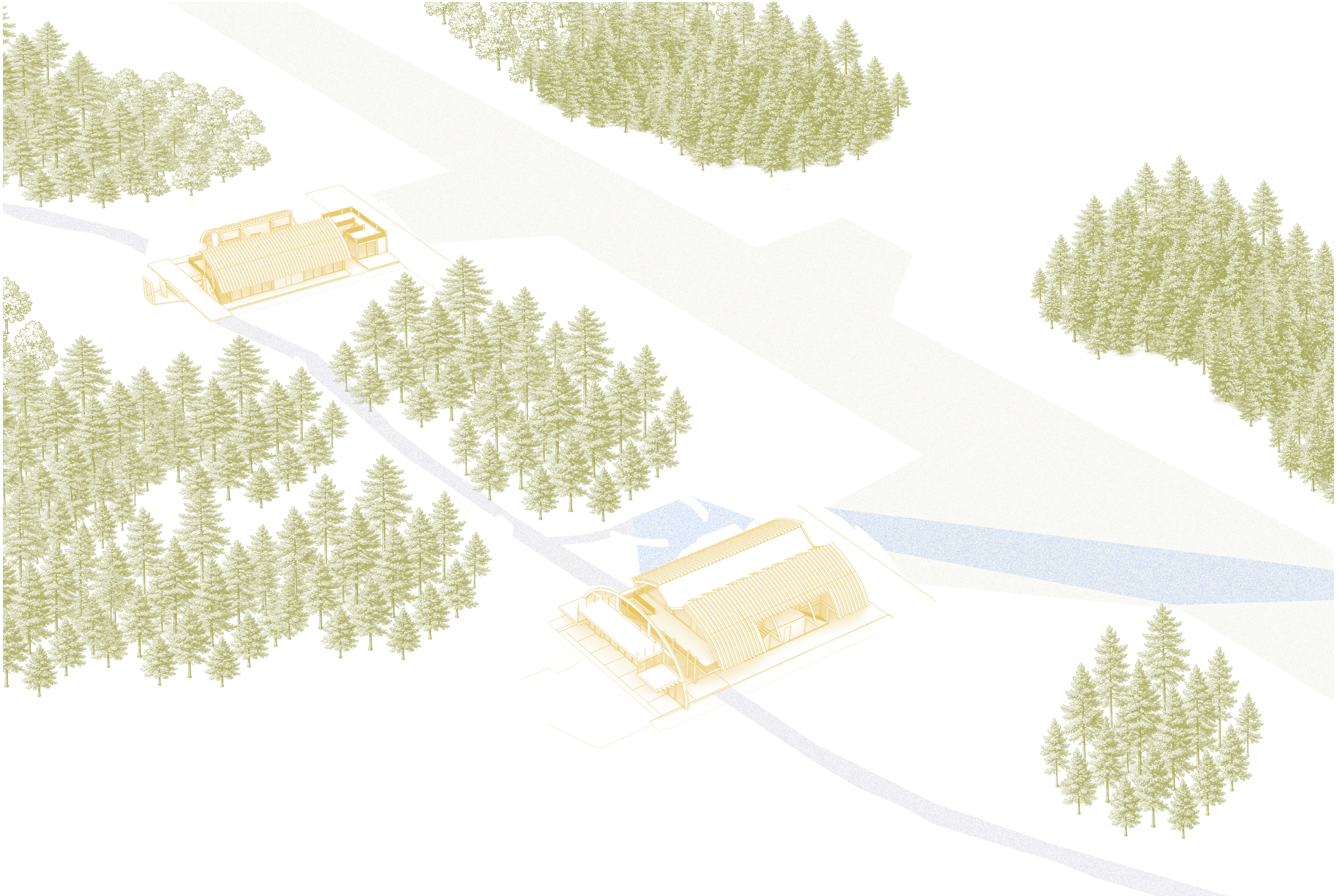
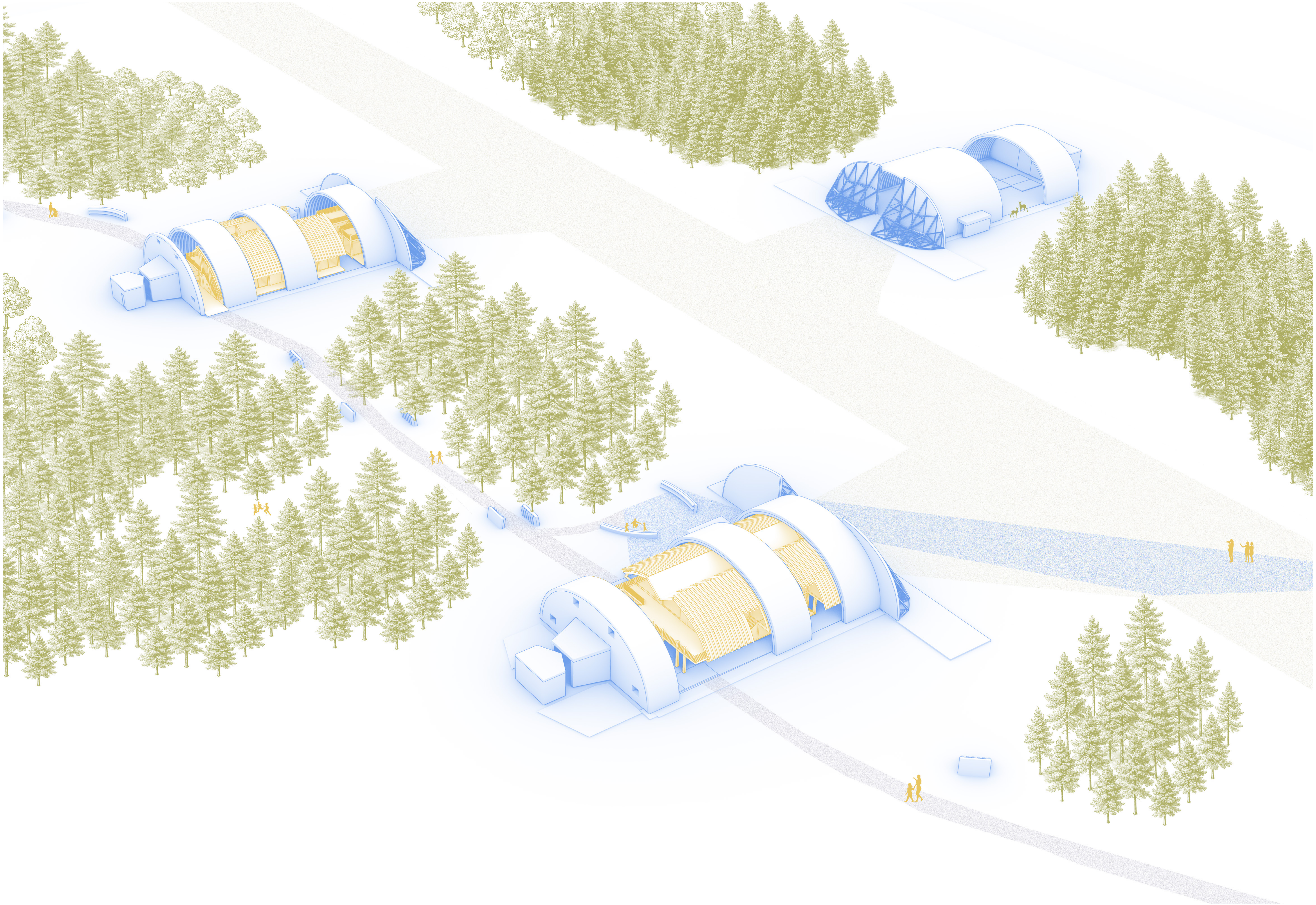
Principle



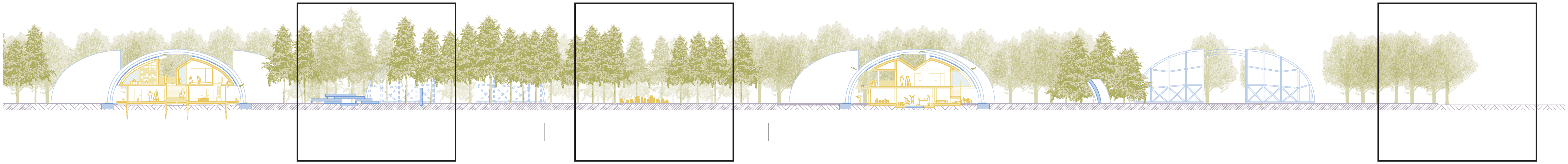




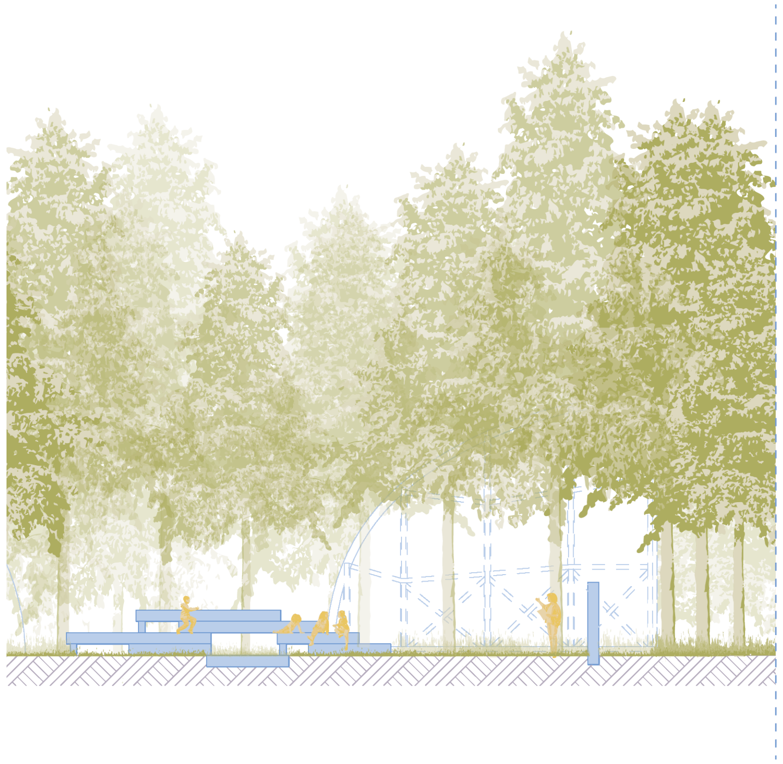


Site

Playground Principles

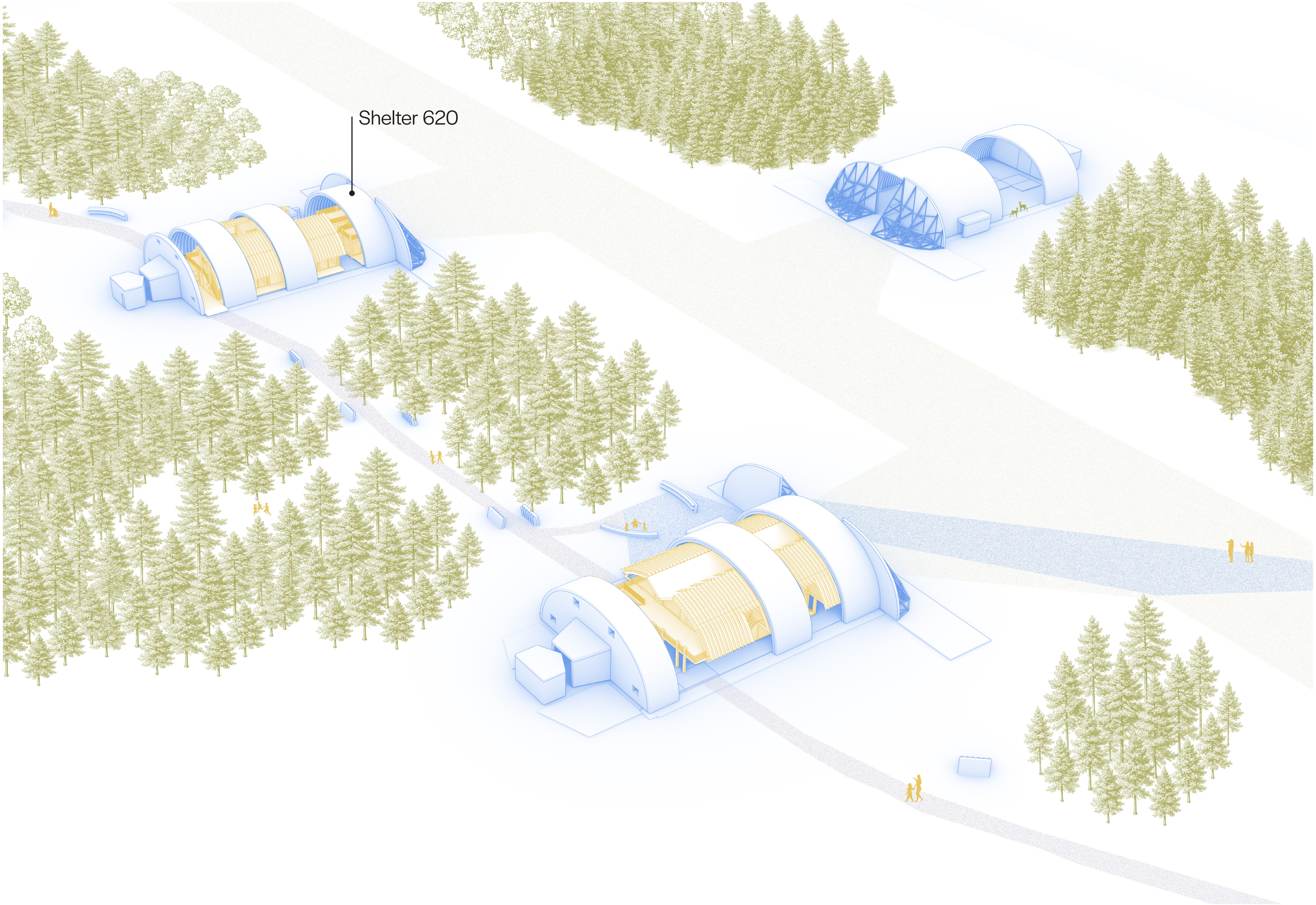


Repurpose Concrete



Natural Play Elements

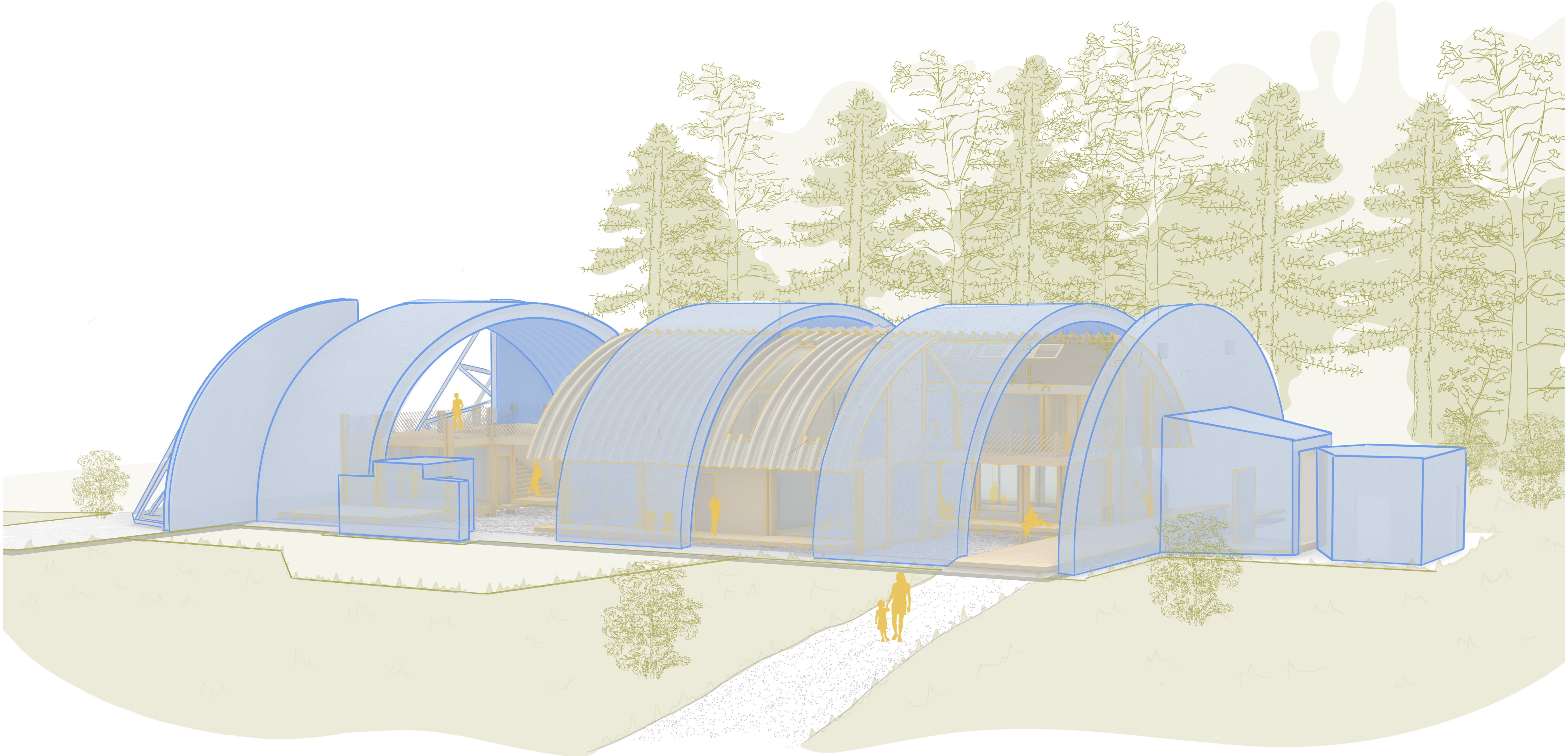
Natural Paths


Shelter 620

*How do **spatial characteristics** and **program approaches** encourage children's learning and engagement with the landscape of the Air Shelter Area?*


de Shelter

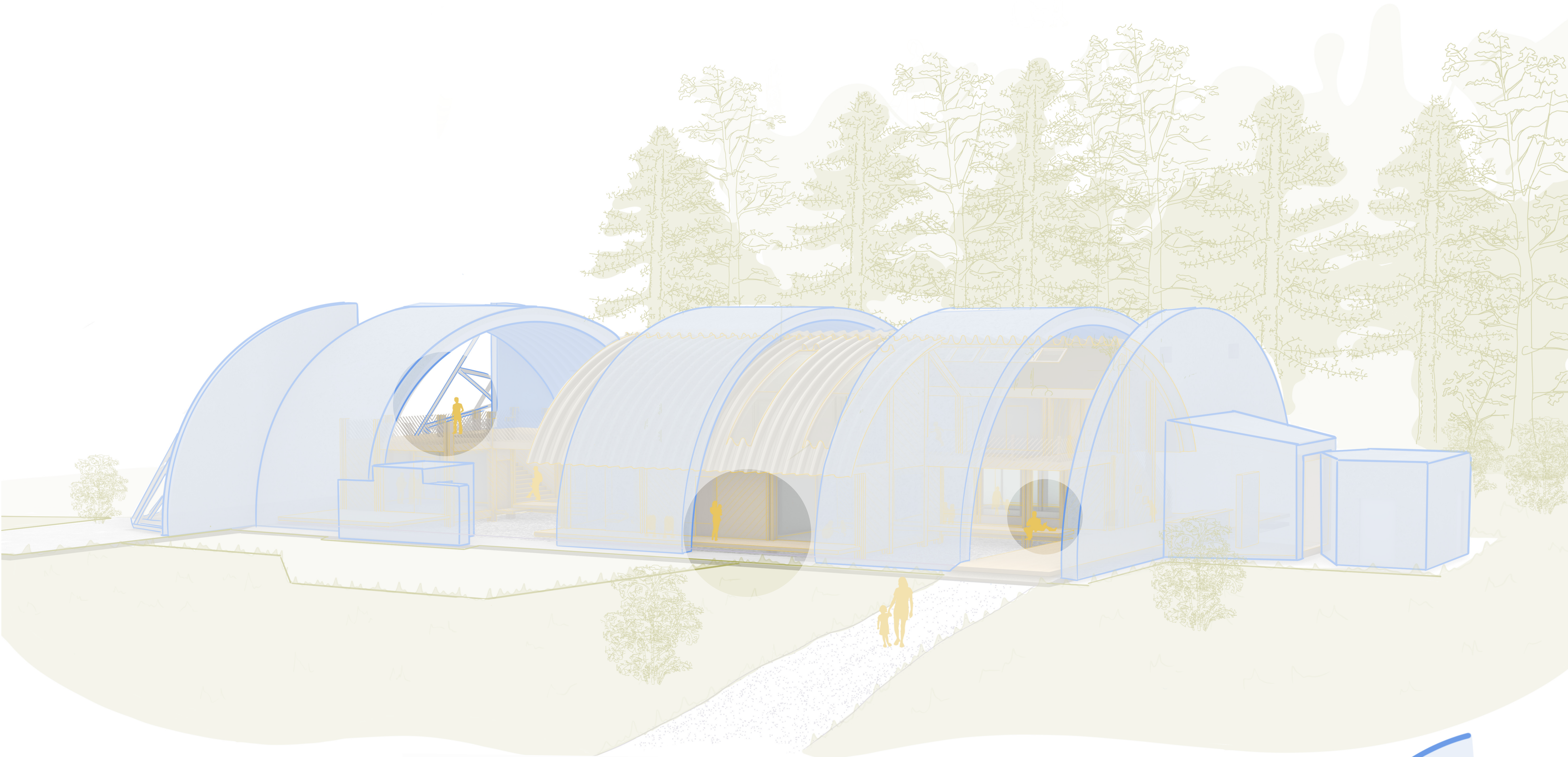
Learning with Nature *Mystery of Movement* *Connectivity of Community*



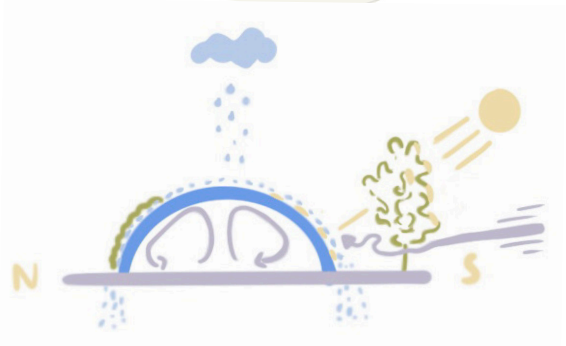
Learning with Nature

Mystery of Movement

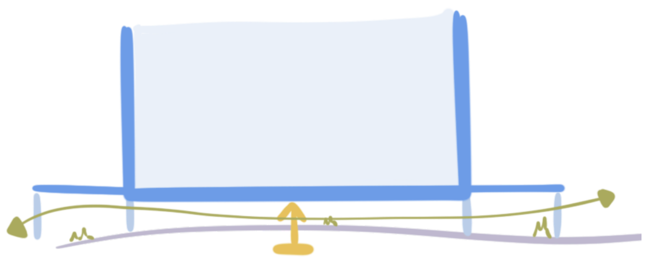
Connectivity of Community



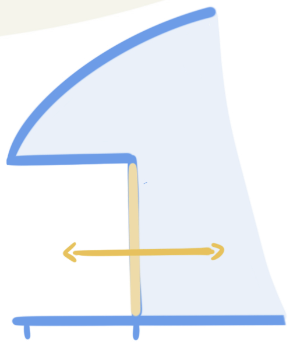
View points



Environmental processes inside the shell



Elevated structures

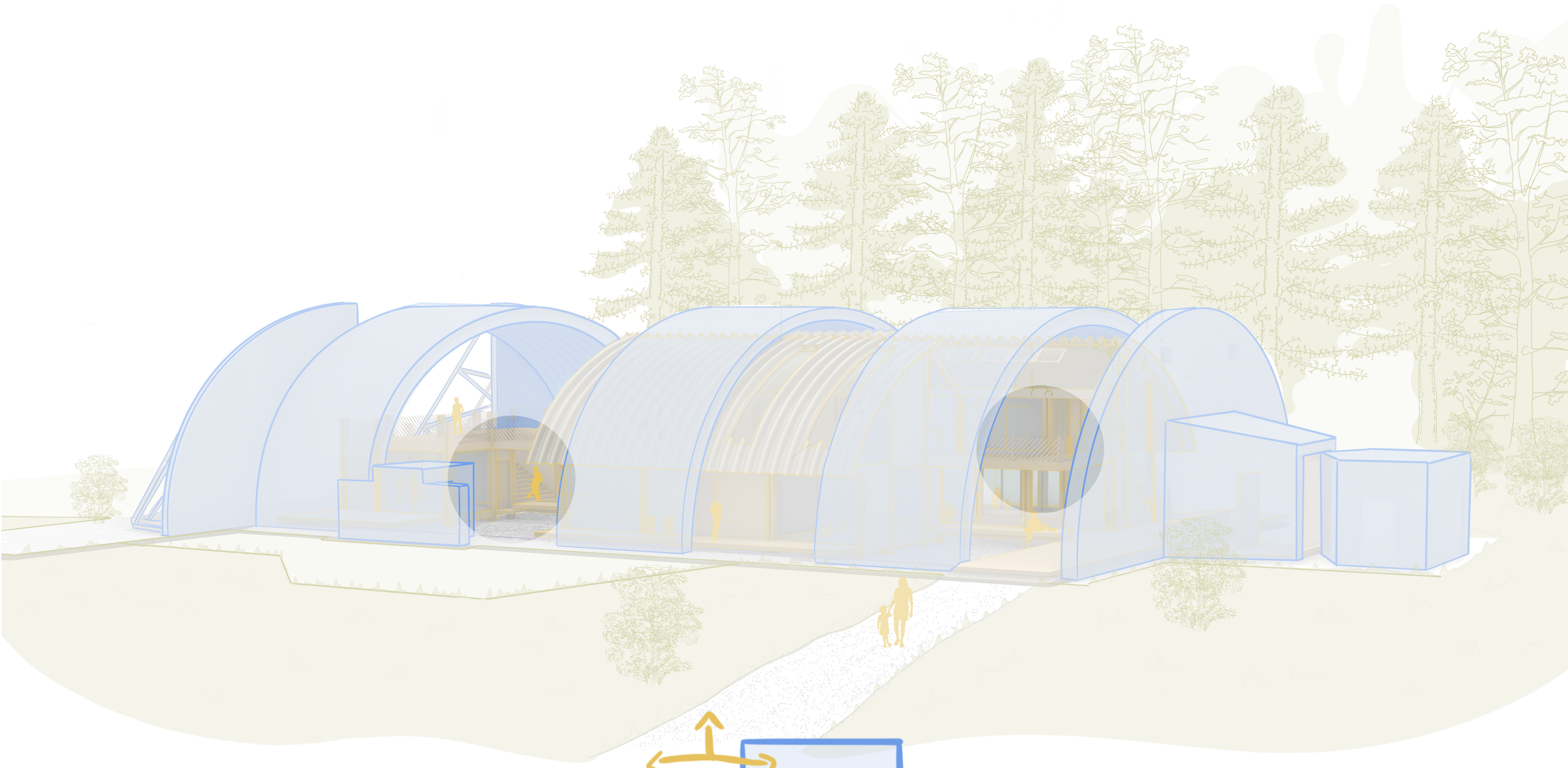


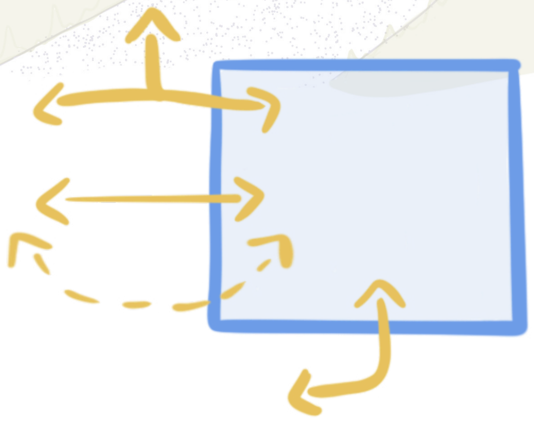
Patio as classroom extention

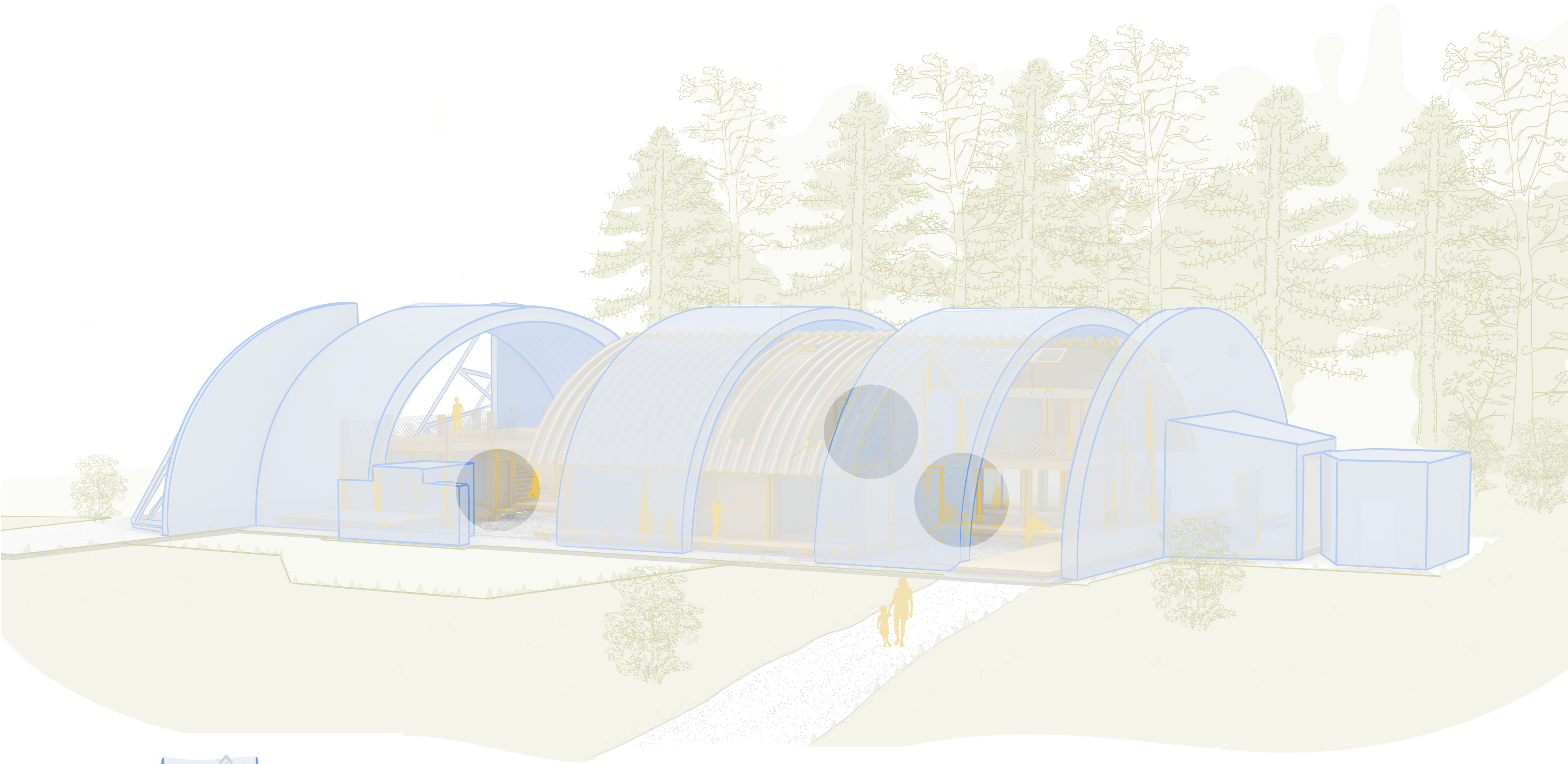
Learning with Nature

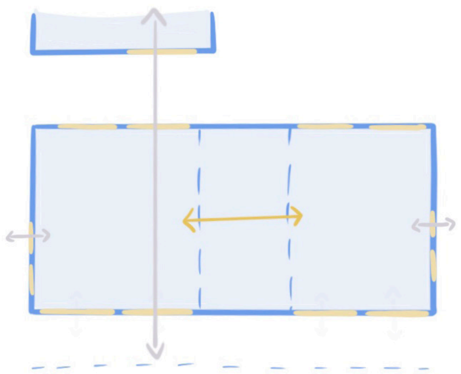
Mystery of Movement

Connectivity of Community

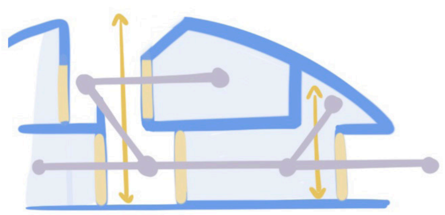




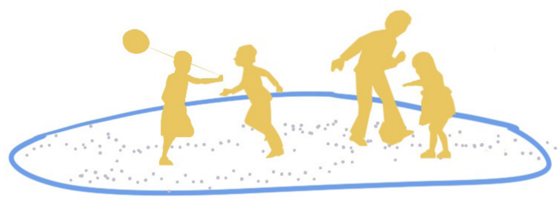




Transparency of spaces

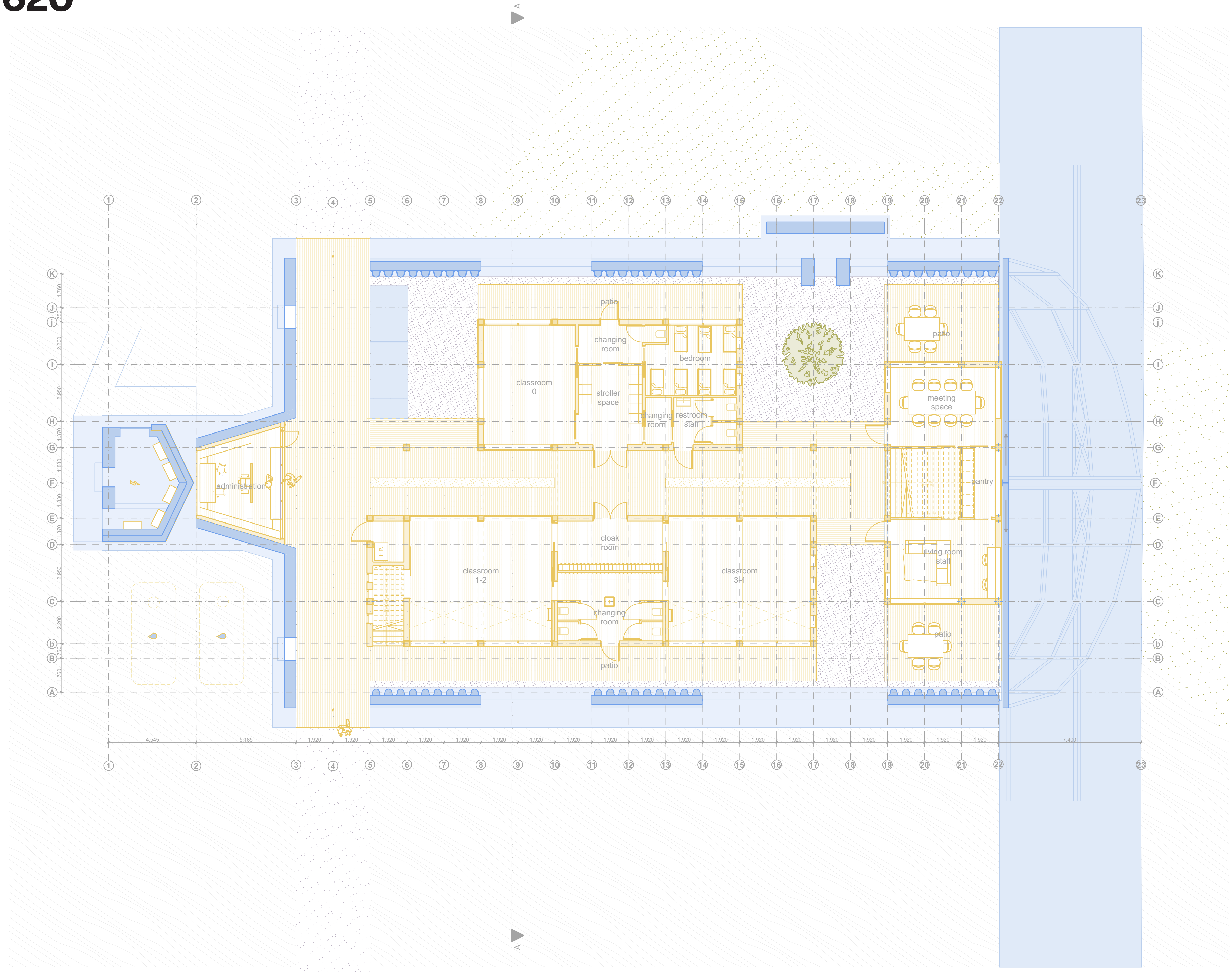


Vertical transparancy

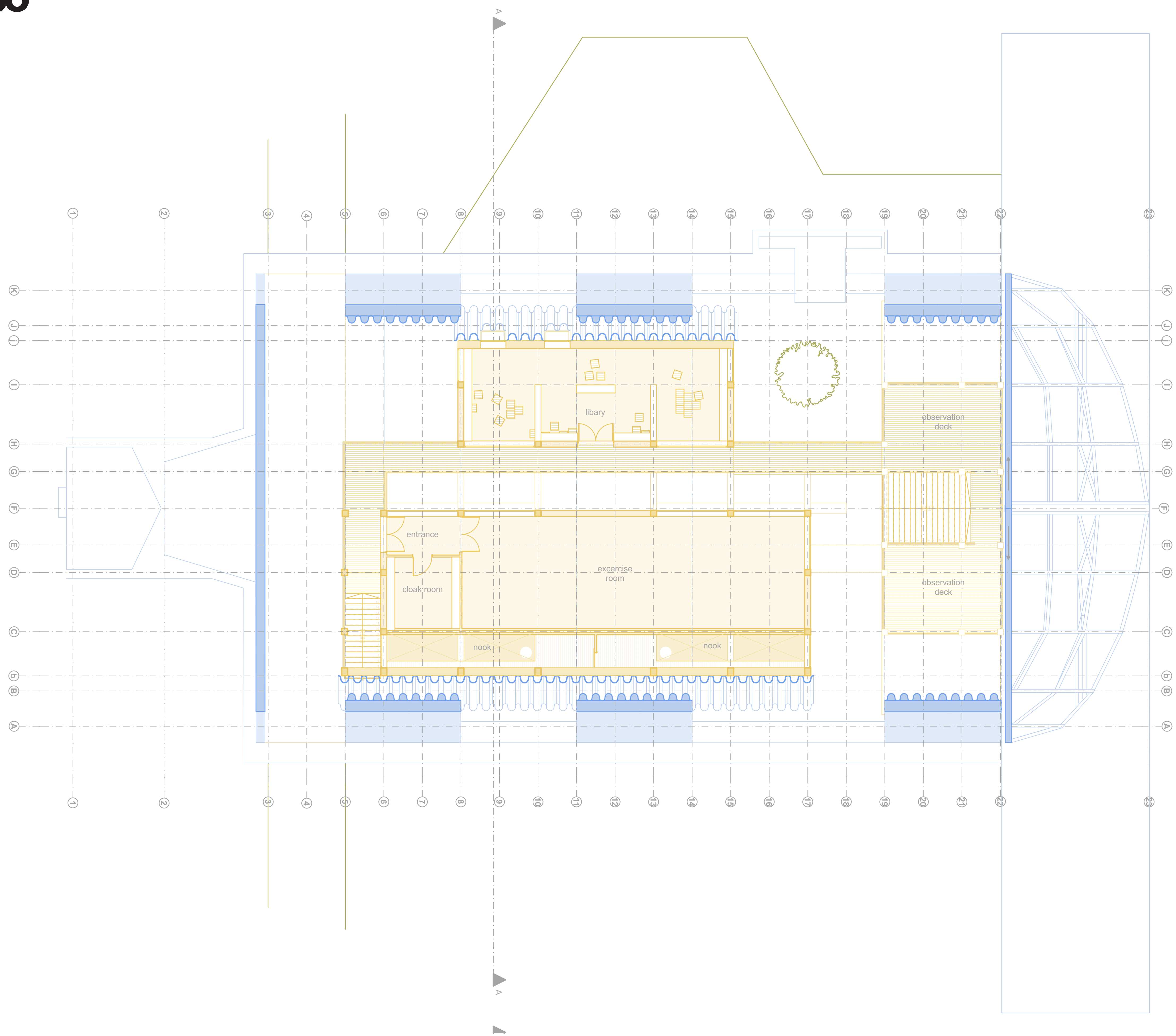


Space for community and celebration

Shelter 620

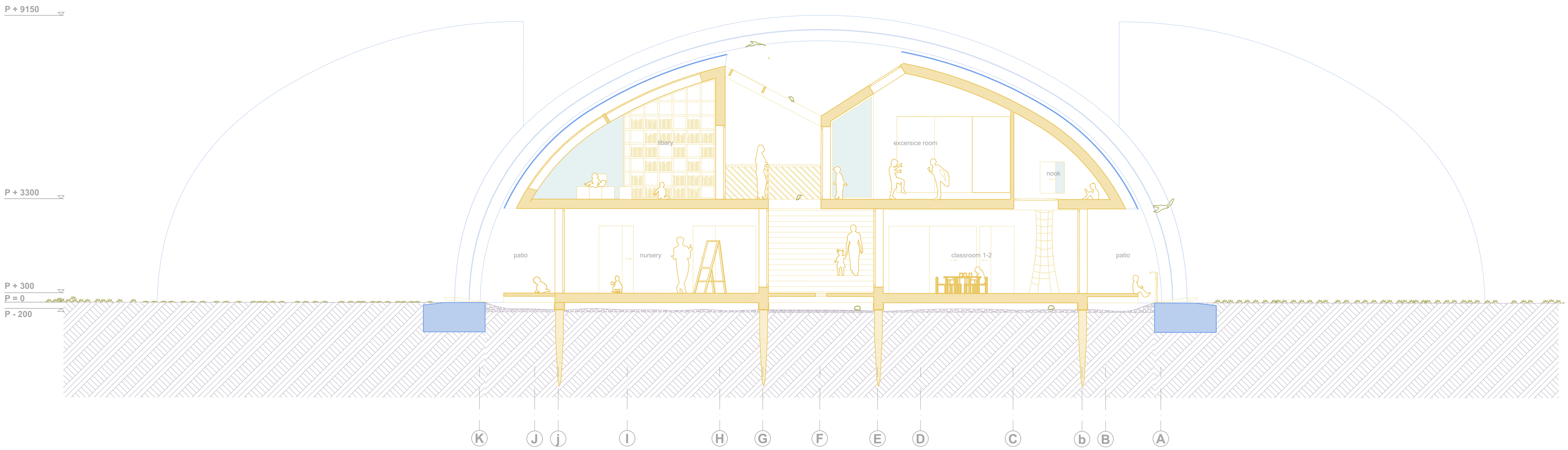

patio
changing room
bedroom
classroom 0
stroller space
changing room
restroom staff
meeting space
administration
pantry
cloak room
classroom 1-2
classroom 3-4
living room staff
changing room
patio
patio
patio

Shelter BB0



libary
observation deck
entrance
excercise room
cloak room
observation deck
nook
nook

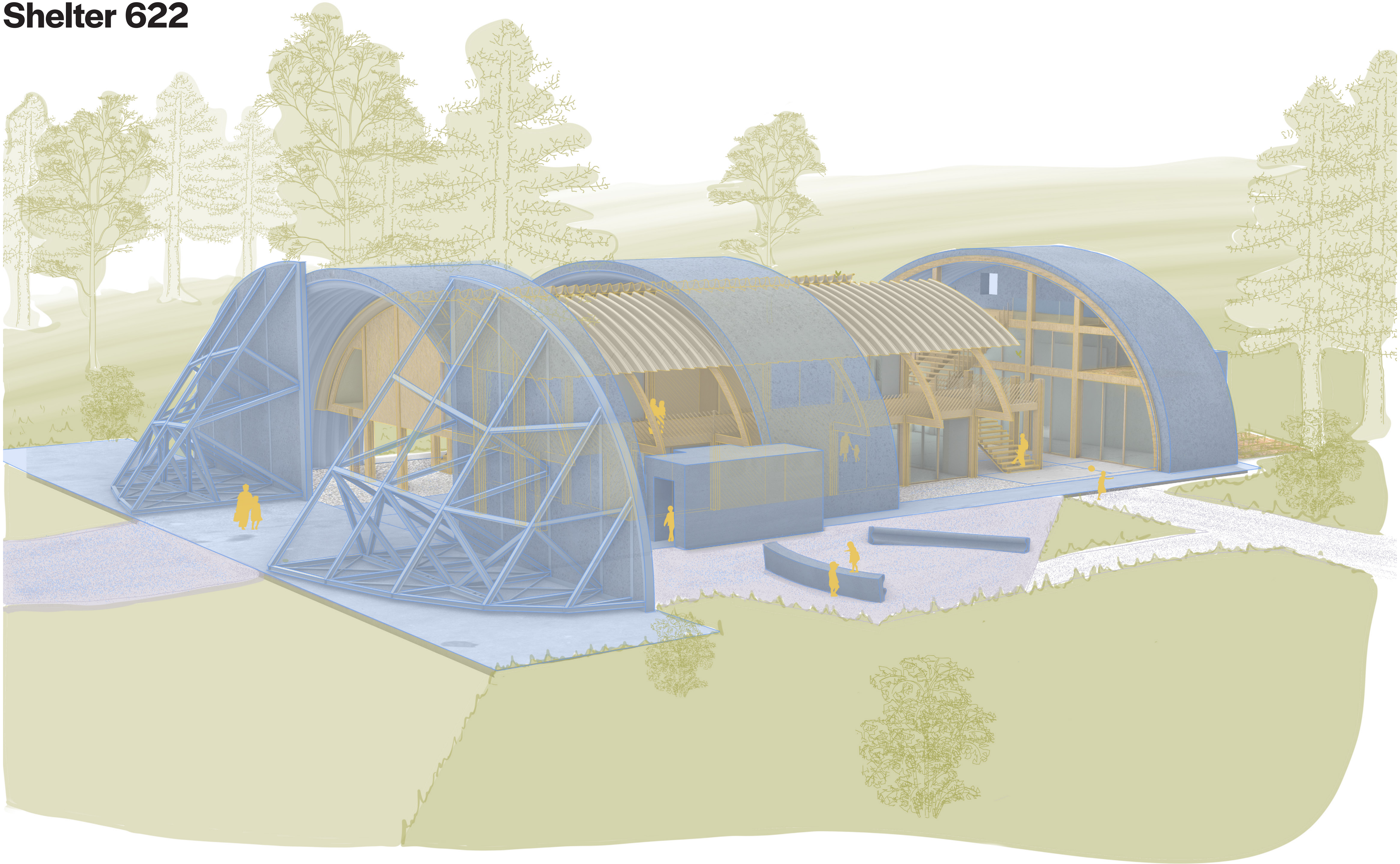
Shelter 620



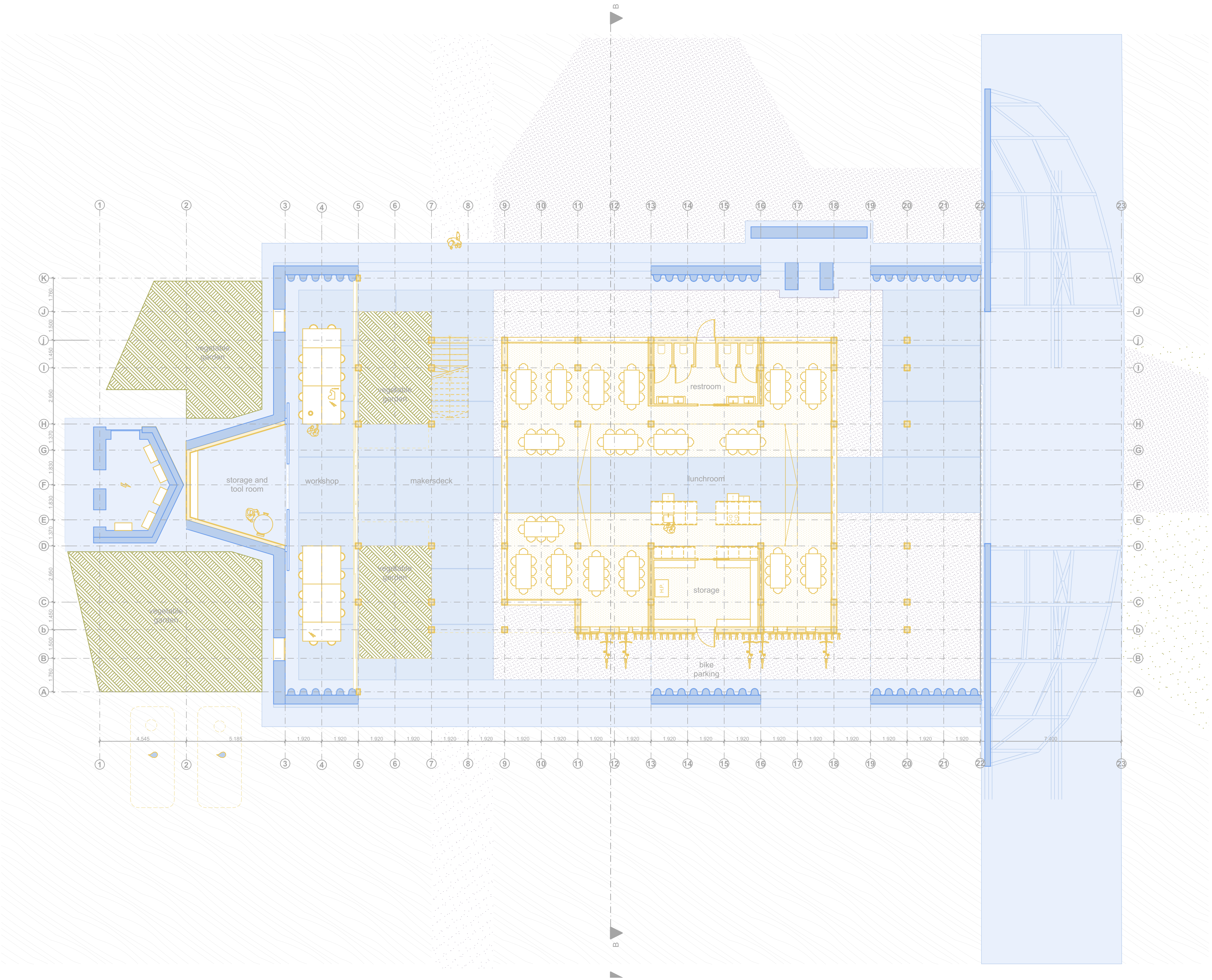
P + 9150
P + 3300
P + 300
P = 0
P - 200
libary
excersice room
nook
patio
nursery
classroom 1-2
patio
K
J
j
I
H
G
F
E
D
C
b
B
A


Shelter 622

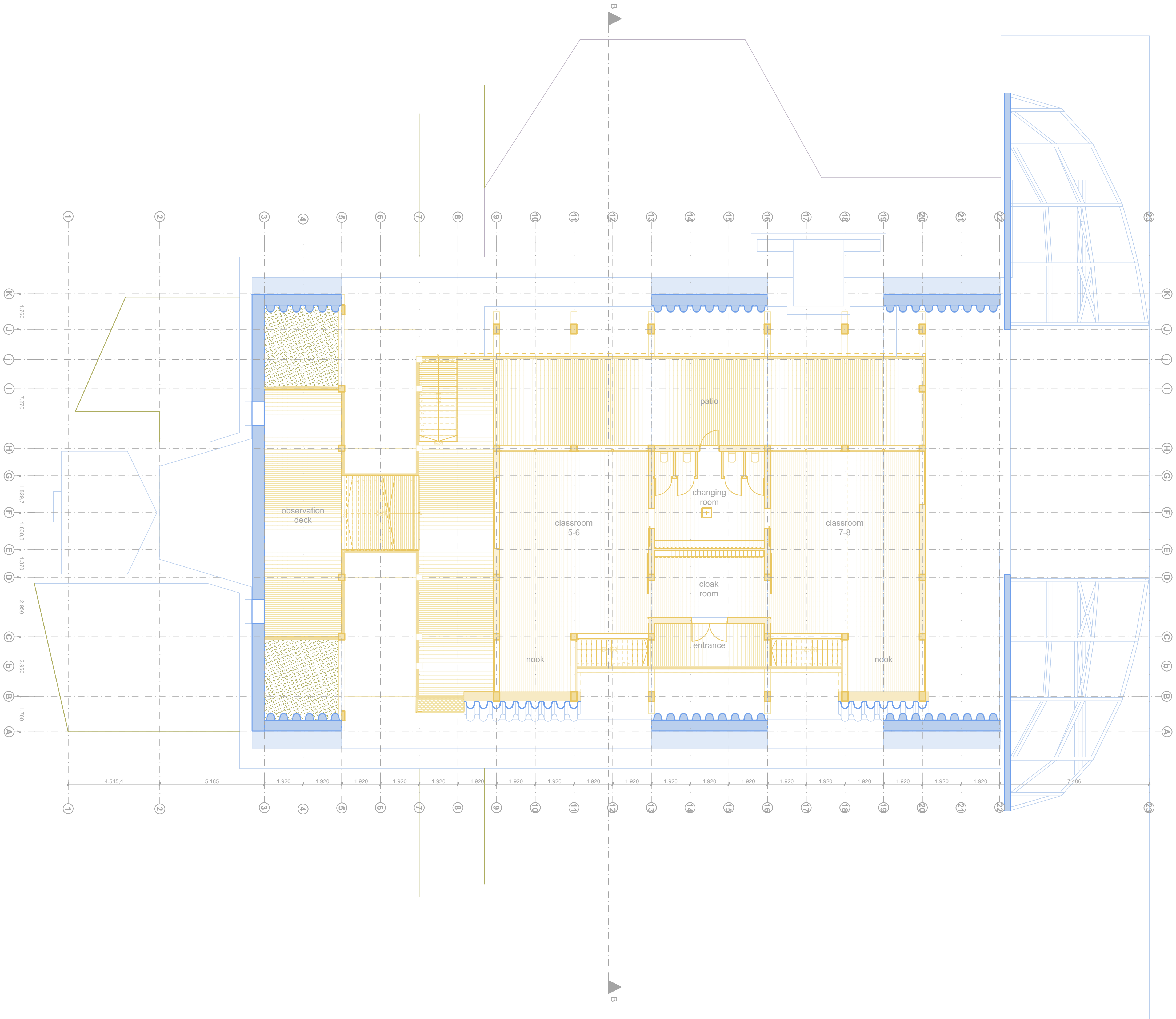
Shelter 622



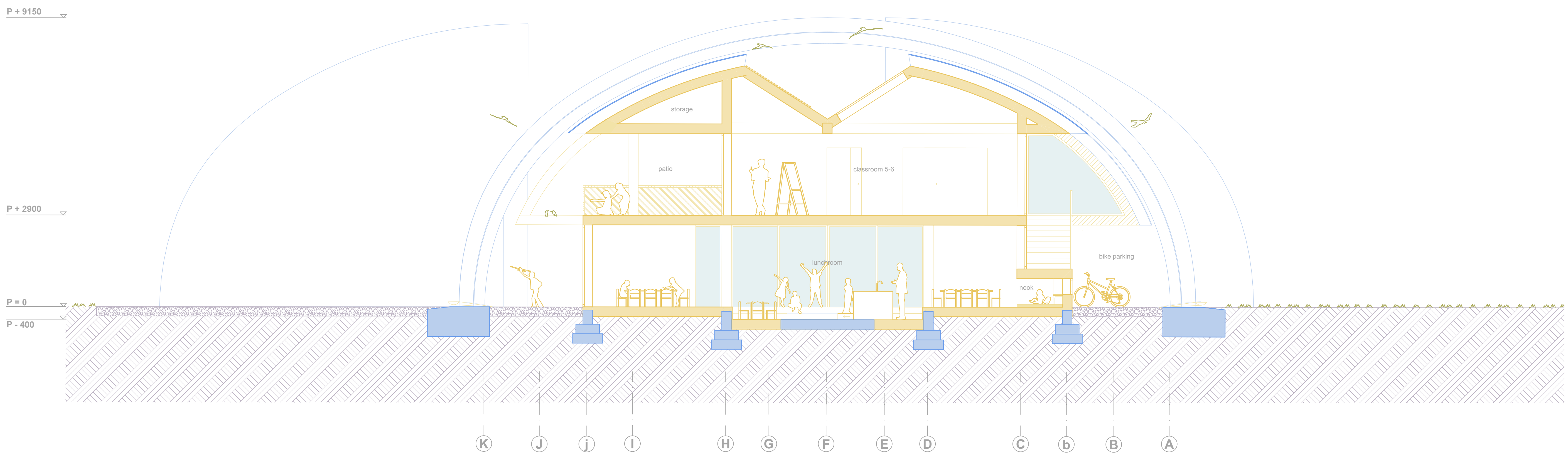
Shelter 622


vegetable garden
storage and tool room
workshop
makersdeck
vegetable garden
restroom
lunchroom
storage
bike parking
vegetable garden
vegetable garden

Shelter 622


observation deck
patio
changing room
classroom 5-6
classroom 7-8
cloak room
entrance
nook
nook

Shelter 622



P + 9150
P + 2900
P = 0
P - 400
storage
patio
classroom 5-6
lunchroom
bike parking
nook
K
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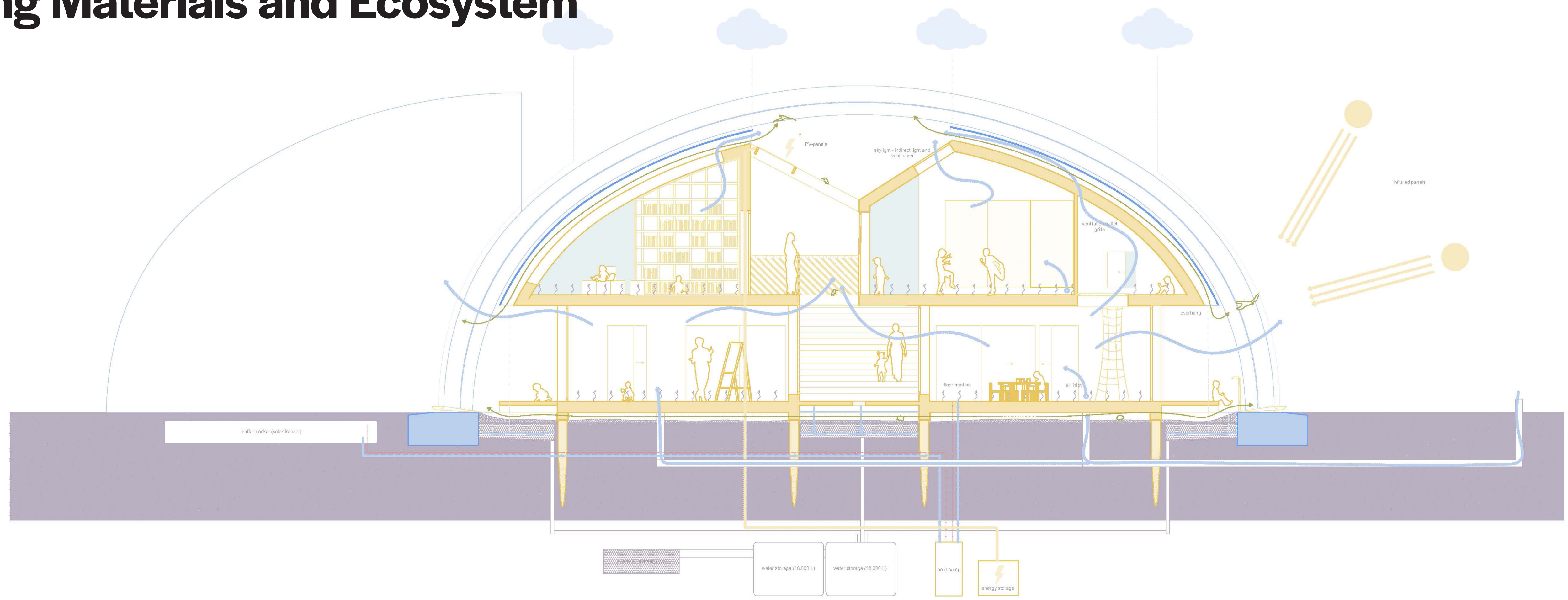
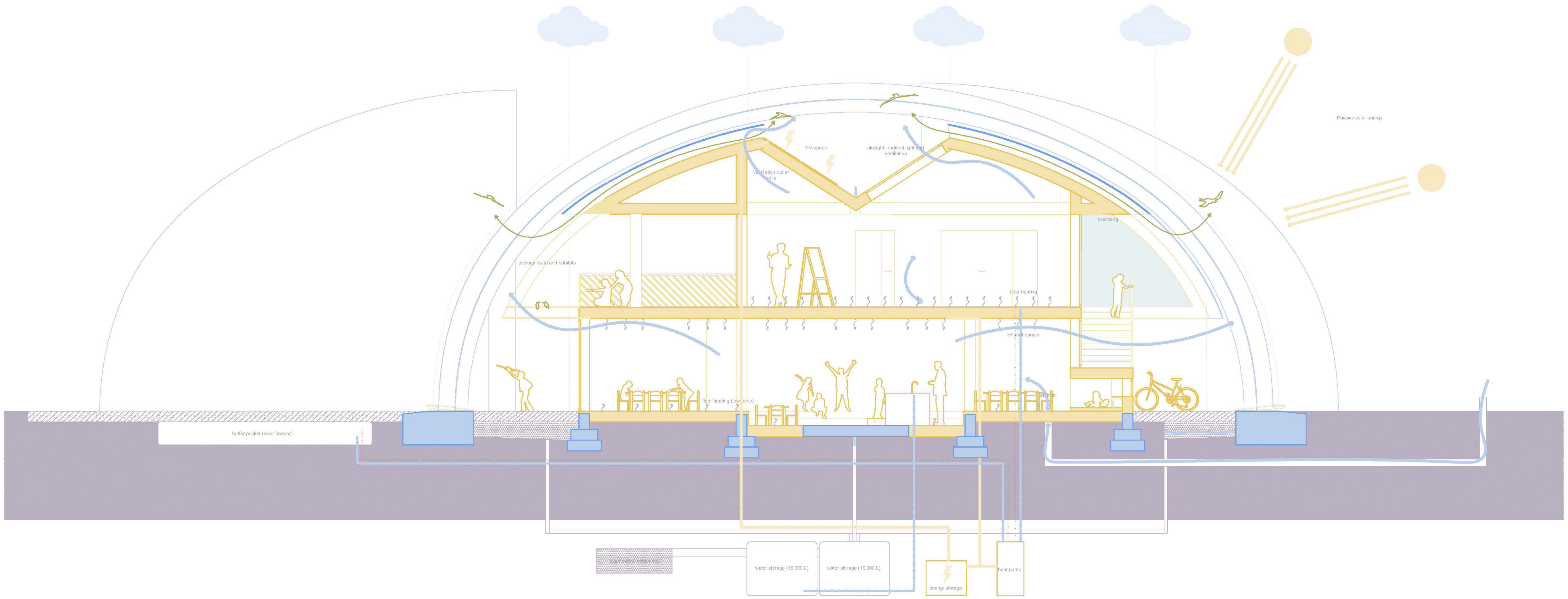
B
A

BUILDING METHOD

*How can the **building method** of newly built architecture convey the concept of architecture as a landscape in the Air Shelter Area?*

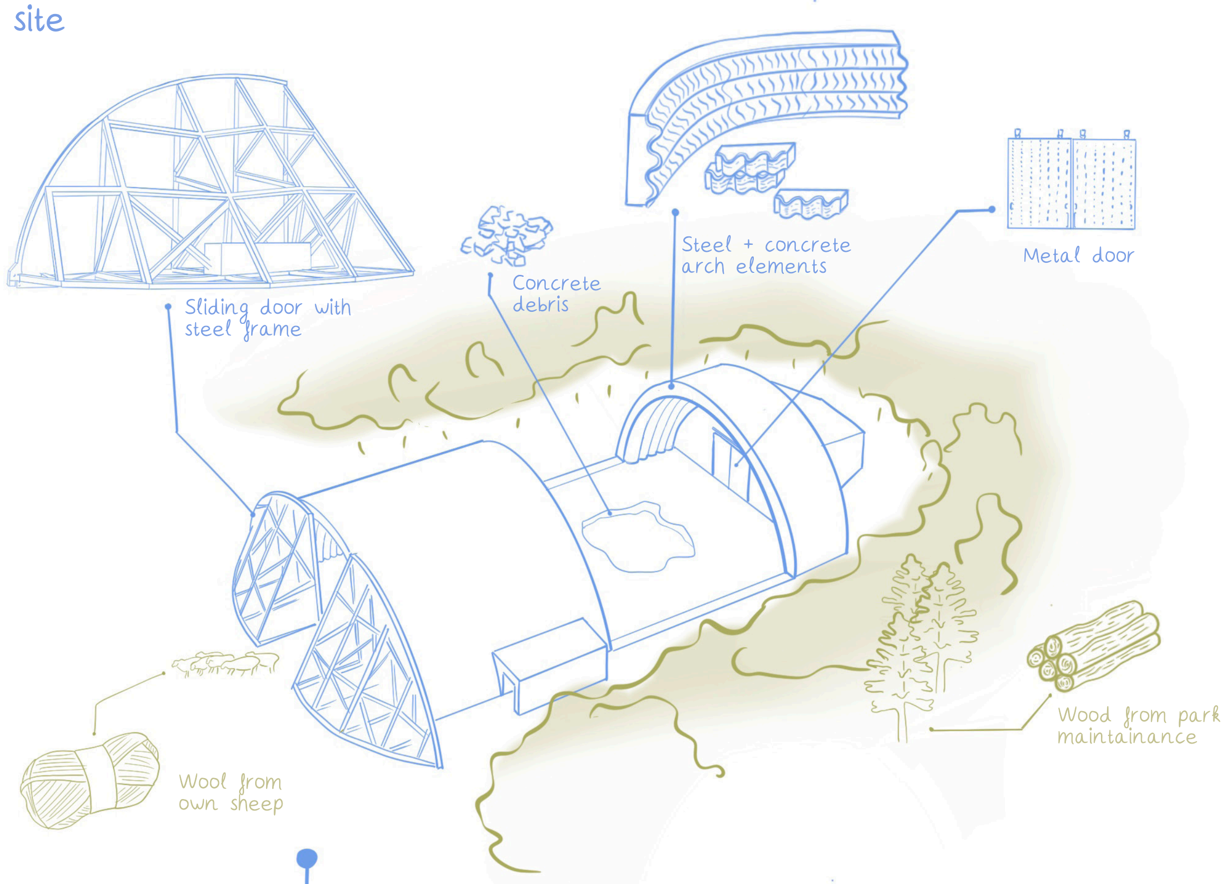
Moving Materials and Ecosystem



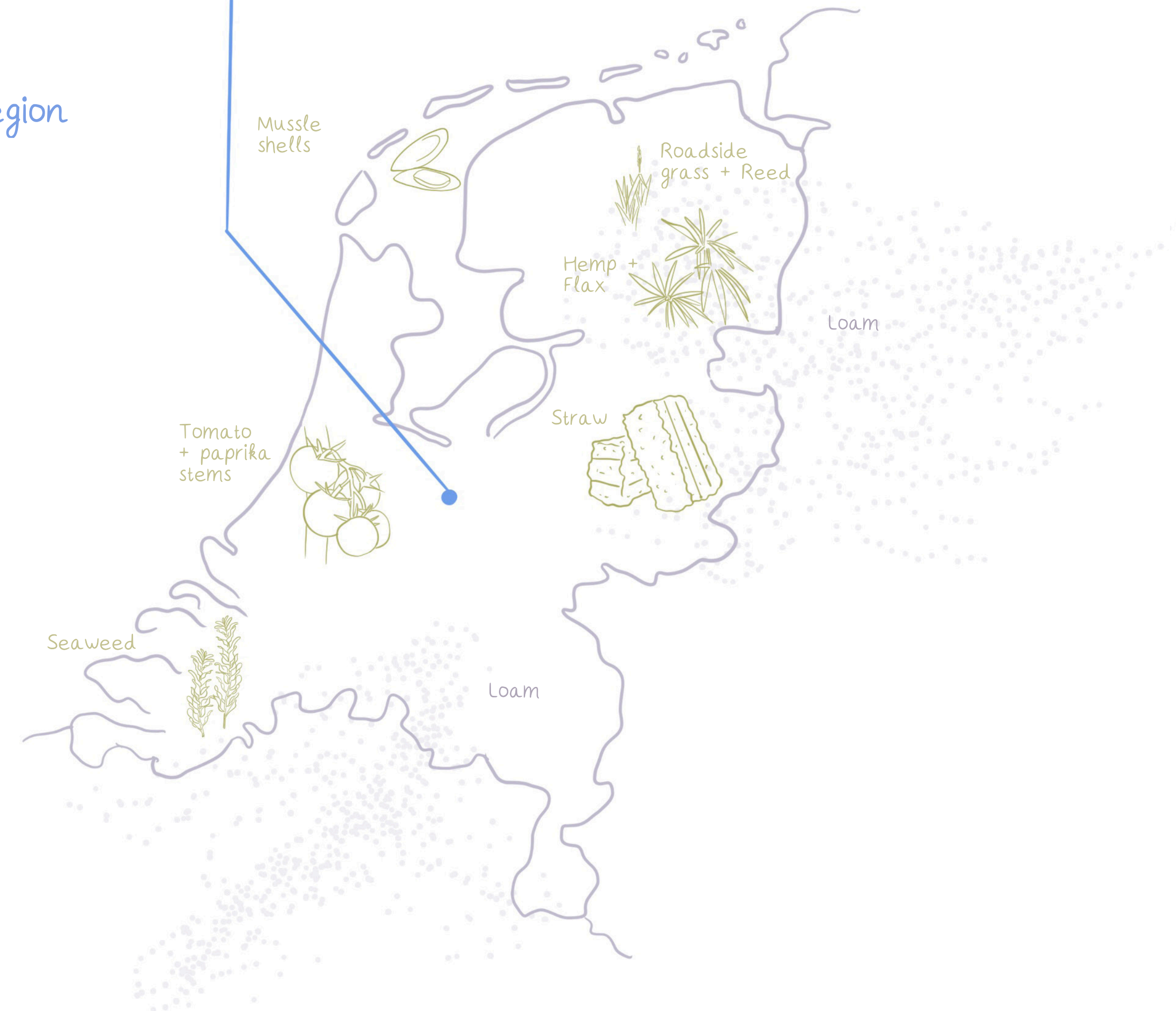


Bioregional Materials

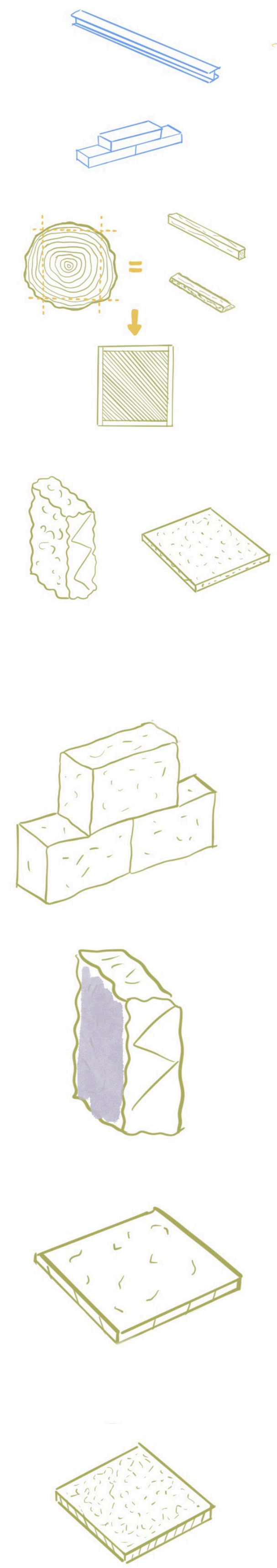
Resources on site



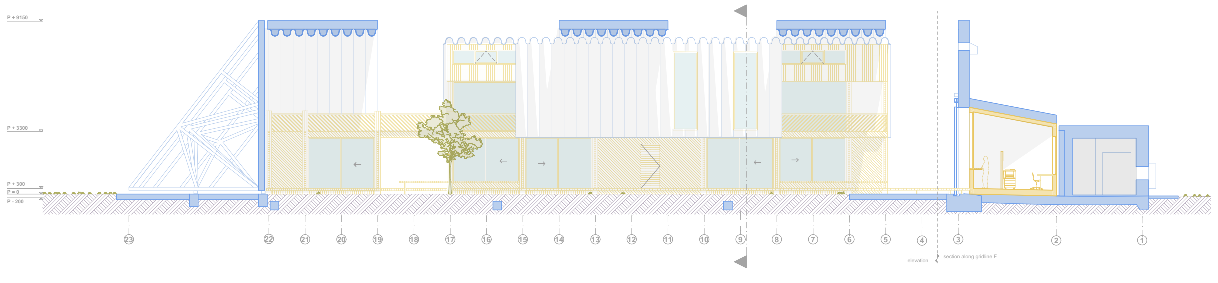
Resources in bioregion



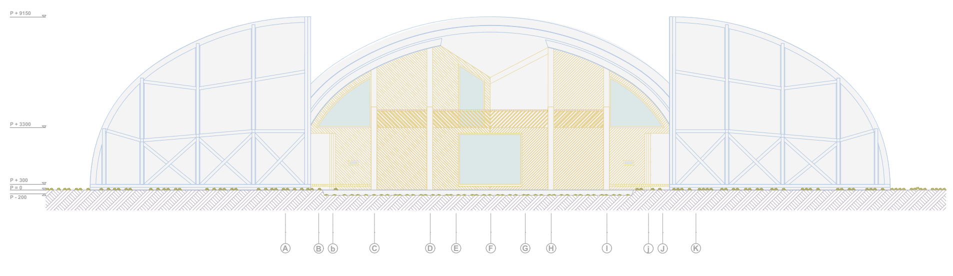
Building materials



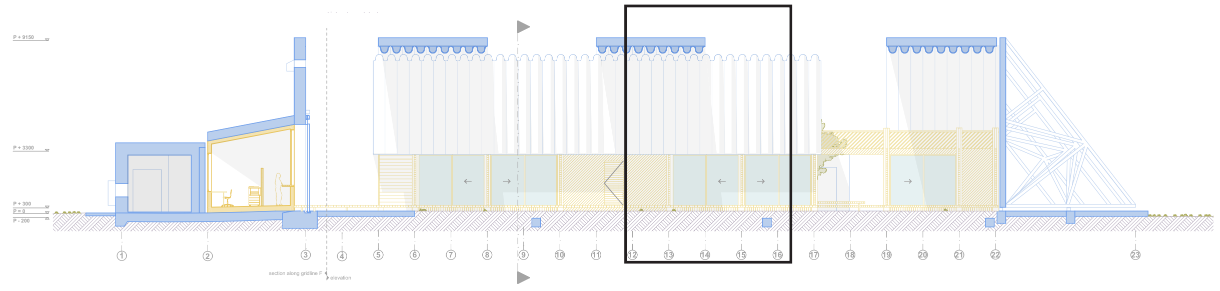
Shelter 620



0. North Elevation 1:200



0. East Elevation 1:200



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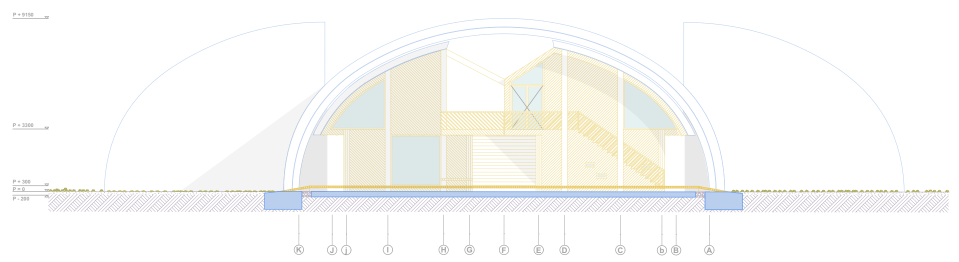
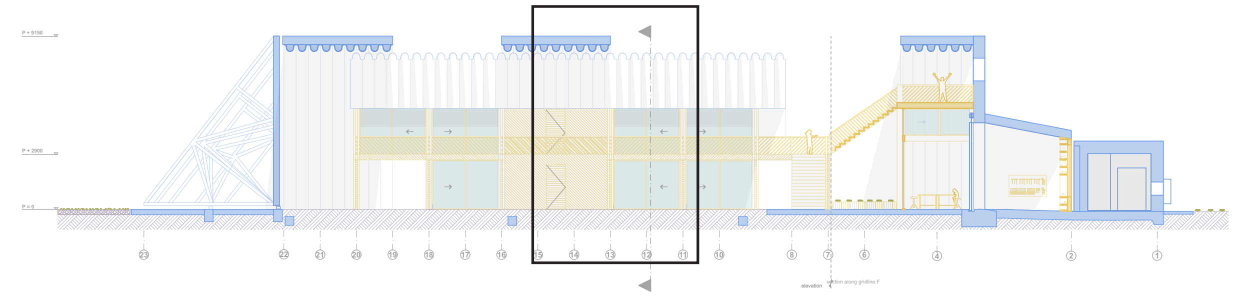


0. West Elevation 1:200

Shelter 622



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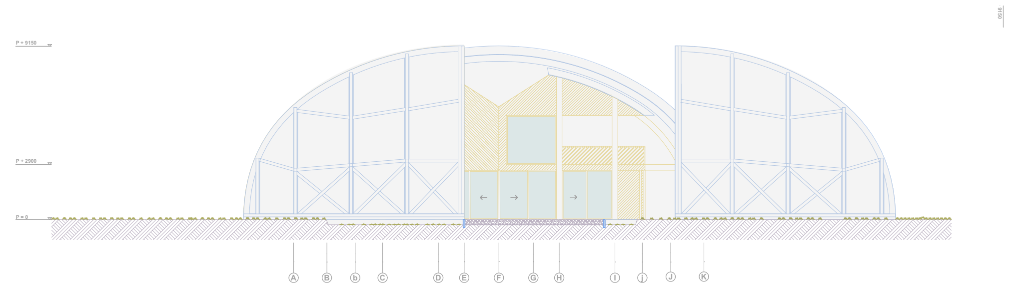

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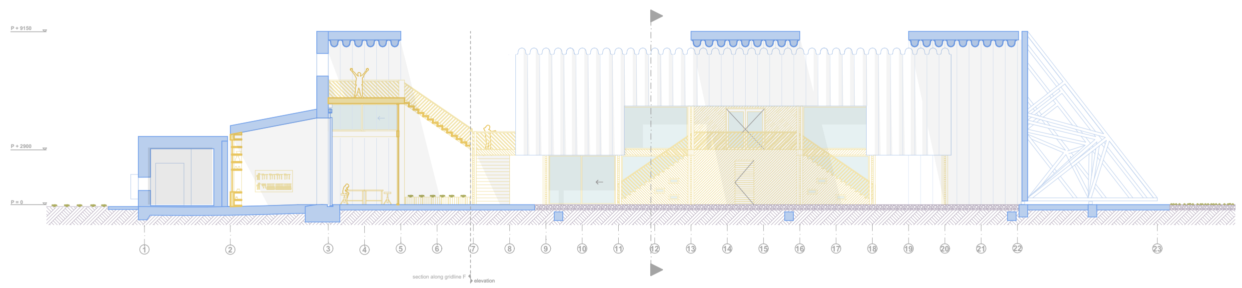

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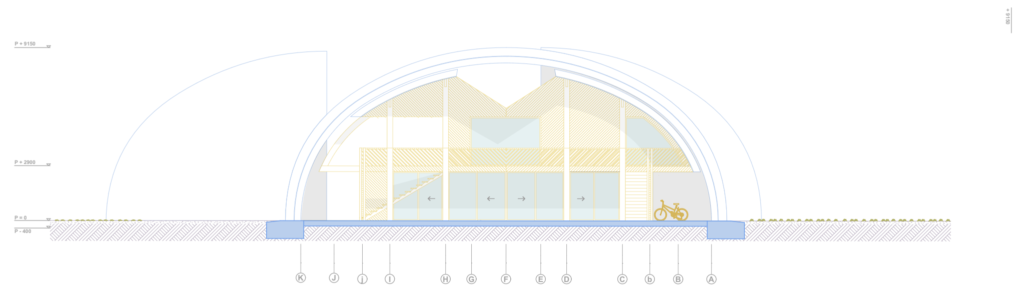
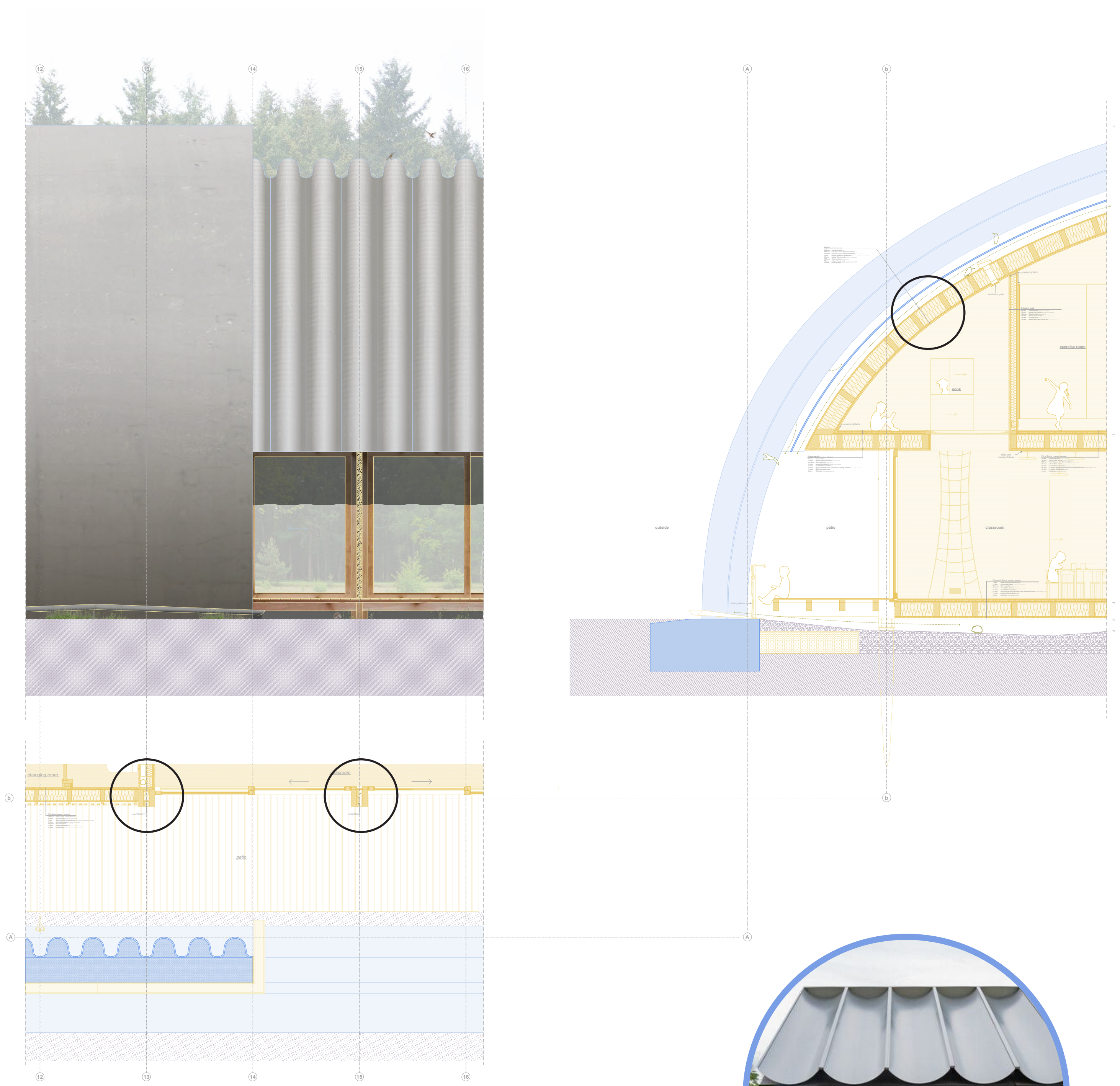
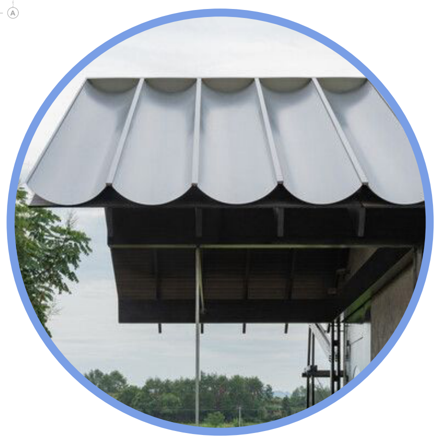


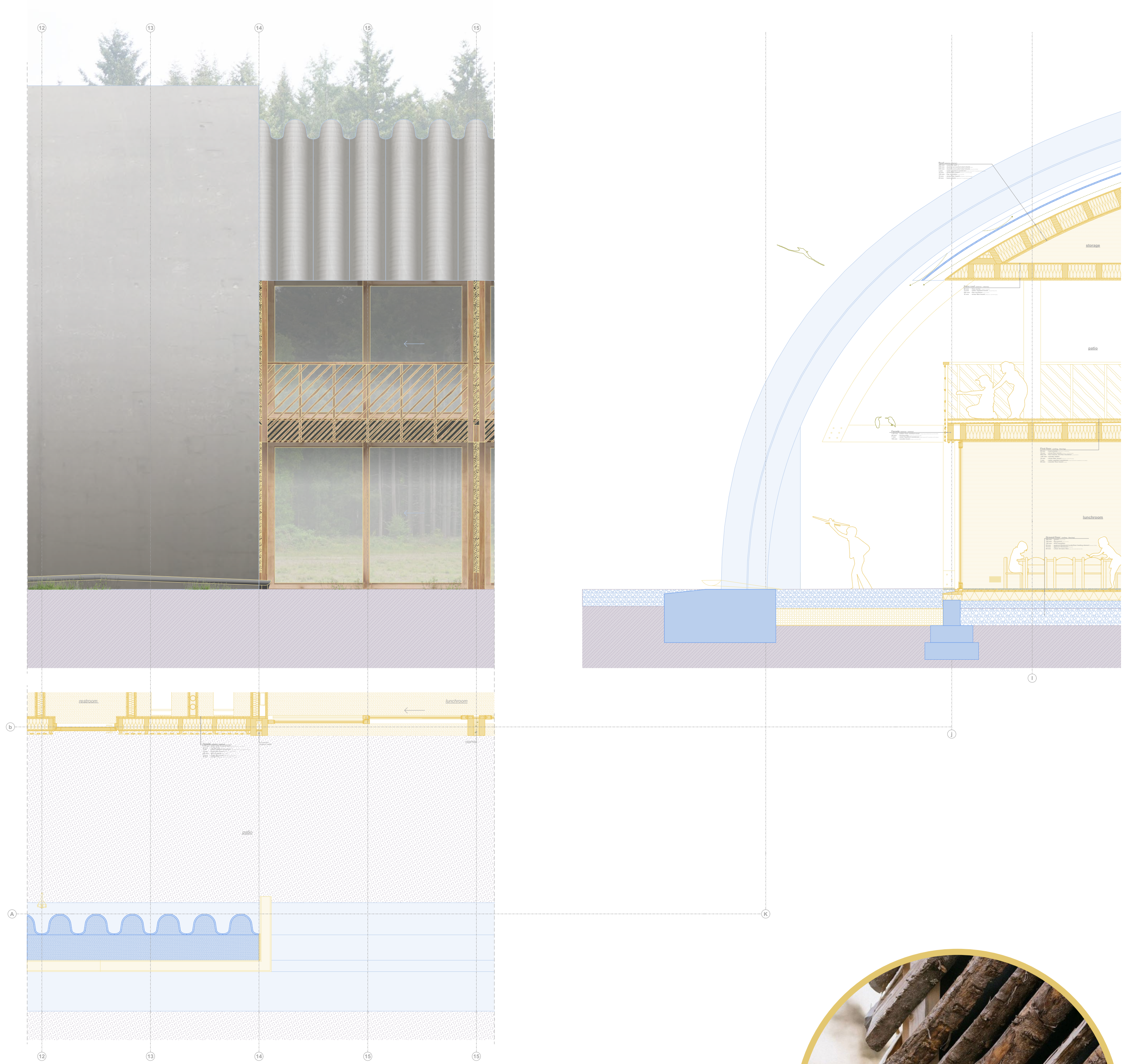
0. West Elevation 1:200

Shelter 620

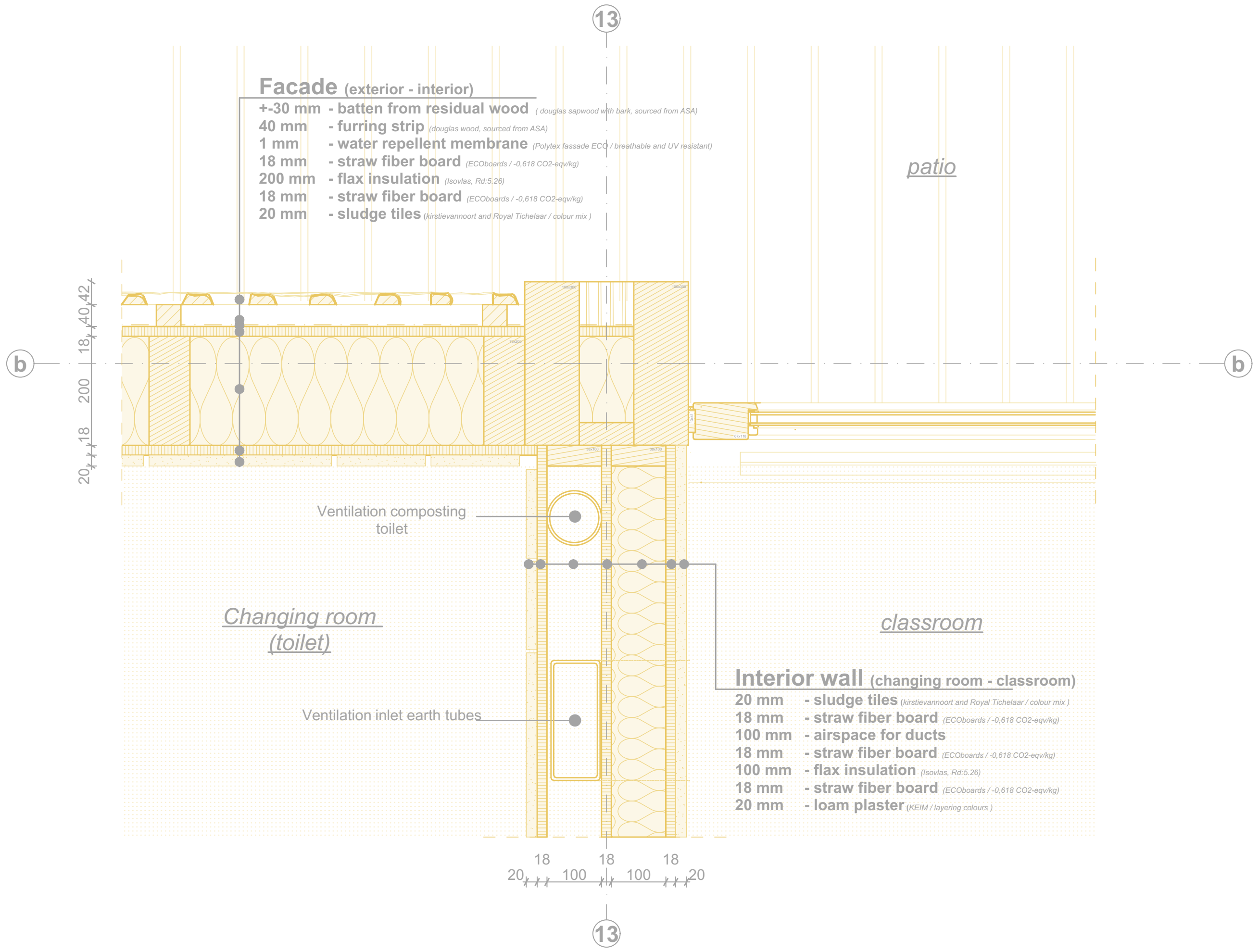


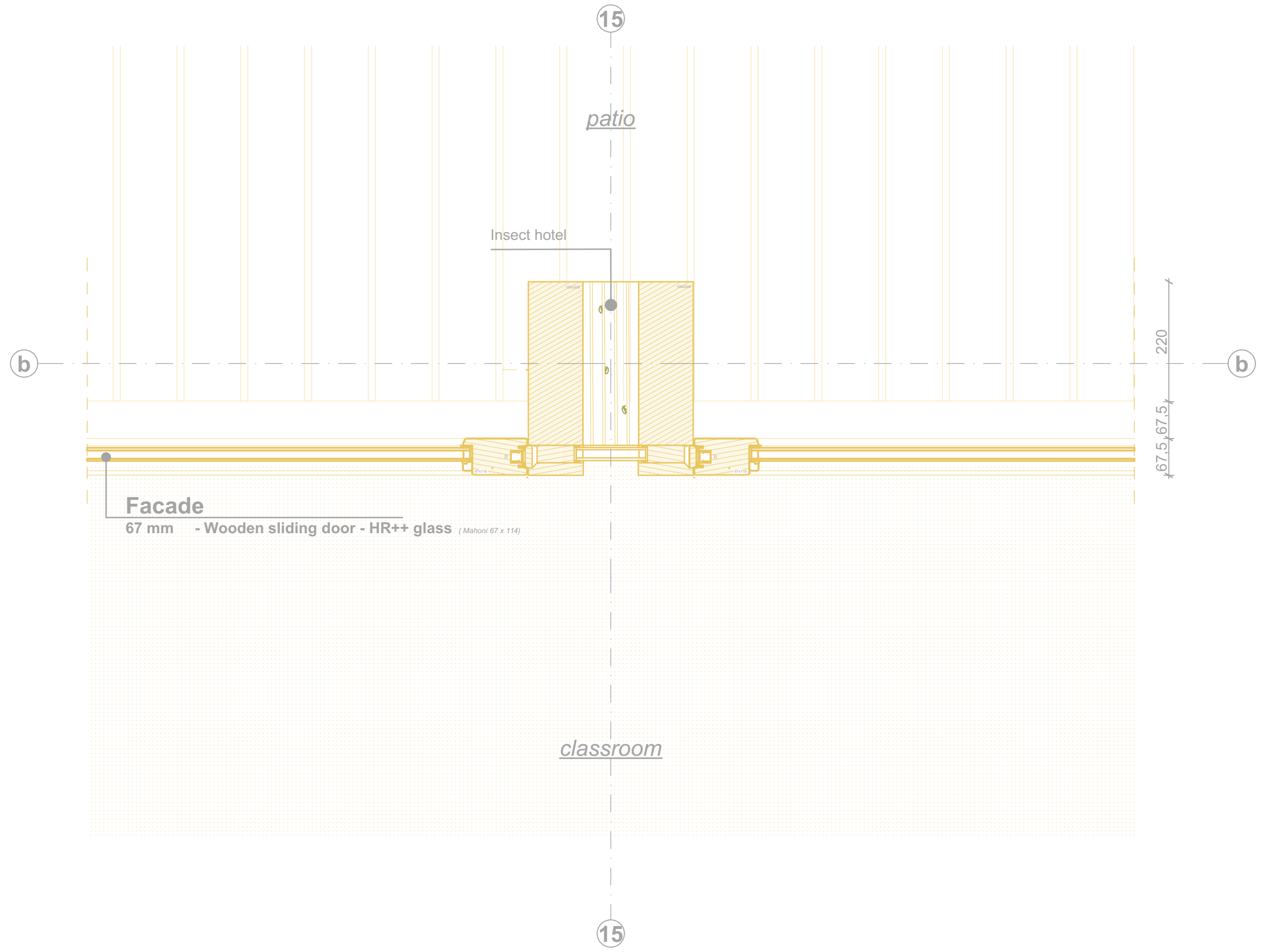


Shelter 622

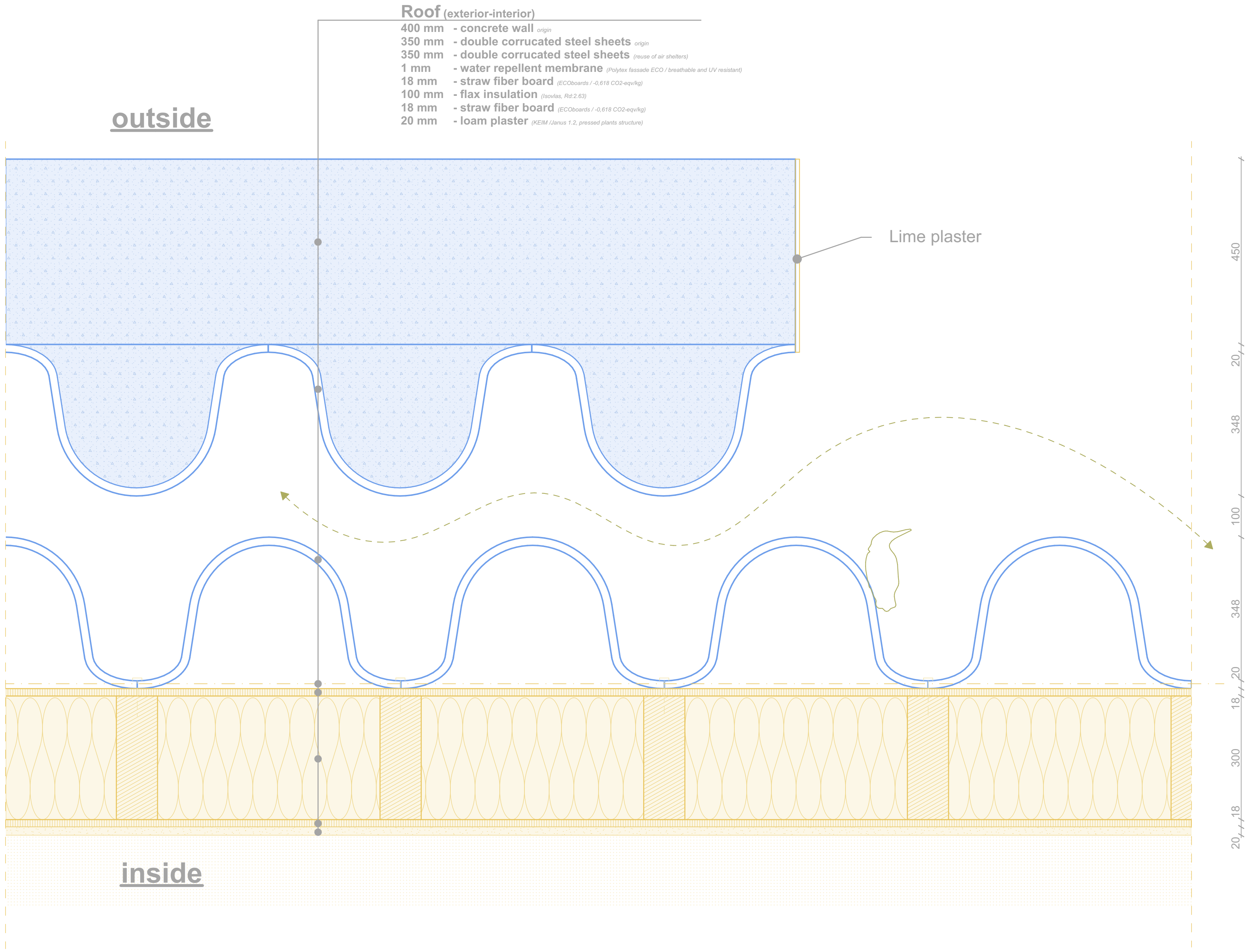


Ecolope


13
Facade (exterior - interior)
+-30 mm - batten from residual wood (douglas sapwood with bark, sourced from ASA)
40 mm - furring strip (douglas wood, sourced from ASA)
1 mm - water repellent membrane (Polytex fassade ECO / breathable and UV resistant)
18 mm - straw fiber board (ECOboards / -0,618 CO2-eqv/kg)
200 mm - flax insulation (Isovlas, Rd:5.26)
18 mm - straw fiber board (ECOboards / -0,618 CO2-eqv/kg)
20 mm - sludge tiles (kirstievannoort and Royal Tichelaar / colour mix)
patio
b
b
20 18 200 18 40 42
Ventilation composting toilet
Changing room (toilet)
classroom
Ventilation inlet earth tubes
Interior wall (changing room - classroom)
20 mm - sludge tiles (kirstievannoort and Royal Tichelaar / colour mix)
18 mm - straw fiber board (ECOboards / -0,618 CO2-eqv/kg)
100 mm - airspace for ducts
18 mm - straw fiber board (ECOboards / -0,618 CO2-eqv/kg)
100 mm - flax insulation (Isovlas, Rd:5.26)
18 mm - straw fiber board (ECOboards / -0,618 CO2-eqv/kg)
20 mm - loam plaster (KEIM / layering colours)
20 18 100 18 100 18 20
13

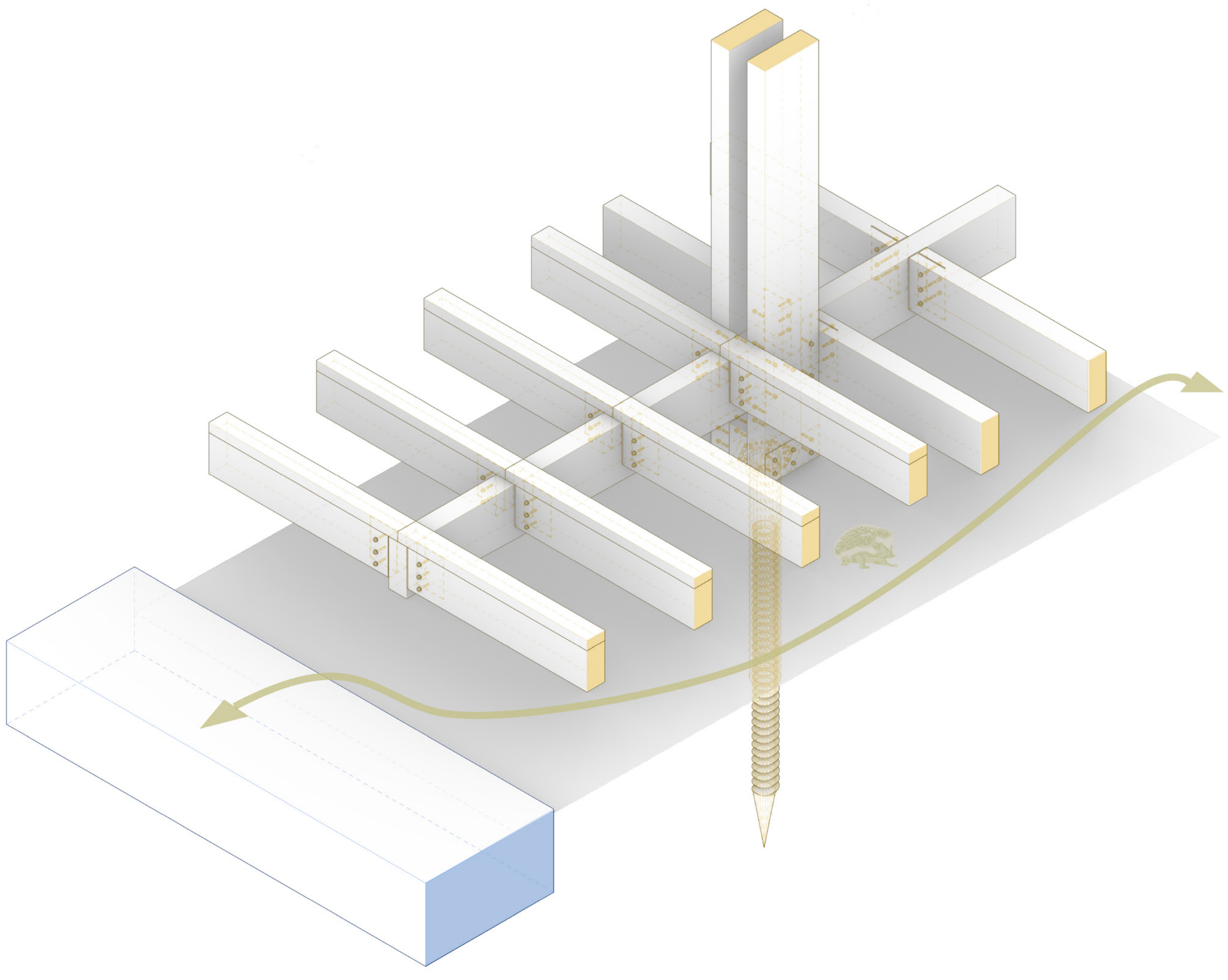

15
patio
Insect hotel
b
b
220
67,5 67,5
Facade
67 mm - Wooden sliding door - HR++ glass (Mahoni 67 x 114)
classroom
15

Ecolope

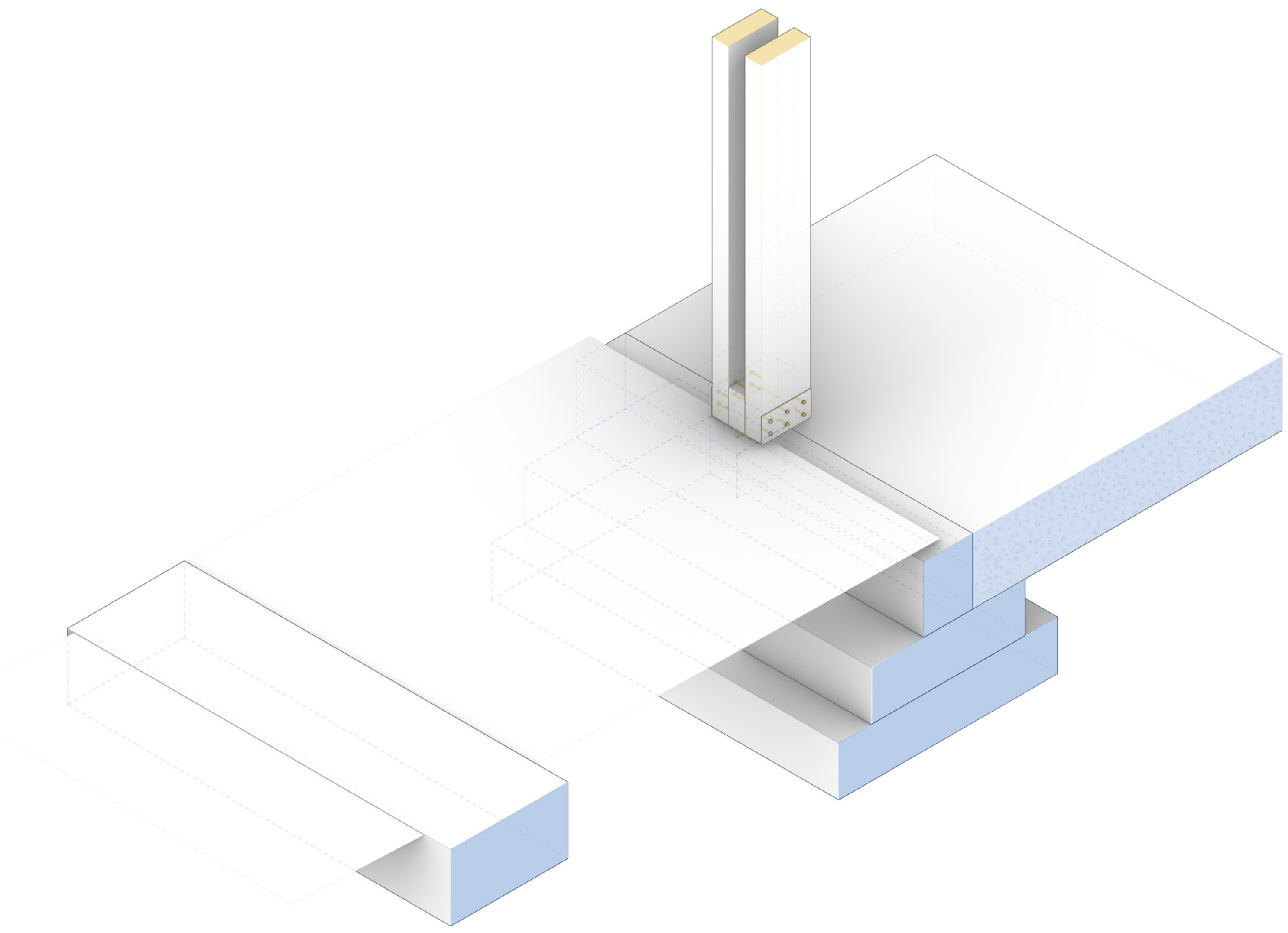

Roof (exterior-interior)
400 mm - concrete wall origin
350 mm - double corrucated steel sheets origin
350 mm - double corrucated steel sheets (reuse of air shelters)
1 mm - water repellent membrane (Polytex fassade ECO / breathable and UV resistant)
18 mm - straw fiber board (ECOboards / -0,618 CO2-eqv/kg)
100 mm - flax insulation (Isovlas, Rd:2.63)
18 mm - straw fiber board (ECOboards / -0,618 CO2-eqv/kg)
20 mm - loam plaster (KEIM /Janus 1.2, pressed plants structure)
outside
Lime plaster
inside
450
20
348
100
348
20
18
300
18
20

Sharing Ground

Shelter 620 - natural value



Shelter 622 - cultural value



REFLECTION

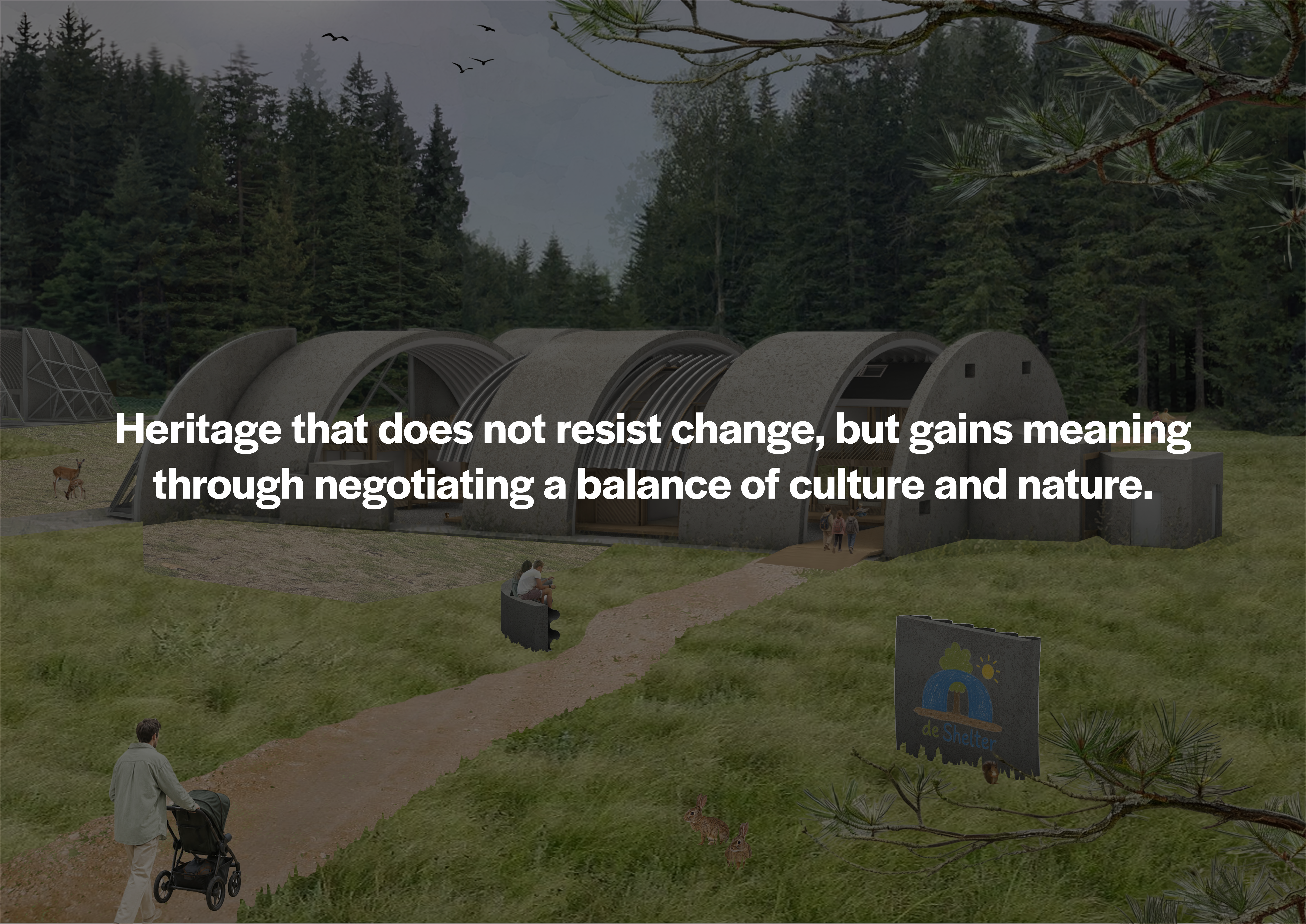
Proces, Implications, Contribution

Reciprocal relationship between culture and nature

Proces - **More implications per case study**

Implication - **Different contextual framework**

Contribution - **A landscape-perspective in heritage architecture**



Heritage that does not resist change, but gains meaning through negotiating a balance of culture and nature.