

ARE YOU READY FOR SUMMER?





Copper House II, Studio Mumbai



SUMMERHOUSE —

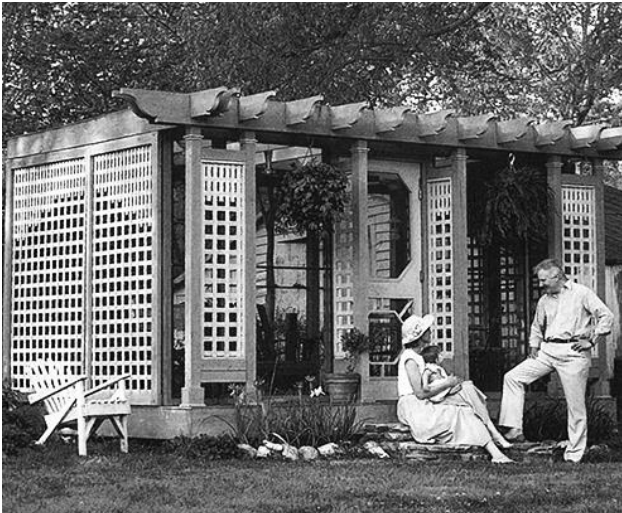
An escape from the inconvenience of summer heat



Summerhouse of Issac Royal, Massachusetts, 1738



Mark Twain's Study at Quarry Farm, 1879



Wysocki Summerhouse, 1980



Ben Page's Tennessee Summerhouse, 2004

## MATERIAL



## FUNCTION

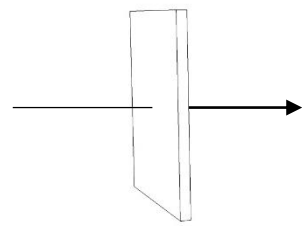
1. Teahouse
2. Well house
3. Store room
4. Garden temple
5. Bath house
6. Greenhouse
7. Retreat

## LOCATION

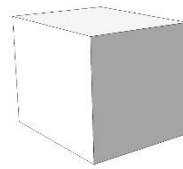


1. COLLECTION OF MATERIALS FOR SUMMER WEATHER
2. USING SUITABLE MATERIALS FROM THE COLLECTION — A SERIES OF ESOTERIC SUMMERHOUSE INTERIORS

# 1. COLLECTION OF MATERIALS FOR SUMMER WEATHER



THERMAL CONDUCTIVITY

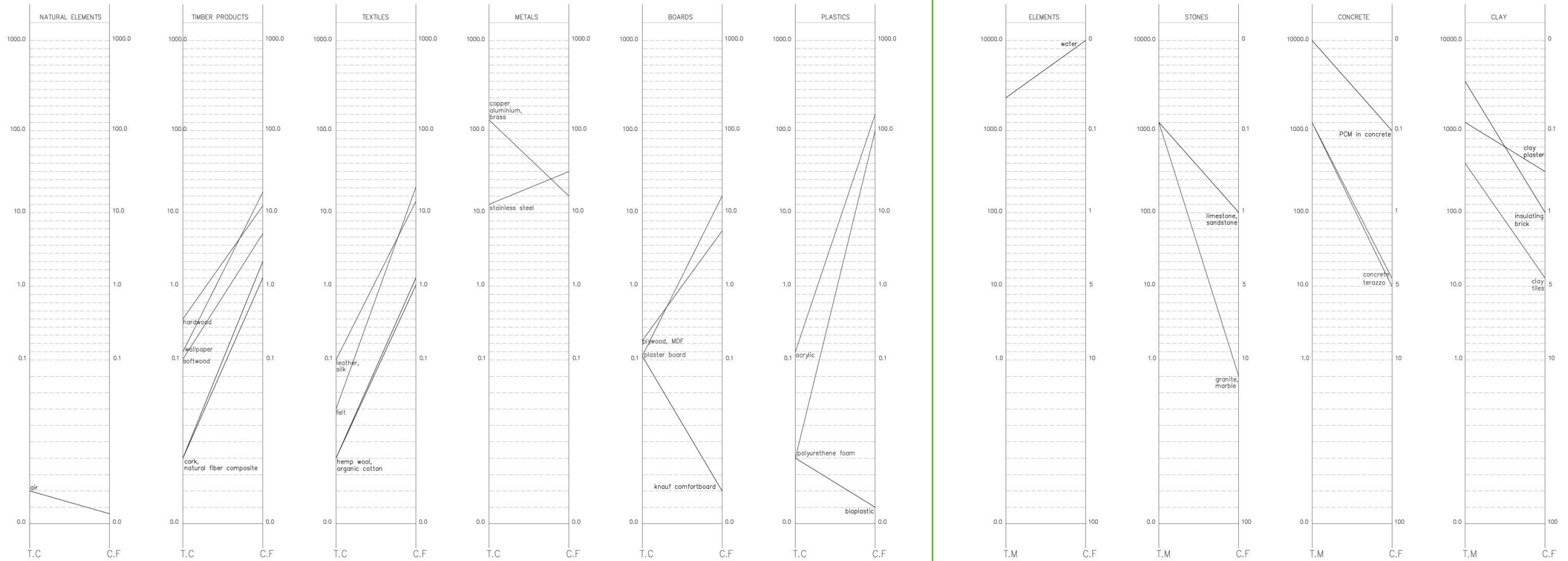


THERMAL MASS

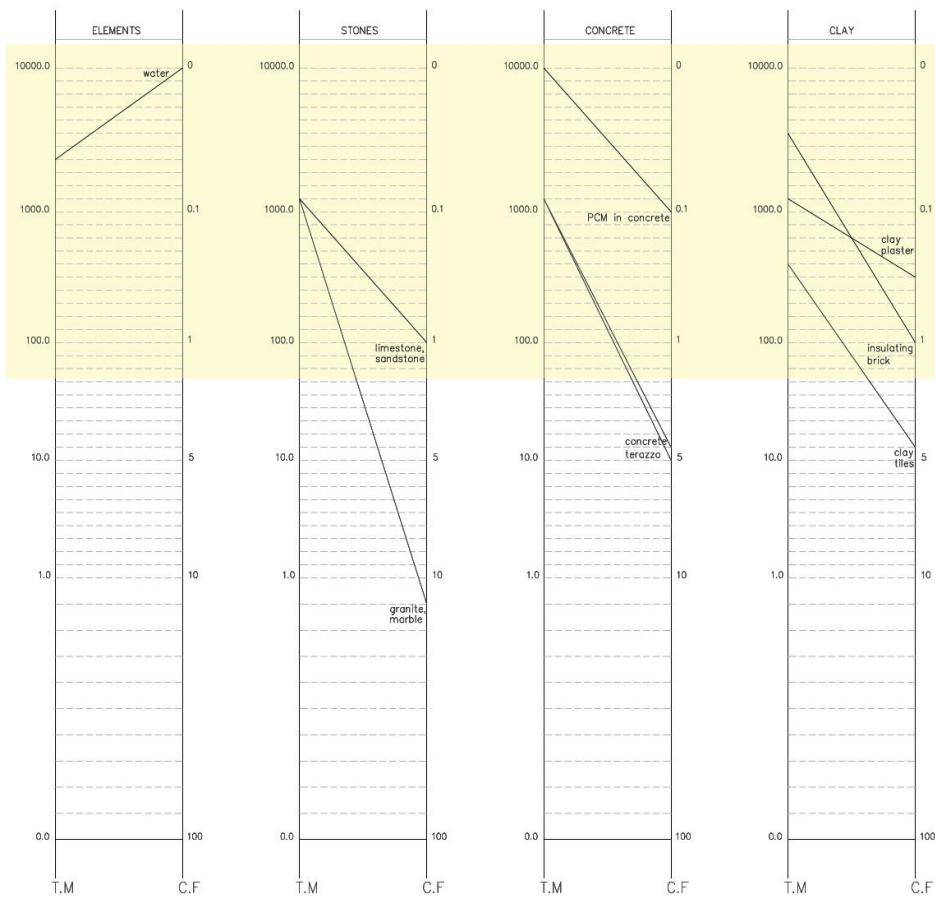
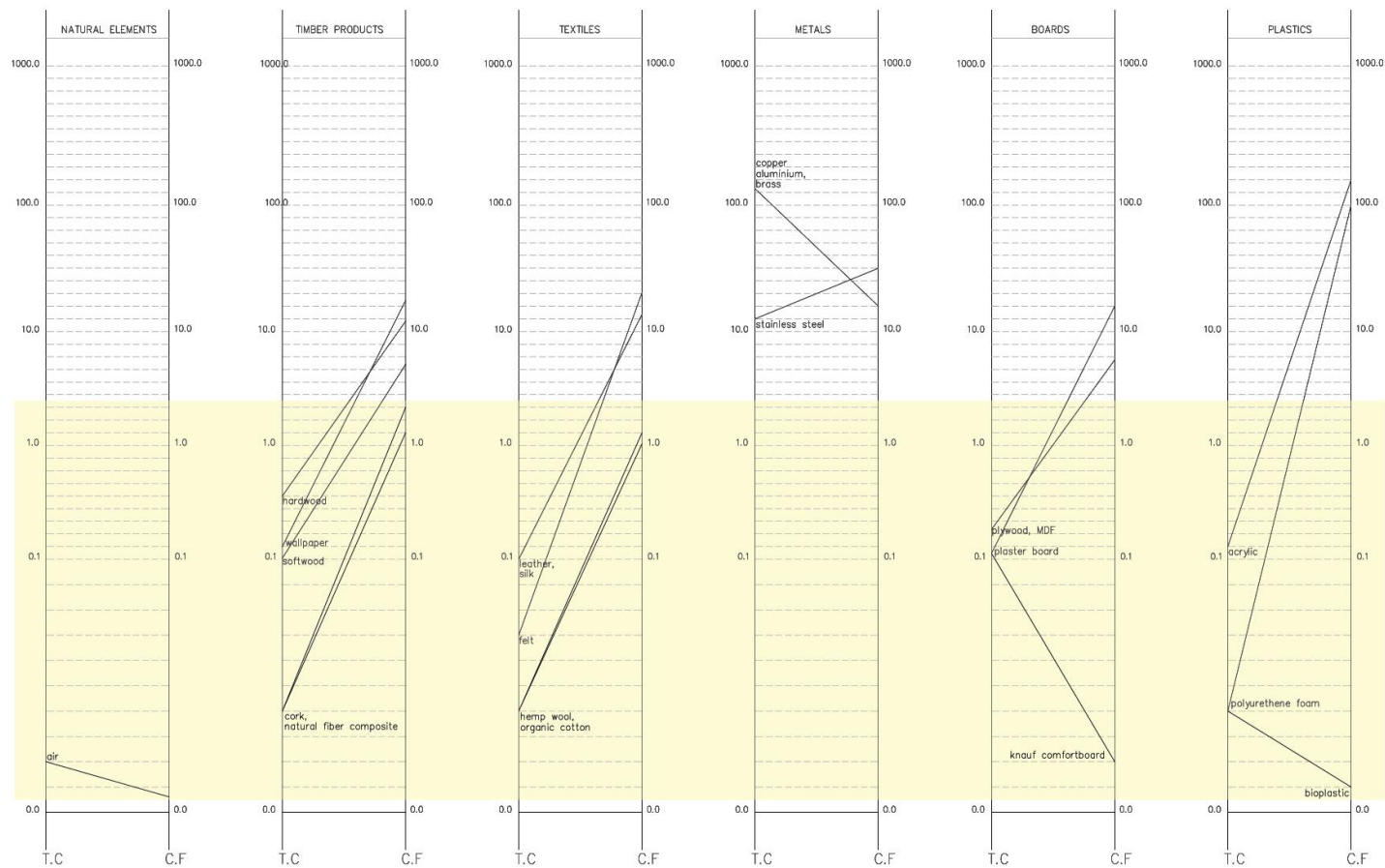


CARBON FOOTPRINT

# MATERIAL CATALOGUE



# MATERIAL CATALOGUE





NATURAL FIBER COMPOSITE



CORK



HEMP



COTTON



COMFORTBOARD - KNAUF



THERMAL GLASS — LOW-E COATING



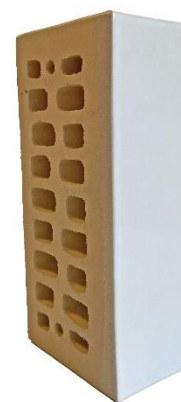
SANDSTONE



LIMESTONE



CLAY



INSULATING BRICK



PCM IN CONCRETE



MATERIAL	AIR	WATER	VACUUM	CORK	NATURAL FIBER COMPOSITE	SANDSTONE	LIMESTONE	HEMP WOOL	ORGANIC COTTON	PCM in Concrete panels	LOW-E-GLASS	GLASS-X	UNFIRED CLAY	COMFORTBOARD BY KNAUF	ECOGAIN BY DUPONT
TYPE				bark of oak	natural composite fiber of jute, hemp, kanaf, resins	quartz, feldspar and lithics	travertine, chalk, tufa, cocquina, oolithic etc	compacted fibers of hemp plant	treated cotton fibers	concrete	Hard-coat and soft-coat	glass panes with PCM sandwiched in between	product of clay	paraffin wax PCM embedded in plasterboard (gypsum)	paraffin wax in a polymer matrix
FORM				boards, mats, objects, tiles, panels	slacks- hollow, solid in different shapes	arenites, wackers, arkose and graywakes	paints, blocks, tiles, slabs	insulation blankets, boards, yarns	fabric, wool	panels, castable powder	film, coating	panels	tiles, bricks objects	board	insulation blanket
FINISHES				natural, waxed, varnished, vinyl	polished, stains, oils, paint, vinyl	smooth to rough	rough, polished, brushed etc.	natural and fibrous	dense / shear fabric, buds, pads	rough- smooth	reflective, smooth			painted- glossy, matt, rough etc.	
DENSITY	1.2	997		>997	1500-2000	2500	2500	200	500	2400	100	2500	1100	1100	405
OPACITY	transparent	transparent		opaque	opaque	opaque	opaque	opaque	translucent to opaque	opaque	translucent - reflective	translucent to opaque. changing state	opaque	opaque	opaque
COLOUR	colourless	colourless		shades of brown	shades of brown	browns, greys, reds and colourless	shades of yellow, white, grey	yellowish grey to deep brown	shades of white	shades of grey	transparent, bluish, greenish, silvery tints	colourless to white	reds, greys, browns	white	silvery grey
REFLECTIVITY	weak	high		low	low	low	reflective, if polished	low	low	low	high	low	low	low	reflective
PERMEABILITY	porous to almost everything.	porous to solvents, solids, air etc		non-porous	non-porous	porous	porous	porous	porous	non-porous	low	low	porous	non-porous	non-porous
TOUGHNESS				high	high	medium	high	medium	low	high	low	medium	medium	medium	medium
PLASTICITY				medium	low	low	low	low	high	low	low	low	low	low	low
LUMINOSITY				low	low	low	low	low	low	low	low	low	low	low	low
RESISTANCE		heat		heat, sound, water, oil, odour, corrosion, dust	heat, water, flame, corrosion	heat, water, scratch, wind	water, corrosion	heat, mould, bacteria	heat, pests, insects	heat, water, dust, corrosion etc	heat, water	heat, water, corrosion, wind	heat, moisture	heat, light	heat
SPECIAL QUALITIES	can cause pressure difference and effected by heat	high specific heat capacity, evaporative cooling	no matter for heat transfer. electrical insulator	low-cost, durable, light-weight, flexible and sound resistant	high strength, low-cost, frange of shapes, natural	healing qualities,, soothing ambience, anti-slip, durable, floor & wall cladding	high strength, durable, in powder forms can be compacted into shades	air purifying qualities, sound insulation, odourless	breathable, light-weight, airy, non-toxic	Imbedded with paraffin wax microcapsules PCM, has high latent heat capacity, evens out temperatures.	heat and light filter, translucent, reflective	changing opacity over time, behaves like a wall and heat buffer	moisture control, low maintainance.	highly heat resistant. flexible usage. can be drilled sawed. thickness-12.5mm	highly heat resistant. can be cut, drilled, clad with plasterboard

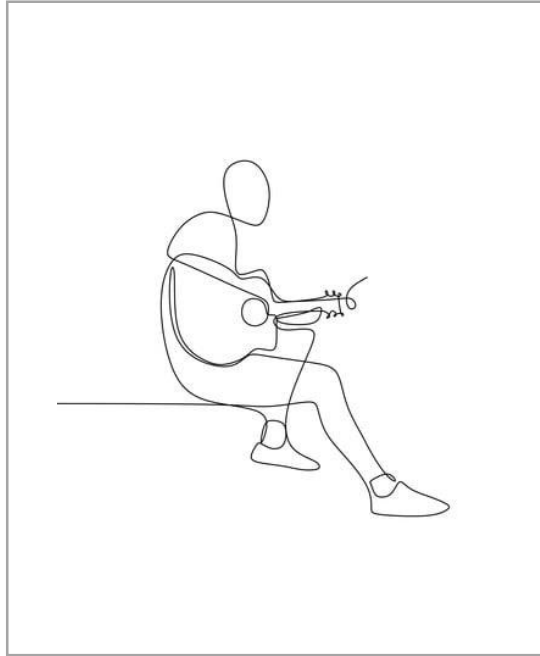
## 2. A SERIES OF ESOTERIC SUMMERHOUSE INTERIORS

## An 'esoteric' purpose

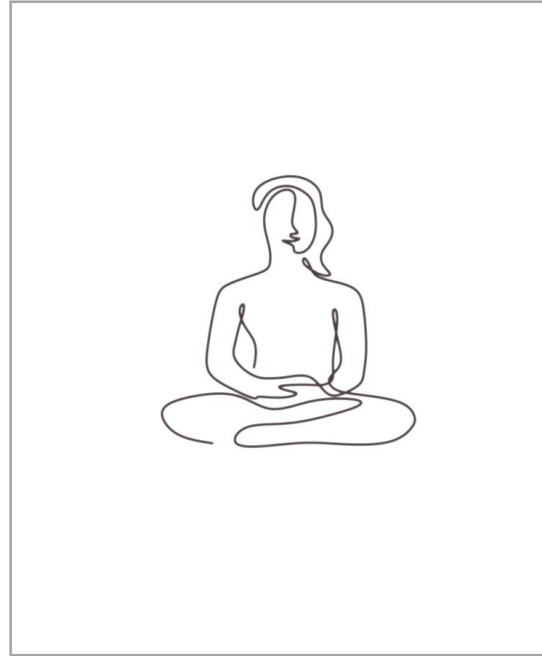
Private; confidential; special; unusual interest



Mark Twain's Study at Quarry Farm, 1879



A MUSICIAN'S STUDY



A MEDITATIVE RETREAT



A READING ROOM

## A MUSICIAN'S STUDY



## CORK

- Ecological thermal and sound insulator.
- Light-weight
- Flexible
- Low carbon footprint.



## HEMP

- Thermal resistance
- Ecological sound insulator
- Sustainable material.



EXPANDED CORK INSULATION



NATURAL CORK



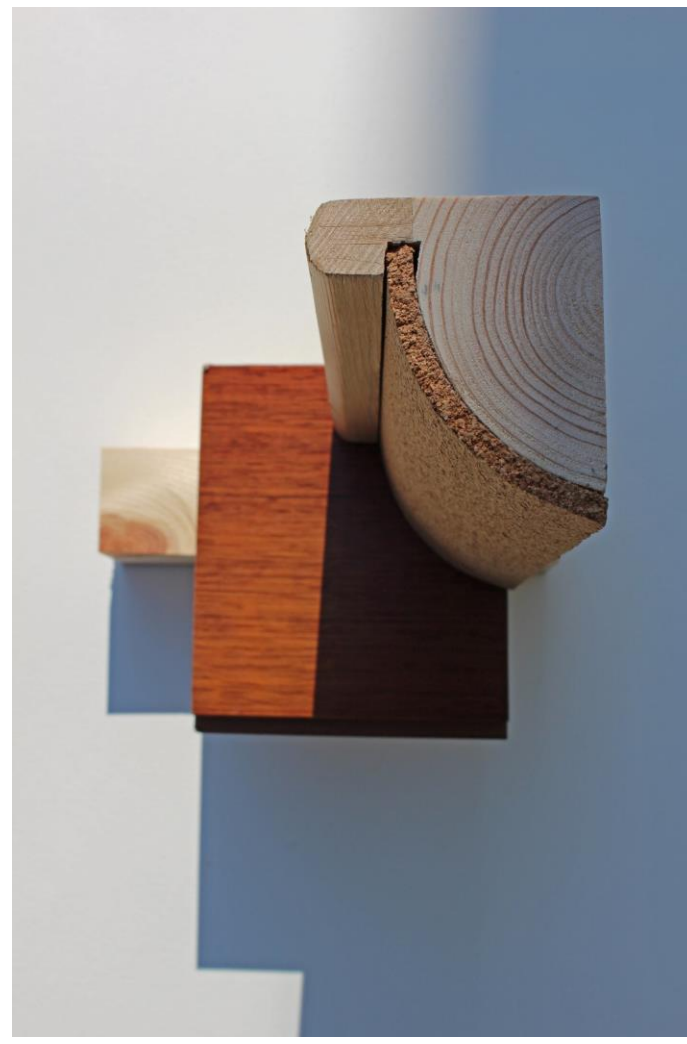
PAINTED CORK PANEL

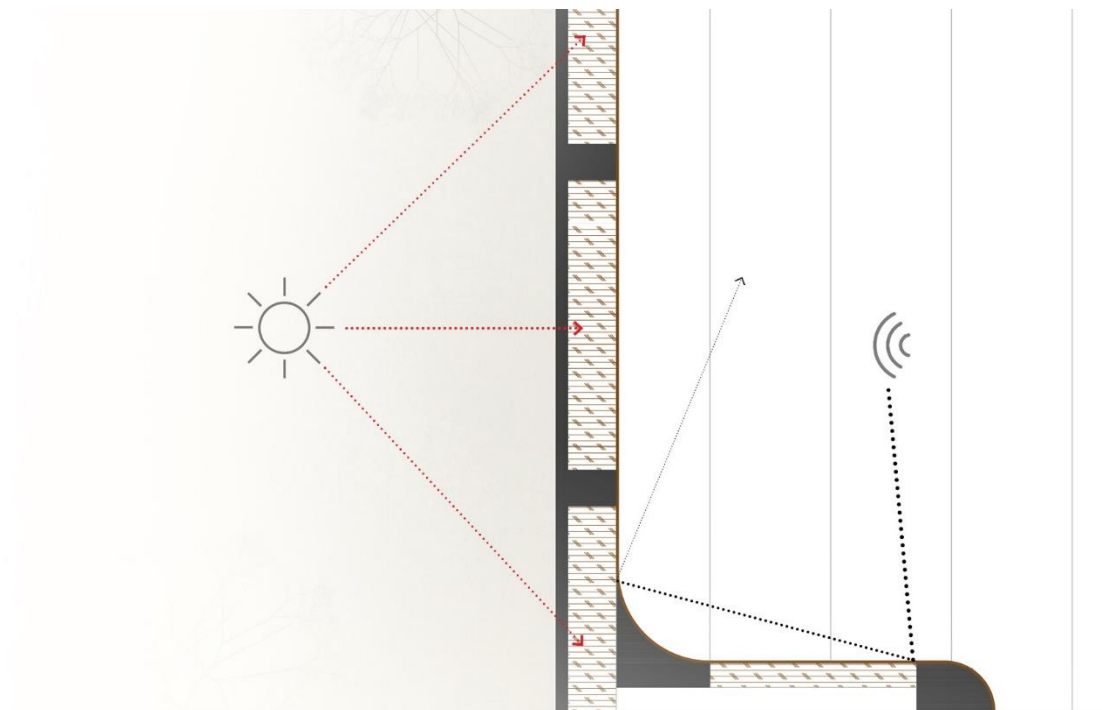


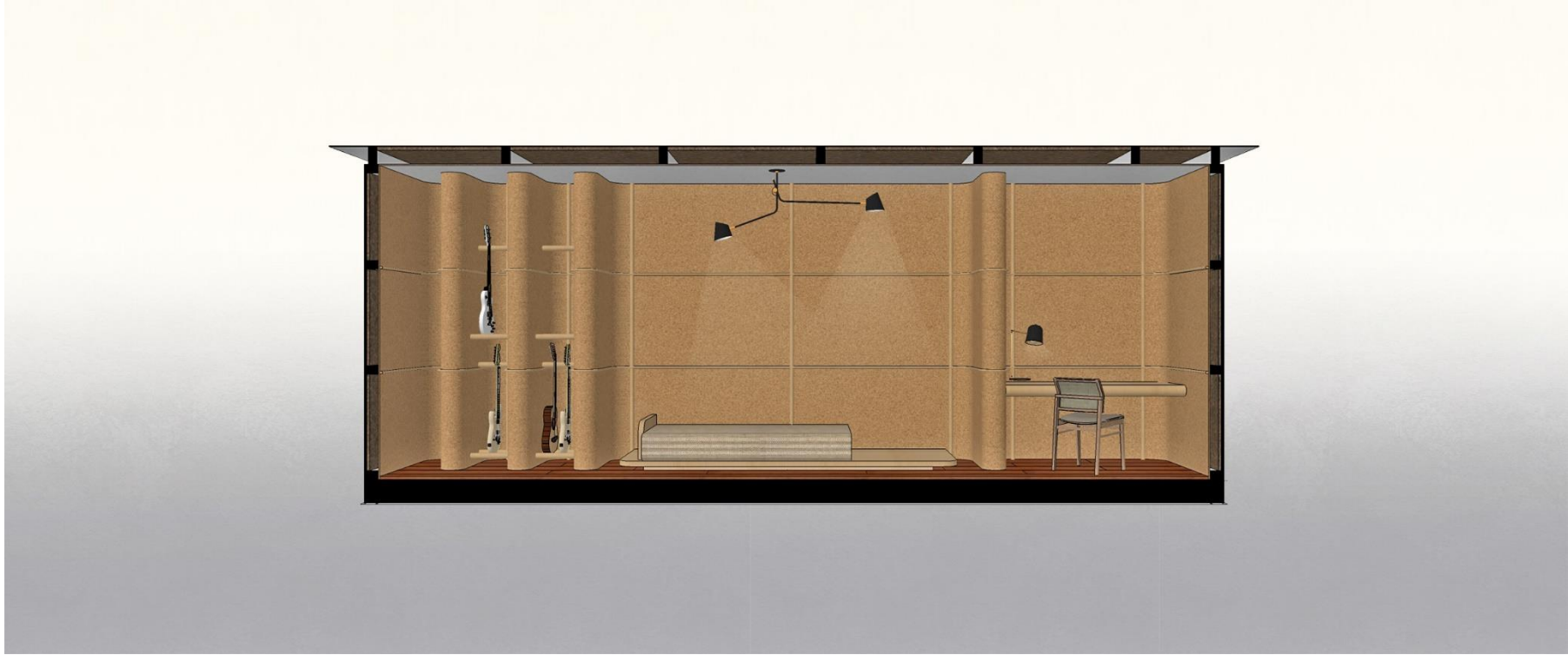
STAINED OAK WOOD



CEDAR WOOD



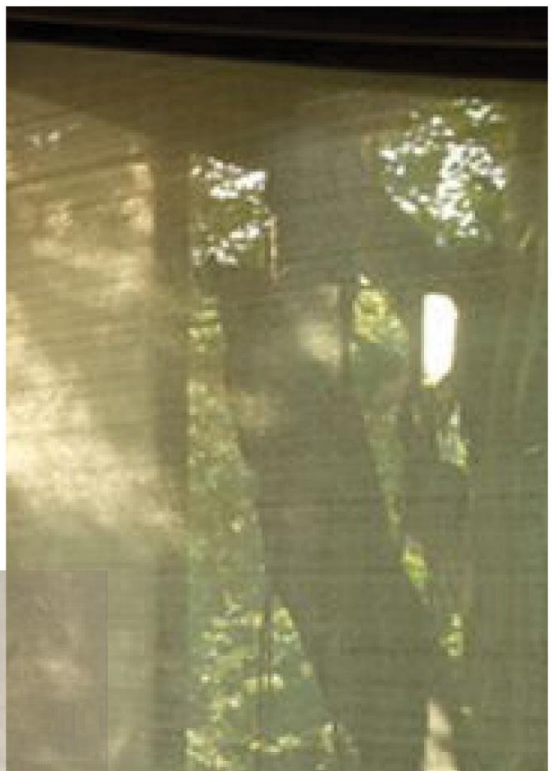








# A MEDITATIVE RETREAT



## CLAY

- High thermal mass. Evens out temperatures between peak hours.
- Natural moisture buffering and regulation.



## HEMP

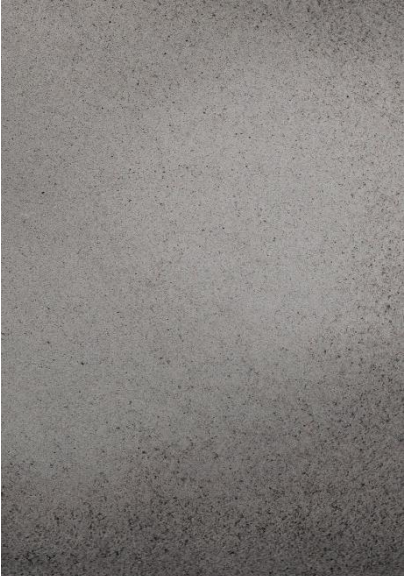
- Thermal resistance
- Natural air filter. Porous



SANDBLASTED BRICK



GLAZED WHITE BRICK



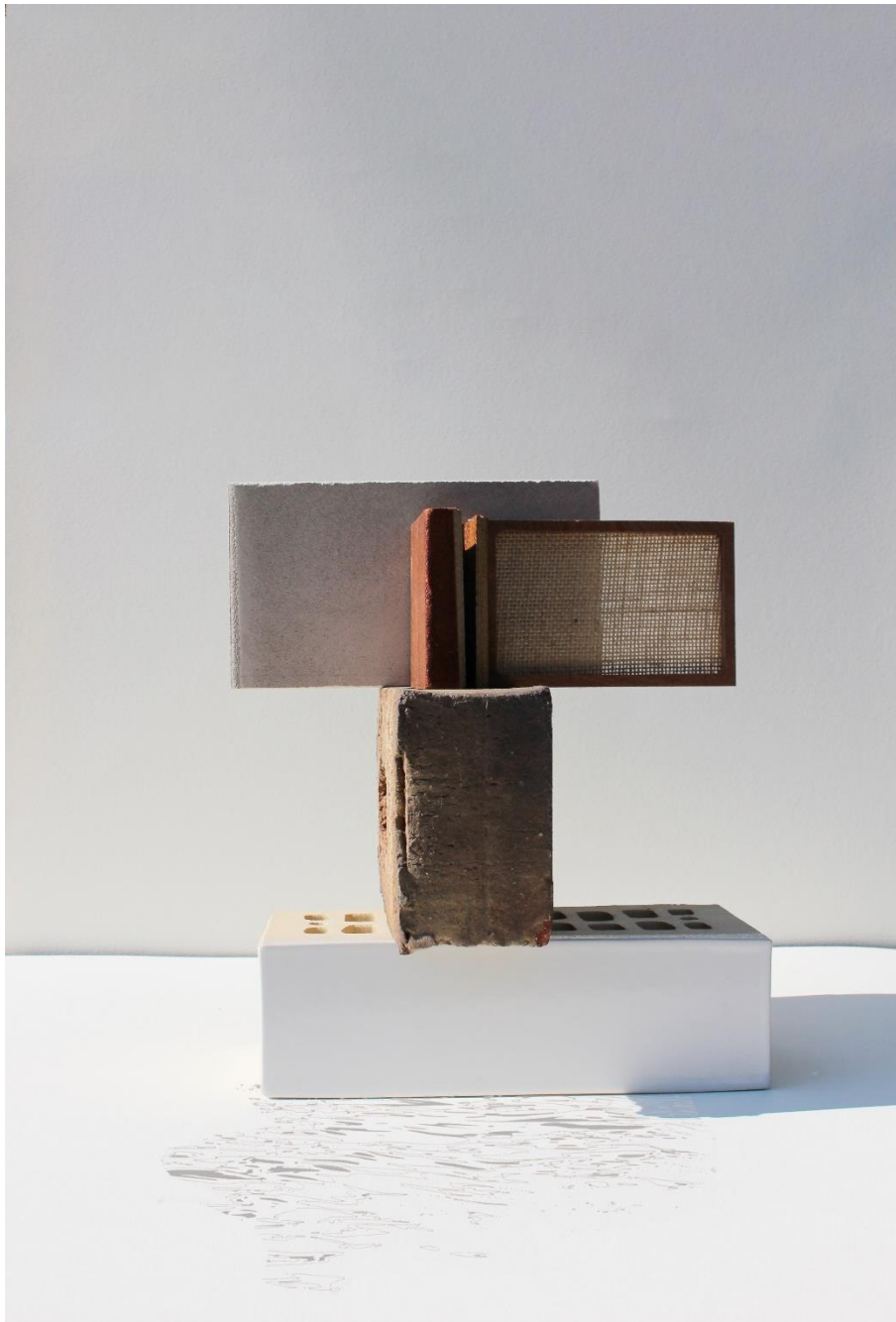
CLAY PLASTER

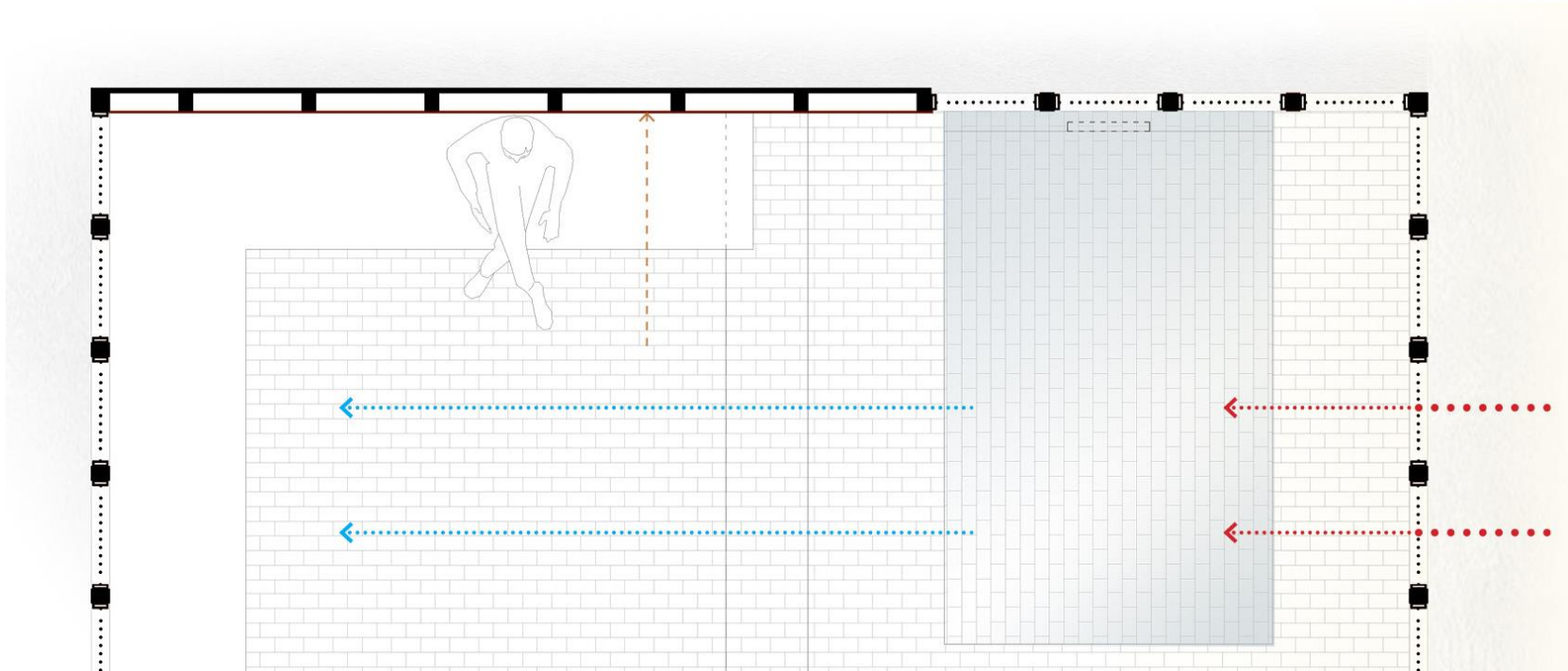


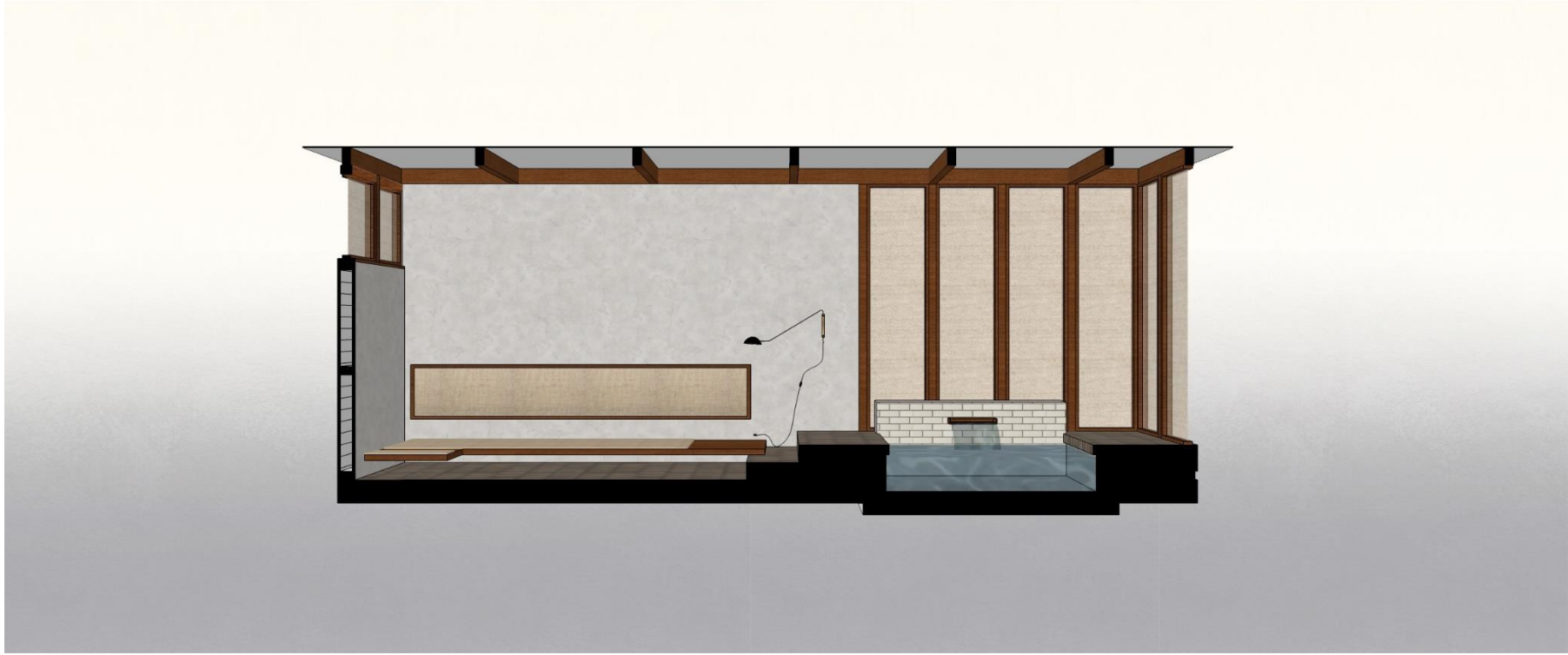
HEMP FABRIC



NATURAL FIBER COMPOSITE











A READING ROOM



## LIMESTONE

- High thermal mass.
- Cool to touch



## GLASS

- Light filter
- Treated glass- thermal lag



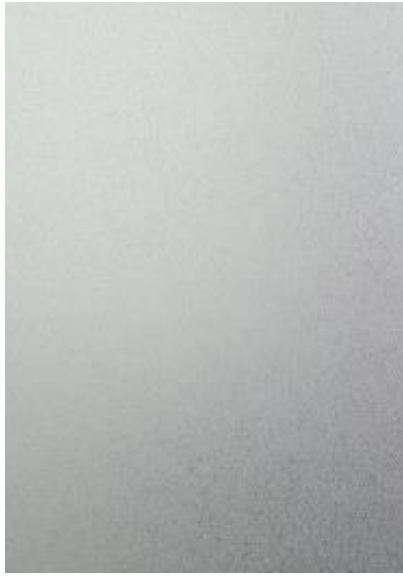
TRAVERTINE



LIME PLASTER



LOW-E GLASS



FROSTED GLASS



NATURAL FIBER COMPOSITE



