

Holistic architecture

space is

*spiritual
emotional
vital
material*

Topic:

*Sustainable building
constructions and
natural materials*

Presented by:

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and Sustainable Design,
Mexico City*

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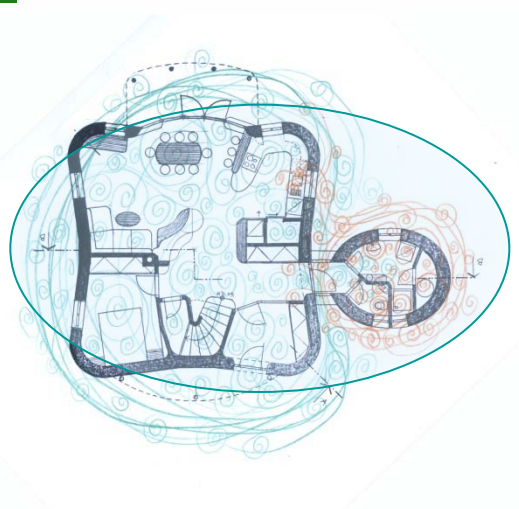
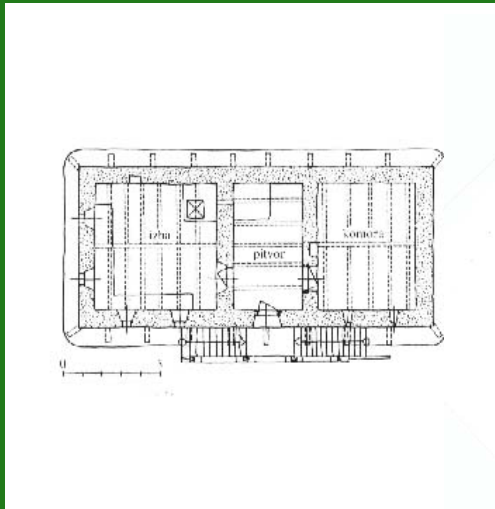
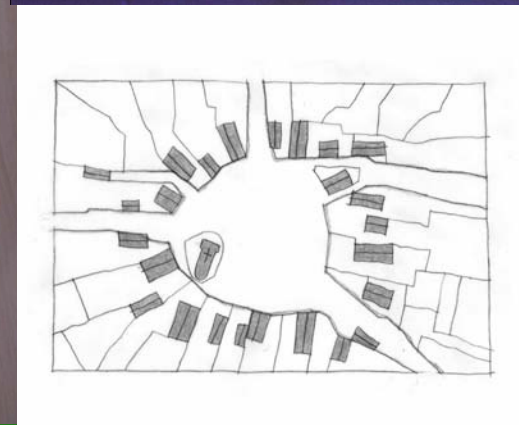


Holistic architecture

space is

*spiritual
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- *wholeness of the Universe*
- *surrounding and centre*
- *the basic form is an oval*
- *covering, skin, bark, wall*
- *the life force is connected with surfaces*
- *principle of emptiness in the centre*
- *shape of the oval*
- *symmetry, axuality*



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Layers in Nature

- *wholeness of the Universe*
- *surrounding and centre*
- *the basic form is an oval*
- *covering, skin, bark, wall = LAYERS*
- *the life force is connected with layers and surfaces*
- *shape of the oval*
- *symmetry, axuality*



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Layers in the construction of ecohouses

- *eco construction*
- *sacred geometry of shapes and proportions*
- *layers in roofs*
- *layers in walls*
- *base wall of stone*
- *radon insulation*
- *ventilated space under the floor*
- *healthy foundations*



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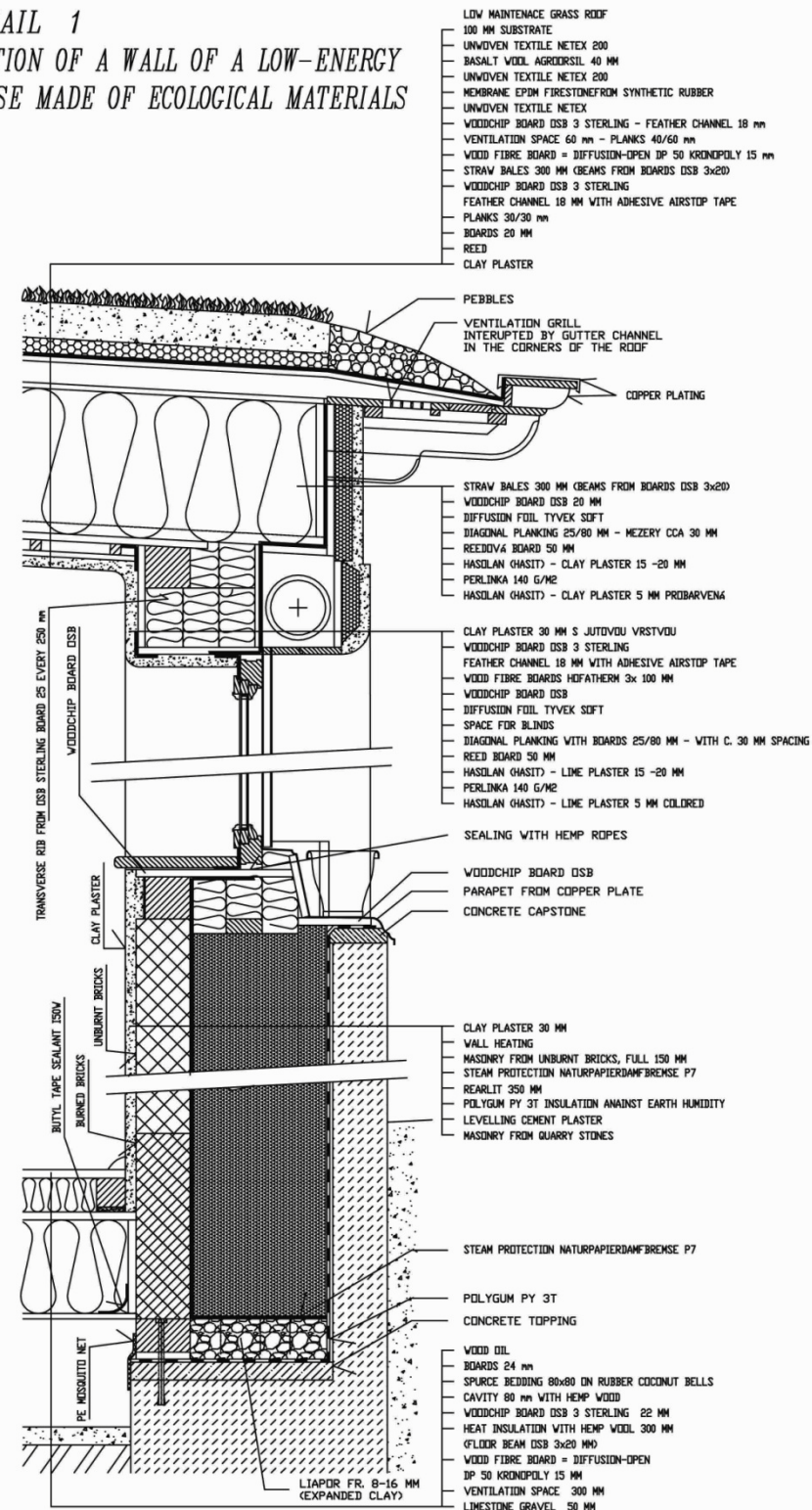
space is

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- natural materials:
- mineral world
- vegetal world
- animal world

- stone, earth, clay, sand, lime
- wood, straw, hemp, flax, corn, jute, reed, cotton, cork...
- Wool, hair, leather,

DETAIL 1 SECTION OF A WALL OF A LOW-ENERGY HOUSE MADE OF ECOLOGICAL MATERIALS



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- Natural materials:**
- *Foam glass*
 - *Hemp fibre*
 - *Straw board*
 - *Wood wool board*
 - *Wood fibre board*
 - *Natural paper*
 - *Wood fibre gypsum board*
 - *Cork board*
 - *Clay board*
 - *Wool*
 - *Linoleum*
 - *Jute felt*
 - *Wool felt*
 - *Hemp felt*
 - *Syntetic rubber*
 - *Cork*
 - *Coconut fibre board*



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Natural materials:

- *Straw bale*
- *Wood fibre insulation*
- *Hemp fibre insulation*
- *Paper fibre insulation*
- *Wool insulation*
- *Wood fibre board with plaster*
- *Straw board*
- *Wood chips board*
- *Heraklith*
(wood wool + magnesium)
- *Solid wood*
- *Wood chips board beam*
- *Liapor (foamed clay)*
- *Pearlith (very light mineral)*
- *Paper flakes*
- *Hemp fibre with calc powder*
- *Flax fibre*



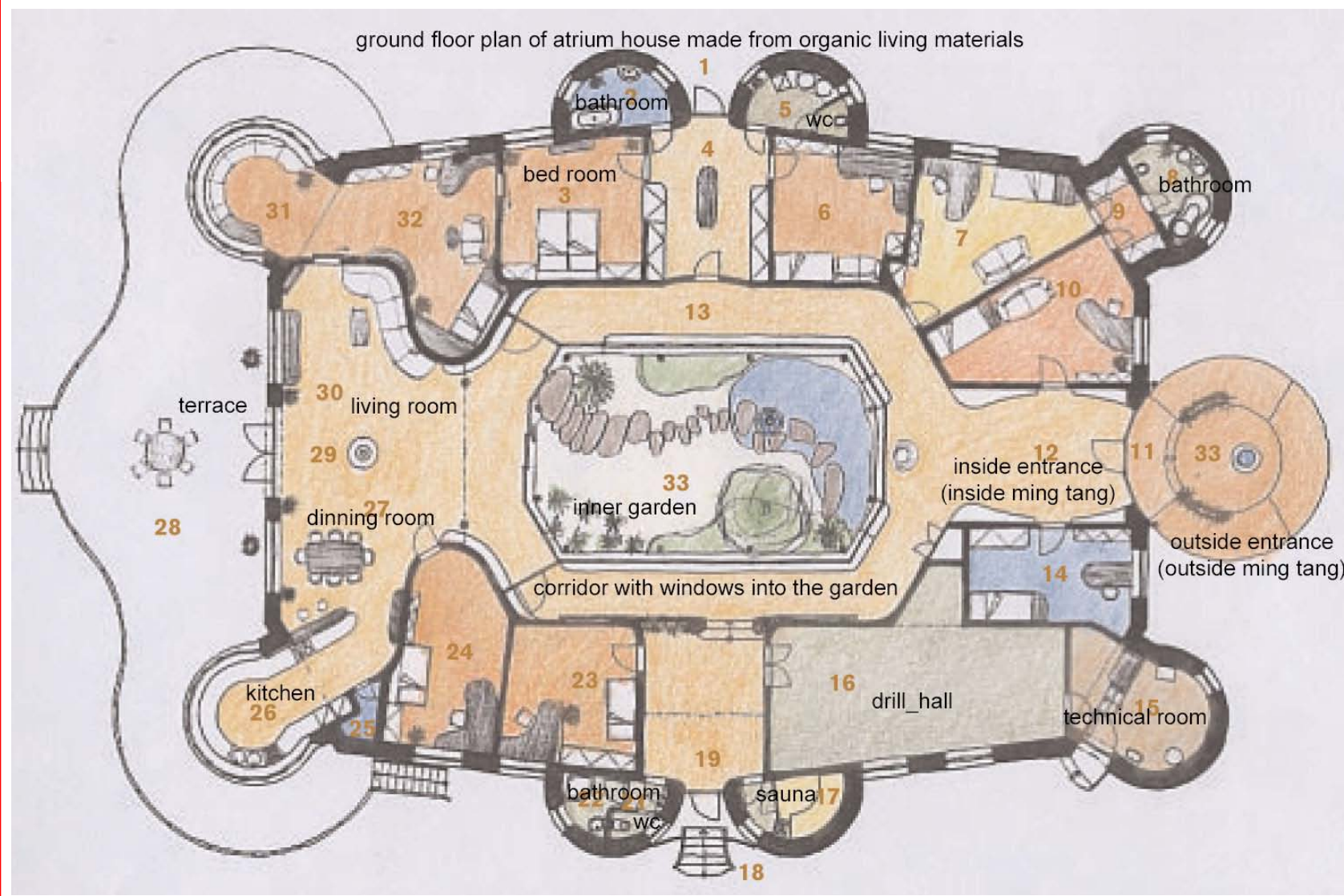
Holistic architecture

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- atrium house
- sacred geometry based on tree of life
- walls of adobe
- accumulate heat well
- regulate air humidity
- clean toxins from air
- regulate ions in the air

Examples of eco-structures



Walls are made of wood beams and filled with unburnt bricks.

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- *atrium house*
- *sacred geometry
based on tree of life*
- *healthy
foundations*
- *walls of stone*
- *ventilated space
under the floor*
- *the air space
provides radon
insulation*

Examples of eco-structures



foundations made of stone.

t

Holistic architecture

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- *atrium house*
- *sacred geometry
based on tree of life*
- *wood as a basic
construction
material*
- *walls of wood and
unburned bricks*
- *ventilated space
under the floor*
- *air in the floor
provides radon
insulation*

Examples of eco-structures



foundations made of stone and building of walls from wood beams

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Examples of eco-structures



wood beams with empty space filled with hemp straw

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- *wood as a basic
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- *ventilated space
under the floor*
- *the air space
provides radon
insulation*

Examples of eco-structures,

wood beams with empty space filled with hemp straw and mixed with lime powder



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Examples of eco-structures,

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- *atrium house*
- *sacred geometry
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- *wood as a basic
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- *ventilated space
under the floor*
- *radon insulation
in the floor is air*

Examples of eco-structures,

wood beams of the floor construction and ventilated space



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- *atrium house*
- *sacred geometry
based on tree of life*
- *wood as a basic
construction
material*
- *hemp improve
fractaliy of the
place*
- *ventilated space
under the floor*
- *radon insulation
in the floor is air*

Examples of eco-structures,

wood beams of the floor construction and ventilated space



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in the floor is air*

Examples of eco-structures,

wood beams of the floor construction and hemp insulation



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- *atrium house*
- *sacred geometry
based on tree of life*
- *healthy
foundations*
- *walls made
from stone*
- *ventilated space
under the floor*

Examples of eco-structures



Foundations and base wall made of sand stone.

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- *atrium house*
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based on tree of life*
- *healthy
foundations*
- *walls made
from stone*
- *aesthetic of walling*
- *ventilated space
under the floor*



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- *the spirit and soul level of the building*
- *celebrate*
- *it influences our behavior*
- *blessing materials*
- *work according to seasons or moon rhythms in different zodiac*



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- *framed building*
- *wood structure
improve charge field*
- *the life is
strengthened by
proper structure*

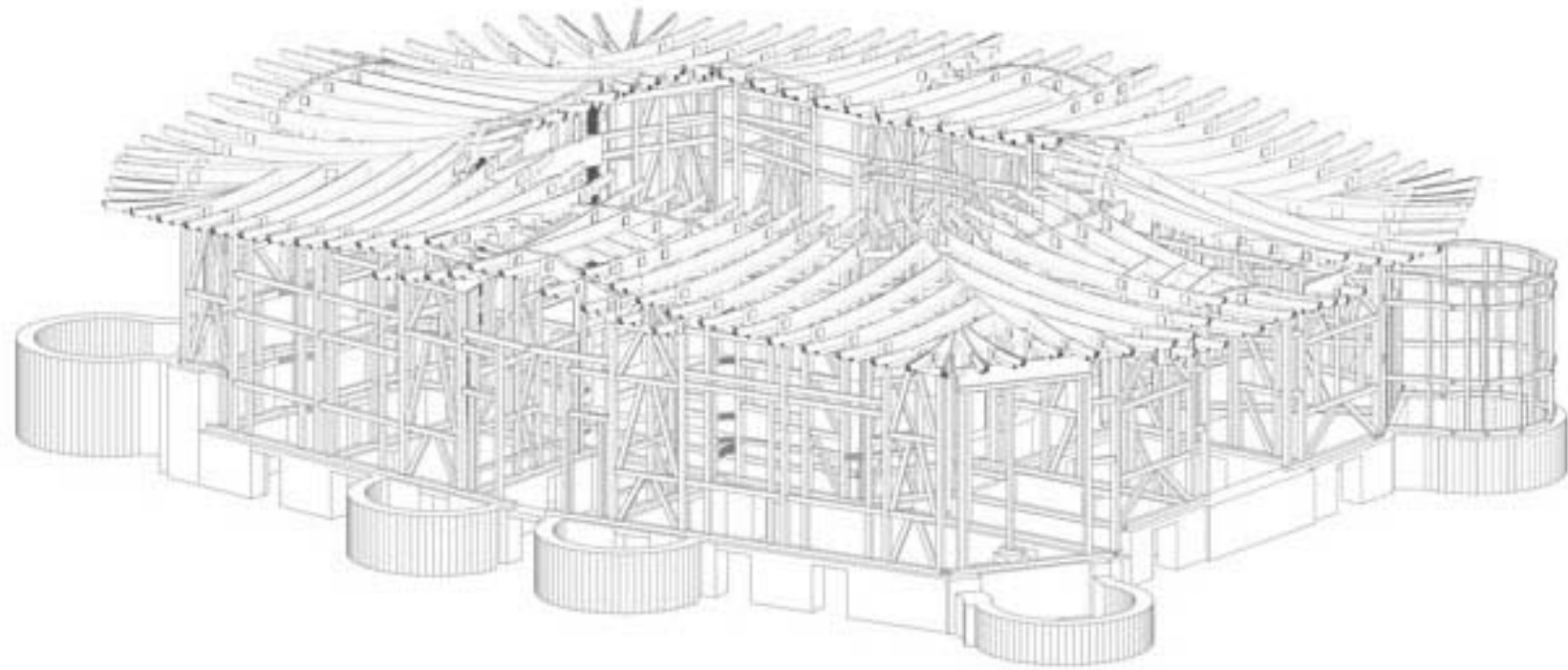


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- *framed building*
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improve charge field
- *the life is*
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- *sacral geometry*
based on dodecagon



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- *life force level*
- *influenced by structure*
- *proper alignment*
- *the life is strengthened by proper structure*



Holistic architecture

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- *framed building*
- *wood and clay
structure improve
charge field*
- *the life is
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- *unburnt brick –
nogging building*
- *more natural =
more fractal*



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Examples of eco-structures,
unburnt bricks in framed wall



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- *unburnt brick*
balance humidity
in the air
- *wood and clay*
structure improve
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- *more natural =*
more fractal



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- *walls of adobe*
- *accumulate heat well*
- *regulate air humidity*
- *clean toxins from air*
- *regulate ions in the air*

Examples of eco-structures



Inside corridor of the house.
Walls made of unburnt bricks.

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balance humidity
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Examples of eco-structures,
unburnt bricks in framed walls



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Examples of eco-structures,
unburnt bricks in framed wall



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- *framed building*
- *wood structure*
improve
charge field
- *the life is*
strengthened by
proper structure
- *wood chips board*
- *more natural =*
more fractal

Examples of eco-structures,
window in framed wall before insulation



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- *natural insulation*
- *wood fibre board*
- *more natural =*
more fractal

Examples of eco-structures,

window in framed wall before insulation by wood fibre board



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- *framed building*
- *wood structure*
improve
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- *natural insulation*
- *wood fibre board*
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more fractal

Examples of eco-structures,
detail of insulation by wood fibre board



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- *framed building*
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- *natural insulation*
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Examples of eco-structures,

window in framed wall during insulation by wood fibre board
roof insulated by straw bales, syntetic rubber for green roof



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Examples of eco-structures,

window in framed wall during insulation by wood fibre board



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Examples of eco-structures,

window in framed wall after insulation by wood fibre board +
layer of planks for reed boards



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- *framed building*
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- *natural insulation*
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more fractal

Examples of eco-structures,

window in framed wall after insulation by wood fibre board +
layer of planks to hold reed boards



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- *atrium house*
- *framed building*
- *wood structure*
improve
charge field
- *natural insulation*
- *wood fibre board*
- *reed boards*
- *more natural =*
more fractal

Examples of eco-structures,

framed wall after insulation by wood fibre board +
layer of planks to hold reed boards, metal works with copper



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- *wood structure*
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charge field
- *natural insulation*
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- *more natural =*
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Examples of eco-structures,

window in framed wall after insulation by wood fibre board +
layer of planks + reed boards, stage before plastering



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- *framed building*
- *wood structure*
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- *natural insulation*
- *wood fibre board*
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Examples of eco-structures,

window in framed wall after insulation by wood fibre board +
layer of planks + reed boards, stage before plastering



Holistic architecture

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- *vapour open materials*
- *natural insulation*
- *natural lime plaster*
- *reed boards*
- *wood fibre board*
- *more natural = more fractal*

Examples of eco-structures,
reed boards, plastering layers



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- *wall insulated by reed board*
- *is compatible with different plasters*
- *$U = 0.2 \text{ W/m}^2\text{K}$*

Examples of eco-structures



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- *vapour open materials*
- *natural insulation*
- *natural lime plaster*
- *reed boards*
- *wood fibre board*
- *more natural = more fractal*

Examples of eco-structures,
lime plaster on reed boards



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- *wooden house*
- *roof structure before insulation by straw bales*
- *long lasting*
- *importance of dry conditions*
- *$U = \text{heat permeability}$
 W/m^2K*
- *$U = 0.2 W/m^2K$
(straw)*

Examples of eco-structures



Wooden atrium house.

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- *wooden house*
- *roof structure before insulation by straw bales*
- *long lasting*
- *importance of dry conditions*
- *$U = \text{heat permeability}$
 W/m^2K*
- *$U = 0.2 W/m^2K$
(straw)*

Examples of eco-structures



Straw bales insulation

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- *roof insulated by straw bales*
- *good insulation features*
- *healthy material*
- *breathing material*
- *Bio degradable*

Examples of eco-structures



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- *roof insulated by straw bales*
- *interior covered by clay plaster*
- *good insolation features*
- *healthy material*
- *breathing material*
- *bio degradable*

Examples of eco-structures,
wood ceiling before stapling the reed board



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- *roof insulated by straw bales*
- *interior covered by clay plaster*
- *good insulation features*
- *healthy material*
- *breathing material*
- *biodegradable*

Examples of eco-structures,

wood ceiling with stapled reed board and first layer of clay plaster



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- *interior covered by clay plaster*
- *regulate relative humidity*
- *good insulation features*
- *healthy material*
- *breathing material*
- *biodegradable*

Examples of eco-structures,
wood ceiling with last layer of clay plaster



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- *interior covered by clay plaster and wood*
- *regulate relative humidity*
- *good insulation features*
- *healthy materials*
- *breathing materials*
- *biodegradable*

Examples of eco-structures,

wood ceiling with oat wooden planks painted by natural wood oil



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- *walls of adobe*
- *accumulate heat well*
- *regulate air humidity*
- *clean toxins from air*
- *regulate ions in the air*

Examples of eco-structures, reed stapled on adobe wall,



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- *Reduce
electromagnetic
pollution*

Examples of eco-structures

earthed electric cables



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- *wall heating*
- *radiating heat*
- *accumulating heat*
- *water pipes*

Examples of eco-structures



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- *floor heating*
- *radiating heat*
- *accumulating heat*
- *water pipes*
- *recommended in
corridors and
bathrooms*

Examples of eco-structures



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- *healthy heating principles*
- *accumulating heat*
- *energy saving*
- *low temperature systems*
- *radiating heat*



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- *solar panels*
- *healthy heating principles*
- *accumulating heat*
- *energy saving*
- *low temperature systems*
- *radiating heat*



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- *healthy heating principles*
- *wood pils*
- *energy saving*
- *low temperature systems*
- *radiating heat*



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- *floor heating*
- *radiating heat*
- *accumulating heat*
- *water pipes in anhydrite (mineral) self-levelling material*
- *Recommended in corridors and bathrooms*

Examples of eco-structures



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- *floor heating*
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- *accumulating heat*
- *water pipes in anhydrite (mineral) self-levelling material*
- *recommended in corridors and bathrooms*

Examples of eco-structures

limestone pavement in main entrance hall



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- *natural colours
based on mineral
powders + casein +
calc*
- *non toxic*
- *improve level of
fractality of the
place*

Examples of eco-structures



Holistic architecture

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- *natural colours based on mineral powders + casein + calc*
- *non toxic*
- *improve level of fractality of the place*

Examples of eco-structures, natural paints



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- *natural blinding*
- *simple solutions*
- *shielding roofs to reduce heat in summer*

Examples of eco-structures, window-blinding to reduce heat



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Examples of eco-structures, window-blinding to reduce heat

- *natural blinding*
- *simple solutions*
- *shielding roofs to reduce heat in summer*



Holistic architecture

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- *atrium house*
- *sacred geometry
based on tree of life
(dodecahedron)*
- green roofs give:*
 - *good insulation*
 - *absorb water*
 - *balance humidity*
 - *improve
flora/fauna*
 - *wild plants*

Examples of eco-structures



Green roof atrium house

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- *atrium house*
- *sacred geometry
based on tree of life*
- *importance of main
entrance*
- *outside space*
- *axiality, symmetry*
- *organic
architecture*

Examples of eco-structures



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- *atrium house*
- *sacred geometry
based on tree of life*
- *emptiness in the
centre create
sacred space*
- *organic
architecture*

Examples of eco-structures



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- *atrium house*
- *emptiness in the centre create sacred space*
- *walls of adobe*
- *accumulate heat well*
- *regulate air humidity*
- *clean toxins from air*
- *regulate ions in the air*

Examples of eco-structures



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Examples of eco-structures



View from living room to the inner garden

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- *atrium house*
- *language of forms and materials*
- use of natural materials:*
 - *calc paints*
 - *natural oils*
 - *wood*
 - *stone*
 - *clay*
 - *unburnt bricks*
 - *anhidrite*
 - *copper*

Examples of eco-structures



entrance to the outside terrace and garden

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- *passive and active heating*
- *open to south*
- *close to north*
- *winter garden*
- *shielding roof*
- *green roof*
- *heating and ventilating by air*
- *earth collector*



energy efficient house, south facade

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- *solid and soft*
- *insulation*
- *rock wool*

• *passive and active
heating*

• *open to south*

• *close to north*



energy efficient house, detail of insulation

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- *material level*
- *unburnt bricks*
- *accumulate heat and cold*
- *regulate air humidity*
- *clean toxins from air*
- *regulate ions in the air*



energy efficient house with acumulate wall heating

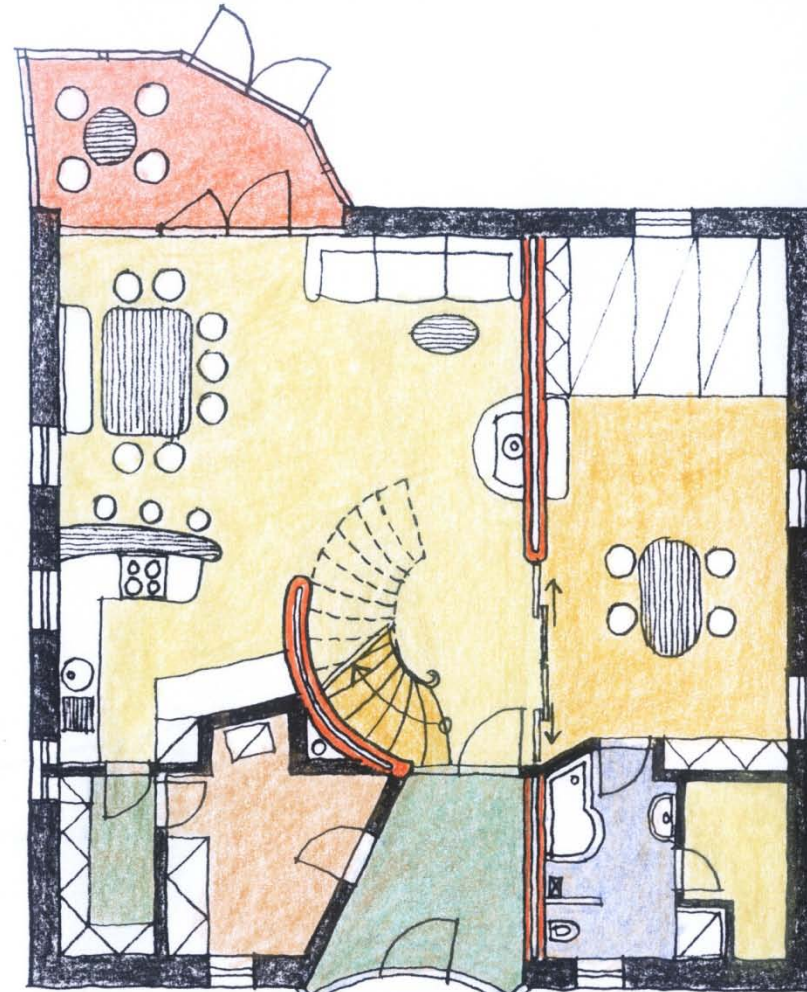
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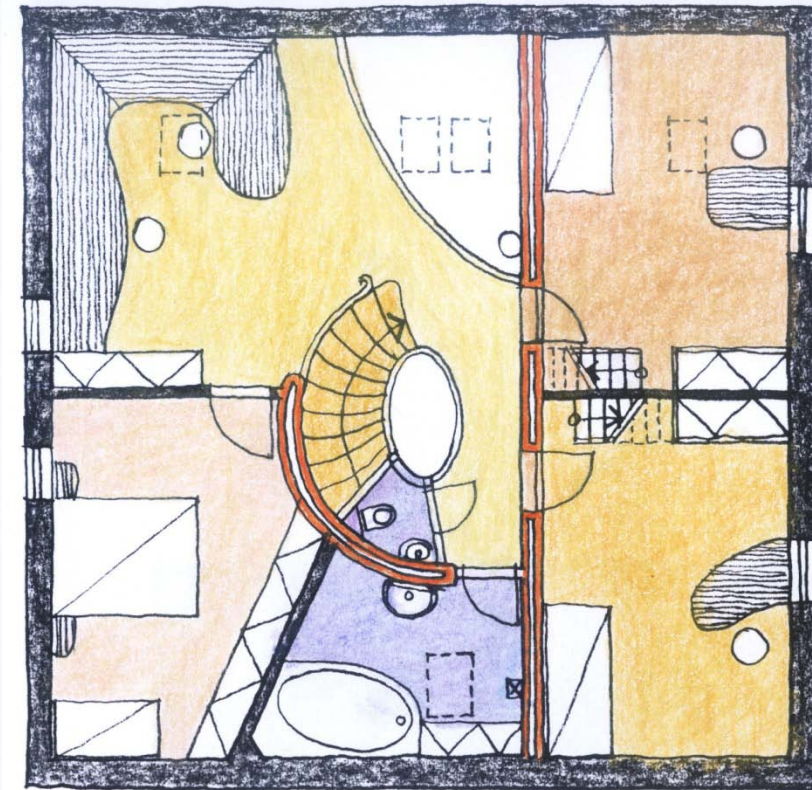
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- *material level*
- *unburnt bricks*
- *accumulate heat and cold*
- *regulate air humidity*
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*energy efficient house with **inside walls** made from unburnt bricks*



Ground floor



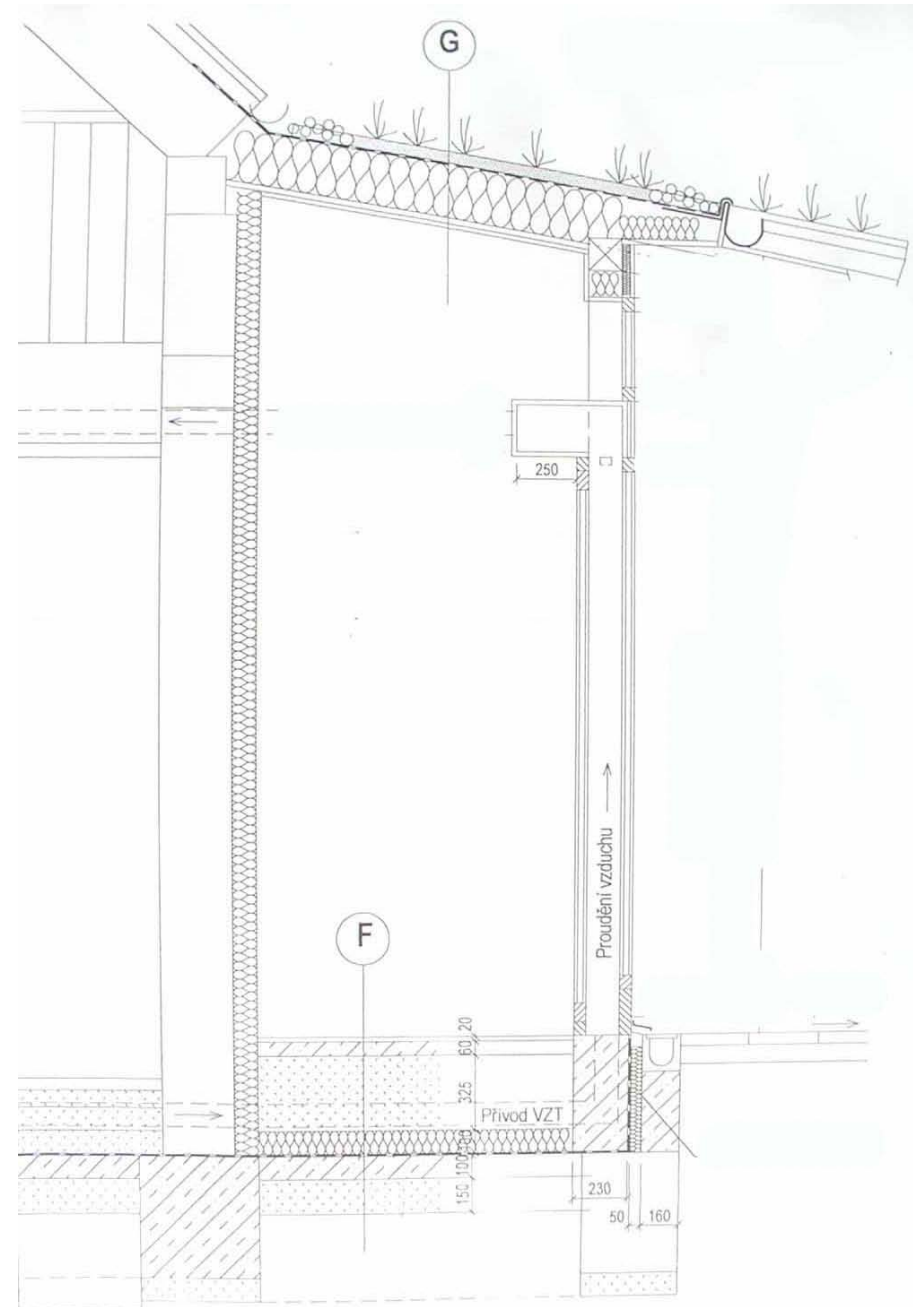
First floor

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- *material level*
- *unburnt bricks*
- *accumulate heat
and cold*
- *regulate air
humidity*
- *clean toxins from
air*
- *regulate ions in the
air*

*energy efficient house with acumulate wall heating made from unburnt bricks
warm air is blown from space between windows into space in walls*



winter garden section

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- *material level*
- *unburnt bricks*
- *accumulate heat and cold*
- *regulate air humidity*
- *clean toxins from air*
- *regulate ions in the air*

*energy efficient house with acumullate wall heating made from unburnt bricks
warm air is blowed from space between windows if winter garden into space in walls*



tube for warm or cold air joint into walls made from unburnt bricks

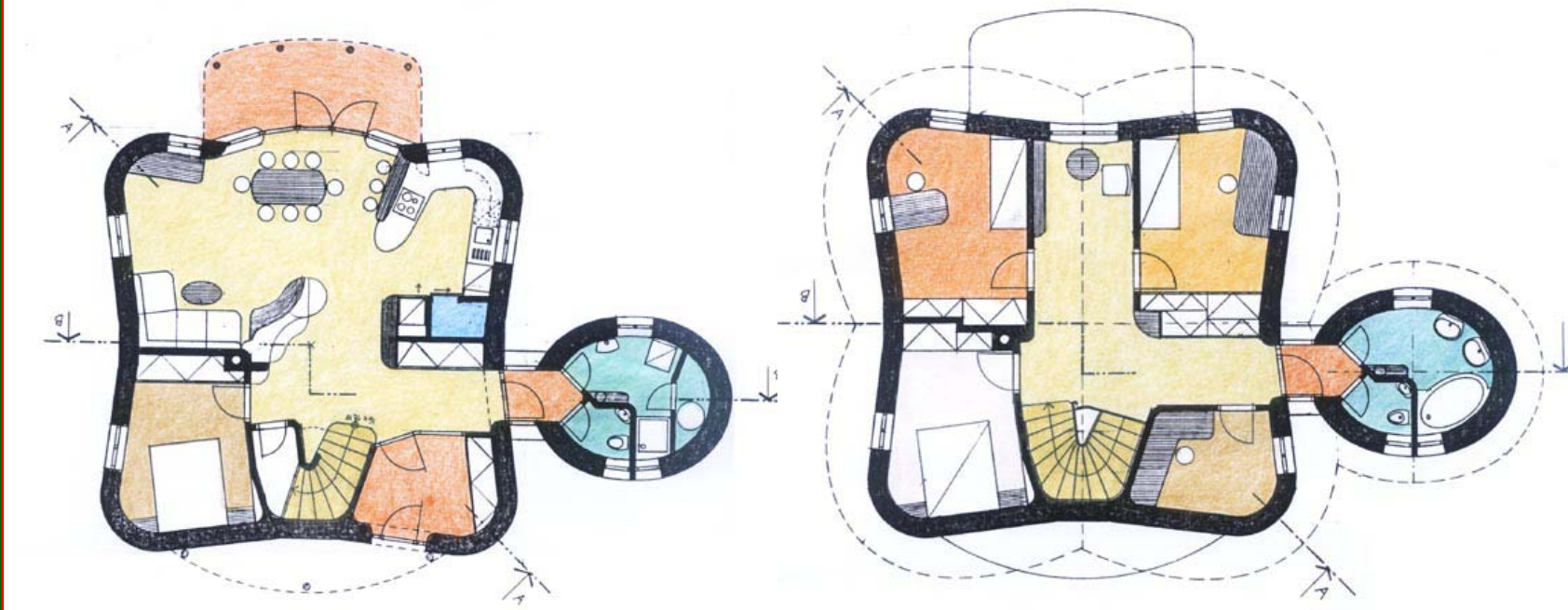
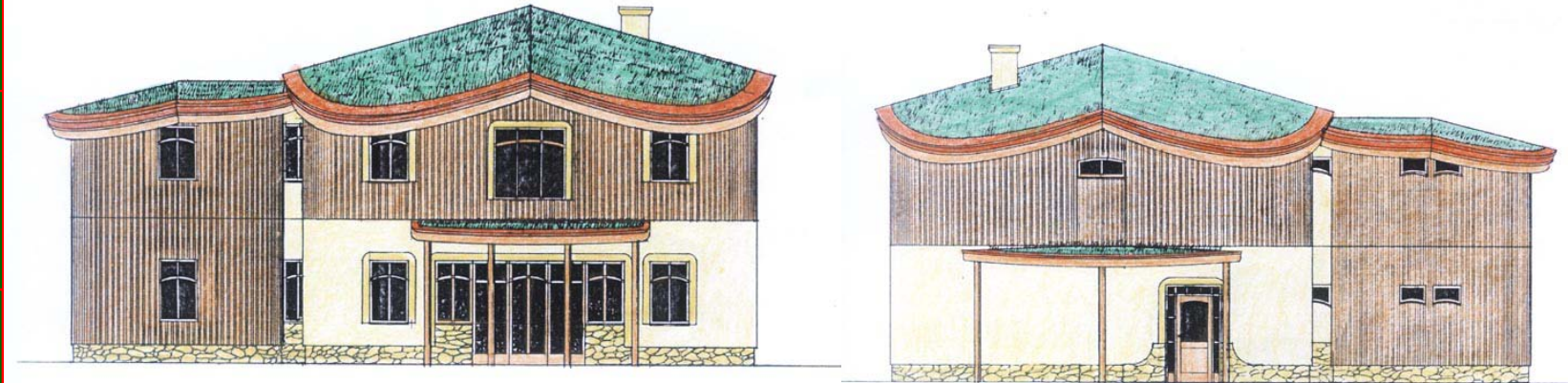
Holistic architecture

space is

*spiritual
emotional
vital
material*

- *inside walls from unburnt bricks*
- *green roof*
- *wood ceiling*
- *clay plasters*
- *reed boards*
- *no steel in floors*

Examples of eco-structures



energy efficient house with accumulating inside walls made from unburnt bricks

Holistic architecture

space is

*spiritual
emotional
vital
material*

- *green roofs*
- *absorbs water*
- *balances humidity*
- *improves
flora/fauna*
- *wild plants*
- *aesthetics*
- *works with the land*

- *good insulation
(30 cm of rock wool)*



energy efficient house,
south view



Holistic architecture

space is

*spiritual
emotional
vital
material*

- *inside walls from unburnt bricks*
- *wood ceiling*
- *influencing human psyche and health*
- *clay plaster*
- *reed boards*
- *no steel in floor*

Examples of eco-structures



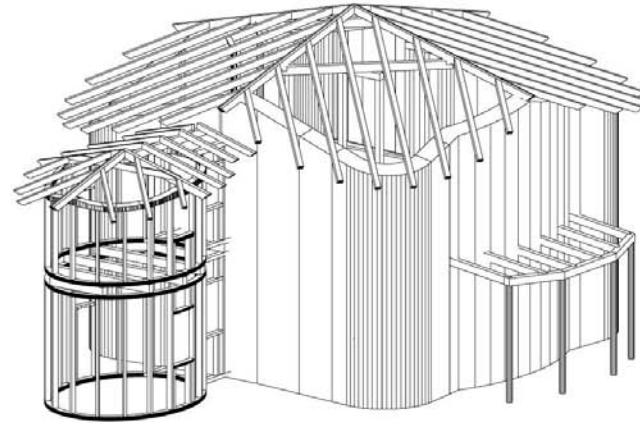
Holistic architecture

space is

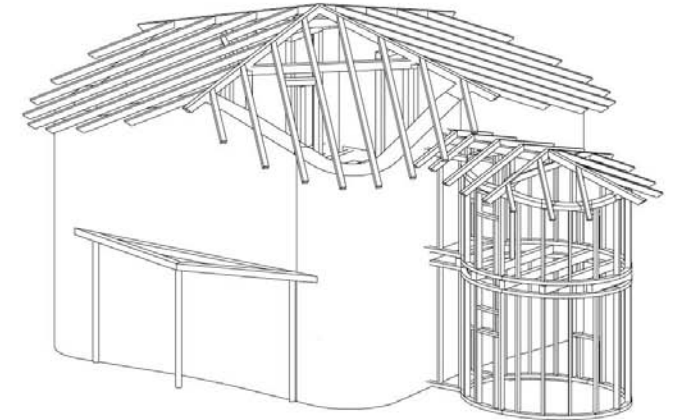
spiritual
emotional
vital
material

- *wooden construction*
- *support life force*
- *calm down heart beat*
- *reduce influence of electro smog*
- *sustainable material*

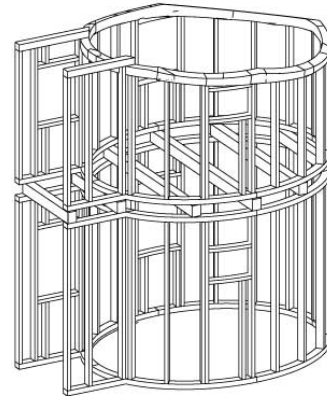
POHLED J-Z



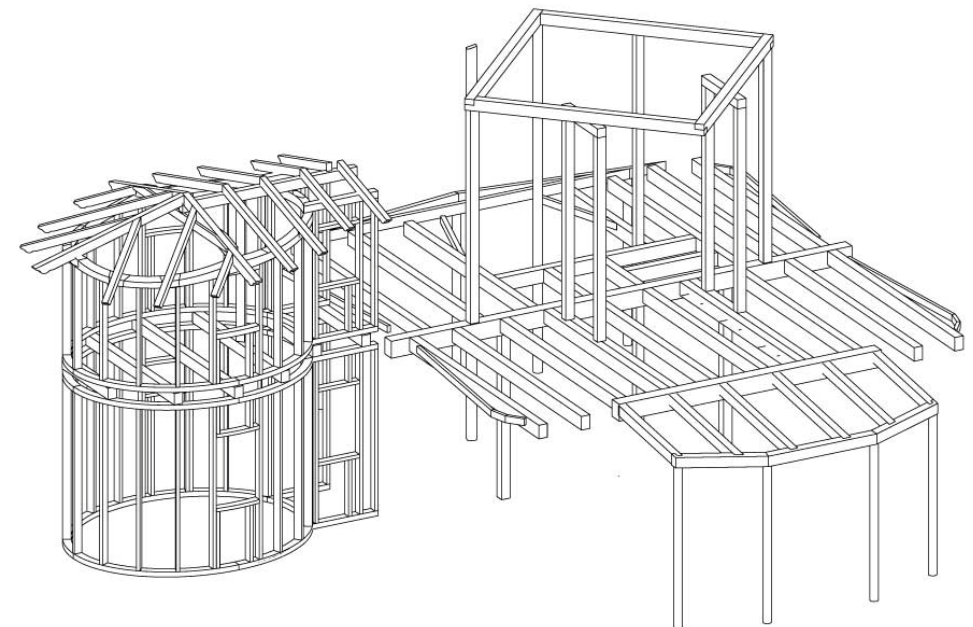
POHLED S-Z



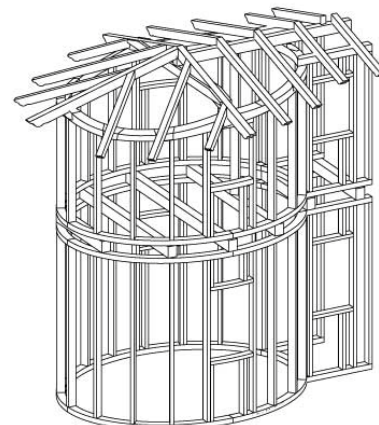
POHLED ABSIDA S-Z



POHLED KONSTRUKCE



POHLED ABSIDA J-Z

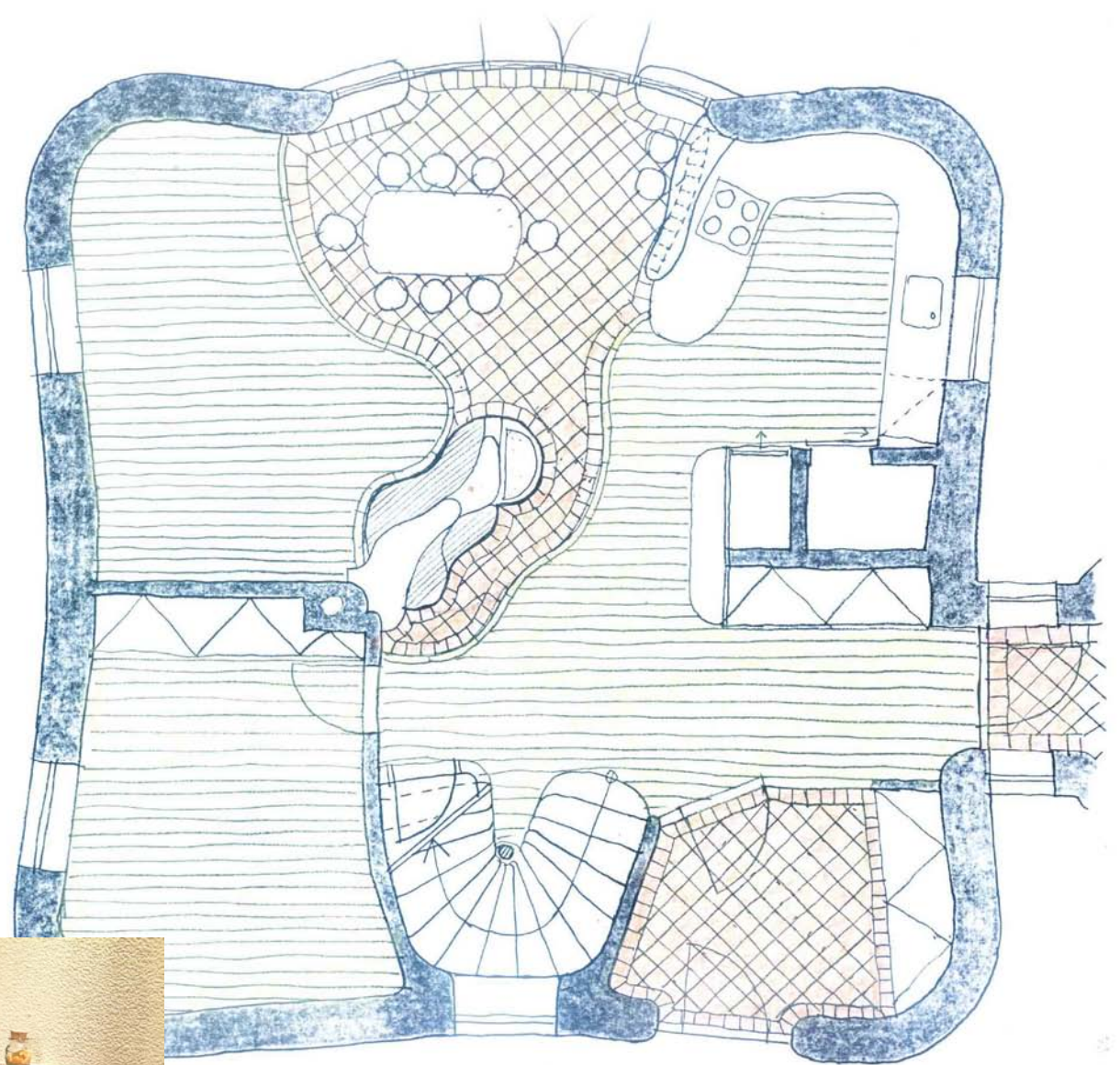


Holistic architecture

space is

*spiritual
emotional
vital
material*

- *healthy heating principles*
- *stoves and ovens*
- *radiating heat*
- *accumulating heat*



Holistic architecture

space is

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emotional
vital
material*

- *straw bale house*
- *simplicity of construction*
- *excellent heat insulation*
- *healthy lifestyle*

Examples of eco-structures



Holistic architecture

space is

*spiritual
emotional
vital
material*

- *natural materials*
- *wood, oils, wax,
clay plasters,
natural paints*



Holistic architecture

space is

*spiritual
emotional
vital
material*

- *natural materials*
- *wood, oils, wax,
clay plasters,
natural paints*



Holistic architecture

space is

*spiritual
emotional
vital
material*

Design of children's space

- *finding balance
between open and
close spaces*
- *empty centre*
- *natural lighting*
- *curves and rounded
shapes*
- *natural materials*
- *Suitable tones of
colours for
children*



Holistic architecture

space is

*spiritual
emotional
vital
material*

- *natural materials*

- *wood*
- *stones*
- *earth*



Garden altar based on the geometry of circle and square

Holistic architecture

space is

*spiritual
emotional
vital
material*

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