



Overview Biobased Construction Materials

From renewable resources

Wim Garmyn- Embuild Vlaanderen



Instructions

- For an optimal experience, view this document in presentation mode and browse through the slides as if you would navigate through a website.
- Click on X to close a window, or on  to return to the previous level.
- The  button will lead you back to the main menu.



Renewable resources



Cellulose
(Recycled paper)



Grass



Hemp



Wood



Jute



Cotton



Cork



Linseedoil



Reed



Shells



Straw



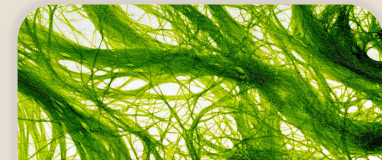
Flax



Wool



Funghi
(with biomass)



Algae

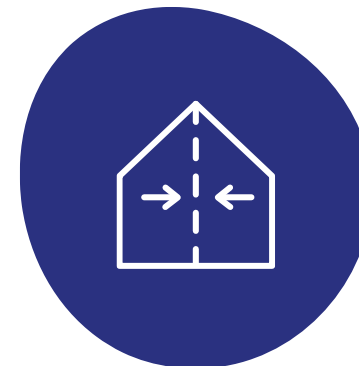
↑
TO TECHNICAL DRAWINGS



Resource

Cellulose

(recycled paper)



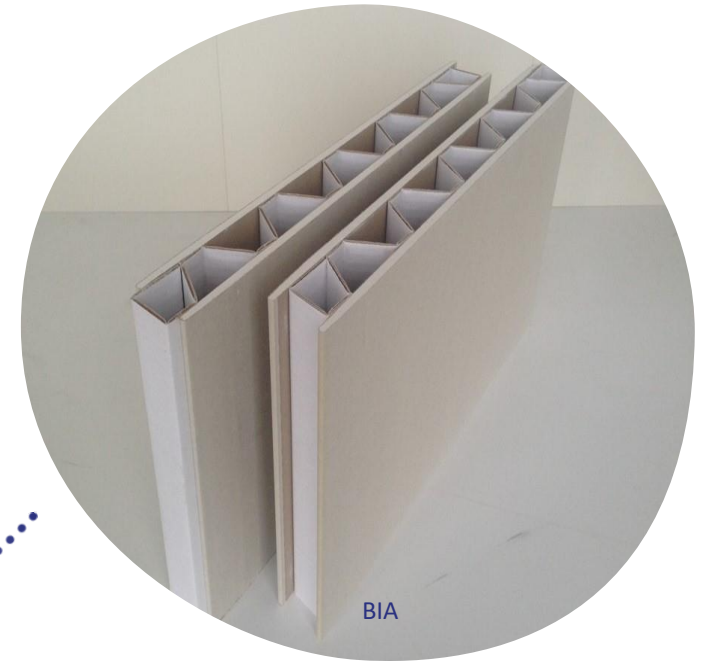
Inner walls



Insulation



Cellulose Inner walls



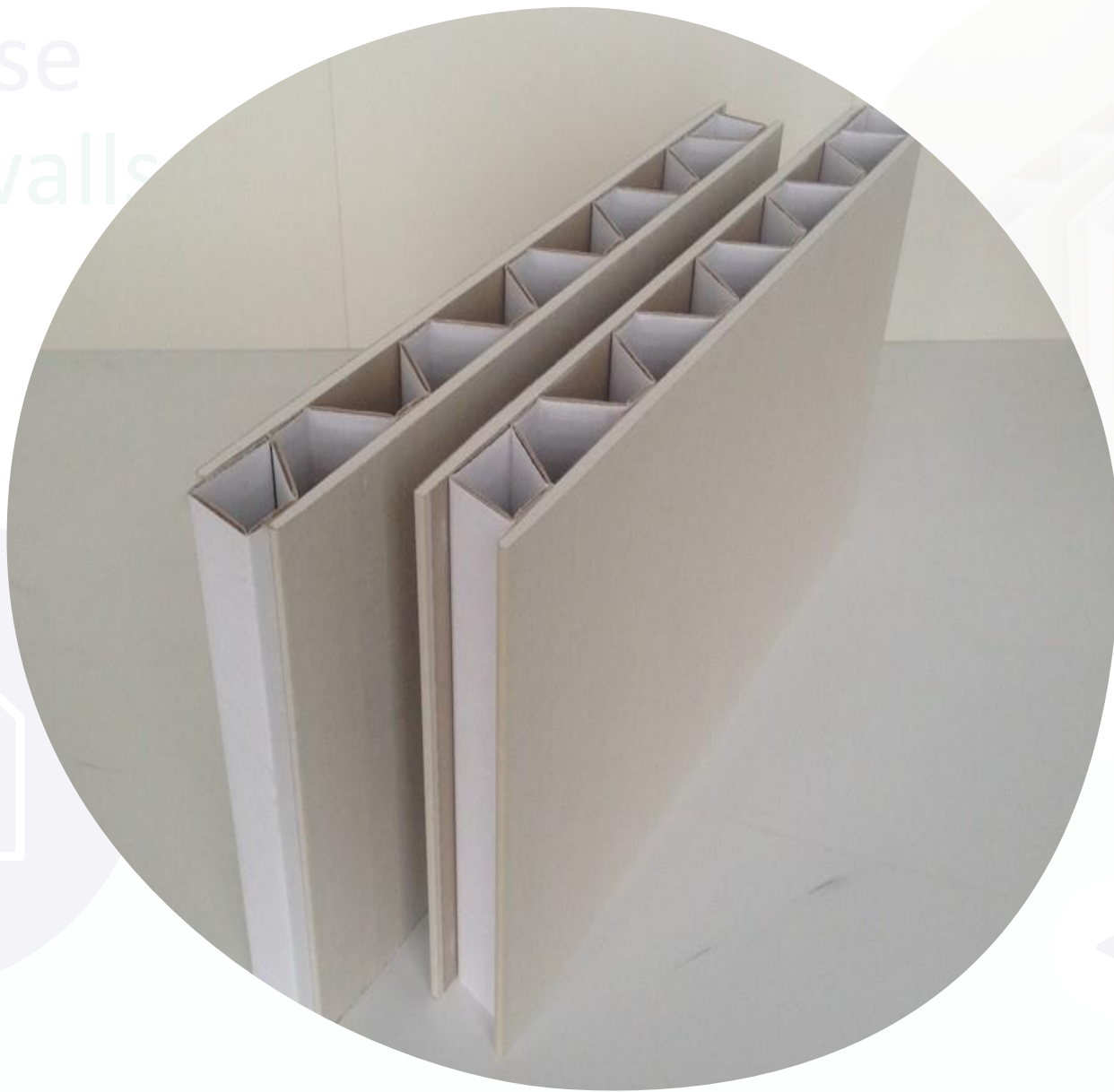
Partition wall based on
cardboard



BACK TO
CELLULOSE



Cellulose Inner walls



Wall based on
board

 [BACK TO CELLULOSE](#)



Cellulose Insulation

Cellulose blankets



Cellulose wadding



BACK TO
CELLULOSE



Cellulose Insulation



Eurabo

cellulose wadding



Cellulose blankets



BACK TO
CELLULOSE



Cellulose Insulation



Cellulose blankets



Cellulose wadding

 [BACK TO CELLULOSE](#)



Resource Grass



Insulation



Grass Insulation



Roadside grass
blankets



BACK TO GRASS



Roadside grass
blankets



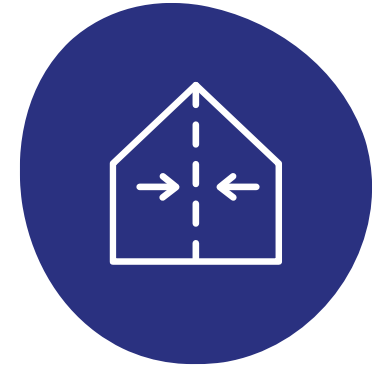
Grass Insulation



BACK TO GRASS



Resource Hemp



Inner walls



Structural



Insulation



Hemp Inner walls



Jory Swart

Hemp board

← BACK TO HEMP



Hemp Inner walls



Hemp board

← BACK TO HEMP



Hemp Structural



© Marble Moon –
Natuurpunt Vlaamse
Ardennen plus - Eurabo

Hemplime blocks



BACK TO HEMP



Hemp Structural



Marble Moon -
Sturpunt Vlaamse
Stenen plus - Eurabo

plime blocks



BACK TO HEMP



Hemp Insulation

Hemp fibres



Hemp fibre
blankets



BACK TO HEMP



Hemp Insulation

Hemp fibres



Hemp fibre
blankets



BACK TO HEMP



Hemp Insulation

Hemp fibres



Hemp fibre
blankets



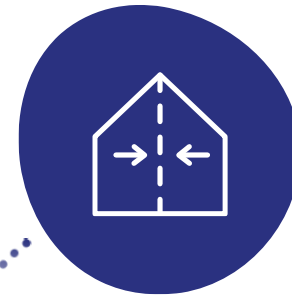
BACK TO HEMP



Resource Wood

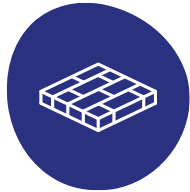


Wall finishing



Inner walls

Roofing



Floors



Structural



Insulation



Windows



Cladding

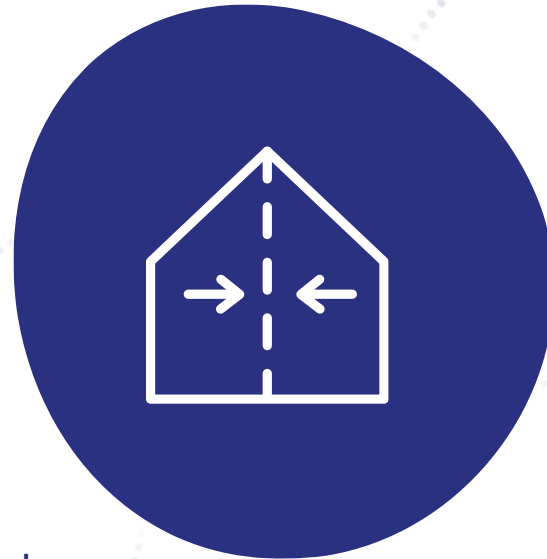
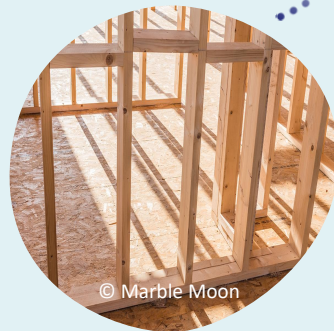


Wood Inner walls

Wood wool cement



SLS wood



CLT



LVL plate



BACK TO WOOD



Wood Inner walls

Wood wool cement



CLT



plate

← BACK TO WOOD



CLT

Wood Innerwalls



Wood wool cement



LVL plate



BACK TO WOOD



CLT



Wood Innerwalls

Wood wool cement



LVL plate

← BACK TO WOOD



CLT

Wood Innerwalls



Wood wool cement



VL plate



BACK TO WOOD



Wood Roofing



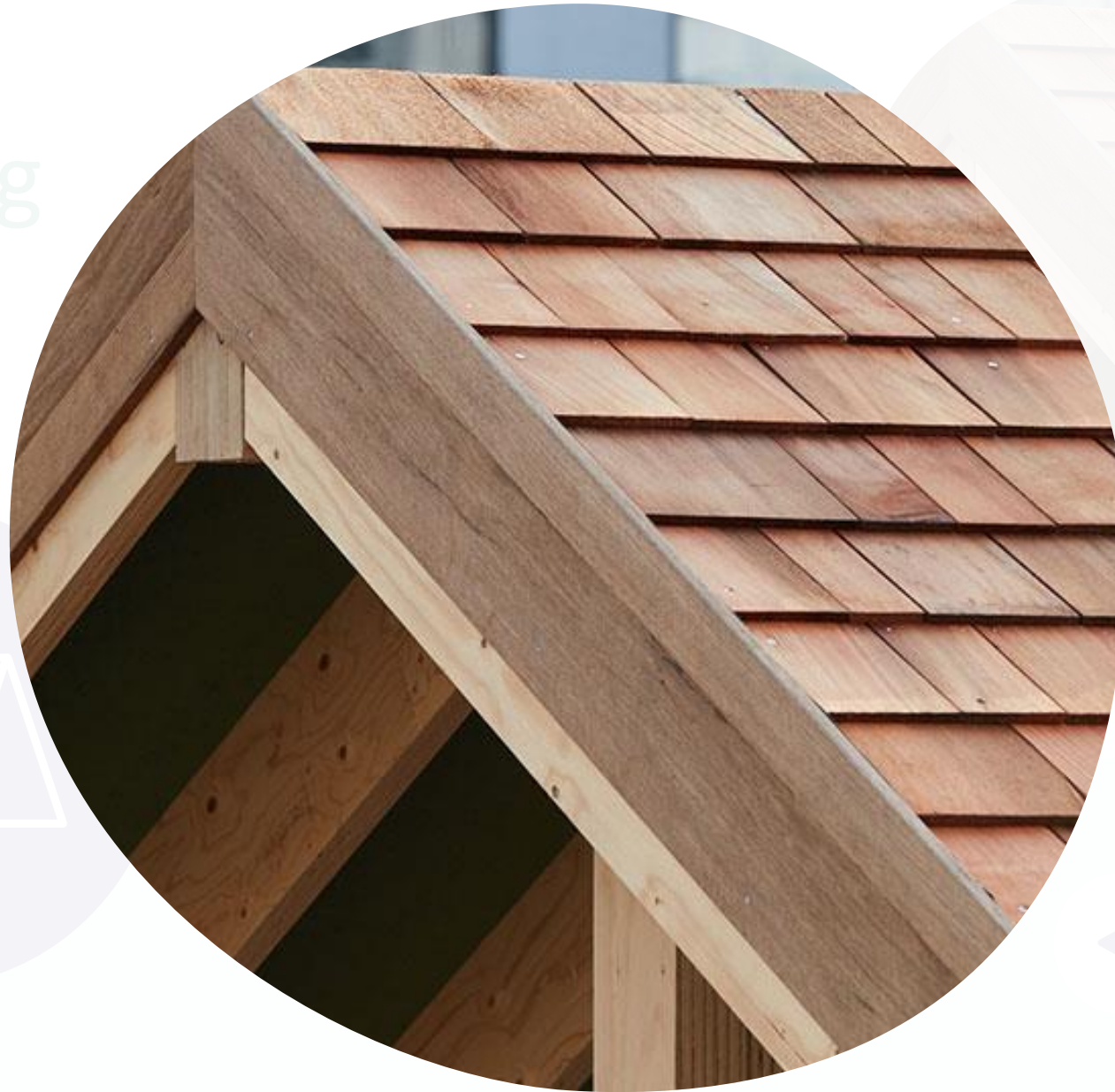
Treated wooden
shingles



BACK TO WOOD



Wood Roofing



Grass Wood Wide

ed wooden
hingles



BACK TO WOOD



Wood Structural



[← BACK TO WOOD](#)



DUO/TRIO laminated beams

SLS wood

Wood Structural



Wood logging

Eurabo

← BACK TO WOOD

Kvh timber





Wood Structural



DUO/TRIO laminated beams

SLS wood

Eurabo



Wood logs



Eurabo

Kvh timber



BACK TO WOOD

beam



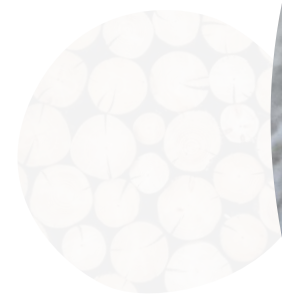
Wood Structural



DUO/TRIO laminated beams

SLS wood

Eurabo



Wood logging



Eurabo

Kvh timber

LVL beam

← BACK TO WOOD



Wood Structural



Laminated beams

SLS wood

Eurabo



Wood logs



← BACK TO WOOD



Eurabo

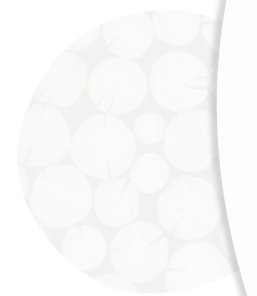
Kvh timber

LVL beam



Wood Structural

10 laminated beams



Wood loggia



SLS wood

Eurabo



Eurabo

Kvh timber

LVL beam



BACK TO WOOD



Wood Structural



CLT laminated beams

SLS wood

Eurabo



Wood logging



Eurabo

Kvh timber

LVL beam

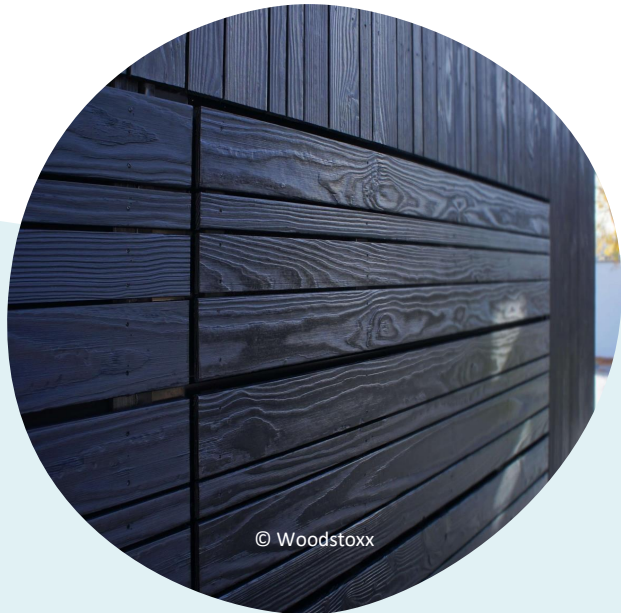


BACK TO WOOD



Wood Cladding

Burnt wood



© Woodstoxx



Treated wood

[← BACK TO WOOD](#)



Wood Cladding



Burnt wood



Treated wood

[← BACK TO WOOD](#)



Wood Cladding



Burnt wood



Treated wood



BACK TO WOOD



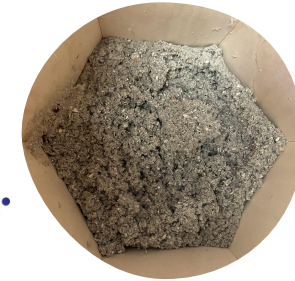
Wood Insulation



Wood fibre boards



Wood fibre



Wood shavings



Wood fibre blankets



Wood wool



BACK TO WOOD



Wood Insulation



Wood fibre

Wood shavings

Wood fi

© Marble
Natuurpunt Vlaam
Ardennen plus
Eurabo

Wood fibre blankets

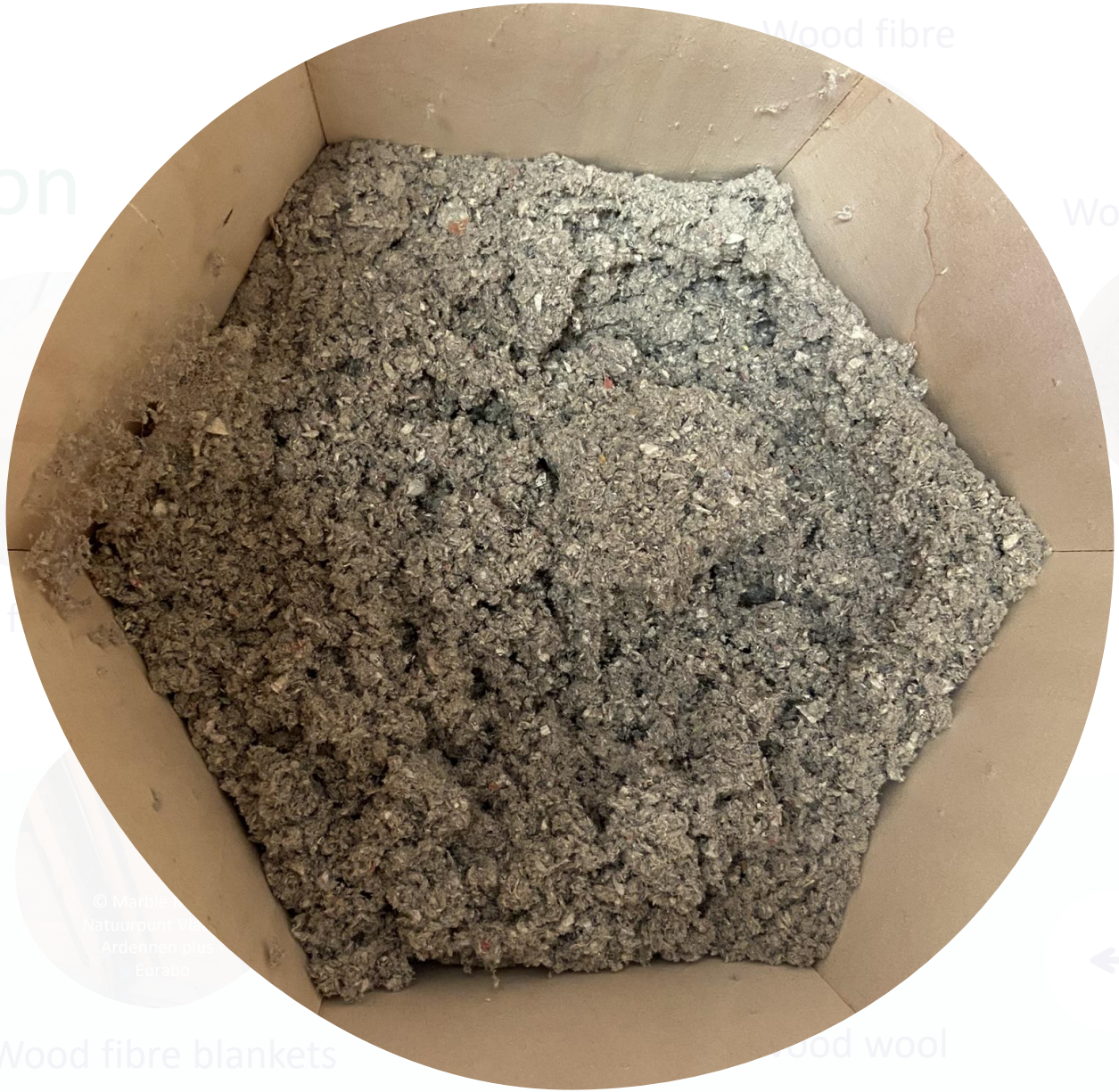
Wood wool



BACK TO WOOD



Wood Insulation



Wood fibre

Wood shavings

Wood f

© Marble
Natuurpunt V.
Ardennen plus
Eurabo

← BACK TO WOOD

Wood fibre blankets

Wood wool



Wood Insulation



Wood fibre

Wood shavings

Wood fibre

© Marble Media
Natuurpunt Vlaanderen
Ardennen plus
Eurabo

Wood fibre blankets

Wood wool



BACK TO WOOD



Wood Insulation



Wood fibre

Wood shavings

Wood fibre

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Natuurpunt Vlaanderen
Ardennen plus
Eurabo

Wood fibre blankets

Wood wool



BACK TO WOOD



Wood Insulation



Wood fibre

Wood shavings



Wood fibre

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Natuurpunt Vlaanderen
Ardennen plus
Eurabo

Wood fibre blankets

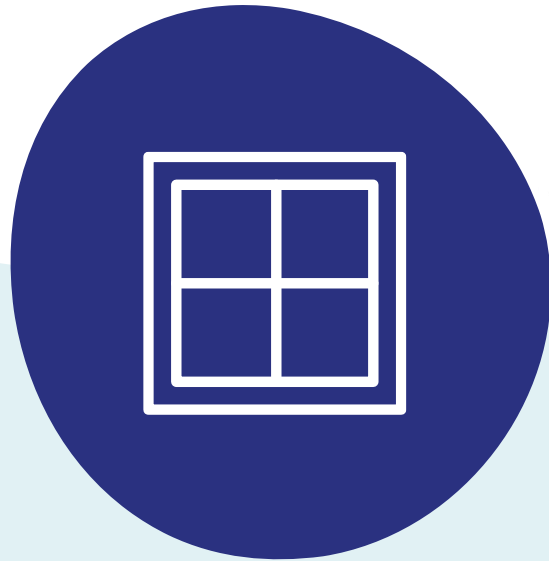
Wood wool



BACK TO WOOD



Wood Windows



Window frames



BACK TO WOOD



Wood Windows



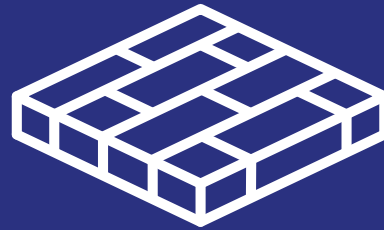
Window frames

← BACK TO WOOD



Wood Floors

Parquet



Laminate flooring



[← BACK TO WOOD](#)



Wood Floors



Parquet

Laminate flooring

[← BACK TO WOOD](#)



Wood Floors



Parquet

Laminate flooring

← BACK TO WOOD



Wood Wall finishing

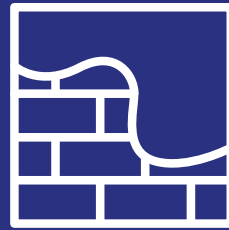
Wood fibre boards



Plywood



© Eurabo



MDF



Bioboard



Eco-Board



OSB



BACK TO WOOD



Wood Wall finishing

Wood fibre boards



MDF

Bioboard

Eco-Board



BACK TO WOOD

OSB

© Eurabo



Wood Wall finishing

Wood fibre boards



MDF



Bioboard



Eco-Board



BACK TO WOOD

© Eurabo

OSB



Wood Wall finishing

Wood fibre boards



MDF

Bioboard

Eco-Board



BACK TO WOOD

© Eurabo

OSB



MDF

Wood Wall finishing



Wood fibre boards



Bioboard

Eco-Board



BACK TO WOOD

© Eurabo

OSB



Wood Wall finishing

Wood fibre boards



MDF



Bioboard



Eco-Board

© Eurabo

OSB



BACK TO WOOD



Resource

Jute



Wall finishing



Jute Wall finishing



Jute cloths



BACK TO JUTE



Jute Wall finish



...e cloths



BACK TO JUTE



Resource Cotton



Insulation



Cotton Insulation

Recycled textile blankets



Metisse



Eurabo

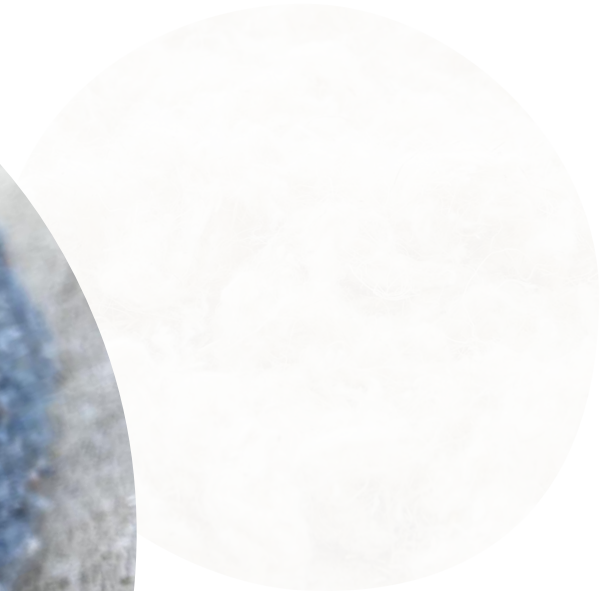
Loose flakes



BACK TO COTTON



Eurabo



Loose flakes



Recycled textile blanket



Metisse

Cotton Insulation



BACK TO COTTON



Eurabo



Loose flakes



Cotton Insulation

Recycled textile blank



Metisse



BACK TO COTTON





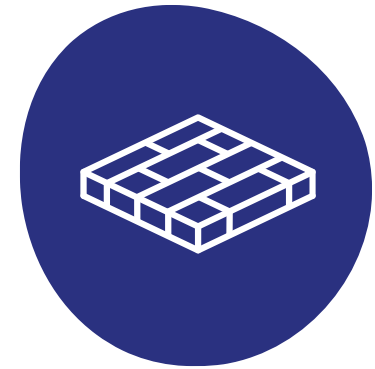
Resource Cork



Cladding



Wall finishing



Floors



Insulation



Cork Cladding



Cafe Walrus © Marble Moon

Cork board sheets



BACK TO
CORK



Cork Cladding



© Marble Mood

board sheets



BACK TO
CORK



Cork Insulation

Expanded cork boards



Cork granules



BACK TO
CORK



Cork Insulation



Expanded cork board



Cork granules



BACK TO
CORK



Cork Insulation



Expanded cork board



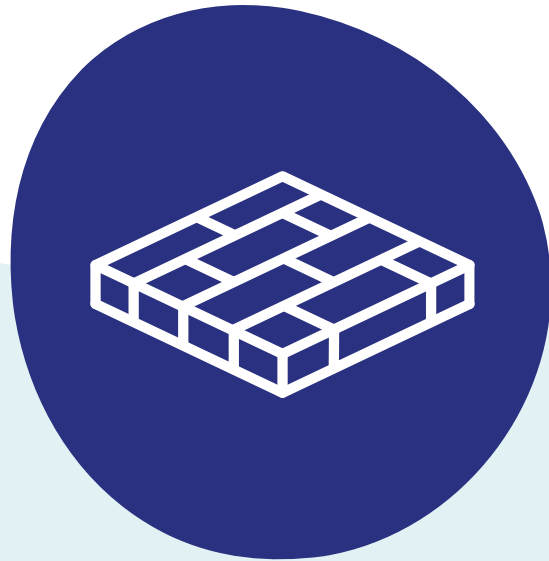
Cork granules



BACK TO
CORK



Cork Floors



Cork flooring



BACK TO
CORK



Cork Floors



flooring



BACK TO
CORK



Cork Wall finishing



Cork wallpaper



BACK TO
CORK



Cork Wall finish

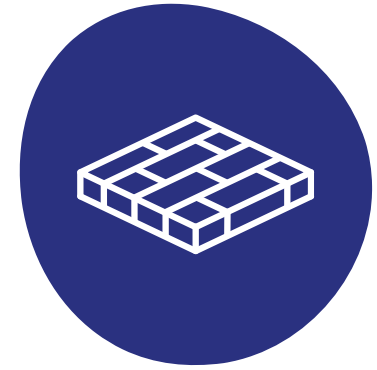


wallpaper

← BACK TO
CORK



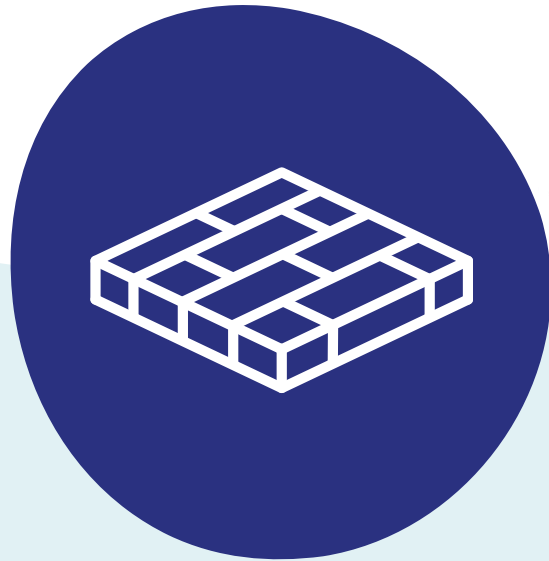
Resource Linseedoil



Floors



Linseedoil Floors



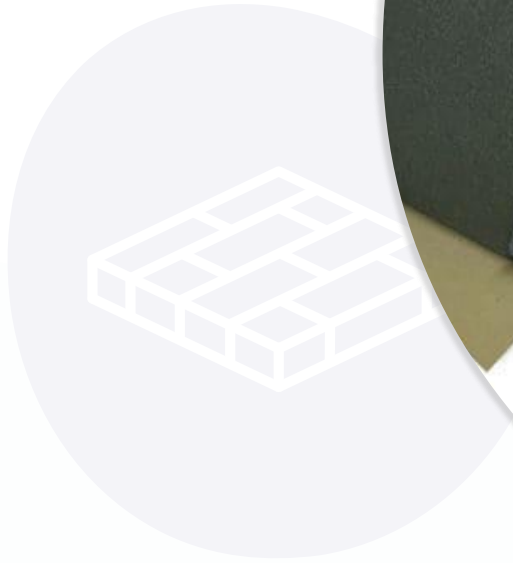
Linoleum



BACK TO
LINSEEDOIL



Linseedoil Floors



oleum



BACK TO
LINSEEDOIL



Resource Reed



Wall finishing



Roof



Reed Roof



Thatching



BACK TO
REED



Reed Roof



atching



BACK TO
REED



Reed Wall finishing



Decorative reed
fibre board



BACK TO
REED



Reed Wall finishing



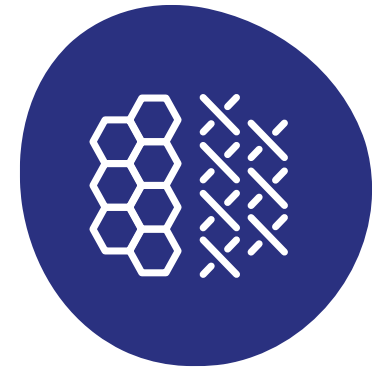
Decorative reed
core board



BACK TO
REED



Resource Shells



Structural



Insulation



Shells Insulation



Schells as dry screed
insulation



BACK TO
SHELLS



Shells Insulation



BACK TO
SHELLS



Shells

Structural



Shell lime based
masonry mortar



BACK TO
SHELLS



Shells Structural



lime based
only mortar



BACK TO
SHELLS



Resource Straw



Structural



Insulation



Straw Insulation



Straw blocks



BACK TO
STRAW



Straw Insulation



straw blocks



BACK TO
STRAW



Straw Structural



Straw panels



BACK TO
STRAW



Straw Structural



Straw panels



BACK TO
STRAW



Resource Flax



Insulation



Inner walls



Flax Inner walls



Flax shives
partition wall



BACK TO
FLAX



Flax Inner walls



Flax shives
partition wall

 [BACK TO
FLAX](#)



Flax Insulation

Flax blankets



isovlas



isovlas



Flax felt noise
insulation

Acoustix



Flax board



BACK TO
FLAX



Flax Insulation

Flax blankets



isovlas



Flax board

isovlas



flax felt noise
insulation



BACK TO
FLAX



Flax Insulation

Flax blankets



isovlas



Flax board



BACK TO
FLAX



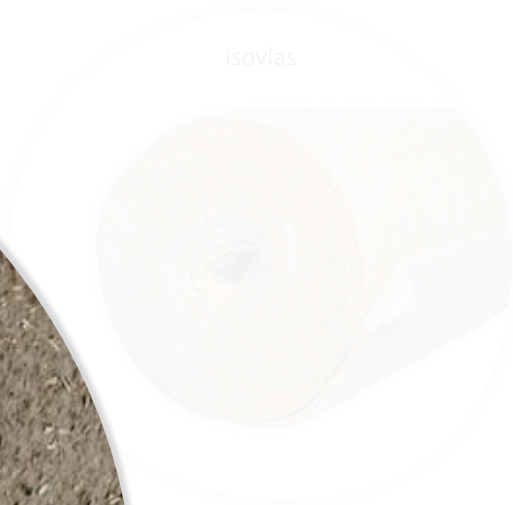
Flax Insulation

Flax blankets



Flax board

isovlas



Flax felt noise
insulation



BACK TO
FLAX



Resource Wool



Insulation



Wool Insulation

Insulation



Sheep wool blanket



BACK TO
WOOL



Wool Insulation



Insulation

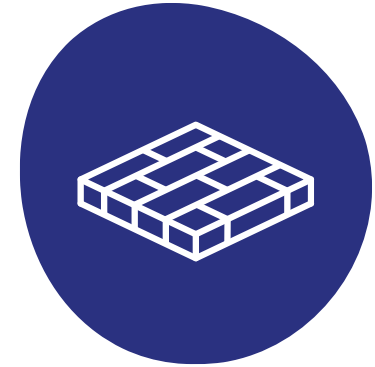


Wool blanket





Resource Funghi (with biomass)



Floors

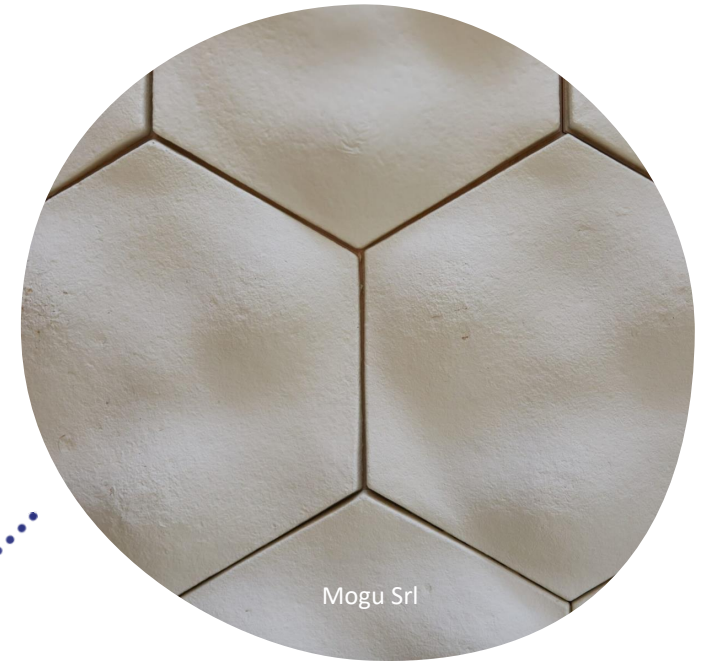


Wall finishing



Funghi

Wall finishing



Decorative Mycellium



BACK TO
FUNGHI



Funghi Wall finishing



Mogu Srl

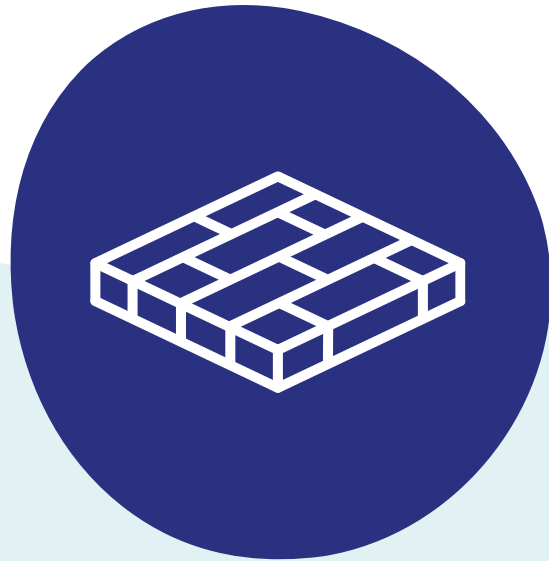
enerative Mycellium



BACK TO
FUNGHI



Funghi Floors



Mycellium composite
flooring



BACK TO
FUNGHI



Funghi Floors



Mogu Srl

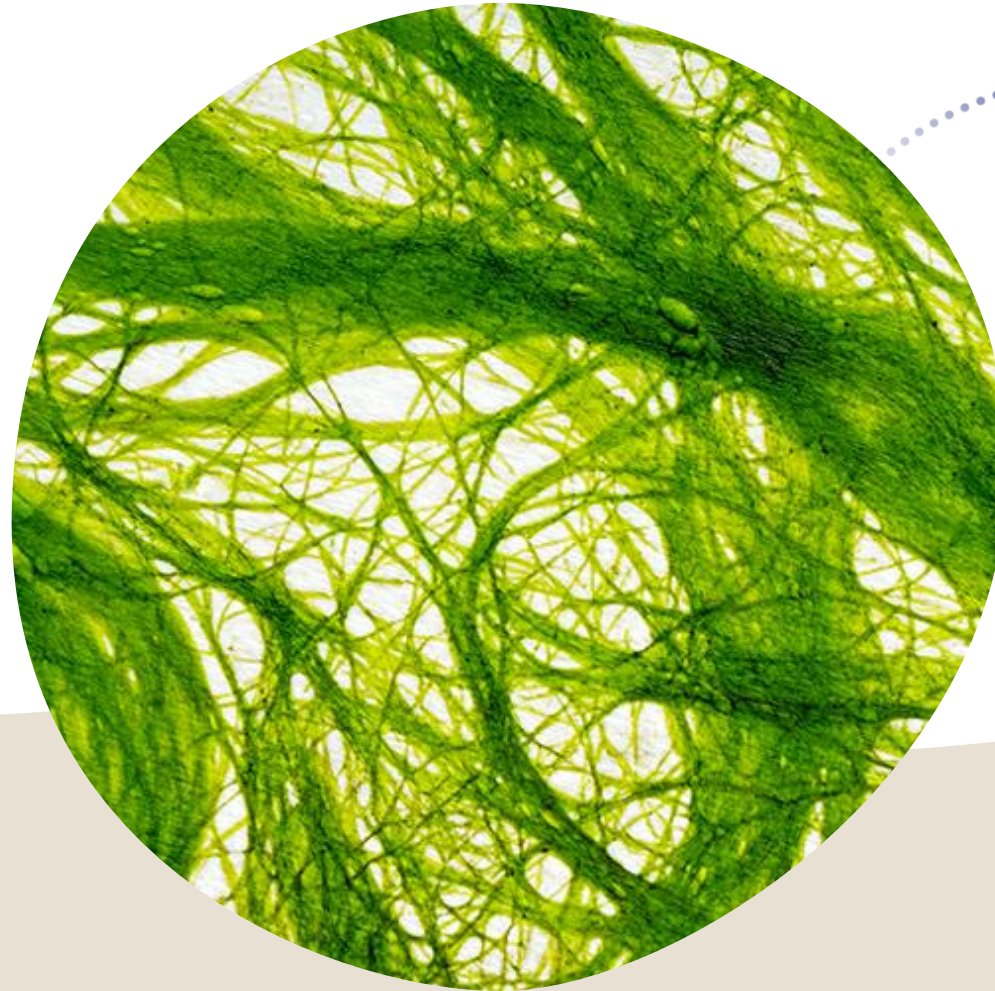
mushroom composite flooring



BACK TO FUNGHI



Resource Algae

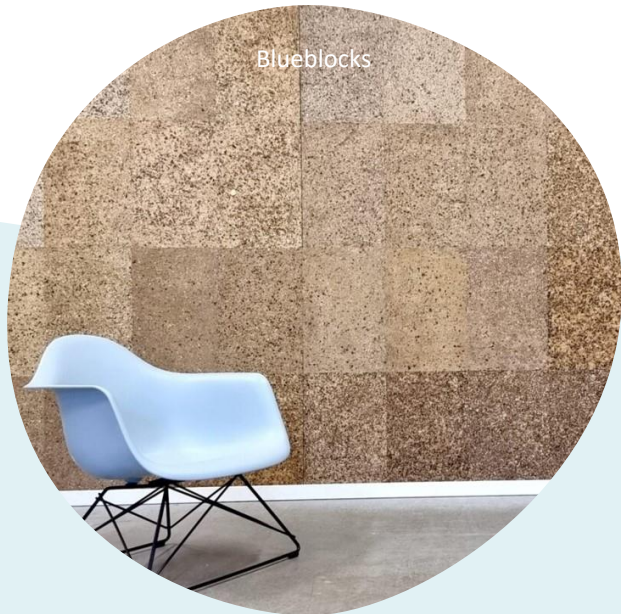


Wall finishing



Algae Wall finishing

Seaweed board



Biopolymer plastic



BACK TO
ALGAE



Algae Wall finishing



Seaweed board



Carolyn Raff

Biopolymer plastic



Blueblocks

← BACK TO ALGAE



Algae Wall finishing



Seaweed board

Blueblocks

Carolyn Raff

Biopolymer plastic



BACK TO
ALGAE



Example *Pitched Roof*

Legend

- Classic construction
- Alternative construction with biobased materials

1. Roofing (tiles)

Ceramic tiles
Treated wooden shingles

2. Insulation

Mineral wool
Recycled cotton blankets

3. Interior finish

Gypsum fibre board
Wood fibre panel

4. Cladding

Bricks
Burnt wood

5. Stiff insulation plate

PIR
Cork

6. Structural plating

OSB
Bio-board

7. Insulation

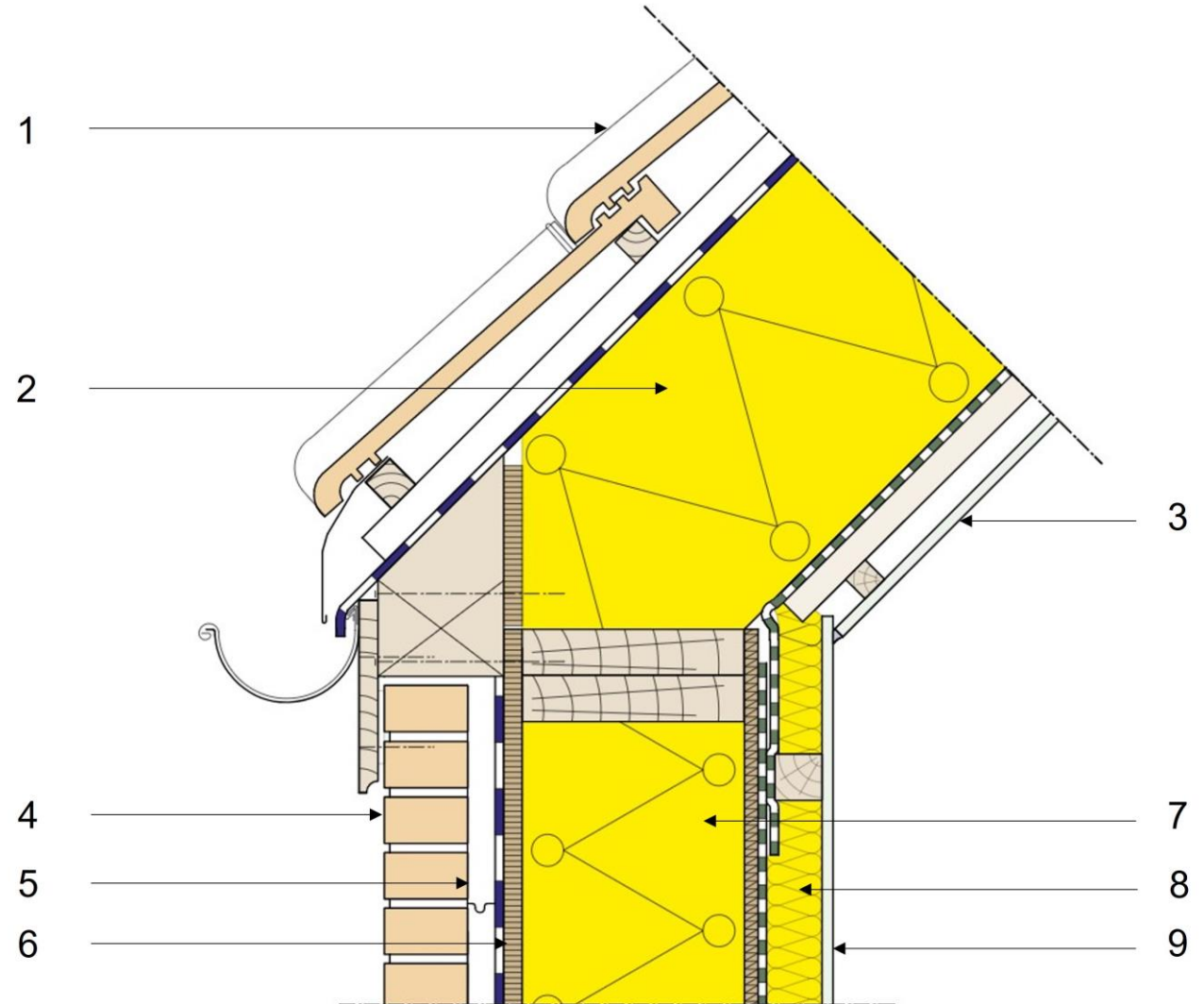
Mineral wool
Recycled cotton blankets

8. Pipe cavity framing

Mineral wool
Wood wool

9. Interior finish

Gypsum fibre board
Wood fibre panel





Example Plastered ETICS

Legend

- Classic construction
- Alternative construction with biobased materials

1. Waterproofing

2. Drainage board

3. Moisture resistant plinth insulation

XPS
Expanded cork

4. Drainage

Gravel
Shells

5. Cladding

Brick slips
Treated wood

6. Insulating building block

Cellular glass
?

7. Mechanical fasteners (anchorage)

8. Profile

9. Leveler

10. Plastering (ETICS)

Lime plaster
Clay plaster (coated)

11. Insulation board (ETICS)

PIR
Wood fibre board

12. Carrier plate ETICS

OSB
Bioboard

13. Insulation of timber frame

Mineral wool
Flax blankets

14. Wind brace

15. Vapour barrier

16. Trellis (pipe cavity)

17. Finishing board

Gypsum fibre board
Hemp board

18. Flooring

Ceramic tile
Click parquet

19. Screed

Sand cement
Frame filled with cork granulate,
covered with wood fibre board

20. Potential membrane

21. Potential acoustic insulation

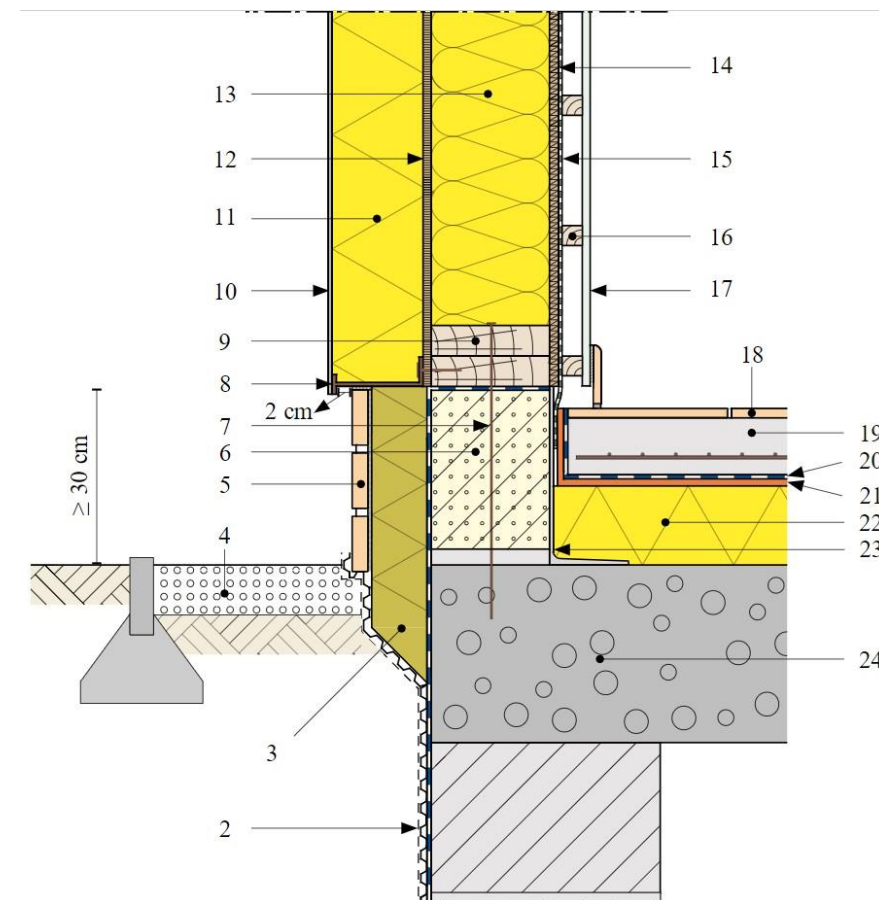
22. Thermal screed insulation

PIR
Cork

23. Air barrier

24. Supporting floor

Concrete
Concrete



Contact



WTCB - Laetitia Delem
KU Leuven - Lode Lefevre
VCB - Wim Garmyn

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www.interreg2seas.eu/nl/CBCi

