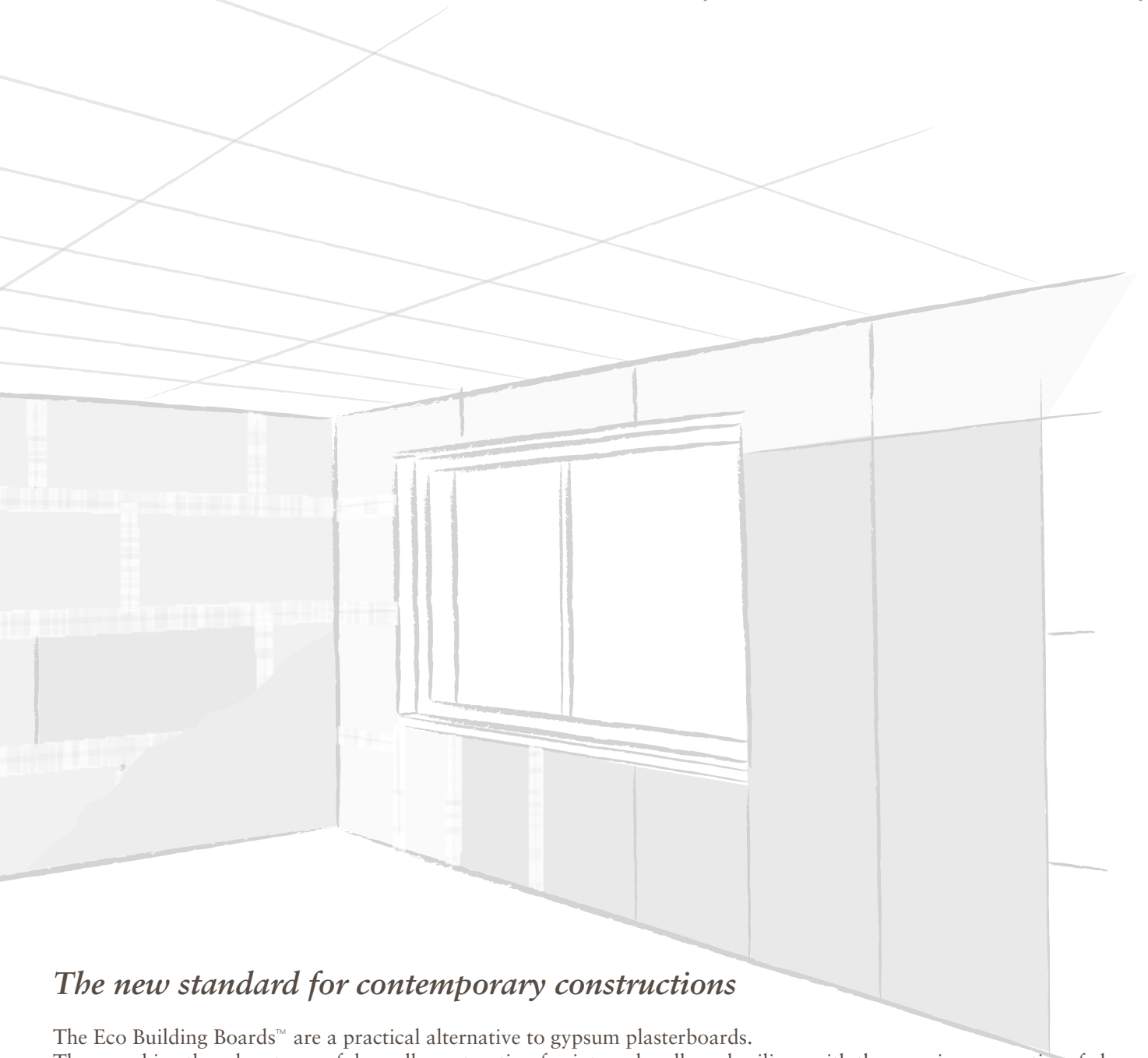




Eco Building Boards™

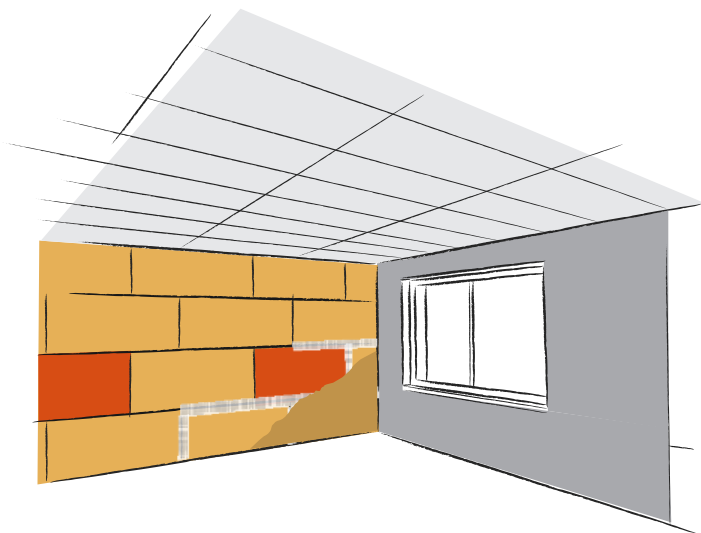
Sustainable Drywall Solutions for Today



The new standard for contemporary constructions

The Eco Building Boards™ are a practical alternative to gypsum plasterboards. They combine the advantages of drywall construction for internal walls and ceilings with the amazing properties of clay as a „green“, healthy and versatile material. The Eco Building Boards™ add significantly to the thermal mass of a structure and passively optimize the relative humidity of the internal climate to around 50% rh, by acting as a moisture buffer.



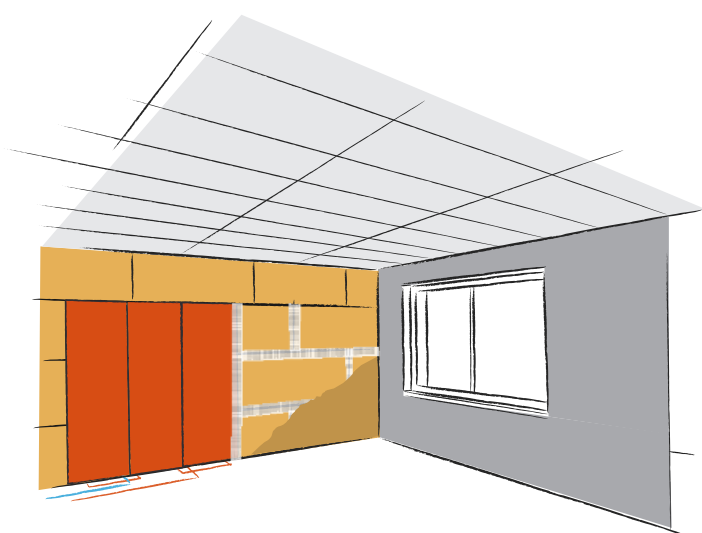


Eco Building Boards™ LOW-VOLTAGE ELECTRIC HEATING ELEMENT

Dimension: 22 mm; 125,0 x 62,5 cm

The ideal solution for 'passive houses' or as a supplementary heating source in any house.

The combination of loam/clay and carbon technologies has enabled the development of a high-tech heating element which fulfils all the demands of modern temperature management.



Eco Building Boards™ CLAY CLIMATE ELEMENT

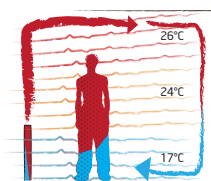
Dimension: 22 mm; 62,5 x 187,5 cm | 22 mm; 62,5 x 100,0 cm

A water-circulating, wall heating element.

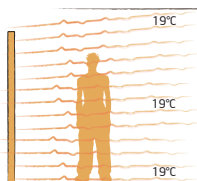
A ready-to-connect drywall function board for use in new constructions and modernisations.

Connection to the existing heating system is also possible. Due to the low flow temperature, it is ideal for use with heat pumps and solar panels.

It can naturally also be used for cooling.



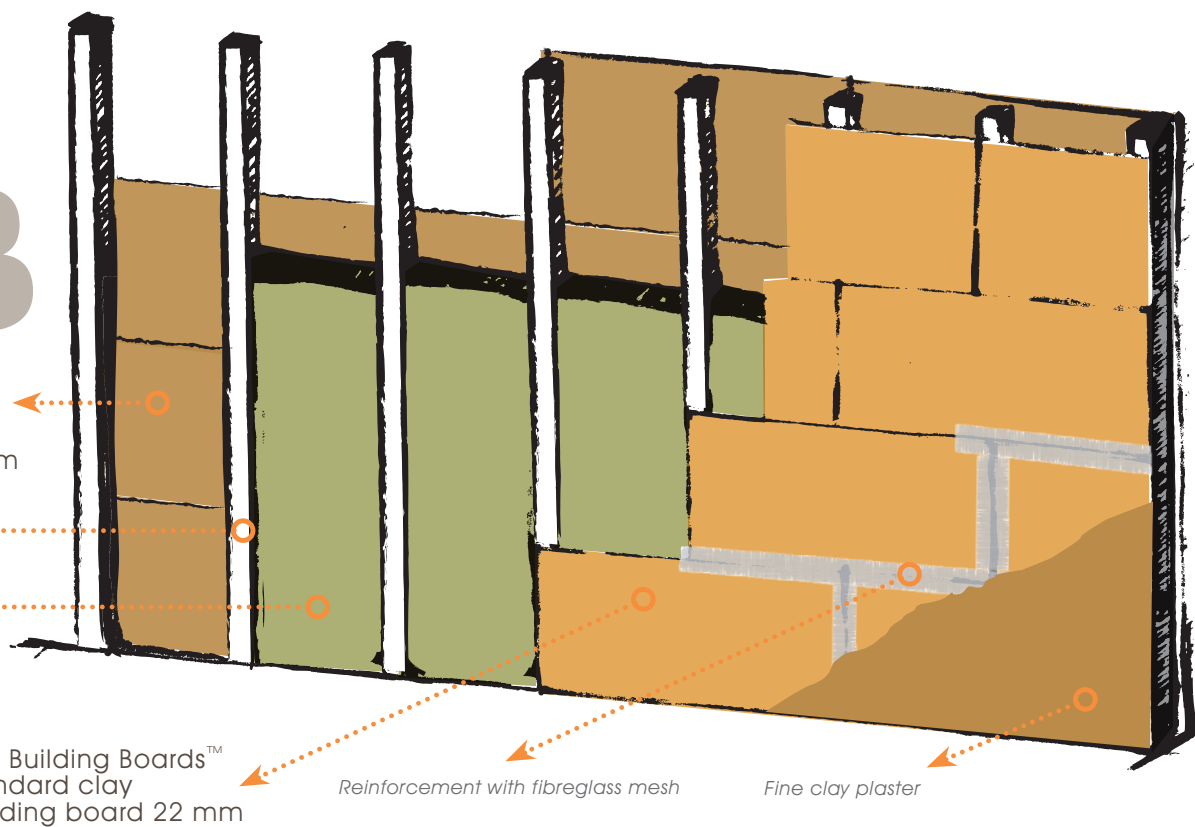
Heating with traditional radiators



Natural, uniform radiation by the clay heating element/Climate clay building board

Acoustic insulation value

61 dB



Eco Building Boards™
Standard clay
building board 22 mm

Finnwall 50 mm

Insulation material
e.g. hemp, wood-fibres,
cellulose etc

Eco Building Boards™
Standard clay
building board 22 mm

Reinforcement with fibreglass mesh

Fine clay plaster

Example

clay partition wall

Eco Building BoardsTM

CLAY BUILDING BOARD WITH LATENT HEAT STORAGE MATERIAL

Application:

Suitable for all interior areas.

The Eco Building BoardsTM clay building boards may be used for the cladding of interior walls, timber stud frameworks, batten- and dry wall constructions, facing formworks, suspended ceilings and loft extensions. The 14mm boards may be affixed to solid substrates such as concrete, lime sand bricks and clay bricks, as well as timber-based/particle boards by means of staples, screws or adhesive applied across the whole surface. The 22mm boards are affixed to standard dry wall constructions by means of staples or screws. The joints are reinforced with glass fibre mesh and then flush-coated with a thin layer of clay plaster.

Advantages:

- Regulates the air moisture level naturally
- No mould growth
- A low primary energy requirement in their manufacture
- Clay is recyclable. It can be re-used continually without loss of its original properties
- Good acoustic insulation characteristics
- Good thermal storage capacity
- Vapour permeable
- Neutralises harmful substances in the air
- Effectively shields against high frequency electromagnetic radiation
- Electro-statically neutral
- Absorbs odours

Board Properties:

Thickness x length x width - 22mm x 125cm x 62.5cm

Single board - 0.781 m² / board

Weight per m² - 27 kg / m²

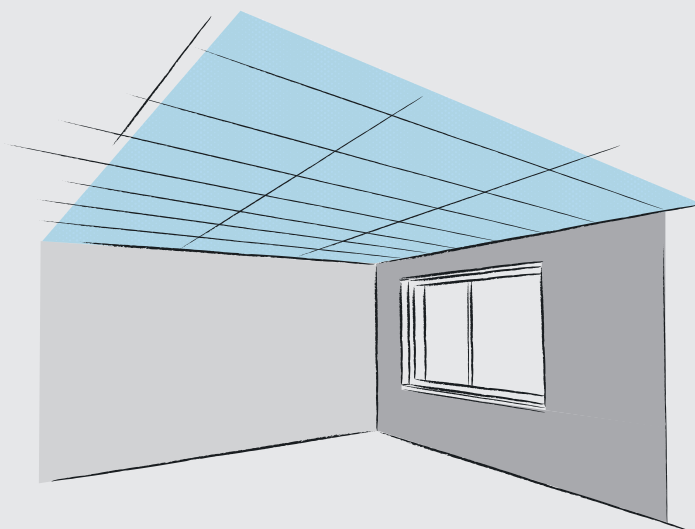
Fire behavior - Non-combustible according to DIN 4102 T1-3

Sound insulation - 51db clay partition wall 10 cm wall

Specific heat capacity - Cp approx. 1.0 kJ / kgK

Thermal conductivity λ - about 0.47 W / mK

Bulk density ρ - 1300 kg / m³



Eco Building BoardsTM CLAY BUILDING BOARD WITH LATENT HEAT STORAGE MATERIAL

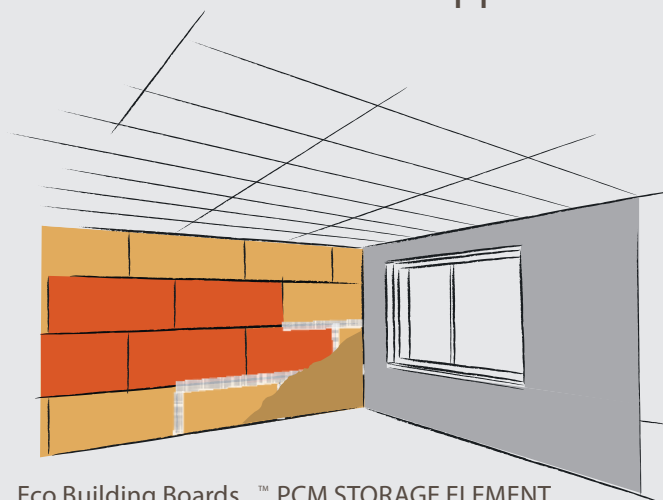
Dimension: 14 mm; 125,0 x 62,5 cm

Cooling in the summer

The latent heat storage material (PCM) has a switch point at 26°C and begins to melt at exactly this temperature in order to extract heat from within the room at the point when it is in danger of becoming too warm.

By simply ventilating the room during the night, the stored thermal energy can be dissipated to the exterior of the building.

A world first! – Patent applied for.



Eco Building BoardsTM PCM STORAGE ELEMENT

Dimension: 22 mm; 125,0 x 62,5 cm

Temperature control in the winter

The combination of clay and carbon technologies has revolutionised heating technology. The Eco Building BoardsTM PCM Storage Element can be directly supplied with energy exactly at the time it is available by the use of photo-voltaic units or micro-turbines (solar, wind). The PCM Storage Element is self-regulating and reacts to a dropping room temperature by slowly releasing the stored thermal energy.

NEWLY CONSTRUCTED BUILDINGS

For use as an interior building board for wall and ceiling cladding. An especially interesting alternative for timber constructions.



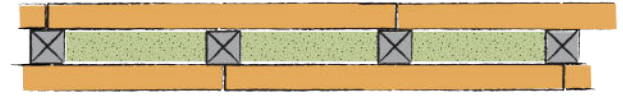
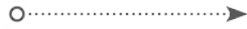
EXISTING BUILDINGS/RENOVATIONS

The existing masonry walls are modernised by affixing the clay boards using screws or adhesive.



PARTITION WALLS

The clay building boards are affixed on both sides of the standard dry-wall sub-construction (studs).



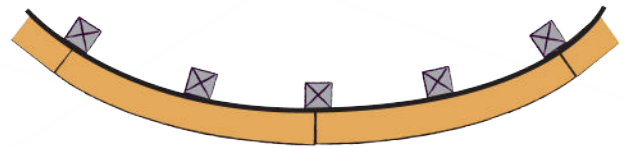
CEILING/ROOF SLOPES

To increase the thermal mass in loft extensions ensuring an improved room climate.



CURVES

Radius > 1.5m, 14 mm clay building board on a solid-surface substrate



Building Boards™ Clay plasters and accessories

We provide: Clay base coat | Clay plaster | Clay fine plaster | Clay fine finishing plaster | Clay paint | Installation accessories | Fittings and pipes for Clay Climate Elements



Eco Building Boards™

Sustainable Drywall Solutions for Today

Supplied by:-

BACKTOEARTH

Building Performance Specialists

www.backtoearth.co.uk 01392 861763

