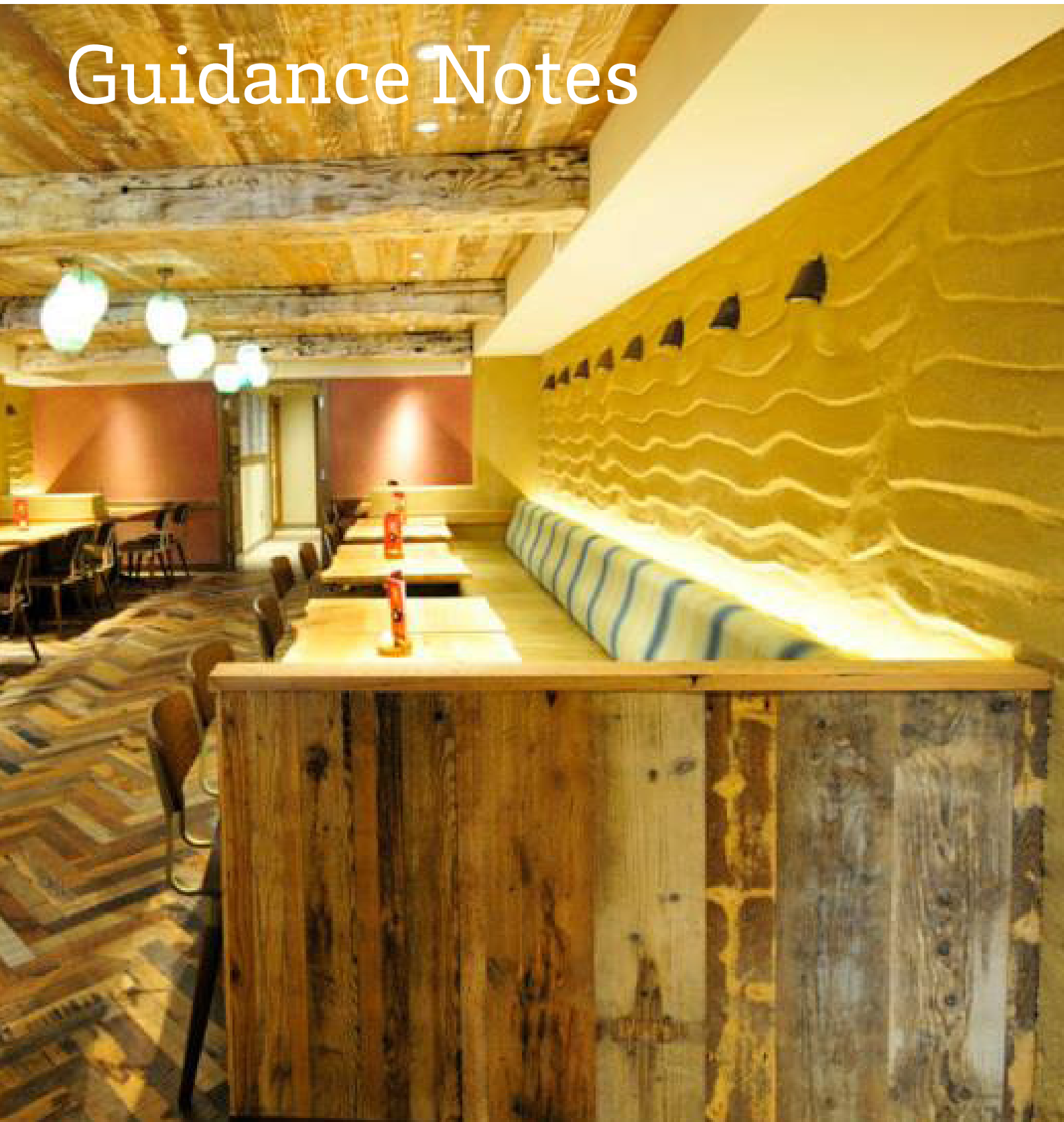




Clayworks

Natural, high-performance, low impact wall finishes.

Guidance Notes



Welcome to **Clayworks**

Natural, high-performance, low impact wall finishes.

Clayworks pigmented clay plasters are suitable for interior walls and ceilings. They can be applied directly onto most conventional building substrates with the use of a suitable primer. They are also suited to historic and eco-walling substrates such as cob, lime, hemp and strawbale.

Our clay plasters do not require painting, as the colour is inherent within the plaster. However, they can be painted with a suitable, micro-porous paint, such as clay paint or limewash if desired.

The carefully blended ingredients give our plasters a unique fleck and subtle radiance, which is difficult to achieve with other plasters and paints.

We manufacture and sell ready-to-use, pigmented top coat clay plaster in 25kg or 1 tonne bags. They come in a range of 27 earth-based colours, and can be applied by trowel or spray.

To place an order, or to talk to us about our clay plaster, please call us on either 01326 341339 or email us at info@clay-works.com

Benefits



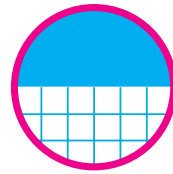
Passive (no energy required) regulation of internal humidity levels due to hygroscopic and vapour permeable nature



Improves indoor air quality (IAQ) through the absorption of toxins and odours



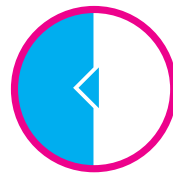
High thermal mass systems passively regulate internal temperature fluctuations.



Seamless surfaces and flexibility accommodates movement of building elements



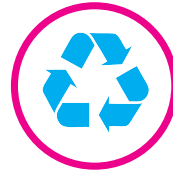
Resistant to mould and fungal growth



Durable, easy to maintain, repairable surfaces



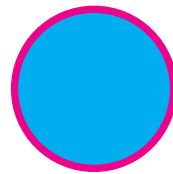
Nontoxic



Recyclable, reusable or 100% compostable



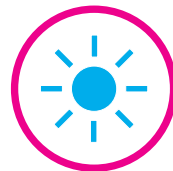
Very low embodied carbon and embodied energy



Through body coloured



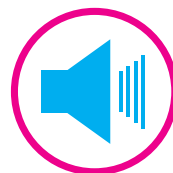
100% natural, no synthetic additives



UV resistant, meaning no painting, repainting or fading



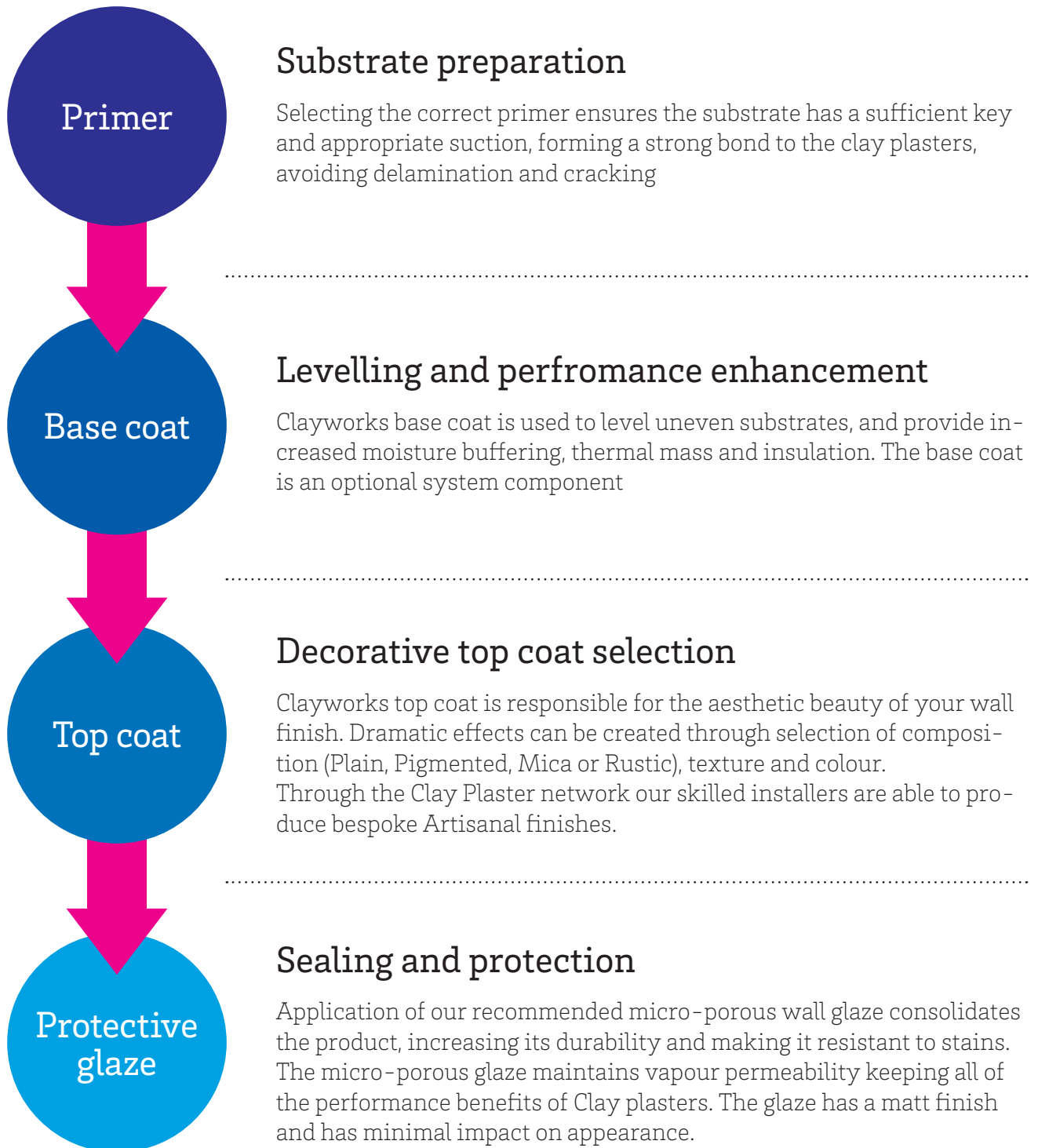
Zero VOC emissions



Effective acoustic absorber

The Clayworks system

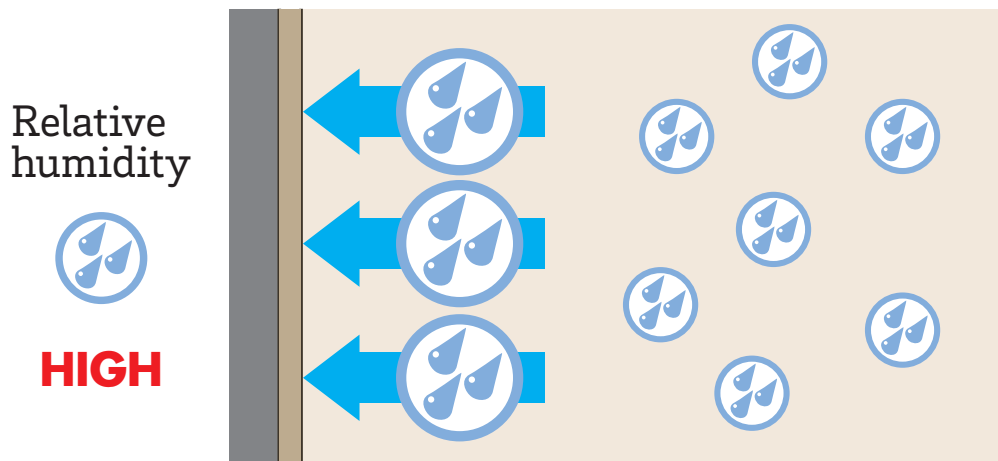
Selecting and specifying Clayworks wall finishes is easy, we provide a complete system from substrate preparation to surface sealing. The Clayworks system is demonstrated below, and we will work with you to select the correct components.



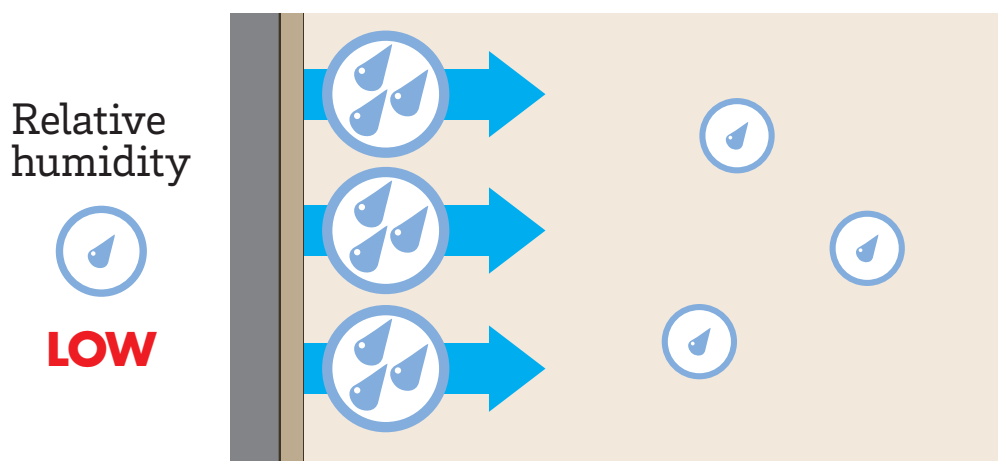
Moisture buffering behaviour

Clay plasters are hygroscopic, absorbing excess moisture when humidity is high and releasing it when relative humidity is low.

This behavior is perfect for maintaining a comfortable and hygienic relative humidity level in spaces prone to excess moisture, for example kitchens or bathrooms. The daily cycle of water vapor flux is best moderated by clay plaster applied at a depth of 20 mm.



Moisture absorbed and stored by clay surface when relative humidity is high



Moisture released by clay surface when relative humidity of a space is low

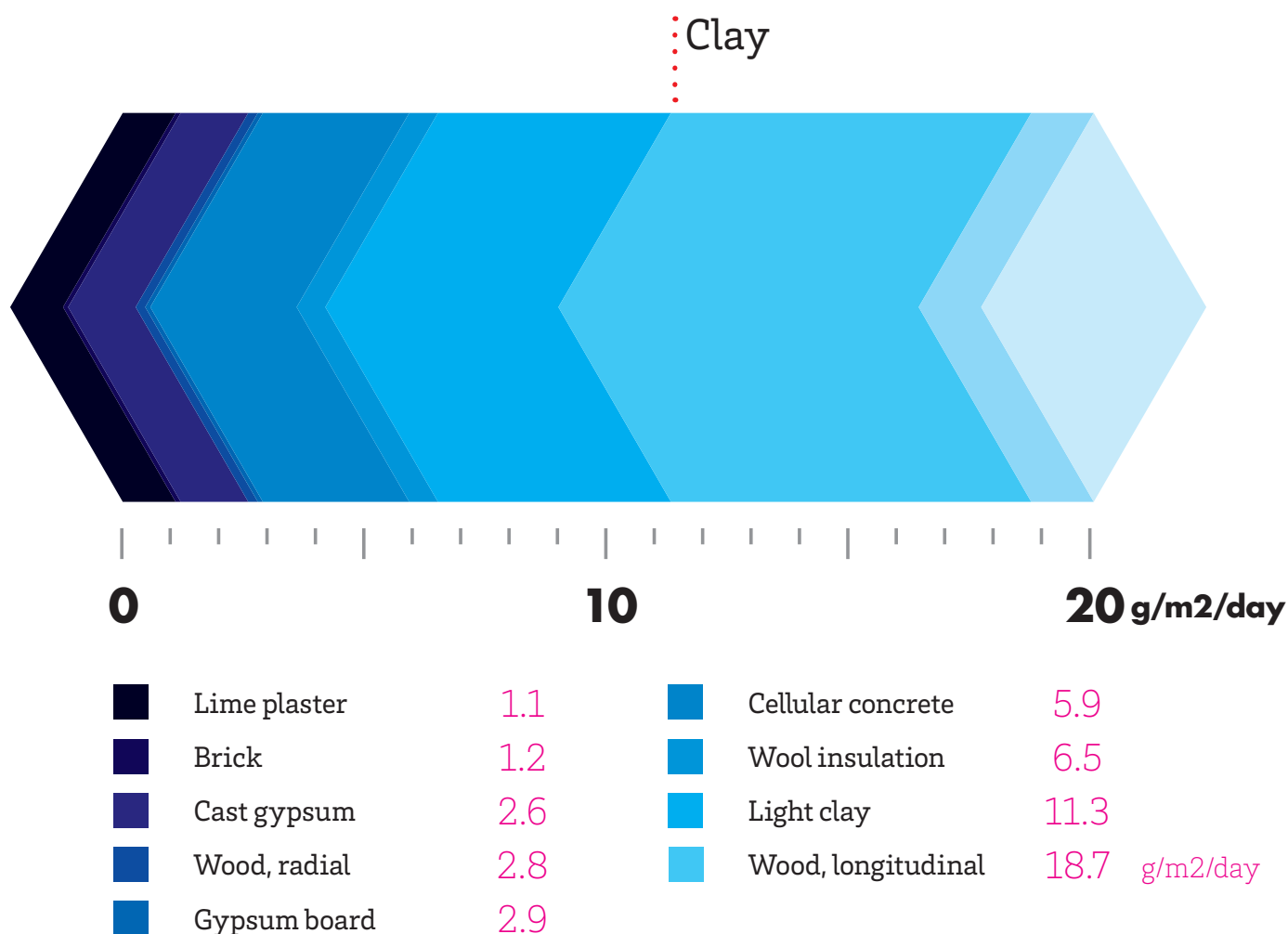
Relative humidity



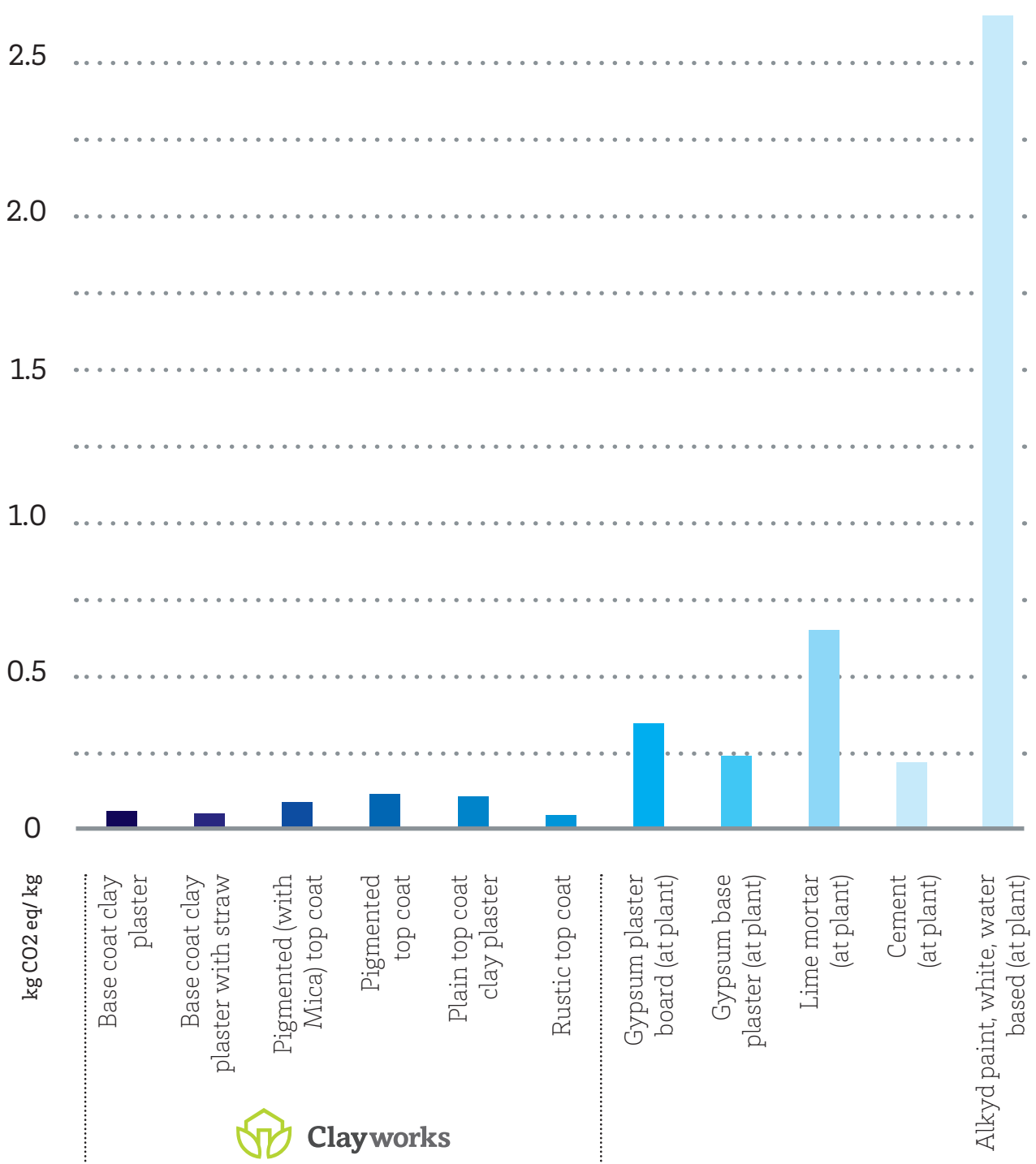
For optimum comfort and a healthy indoor environment humidity levels should be maintained between 30% - 70%. Clay plasters naturally help maintain these levels minimising mold and fungal growth within buildings.

Available daily water absorption

Clay is one of the best materials suitable for wall finishes with regards to hygroscopic behaviour



Embodied CO2 comparisons



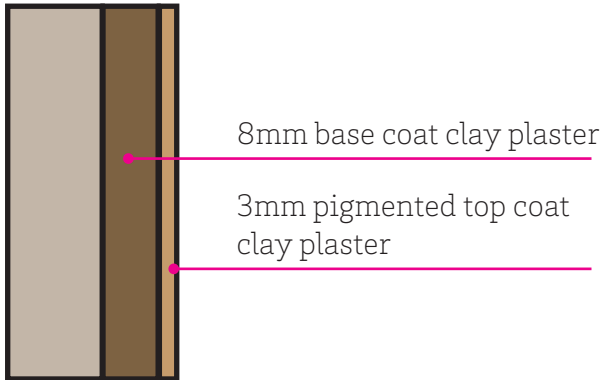
Embodied CO2 is a measure of the CO2 and other greenhouse gasses released in the extraction, transportation and production of a product or material.

Clay plasters are very low carbon materials, due to the local extraction of materials and low energy processing required to produce the products. Clay plasters have one of the lowest embodied CO2 out of any interior finishes. And with clay's UV stability and repairability the recurring embodied CO2 associated with refurbishment is also kept to a minimum.

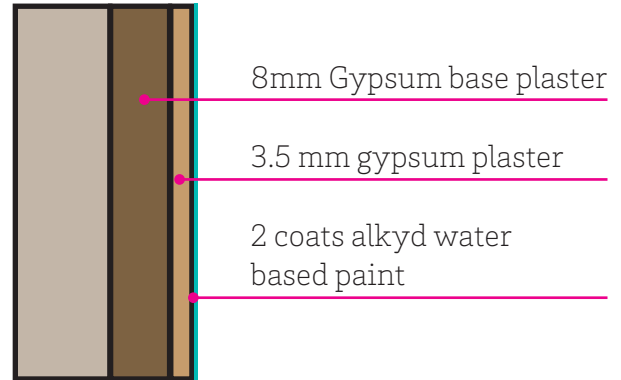
Embodied energy comparison of typical build ups for clay plasters and standard gypsum equivalent.



Clayworks build up



Conventional build up



Embodied energy per m²



2.4 kg CO² saved

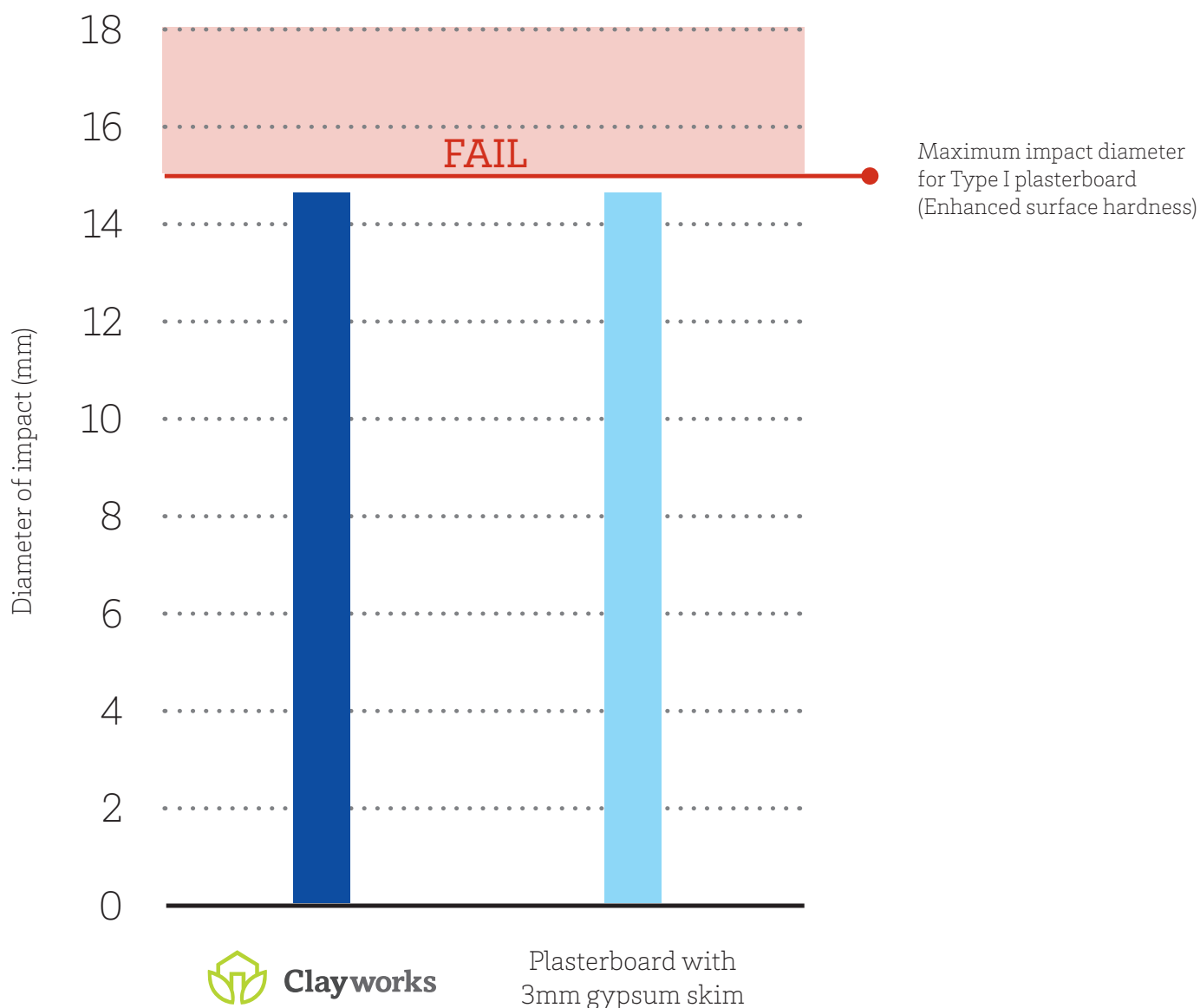
for every m² of wall surface by using Clayworks products

Impact resistance

As there is currently no standard for testing the performance of clay plasters the impact resistance of Clayworks products was tested to BS EN 520, the standard for gypsum plasterboards. The impact resistance test drops a standard weight and measures the diameter of impact.

Clayworks clay plasters achieved a surface hardness equivalent to Type I (enhanced surface hardness) plasterboard, with an average impact diameter less than 15mm. The performance was identical to the gypsum rendered plasterboard tested in parallel.

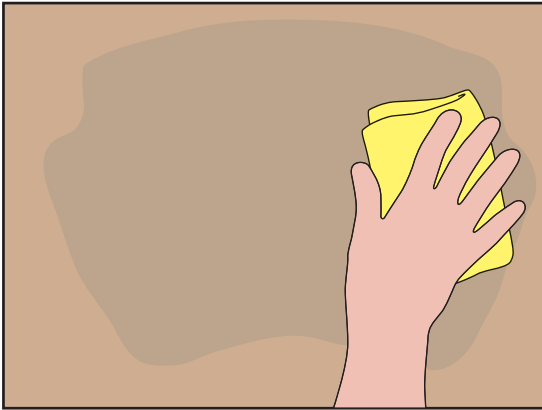
Impact test: BS EN 520



*Average values over ten repetitions

Maintenance

Regular maintenance

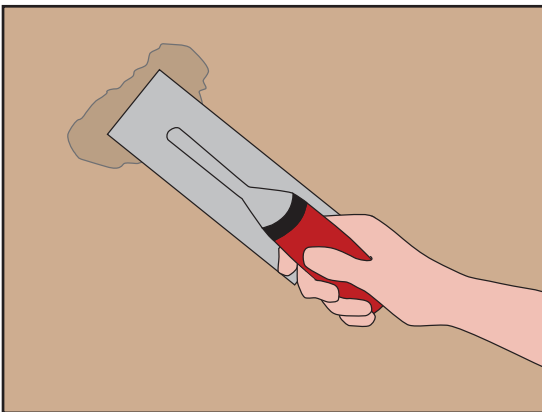


Clayworks Top coats when sealed with a protective glaze are easily cleaned by wiping with a soft damp cloth or sponge. On textured surfaces, such as the Rustic top coat with straw, cleaning should be carried out with due care and attention avoiding rough treatment of the surface.

Periodic maintenance

With proper care of a Clayworks surface major maintenance will not be necessary. Clayworks pigmented plasters, due to their mineral pigments are UV stable, therefore will not fade in sunlight and will not need repainting.

Repairs



Any damage caused to a Clayworks surface will be inconspicuous due to their through bodied colouring. Chips, divots and scratches can be simply repaired through the addition of a small quantity of colour matched clay plaster, trowelling and reapplication of the protective glaze.

Thickness & coverage

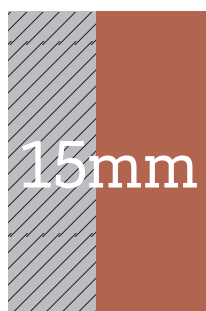
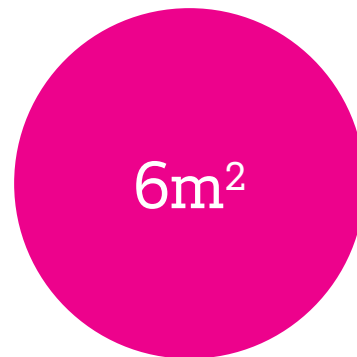
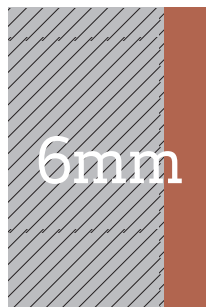
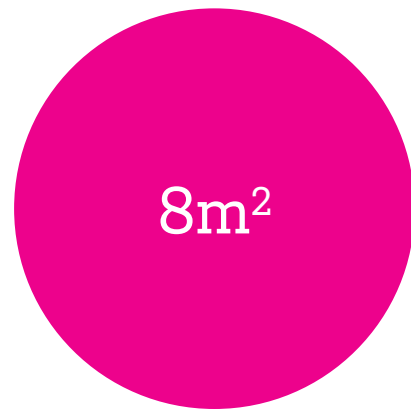
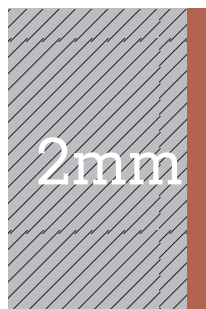
Indicative for a Clayworks 25kg pack



Thickness (mm)



Coverage (m²)



Applicable credits to Clayworks in environmental rating systems

As a high performance, low impact interior finish Clayworks clay plasters can contribute towards a number of credits in environmental rating systems for buildings. Listed below are applicable credits for LEED and SKA.

LEED



MR Credit 3: Materials reuse	1-2 points
MR Credit 4: Total recycled content	1-2 points
MR Credit 5: Regional materials	1-2 points
IEQ Credit 4.1: Low emitting materials - Adhesives & sealants	1 point
IEQ Credit 4.2: Low emitting materials - Paints & coatings	1 point

SKA



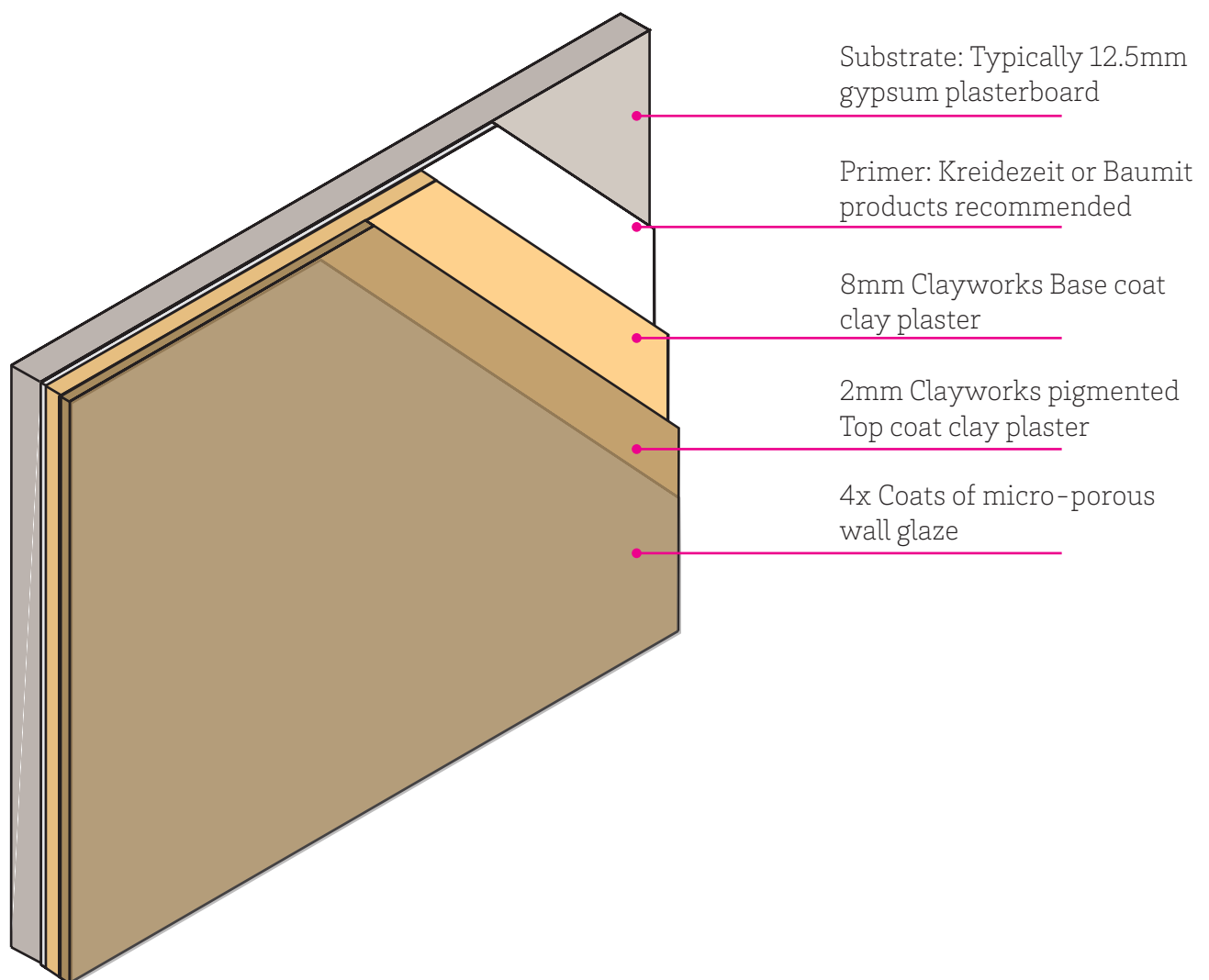
D19 - Materials Specification
M13 - Hard Wall Covering
D21 - Total recycled materials

Design guidance: Typical build ups

Clayworks performance build up

A build up using a base layer of Clayworks Base Coat, covered by a decorative skim provides a wall surface that promotes a healthy indoor environment through moisture regulation, thermal mass and odour absorption.

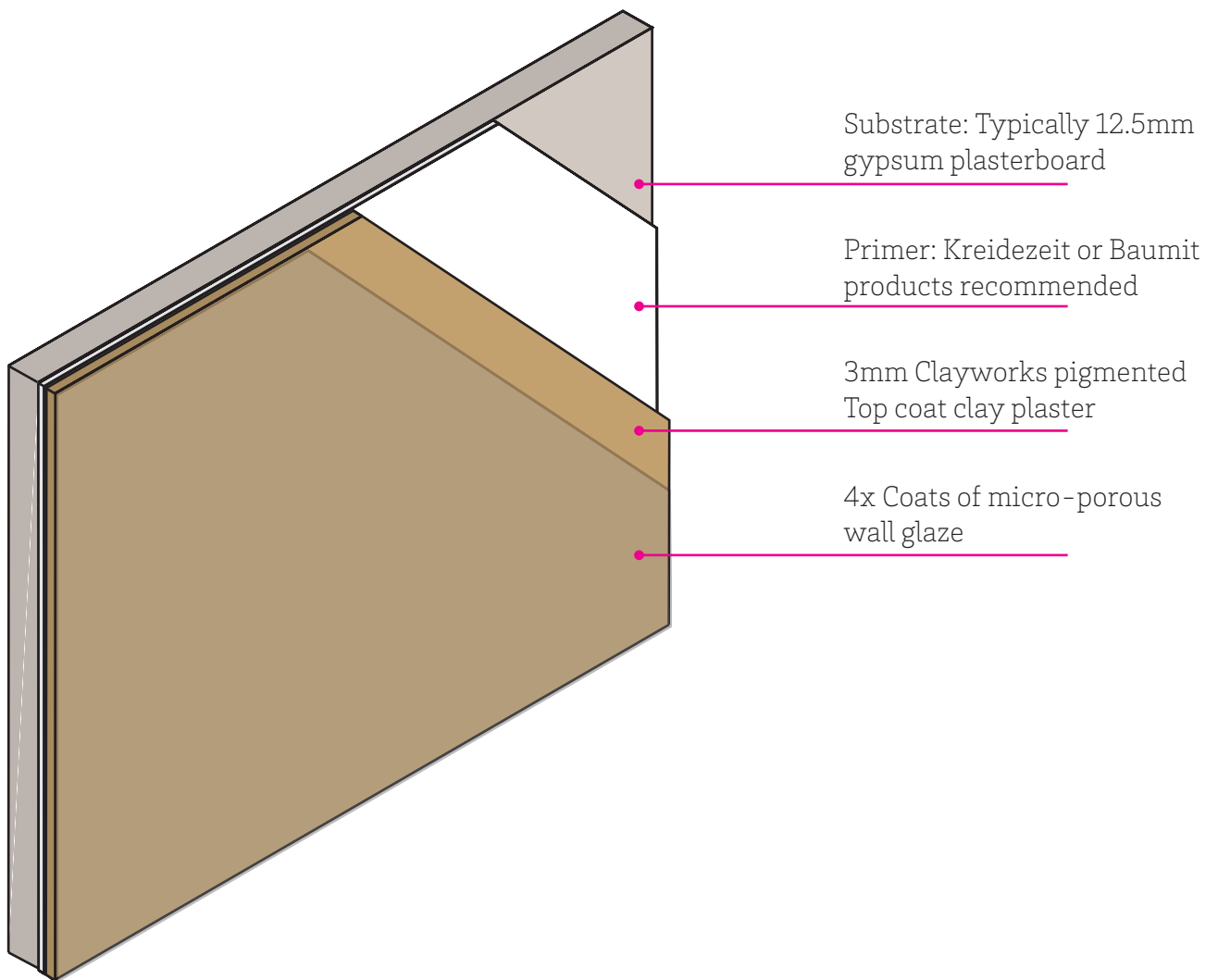
Do not exceed final thickness of 10mm when applying onto plasterboard.





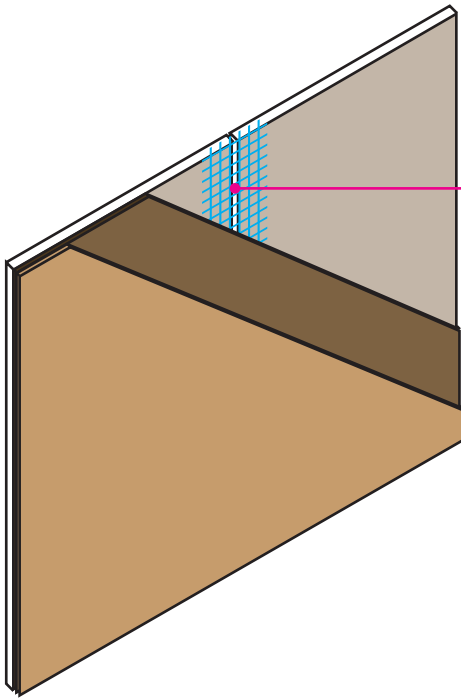
Clayworks decorative build up

A build up which is lightweight and showcases all of the natural beauty of clay plasters. A thin top coat still promotes hygroscopic behaviour, however has a lower capacity when not applied in tandem with a Base Coat.



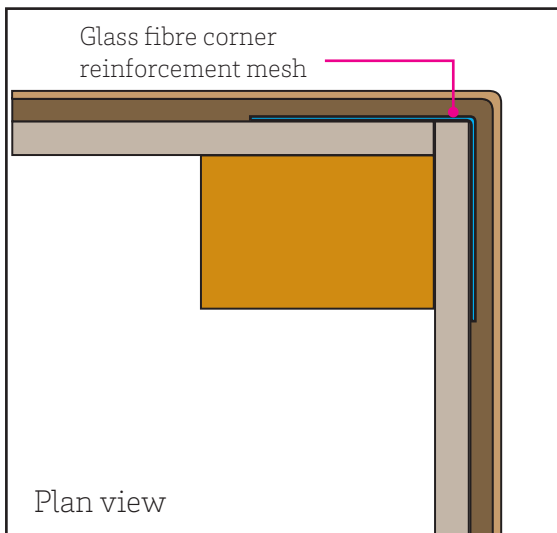
Design guidance:

Joint in substrate detail

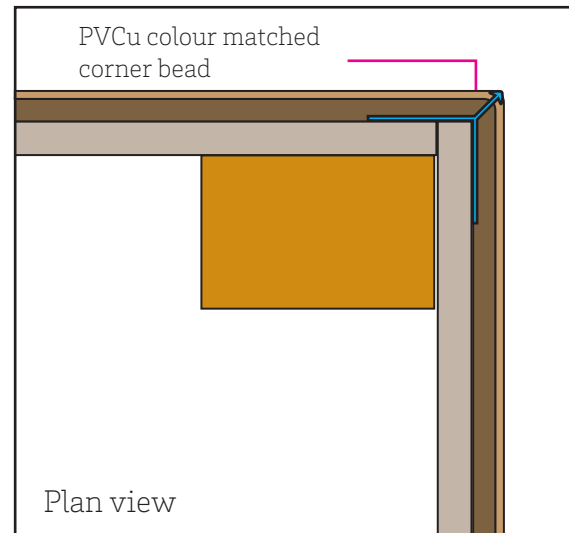


Joints in plasterboard should be covered with a 50mm scrim tape (Polypropolene open mesh)

Standard corner detail



High durability corner detail



For primed plasterboard and other render carrying boards use either glass fibre corner reinforcement mesh or plastic corner beading.

Glass fibre can be built up to create a rounded corner, or executed to create a sharp angular corner. Plastic corner beading can be colour-matched through specialist suppliers (SAS Direct, Renderplas and LocusRite) to produce a seamless, impact resistant corner.



(TCp) Top coat clay plaster Plain

Description:

Clayworks Plain Top Coat clay plaster is a natural, high-performance, seamless interior finish. Developed from many years experience working directly with natural plasters and tested by scientists at Bath University, they are hi-tech, high performance yet 100% natural and environmentally inert.

Material composition:

Sand and clays

Properties & benefits

- Very low embodied carbon and embodied energy
 - 100% natural - nontoxic, zero VOC emissions and no synthetic additives
 - Recyclable, reusable or 100% compostable
 - Improves indoor air quality (IAQ) through the absorption of toxins and odours
 - Passive regulation of internal humidity levels due to hygroscopic and vapour permeable nature
 - Seamless surfaces and flexibility accommodates movement of building elements
 - Through body coloured and UV resistant, meaning no painting, repainting or fading
 - Durable, easy to maintain, repairable surfaces
 - Effective acoustic absorber
 - Resistant to mould and fungal growth
 - Applicable to a variety of surfaces
-

Suitable applications:

Surface or backing coat
Interior walls and ceilings
Commercial or domestic applications

Physical properties

Density: 1600 kg/m³

Thermal conductivity: 0.84 W/mK

Fire resistance: Non-combustible
BS 1377 - Organic matter 0.5% - Defined as none combustible in Building regulations document B.

Surface hardness: Excellent
BS EN 520 - Impact diameter < 15mm

UV stability: Excellent

Moisture buffer value: 1.28

Thicknesses: 2 - 3 mm

Coverage: 8 m² (@ 2mm thickness)

VOCs: Zero

Mould & fungal resistance: Excellent

Embodied CO₂: 0.106 Kg CO₂ eq/kg

Product lifespan: 15 years

End of life: Recyclable / biodegradable

Origin

Cornwall, UK



(TCc) Top coat clay plaster Pigmented

Description:

Clayworks Plain Top Coat clay plaster is a natural, high-performance, seamless interior finish. Developed from many years experience working directly with natural plasters and tested by scientists at Bath University, they are hi-tech, high performance yet 100% natural and environmentally inert.

Material composition:

Sand, Clays and pigments

Properties & benefits

- Very low embodied carbon and embodied energy
 - 100% natural - nontoxic, zero VOC emissions and no synthetic additives
 - Recyclable, reusable or 100% compostable
 - Improves indoor air quality (IAQ) through the absorption of toxins and odours
 - Passive regulation of internal humidity levels due to hygroscopic and vapour permeable nature
 - Seamless surfaces and flexibility accommodates movement of building elements
 - Through body coloured and UV resistant, meaning no painting, repainting or fading
 - Durable, easy to maintain, repairable surfaces
 - Effective acoustic absorber
 - Resistant to mould and fungal growth
 - Applicable to a variety of surfaces
-

Suitable applications:

Surface coat
Interior walls and ceilings
Commercial or domestic applications

Physical properties

Density: 1600 kg/m³

Thermal conductivity: 0.84 W/mK

Fire resistance: Non-combustible
BS 1377 - Organic matter 0.5% - Defined as none combustibile in Building regulations document B.

Surface hardness: Excellent
BS EN 520 - Impact diameter < 15mm

UV stability: Excellent

Moisture buffer value: 1.28

Thicknesses: 2 - 3 mm

Coverage: 8 m² (@ 2mm thickness)

VOCs: Zero

Mould & fungal resistance: Excellent

Embodied CO₂: 0.1162 Kg CO₂ eq/kg

Product lifespan: 15 years

End of life: Recyclable / biodegradable

Origin

Cornwall, UK



(BCb) Base coat clay plaster

Description:

Clayworks Plain Top Coat clay plaster is a natural, high-performance, seamless interior finish. Developed from many years experience working directly with natural plasters and tested by scientists at Bath University, they are hi-tech, high performance yet 100% natural and environmentally inert.

Material composition:

Sand and clays

Properties & benefits

- Very low embodied carbon and embodied energy
 - 100% natural - nontoxic, zero VOC emissions and no synthetic additives
 - Recyclable, reusable or 100% compostable
 - Improves indoor air quality (IAQ) through the absorption of toxins and odours
 - Passive regulation of internal humidity levels due to hygroscopic and vapour permeable nature
 - Seamless surfaces and flexibility accommodates movement of building elements
 - Through body coloured and UV resistant, meaning no painting, repainting or fading
 - Durable, easy to maintain, repairable surfaces
 - Effective acoustic absorber
 - Resistant to mould and fungal growth
 - Applicable to a variety of surfaces
-

Suitable applications:

Backing coat, or paintable
Interior walls and ceilings
Commercial or domestic applications

Physical properties

Density: 1722 kg/m³

Thermal conductivity: 0.84 W/mK

Fire resistance: Non-combustible
BS 1377 - Organic matter 0.5% - Defined as none combustible in Building regulations document B.

Surface hardness: Excellent
BS EN 520 - Impact diameter < 15mm

UV stability: Excellent

Moisture buffer value: 1.28

Thicknesses: 6 - 18 mm

Coverage: 6 m² (@ 6mm thickness)

VOCs: Zero

Mould & fungal resistance: Excellent

Embodied CO₂: 0.059 Kg CO₂ eq/kg

Product lifespan: 15 years

End of life: Recyclable / biodegradable

Origin

Cornwall, UK

Please direct any correspondence to our administration office at:

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