

Plaster Coatings

InsideOut

A very, very brief history of plaster, the different types, tools, substrates, all the way through to our range of Interior & Exterior Plasters to enhance the built environment.



Venice Biennale, 2016

“My house is my refuge, an emotional piece of architecture, not a cold piece of convenience.”

- Luis Barragan





Marisfrolg Campus,
Shenzhen, China.

The material palette has been carefully considered in regards to recycling and reuse, and the art of rekindling ***hand craftsmanship.***

- Fred Van Brandenburg



“The art of plastering is as old as civilization.

More emphatically, and slightly biased - without plaster there is no civilization.”

A Timeless Craft

Ca.7500 BC

Çatalhöyük (modern day Turkey) dwellings had mud brick walls and floors coated with a locally available clay marl that made a suitable plaster.

Ca.3000 BC

The pyramids of Giza contain gypsum and lime mortars, the exteriors of which originally received smooth lime stucco.

8th century BC- 6th century AD

Thanks to the Greeks we have the English word “gypsum”, directly derived from the Greek gypsos. Roman military engineer Marcus Polio Vitruvius *Ten Books on Architecture* dedicates three chapters of Book II to the selection of sand, lime and pozzolans for stucco and concrete works

13th - 19th century

Gothic & Islamic architecture featured ornate plaster work. The late renaissance period led to the formation of decorative, coloured Venetian Plaster

Plaster Coatings **InsideOut**

Modern day

Plaster facades, multiple substrate options, dry powder adhesives, liquid colourants and modern manufacturing facilities for product accuracy.

Basic Plaster types -

Gypsum

Lime

Clay

Cement

Acrylic

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Binder	Vapour Permeability (US Perm/inch)	Weathering Resistance	Strength	Embodied energy
Clay	Excellent (18)	Poor	Weak	Low
Lime	Good (14)	Good	Strong	Medium
Cement	Very Poor (1)	Very good	Strong but brittle	Very High

A Timeless Craft

Plaster Coatings **InsideOut**

The very first plasters were earthen. Being simple mixtures of clay, sand and straw they required no furnaces and dried with the sun. The mixture was also cast as bricks and the same basic formula was used as the mortar and stucco. Earthen plasters are still one of the most commonly used plasters worldwide.

Used dominantly as an internal finish due to their inability to resist water.



A Timeless Craft

Plaster Coatings **InsideOut**

Gypsum and Lime were likely discovered through the process of pottery making.

Lime is renowned for its ability to self heal, and be vapour permeable, rather than modern cement that is impermeable.

Most commonly applied too historic building repair, and modern interior wall finishes

Calcium Oxide, or Clacium Hydroxide.



A Timeless Craft

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Cement plasters - a mixture of silica sand, limestone, clay, chalk and other ingredients melted together at blistering temperatures.

In plaster, this powder is liquified with water creating a paste that binds 'aggregate' - sand and other fine particles.

Cement based plasters are the most common form for exterior plastering today due to their hardness, and durability.



A Timeless Craft

Acrylic plasters - a mixture of Acrylic resin, calcium, quartz, silica sand, titanium and other ingredients blended to form a ready to use plaster.

Acrylic replaces cement as the binder in these products. These products are highly flexible and crack resistant.

Used mainly as decorative, pre-coloured plaster finishes.

Plaster Coatings **InsideOut**




A Timeless Craft

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Application

Tools

Techniques & Finishes

A close-up photograph of a person's hands, which are completely covered in thick, brown mud. The person is wearing a white t-shirt and blue jeans. The mud is applied in a way that obscures the natural lines and textures of the skin, illustrating the concept of 'hand applied - Plaster literally was'.

“Hand applied - Plaster literally was, until tools were developed for specific applications .”



Products, Tools, Application techniques, experience from professional plasterers combined with the vision from clients determine what can be achieved with plaster.



Modern Texture / plaster finishes - mainly exterior



Sponge

Lightly raised grained surface



Float

Inverted grain, flat surface



Brushed

Lightly raised grained surface, with horizontal or vertical striation

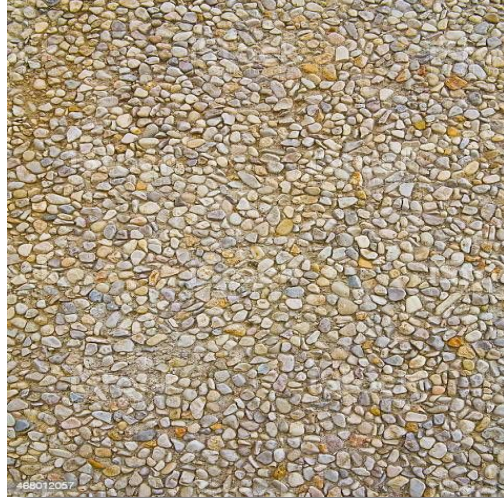


Traditional Solid Plaster Texture - exterior



Tyrolean

Lumpy raised surface



Dry dash

Flat or raised natural
aggregate



Roughcast

Heavy, traditional
finish



Texture - interior



Polished

Smooth, polished surface

Product -
Rockcote Otsumigaki or
Rockcote Venetian



Travertine

Smooth to touch,
lightly textured

Product -
Rockcote Velvetina



Distressed

Smooth with textured
Distressing

Product -
Rockcote Otsumigaki



Texture - interior



Distressed - medium

More heavily distressed,
rustic look

Product - Rockcote Clay
Decor



Scratched - light

Smooth with light grain
scratch

Product - Rockcote Velvetina



Combed

Vertical or horizontal
combed surface.

Product - Rockcote Clay Decor



Plasters need
substrates.....

Substrates

Original -

- Mud brick / stone
- Solid plaster over Backing
- Lath & plaster (interior)



Mud Brick



Solid plaster over rigid or flexible backing



Lath - bamboo



Lath - wooden slats

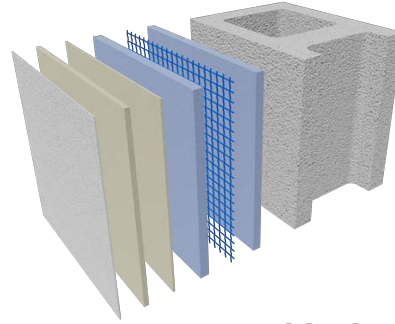
Substrates

Modern

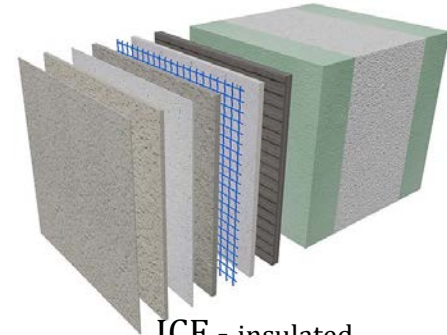
- Precast concrete
- INTEGRA aac panel
- Concrete block (filled/partial fill)
- Clay Brick
- ICF
- Insulation board
- Plaster board
- Cement sheet



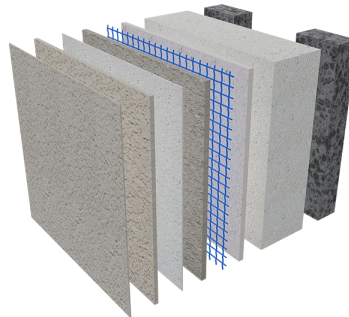
Pre-cast



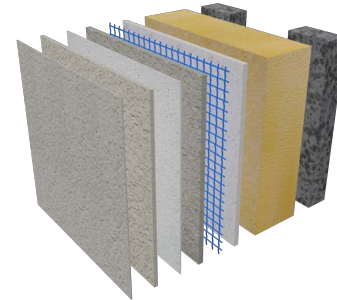
Concrete block



ICF - insulated
concrete formwork



INTEGRA aac panel

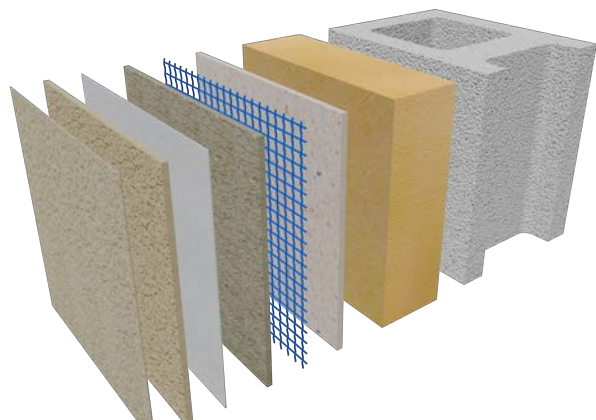
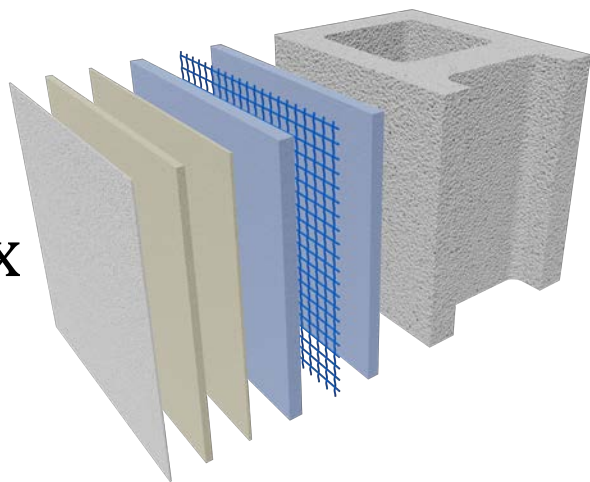


XTHERM Insulation boards

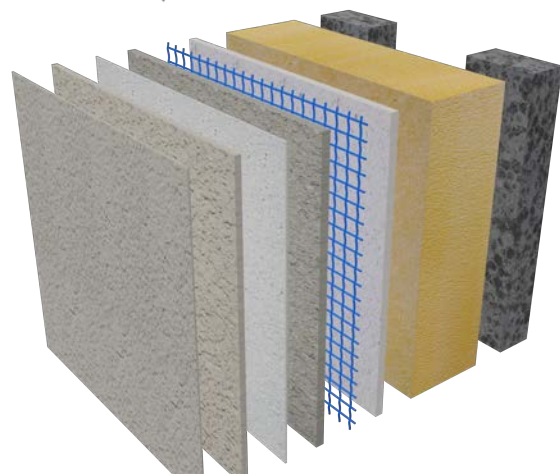
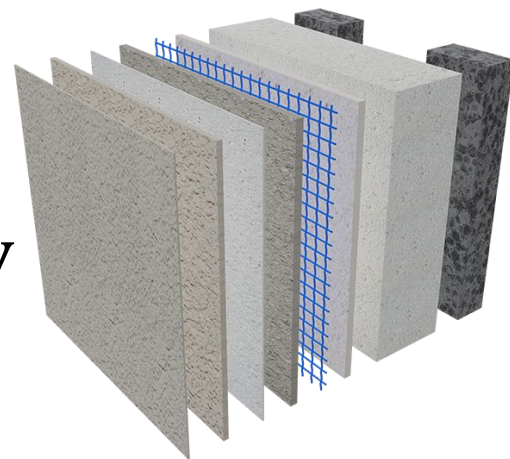
Not just plastering these days

Substrates

Direct fix

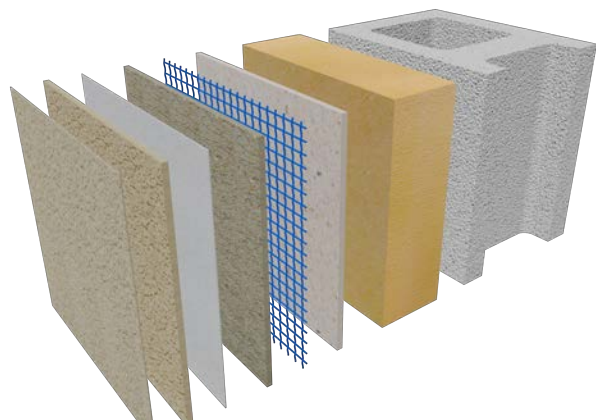
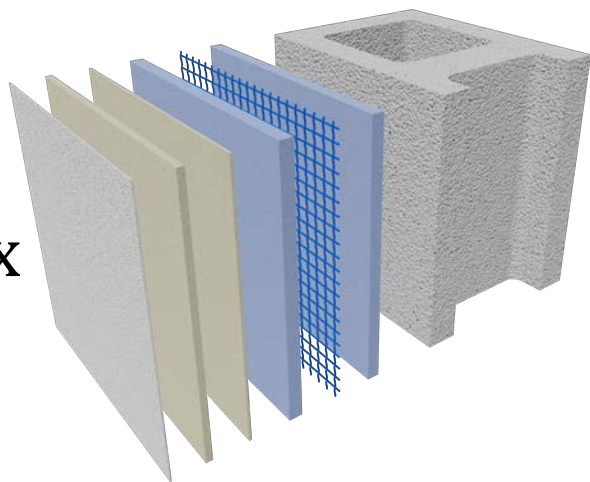


Cavity

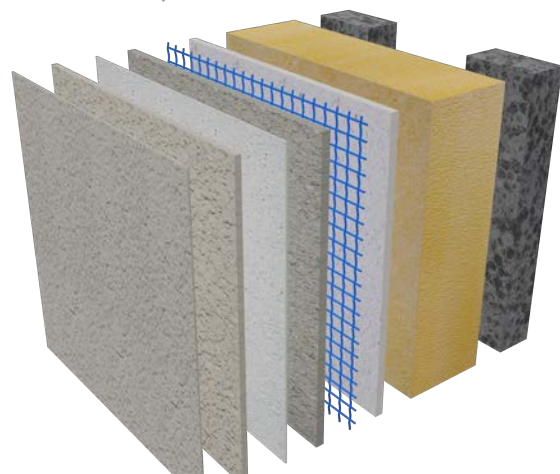
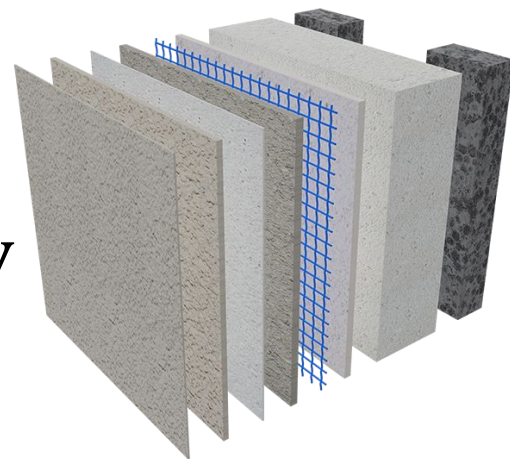


Substrates

Direct fix



Cavity

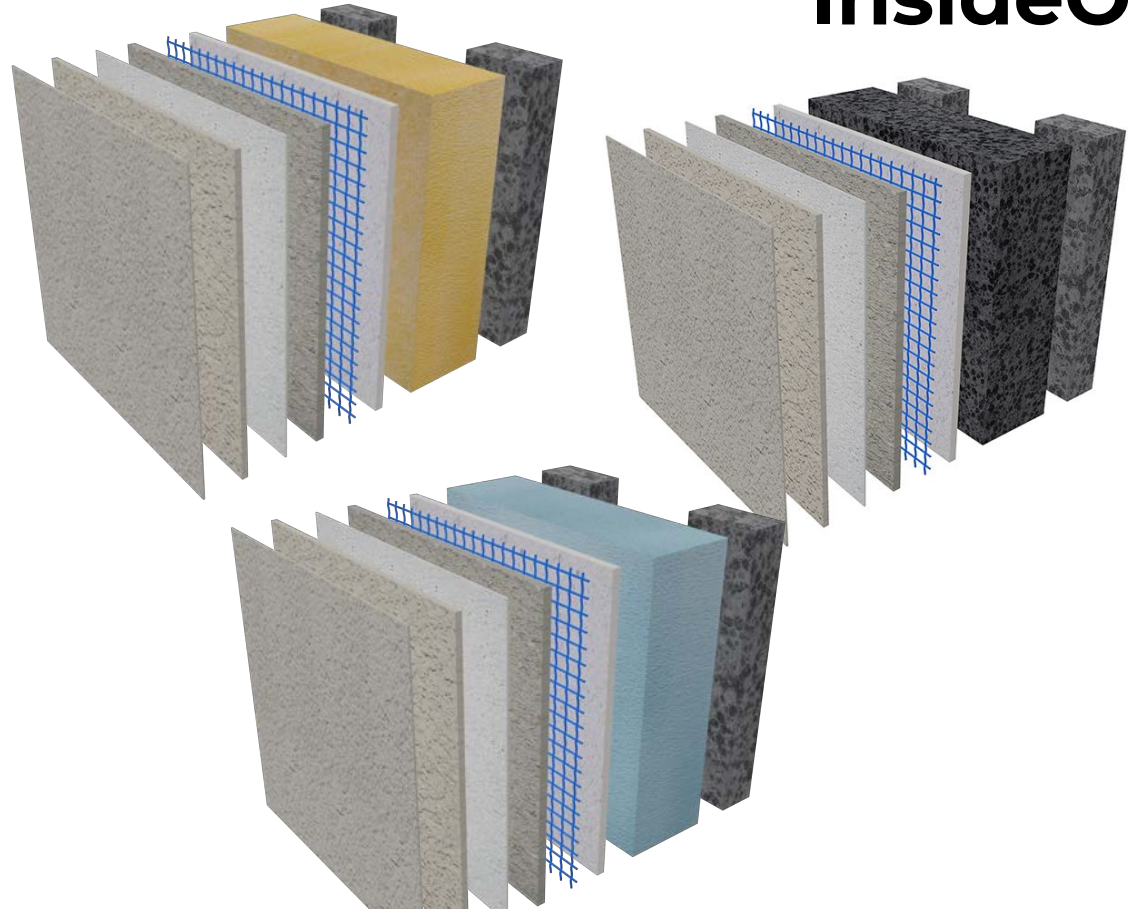


Substrates

Insulation Boards - cavity

- EPS - expanded polystyrene
- XPS - extruded styrene
- PIR - polyisocyanurate

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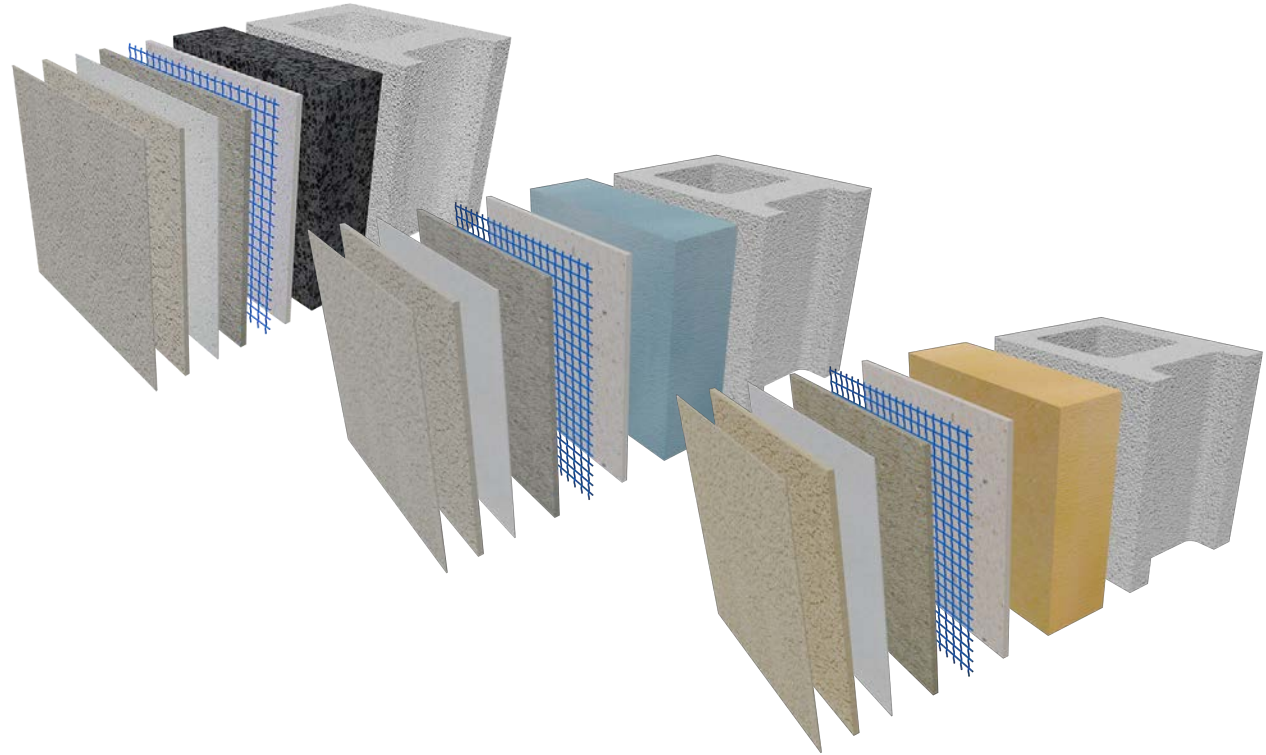


Substrates

Insulation Boards - direct fix

Masonry overlay

- EPS - expanded polystyrene
- XPS - extruded styrene
- PIR - Polyisocyanurate



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Project profiles

The image shows a modern interior space with white, curved walls and a polished floor. A large glass window on the right side offers a view of a coastal landscape at dusk, featuring a road, greenery, and the ocean under a blue sky with some clouds. The text 'Project profiles' is overlaid in the top left, and 'Exterior' is overlaid in the middle right.

Exterior

Brick veneer

Plaster Systems

Natural Mineral plaster
uncoloured

Private residence,
Auckland

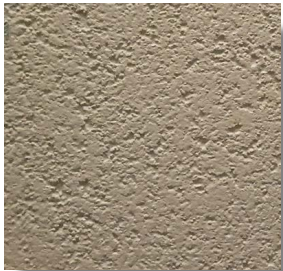


INTEGRA aac lightweight
concrete over 20mm cavity to
timber frame.

ROCKCOTE Classico

Acrylic, coloured,
Float finish

Private residence,
Christchurch

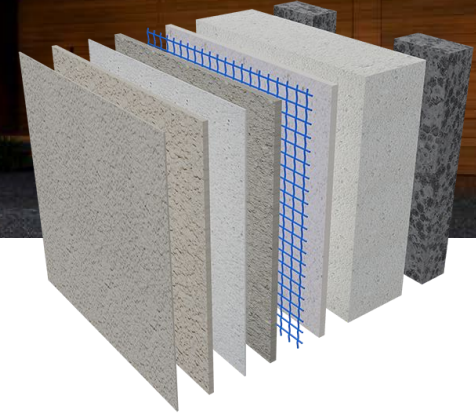


INTEGRA aac lightweight
concrete over 20mm cavity to
timber frame.

ROCKCOTE Cerano

Acrylic, coloured,
Trowel finish

Private residence,
Christchurch



INTEGRA aac lightweight
concrete over 20mm cavity to
timber frame.

ROCKCOTE Cerano

Acrylic, coloured,
Trowel finish

Private residence,
Christchurch

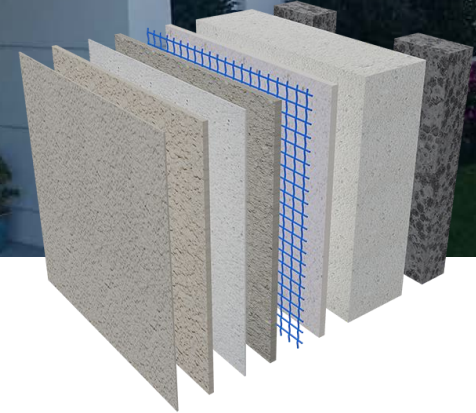


INTEGRA aac lightweight
concrete over 20mm cavity to
timber frame.
Feature plaster mouldings,
and negative detailing

Plaster Systems

Mineral, painted
Float finish

Private residence, Auckland

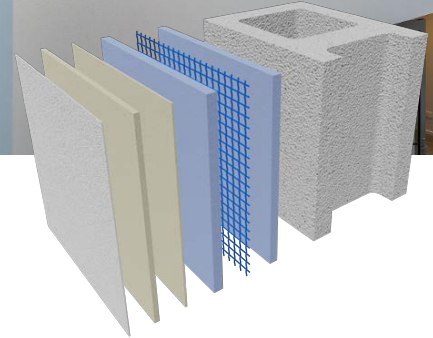


Masonry block

Plaster Systems

Mineral, painted
Float finish

Private residence, Auckland

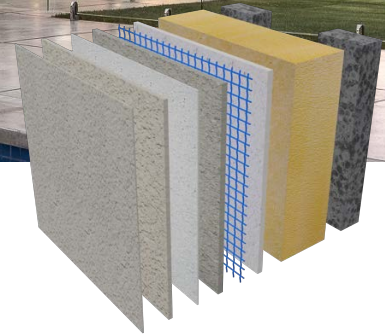


XTHERM Gold over 20mm
cavity to timber frame.

Plaster Systems

Mineral, painted
Float finish

Private residence, Timaru





ROC COTE

Plaster Systems

Project profiles

Interior



ROCKCOTE

Otsumigaki

Private residence,
Gold Coast, Australia



ROCKCOTE Otsumigaki

Kiwi Property Head Office,
Vero Building,
Auckland

Clay lime plaster applied over plasterboard



ROCKCOTE
Marrakesh

Duty Free
collections,
Auckland Airport

Lime plaster applied over
plasterboard



ROCKCOTE Otsumigaki

Smooth polish

Private residence,
Auckland

Clay lime plaster applied over
plasterboard



ROCKCOTE Otsumigaki

Burnished concrete effect

Buddle Findlay,
Auckland

Clay lime plaster applied over
plasterboard



ROCKCOTE Otsumigaki

Private residence,
Auckland

Clay lime plaster applied over plasterboard



Plaster Systems Mineral Texture

Private residence,
Auckland

Bagged brick using natural mineral plaster to
achieve a bleached natural plaster finish.



ROCKCOTE Velvetina

Smooth with light grain
scratch

NewYork Grill, New Market,
Auckland

Lime plaster applied over plasterboard



ROCKCOTE Velvetina w
Venetian polish

Harmos Horton Lusk
commercial offices,
Vero Building, Auckland

Fine Lime plaster applied over
plasterboard, achieves a 'mirror finish'



ROCKCOTE Marrakesh

Private residence,
Tauranga

Lime plaster applied over plasterboard



ROCKCOTE Clay Decor

Combed plaster finish

Maje Clothing,
New Market, Auckland

Clay plaster applied over plasterboard,
Vertical comb finish



ROCKCOTE Cerano

Lightly distressed

AllBirds,
Britomart, Auckland

Fine grained acrylic plaster
applied over plasterboard



ROCKCOTE Clay Decor

Layered with a variety of colours

Auckland War Memorial,
Auckland

Clay plaster applied over plasterboard,

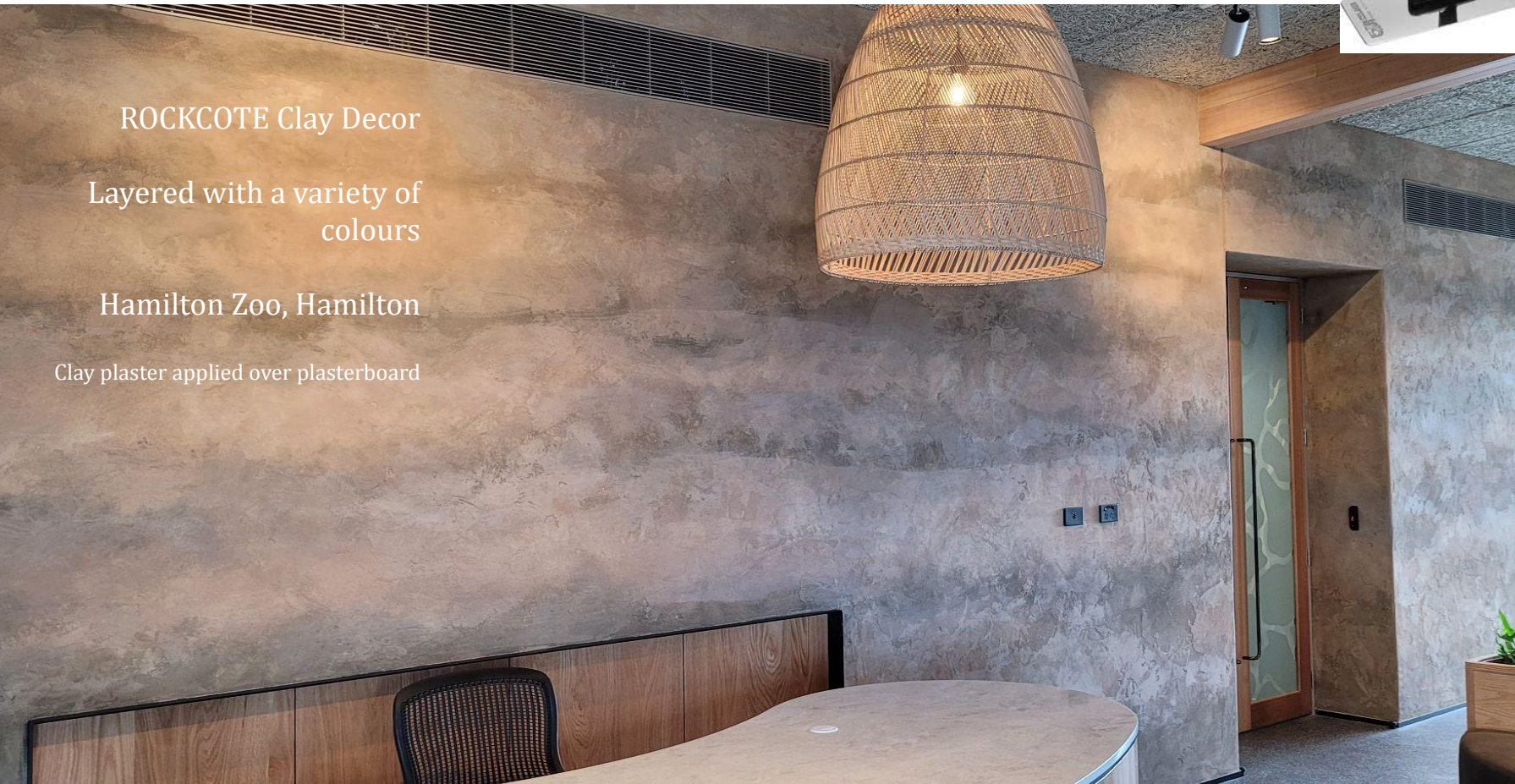


ROCKCOTE Clay Decor

Layered with a variety of
colours

Hamilton Zoo, Hamilton

Clay plaster applied over plasterboard

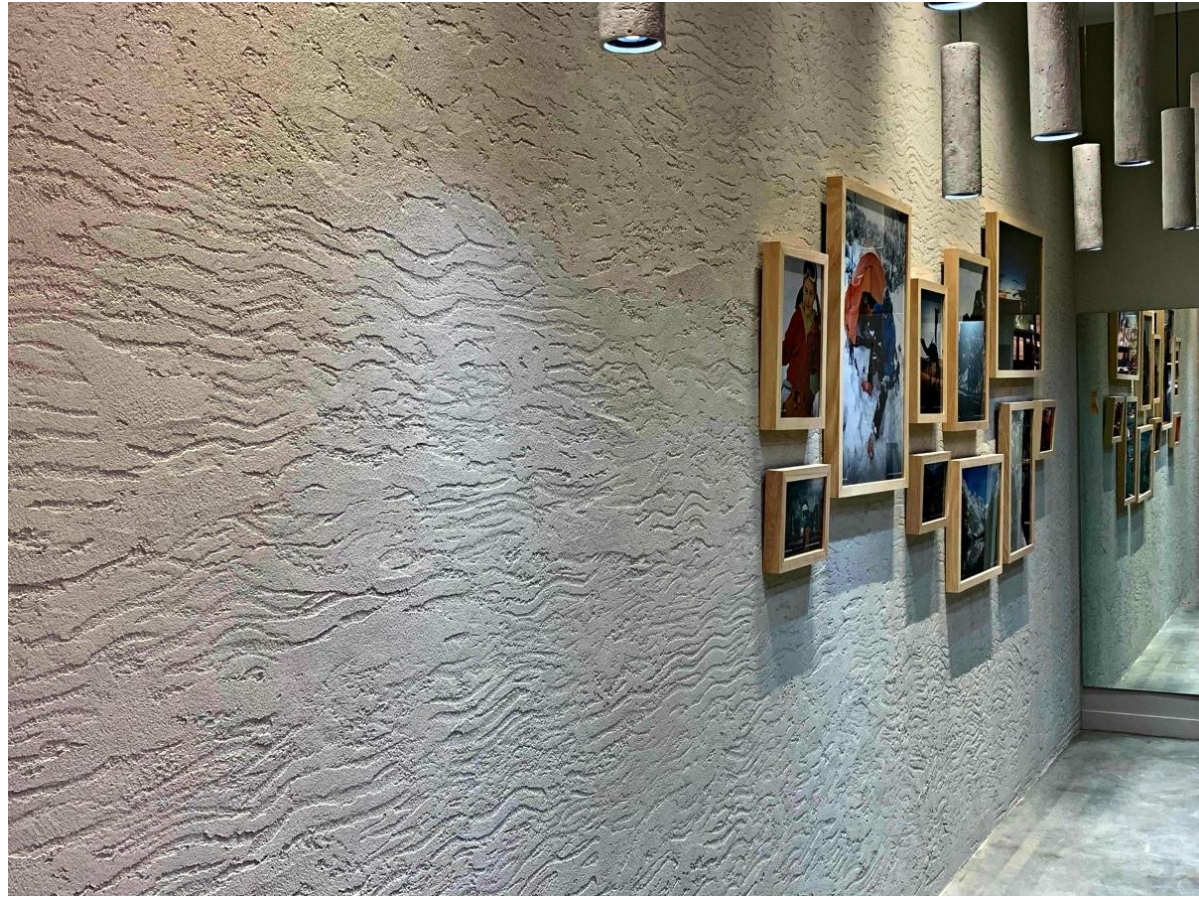


Mineral Plaster

Raked and tipped off

Kathmandhu,
New Market, Auckland

Modified medium grain Cement plaster
applied over plasterboard



Mineral Plaster

Burnished concrete finish

Ebb Hotel, Dunedin

Modified fine grain Cement plaster
applied over plasterboard



Mineral Plaster

Concrete effect

Untouched World kitchen,
Christchurch

Modified fine grain Cement plaster
applied over plasterboard



Mineral Plaster

Heavy raised surface

AJE Athletic,
New Market,
Auckland

Lime plaster
applied over plasterboard.

Heavy dabbed plaster application



ROCKCOTE Otsumigaki

Distressed

Dior, Commercial Bay,
Auckland

Clay lime plaster applied over
plasterboard



ROCKCOTE Clay Decor

Nandos, Queen Street,
Auckland

Clay plaster applied over plasterboard

Template designed and applied over dry
base coat plaster, with second coat in
darker colour applied over the template.



Artisan Interiors

Made by Nature, Finished by Artisan



ROC COTE

**Plaster
Systems**

From this



To this -

Plaster Coatings
InsideOut



it only took 7,500 years

INTEGRA Lightweight Concrete Facade System

Incorporating the latest drained rainscreen facade construction technology.

ABOUT THE PRODUCT





Plaster Coatings
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Questions



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Plaster 
Systems[™]