



An introduction to Graphenstone Paints

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The choice of coating is an
often-overlooked source of
ESG benefits

Graphenstone – “*Beyond Colour*”

- Most certified ecological paint brand for health and sustainability
- Sustainably sourced raw materials – lime, calcium carbonates and natural minerals
- Combined with Graphene
- Manufactured using renewable energy and closed loop water system
- The world’s most certified paint brand
- Independently verified by world’s most recognised ‘Harm-Free’ product evaluation agencies:
 - Cradle to Cradle – Gold, Silver & Bronze
 - Eurofins Indoor Air Comfort Gold
 - Green Tag Health Platinum
 - Ecolabel
 - BREEAM, LEED & WELL compliant

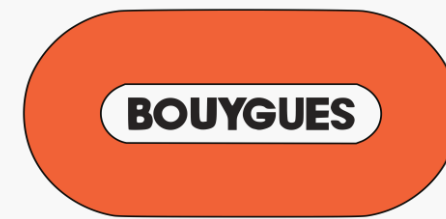
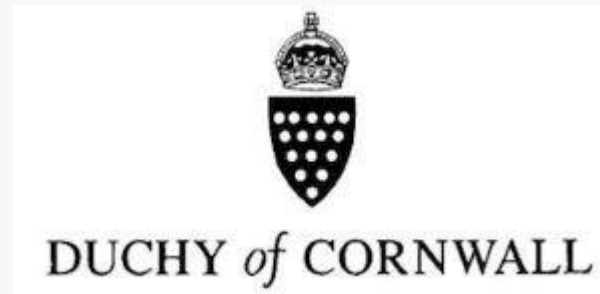


Graphenstone – “*Beyond Colour*”

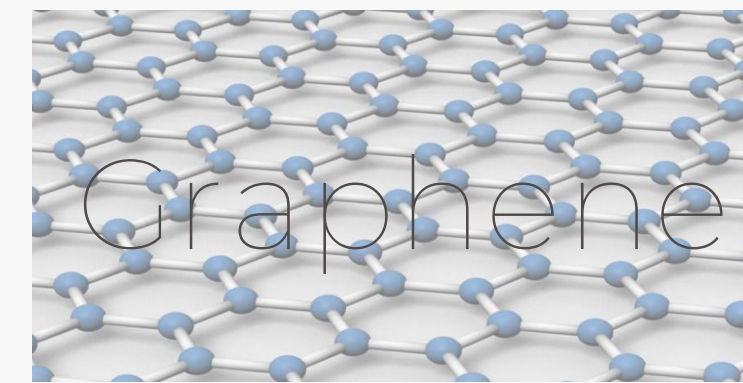
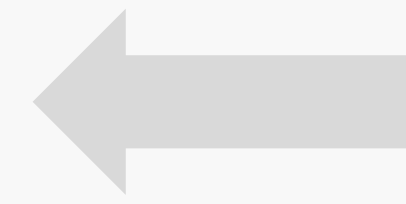
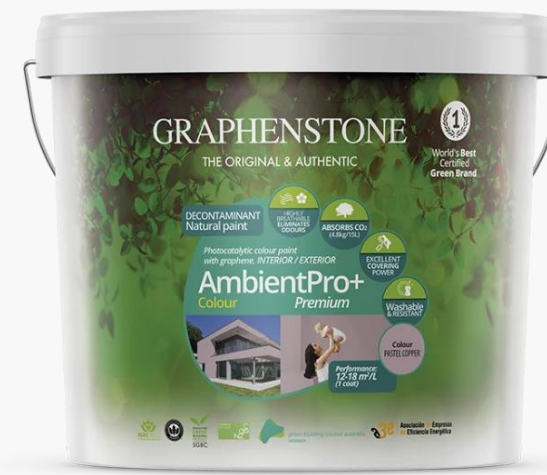
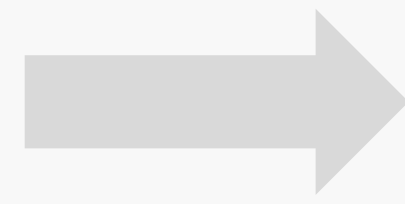
- Ultra-low embedded carbon (CO₂e)
- Absorbs CO₂ during the curing phase
- Air-Purifying
- “Self-Cleaning”
- Breathable / Durable / Fire rated
- Over 1,000 colours
- Internal and External
- Applied like standard paint



A selection of our customers



A perfect fusion of traditional building materials and modern technology



100% natural and sustainable

CO2 absorbent

Non-smelling, absorbs off-gases

High pH: natural proof vs. fungi, mould and bacteria

Non flammable

Breathable, porous material (SD rating up to 0.01)

Plentiful global supply

Recyclable

Provides support structure = removes need for chemical binders

- 200x stronger than structural steel
- 1,000x more conductive than copper
- 20% flexibility without damage

Class 1 strength for the first time in history

Unique elasticity and flexibility; no cracking

Reduction in snagging and maintenance costs

Significantly increased coverage

Increased hardness, uniformity, strength and flexibility

Strengthens the benefits of natural paint

Colour

House colours (x96)

Can match to RAL / NCS colours in some products

Ambient Pro+

Lime is pure white - needs too much pigment to get to dark colours

Range of circa 30-40 colours. Predominantly white and light

Colours marked "L" on colour book

Specification

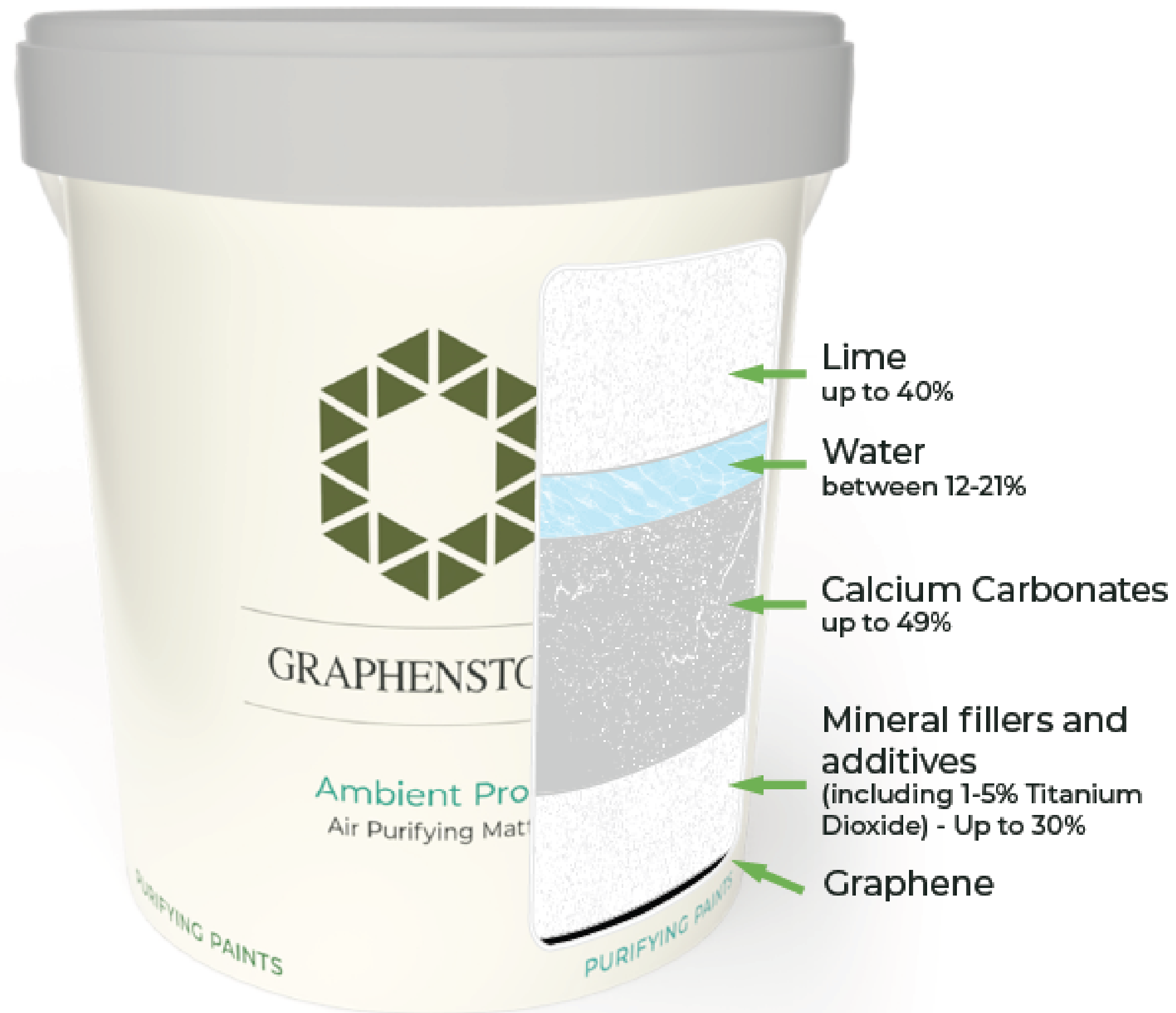
Usual product combination in offices / public spaces for best combination of durability and ecological benefits is:

Wall = GrafClean

Ceilings = Ambient Pro+



What's in the tin...



Paint Ingredients

Lime - Calcium Hydroxide ($\text{Ca}(\text{OH})_2$) or Slaked Lime - acts as **both** the pigment and the binder.

Calcium Carbonates (CaCO_3) - form part of the limestone based mineral fillers.

Mineral fillers and additives - including silicates, talcs and cellulose.

Titanium Dioxide (TiO_2) - is a naturally occurring oxide, used as additional pigment as well as for its air purification and photocatalytic properties.

Graphene - using a unique polymer, the graphene fibres fuse with the lime, and act as a further unique binder, providing enhanced surface bond, durability and greater flexibility.

All Graphenstone paints:

1. Trace VOCs

British Coatings Federation: *No paint should now claim "Zero VOC"*.

Graphenstone is the lowest = < 0.5g / litre.

2. Zero toxic chemicals, preservatives, plastics or micro-beads

Due to use of graphene

3. Ultra-low CO2(e) footprint

We have saved companies such as:

∞ Meta over 52 tonnes CO2(e)

GREYSTAR® over 50 tonnes CO2(e) over two annual projects

- just from a switch of paint specification



Carbon



CO2(e) Footprint (Kg / m2 CO2(e))

Graphenstone Ambient Pro+ = 1.78E-01

Market leading competitor = 3.99E-01 (1)



Based on a project of 20,000 m2 =

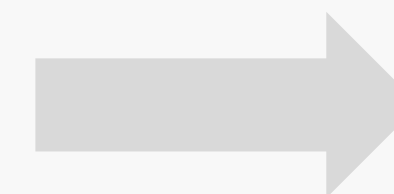
CO2(e) saving = approx. 4.4 tonnes

CO2 Absorption ("Lime Cycle")

Graphenstone Ambient Pro+ absorbs CO2
during the curing phase

A 15-litre tin absorbs up to 5.0 kg of CO2

This is in addition to the products' low CO2(e) footprint



CO2 absorbed = approx. 1 tonne

* Based on two coats @ 250m2 / tin

(1) Source: Market leading competitor EPD Both figs based on two coats

Graphenstone CO₂(e) comparison calculator

Characteristics	Graphenstone Ambient Pro+	Graphenstone GrafClean Matt	Competitor 1	Competitor 2	Competitor 3	Competitor 4	Competitor 5	Competitor 6	Competitor 7	
Air Purification	Yes	No	No	Anti Bacterial	No	Formaldehyde	No	Neutralises noxious gases & pollutants	No	
VOC content	<1g/l	<1g/l	<1g/l	<10g/l	<15 g/l	<1g/l	<30g/l	<1g/l	"Low"	
CO ₂ absorption	5KG/15L	No	No	No	No	No	No	No	No	
BREEAM, LEED and WELL compliant	Yes	Yes	Yes	No	No	Yes	No	Yes	No	
Naturally Anti-bacterial	Yes	No	No	No	No	No	No	No	No	
Eurofins Indoor Air Comfort Gold certified	No	Yes	No	No	No	No	No	No	No	
Cradle to Cradle certified	Gold	Bronze	No	No	No	No	No	Silver	No	
Microplastic free raw materials	Yes	Yes	No	No	No	No	No	Yes	No	
Chemical free bases; no MIT/BIT	Yes	Yes	No	No	No	No	No	No	No	
Spread rate	Up to 18m ² p/l	Up to 16m ² p/l	Up to 16m ² p/l	Up to 16m ² p/l	Up to 16m ² p/l	Up to 11m ² p/l	Up to 14m ² p/l	Up to 6.5m ² p/l	Up to 10m ² p/l	
Fire Classification	No	B-s1, d0 BS Class O	No	No	No	No	N/A	Euro A2	No	
Breathable/Vapour open	Class 1 Sd <0.1	Class 1 Sd <0.1	No	No	No	No	No	Class 1 Sd <0.1	No	
Wet scrub resistance	Class 1 - ISO 11998	Class 1 - ISO 11998	Class 1 - ISO 11998	Class 1 - ISO 11998	Class 1 - ISO 11998	Class 2 EN 13300	Class 1 - ISO 11998	Class 1 - ISO 11998	Class 1 - ISO 11998	
Natural minerals and sustainable materials	Yes	Yes	No	No	No	No	No	No data	No data	
Cost/m ² per coat colour (Exc VAT). Top coat only	£1.00	£1.02	£1.14	£1.44	£0.99	£2.17	£0.86	£1.68	£1.45	
Graphenstone CO₂(e) saving vs other brands Enter your paintable area (in m²) in the yellow box below										
Global Warming Potential (AI-D) Kg CO ₂ (e)/m ² from EPD	0.163	0.279	0.633	0.514	0.481	0.472	0.233	1.873	0.795	
Number of coats stated in EPD	2	2	2	2	2	1	1	2	1	
GWP (AI-D) per coat	0.0815	0.140	0.317	0.257	0.241	0.472	0.233	0.937	0.795	
CO ₂ (e) Footprint of project @ assumed TWO COATS	Project meterage... 10,000	1630	2790	6330	5140	4810	9440	4660	18730	15900
CO ₂ (e) Saving from using Ambient Pro+ based on stated project m ² with an assumed TWO COATS vs other brand		1160 kg	4700 kg	3510 kg	3180 kg	7810 kg	3030 kg	17100 kg	14270 kg	
All data correct as of 17/10/2023, using available data from the relevant manufacturer's website and EDPs. Price per m ² working from RRP and colour product.										

Notes

- EPD AI-D figures used for all products and therefore include the CO₂ Absorption from the "Usage" phase from Ambient Pro+
- Most EPDs use figures for TWO COATS of paint. However the EPDs from some competitor products state that the figures included are for ONE COAT of paint. The Technical Data Sheets of all products state that its normal practice for TWO COATS of paint to be used. To enable a like for like comparison, where required, this document uses adjusted figures for TWO COATS of paint for all products.

Air Quality



Neutralises...

- Air pollution
- Bacteria
- Viruses
- Odours

- Our pure lime-based products neutralise air pollution
- Natural process of photocatalysis through which the bonds of pollutants are broken
- Titanium Dioxide – acting as pigment and as a catalyst
- Neutralisation of NO_x, SO_x and (some) VOCs
- Lime has high pH level = inhospitable to bacteria and viruses
- Aligns perfectly with the principles of biophilic design

Self-Cleaning

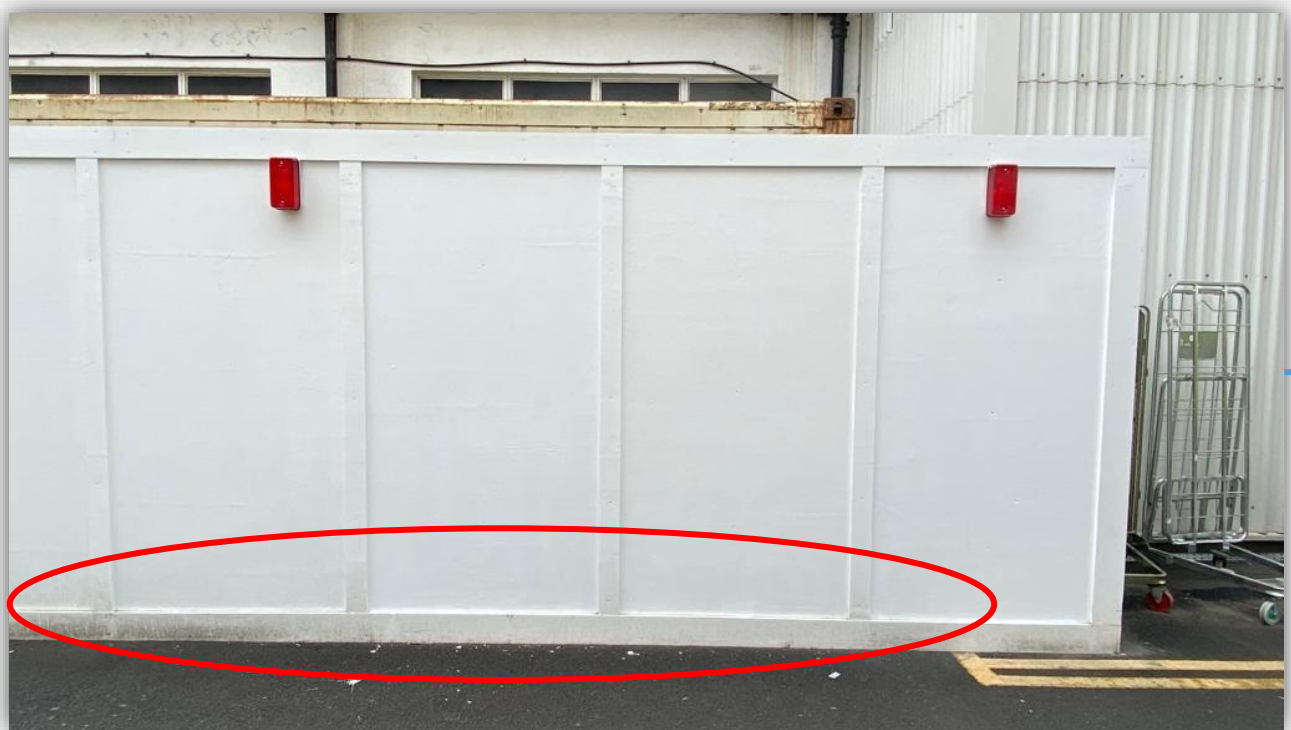
Graphenstone Ambient Pro+ active ingredient = Titanium Dioxide (TiO₂) – acting as both a pigment and catalyst

Same process as “self-cleaning glass”

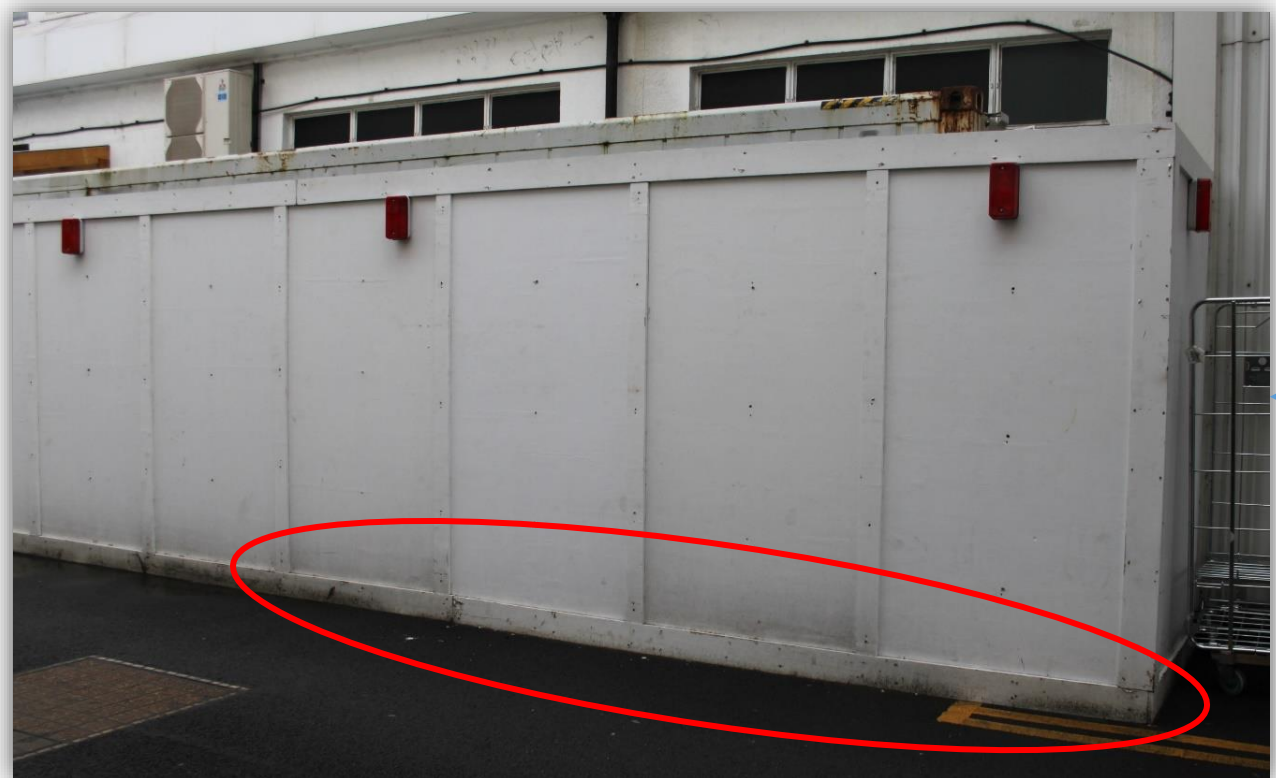
Photocatalysis (“hydroxyl radicals”) also prevents airborne dirt and dust from adhering to the surface

Recent study with Epsom & St Helier University Hospitals NHS Trust (replicated with Grosvenor Estates)

- Various panels painted with Graphenstone Ambient Pro+ and a non-photocatalytic paint
- Revisited 3 months after painting...



July 2022



October 2022

Circular Economy

Raw Materials:

Graphenstone paints have 100% recyclable materials

Waste paint:

Waste from our warehouse is used for CSR / charitable mural projects

Packaging:

Made from 100% recycled and recyclable material

Reduce-Reuse-Recycle

We have launched a Tub Take Back scheme

Other brands: “*Planet Positive Paint Company*” = Achieved through offsetting = “*dubious at best*”

Practical benefits: *“Normal paint rules apply”*

Mistaken historical
views of the issues of
traditional lime /
mineral-based paints.

- High solid content = excellent coverage
- High durability and washability
- Standard drying times
- Standard application cycle = (Mist if required) + 2 coats
- Applied by brush, roller or spray gun
- Supplied in pre-mixed liquid form with long pot-life
- Available through usual paint supply chain

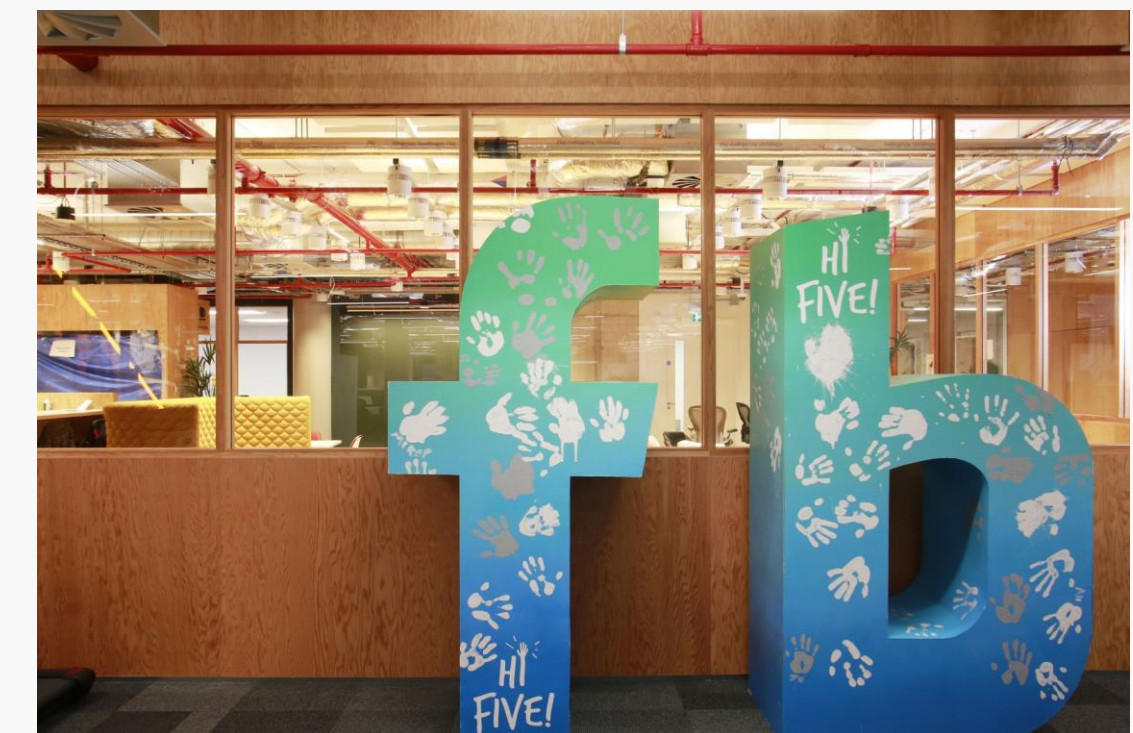
∞ Meta

Head Office – Kings Cross London

- Graphenstone paints have been specified for 5 blocks of internal space in over 20 different colours and a mixture of products.
- Due for completion in 2022
- Graphenstone was chosen for:
 - Cradle to Cradle certifications
 - CO2(e) Saving = Over 52 tonnes
 - CO2 absorption = 3 tonnes
 - Durability
 - Provision of healthier indoor air quality for its employees

Architect: T P Bennett / HLW

Contractors: CJ Decorators



∞ Meta

Head Office – Kings Cross London



Artist name: Kyung Hwa Shon
Title of the work: "Excess of Elsewhere"
Artist website: www.kyunghwashon.com
Venue: Meta's King's Cross Offices (Building T)
Commissioned by: Meta Open Arts

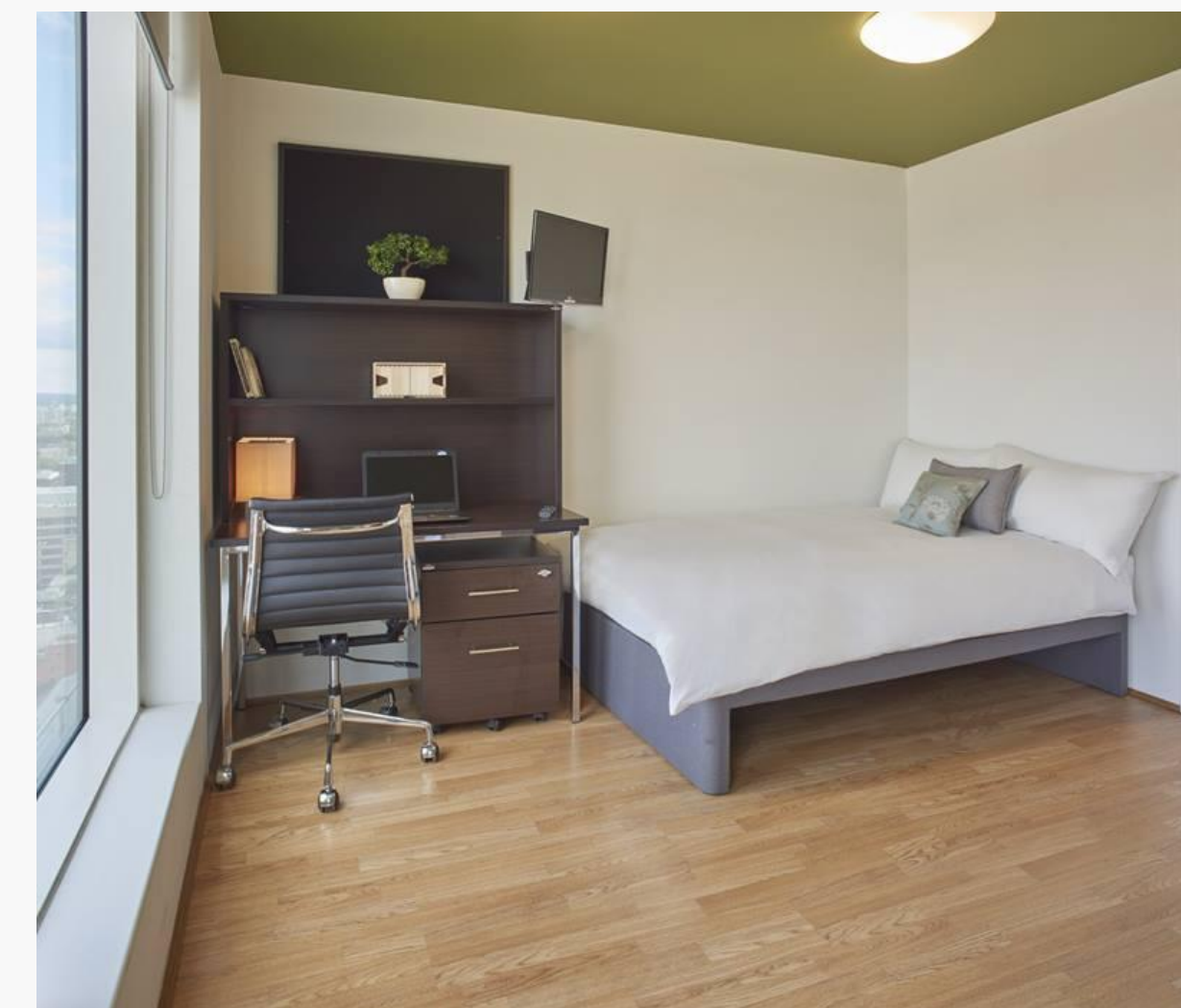
Artist name: Yinka Ilori
Title of the work: "Layers of Movement"
This largest mural to date. The mural runs across 9 floors at Facebook and Instagram @meta's new office in King's Cross using our eco-friendly paints.
Artist website: <https://yinkailori.com/>
Venue: Meta's King's Cross Offices (Building T)
Commissioned by: Meta Open Arts

GREYSTAR

Student accommodation - London

- Graphenstone paints specified across 11 student accommodation blocks
- Major summer works plus on-going refurbishment
- Graphenstone was chosen for:
 - Wide environmental credentials
 - Durability
 - CO2(e) Saving = 30 tonnes
 - CO2 Absorbed = 3 tonnes
 - Cradle to Cradle certifications
 - Provision of healthier indoor air quality for fee paying students

Contractors: HAS Builders, CLC, Fortis Vision, Bell Group



Thank you.



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