

CARBON CAPTURE BRICK SLIPS & FROGGED BRICKS 2026 BROCHURE

The bricks and mortar of a better future

About us

We founded earth4Earth in Sheffield in 2023. Since then, the company has experienced rapid growth and we now have over 30 team members, including civil and geotechnical engineers and experts in materials science. We have a Research & Development Centre in Sheffield and a pilot factory in Wuhan, China. Now that we have established our manufacturing process, we plan to open a factory in the UK in 2026.

As a team of scientists and engineers, we recognise the greatest threat facing humanity today is climate change. Our mission is to decarbonise the construction industry and mitigate global warming through the provision of high quality materials that capture CO₂ directly from the air. Our innovative products transform buildings into CO₂ absorption systems, helping to protect our planet, whilst also supporting the ever-growing need for new homes and infrastructure. They are life-cycle carbon-negative, fully recyclable and made from the earth, for the Earth.



The 'Wonderwall' is our first pilot project, based at Sustainable Ventures in Manchester. It is a 4x4 m wall cladding made with 1,200 of our N10 bricks. Each brick absorbs 178g of CO₂ - so this wall absorbs and permanently stores as much carbon as making 720 cups of coffee!

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The earth4Earth team were fantastic to work with — responsive, collaborative, and able to deliver at very short notice to meet our tight construction deadlines.

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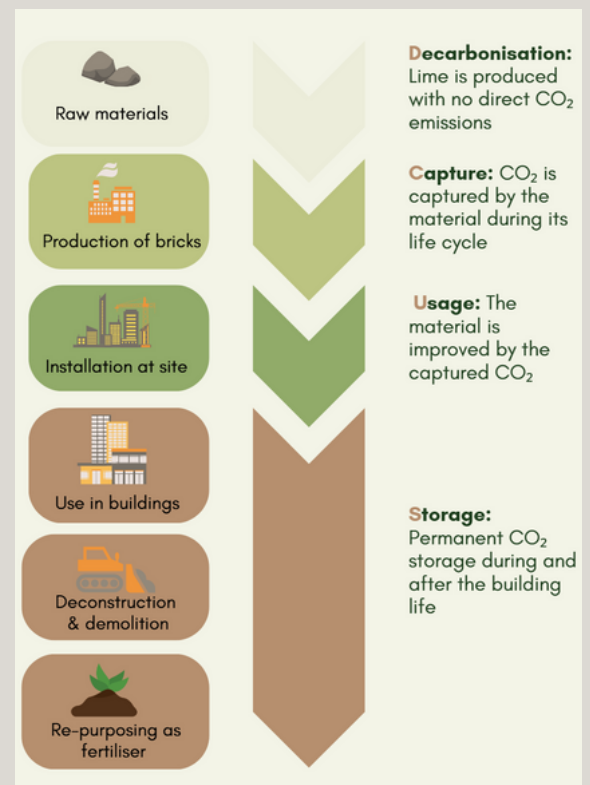
Andy Bargh, Development Manager, Sustainable Ventures

Our technology

Lime-based binders have been used in construction for over 10,000 years. To this day, they are typically produced by heating limestone at elevated temperatures, of at least 900°C. This process generates CO₂ emissions from both the breakdown of the raw materials ($\text{CaCO}_3 \rightarrow \text{CaO} + \text{CO}_2$) and the combustion of fossil fuels required to achieve the necessary high temperatures.

We have developed a zero-emissions lime production process that can be done at room temperature.

We create our lime by chemically treating naturally-decarbonised raw materials. The reaction occurs at room temperature, thus avoiding CO₂ emissions from both the material breakdown and combustion. This innovative production process is part of our DCUS Technology - Decarbonisation, carbon Capture, carbon Usage and carbon Storage.



Our products

Our materials enable clients to achieve net-zero and even carbon-negative outcomes by absorbing and storing carbon dioxide from the air throughout their entire lifecycle. Supported by a series of recognised sustainability credentials, our products provide measurable environmental performance while maintaining the durability and aesthetic quality expected in modern construction.



Compressed, rather than fired

We avoid the carbon-intensive kiln firing process and this alone cuts more than half of the carbon emissions of traditional clay brickmaking.



Upcycled raw materials

Our bricks are made from excavated soil, which would otherwise go to landfill, promoting a circular economy and waste valorisation.



100% recyclable

At end-of-life, our bricks can be crushed and used in new bricks, or returned to the earth for crop growth.



Better-than-zero net carbon

Zero or negative CO₂ emissions thanks to novel binder production and CO₂ Direct Air Capture.



Brick slips



We have developed a range of brick slips, to suit different requirements and budgets. e4E brick slips offer the timeless beauty and durability of traditional brickwork in a lightweight, easy-to-install format. They provide excellent versatility for both interior and exterior designs, combining authentic texture with modern practicality. e4E brick slips have a range of sustainability credentials.

Our colour range

Our brick slips are available in six carefully curated colours, each inspired by the natural tones of the earth. From warm, rustic shades to softer, contemporary hues, this limited palette offers versatility while staying true to an authentic, natural aesthetic.



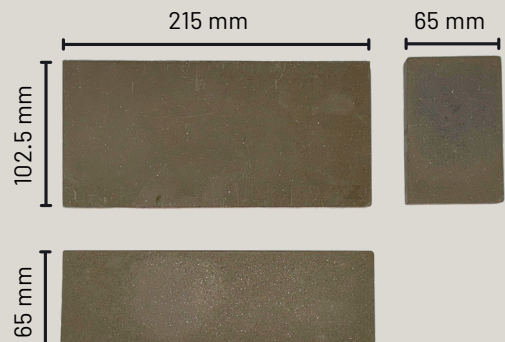
Finish options

We offer two distinctive finishes, each bringing its own unique character to a project. The Raw finish features a natural, textured surface that highlights the raw beauty of the clay, while the Sleek finish offers a smoother, more refined appearance for a contemporary look. Together, they provide the freedom to create spaces that feel both authentic and timeless.



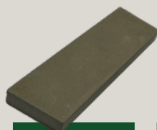
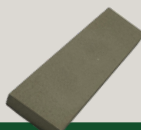
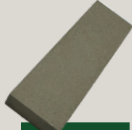
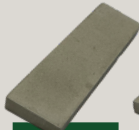
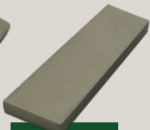
Size range

We offer three practical formats to suit a variety of design needs: 215×102.5 mm, 215×65 mm, and 102.5×65 mm, all with a consistent 20 mm thickness. These versatile sizes make installation straightforward and adaptable, whether used for full wall applications, detailing, or creative layouts. Designed for flexibility and precision, they ensure a seamless fit across both interior and exterior projects.



Carbon absorbency

Our brick slips are available in a range of carbon absorbency levels, determined by the type and proportion of binder contained in the unit. This allows for options from low carbon emissions to carbon-negative performance, with each product absorbing varying amounts of CO₂ throughout its service life. By selecting the right mix, you can balance aesthetic goals with measurable environmental benefits.

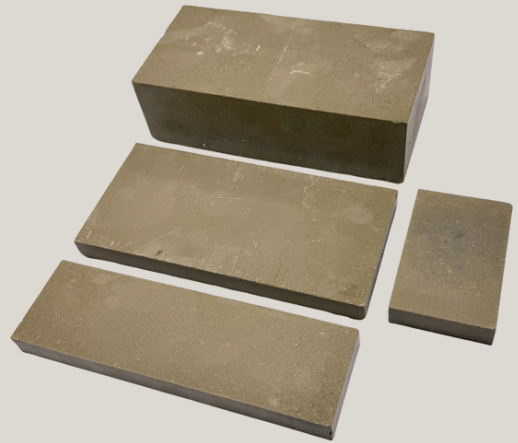
					
	L0 - No binder	L10 - Conventional binder	N10 - 10% e4E binder	N20 - 20% e4E binder	N30 - 30% e4E binder
CO ₂ emissions per brick	n/a	up to 50g	0g	0g	0g
CO ₂ absorption per brick	n/a	up to 50g	up to 50g	up to 100g	up to 140g

e4E-L10-BS

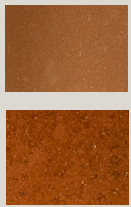
Carbon-neutral brick slip

10% hydrated lime Ca(OH)_2

Available sizes	Weight	CO ₂ absorbency
215 x 102.5 mm	872 g	52g
215 x 65 mm	580 g	34g
102.5 x 65 mm	263 g	16g



Available finishes



Sleek

Raw

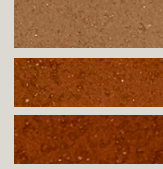
Available colours



Natural Grey

Natural Yellow

Cinnamon



Rose

Terracotta

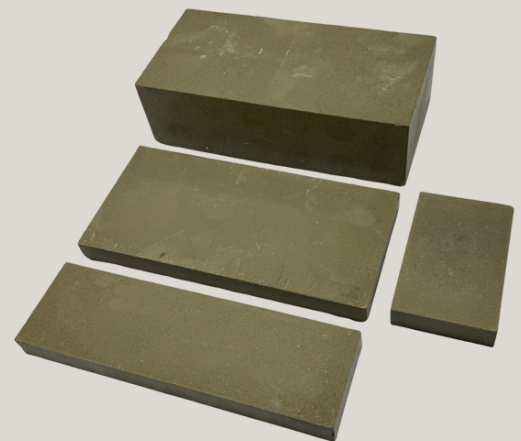
Mahogany

e4E-L0-BS

Carbon-neutral brick slip

100% compressed earth from upcycled waste excavation soil

Available sizes	Weight
215 x 102.5 mm	858 g
215 x 65 mm	562 g
102.5 x 65 mm	265 g



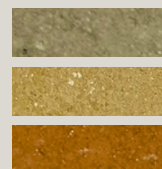
Available finishes



Sleek

Raw

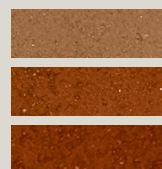
Available colours



Natural Grey

Natural Yellow

Cinnamon



Rose

Terracotta

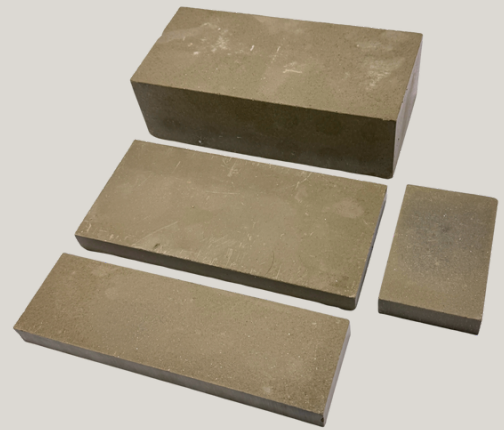
Mahogany

e4E-N10-BS

Carbon-negative brick slip

10% e4E binder

Available sizes	Weight	CO ₂ absorbency
215 x 102.5 mm	867 g	51g
215 x 65 mm	583 g	35g
102.5 x 65 mm	272 g	16g



Available finishes



Sleek



Raw

Available colours



Natural Grey



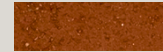
Natural Yellow



Cinnamon



Rose



Terracotta



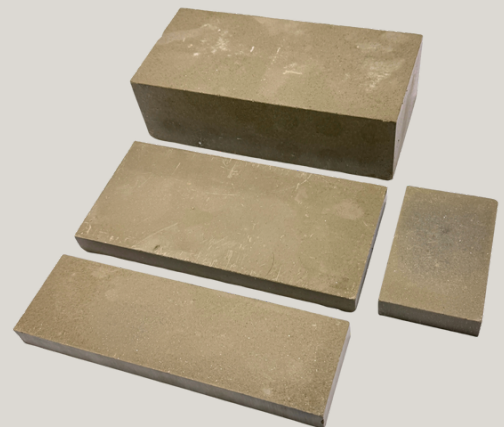
Mahogany

e4E-N20-BS

Carbon-negative brick slip

20% e4E binder

Available sizes	Weight	CO ₂ absorbency
215 x 102.5 mm	842 g	100g
215 x 65 mm	524 g	62g
102.5 x 65 mm	247 g	29g



Available finishes



Sleek



Raw

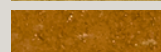
Available colours



Natural Grey



Natural Yellow



Cinnamon



Rose



Terracotta



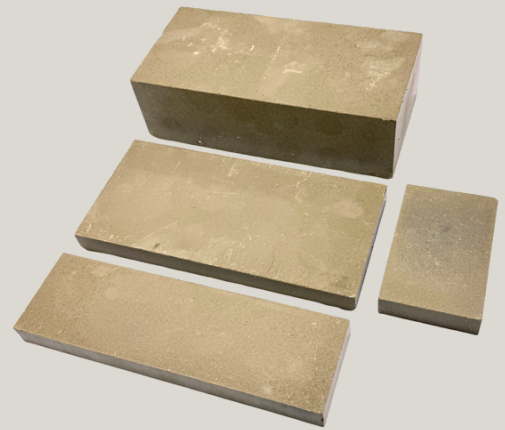
Mahogany

e4E-N30-BS

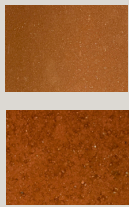
Carbon-negative brick slip

30% e4E binder

Available sizes	Weight	CO ₂ absorbency
215 x 102.5 mm	783 g	140g
215 x 65 mm	500 g	89g
102.5 x 65 mm	239 g	43g



Available finishes



Sleek

Raw

Available colours



Natural Grey

Natural Yellow

Cinnamon



Rose

Terracotta

Mahogany

e4E-N10-FB

Carbon-negative frogged brick

10% e4E binder

Our frogged bricks feature a recessed indentation on one face. This traditional design reduces material use and weight while enhancing mortar adhesion, making it both efficient and authentic in appearance.

Size	Weight	CO ₂ absorbency
215 x 102.5 x 65 mm	2.4 kg	143g

e4E-L10-FB

Carbon-neutral frogged brick

10% hydrated lime Ca(OH)₂





earth
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Carbon Capture Bricks

Contacts

If you have any questions, please do not hesitate to contact us at

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or visit our website

www.earth4Earth.co.uk

