



# HOW SECTOR INNOVATION CAN SUPPORT A SUSTAINABLE FUTURE

## WHITE PAPER

PARKSIDE  
ARCHITECTURAL TILES

strata  
tiles





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# SYNOPSIS

## HOW SECTOR INNOVATION CAN SUPPORT A SUSTAINABLE FUTURE

### The Green Revolution

The urgent need to stop climate change is fast becoming a priority, with many sourcing new ways to proactively embrace a more sustainable way of working.

This is even before the Government launched its Green Industrial Revolution; itself aiming “to forge ahead with eradicating its contribution to climate change by 2050<sup>1</sup>.” This makes our government the first major economy to embrace such a legal obligation.

Fast track to the post-pandemic world and meeting net zero is a demanding challenge for those affected. As leading British Economist, Nicholas Stern recently cited, “It’s going to need determination, some resources and smart design,” and continued “growth has to be driven by innovative investment<sup>2</sup>.”

The perception is that COVID-19 presents a once in a lifetime opportunity to re-write the existing rulebook. This is riding on the significance of changing public support for more environmentally friendly living opportunities, with associated cost savings, efficiencies and cleaner industries.

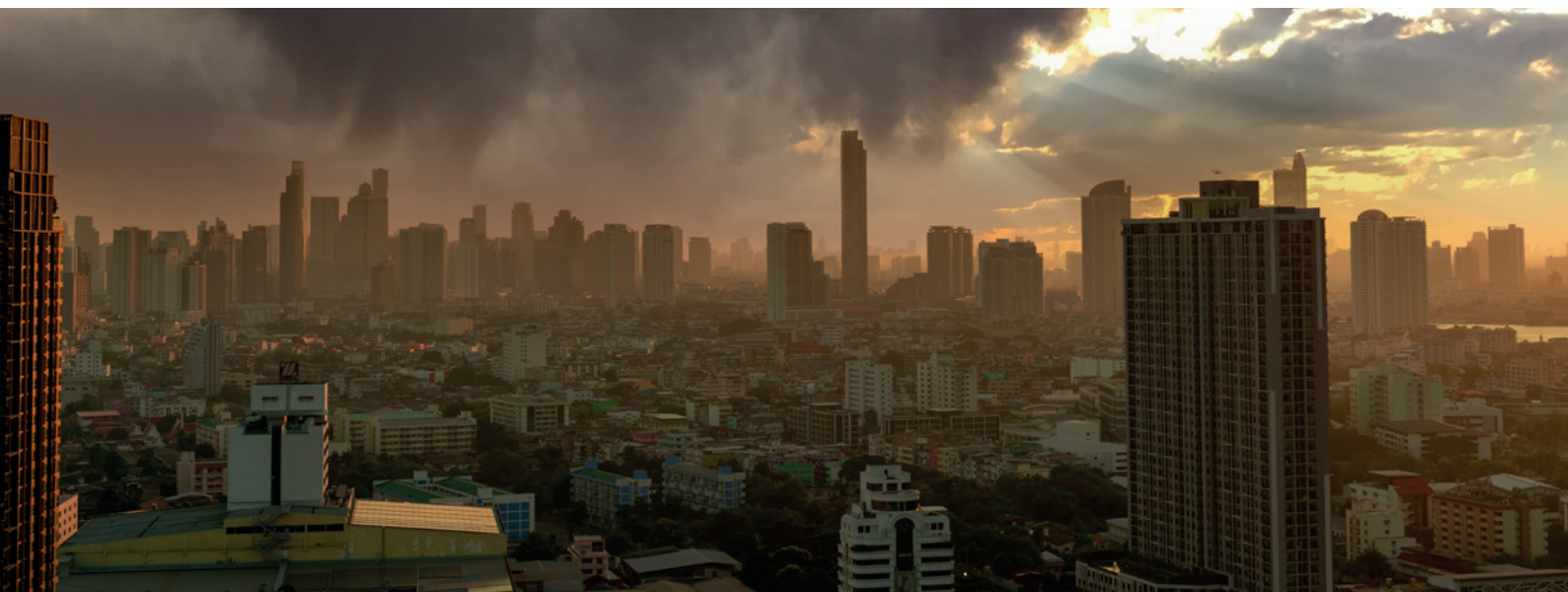
Innovative sustainable technologies are the key to kickstart this route to economic recovery. Nowhere can this be seen more than in the built environment, which currently contributes to 40% of the UK’s carbon footprint<sup>3</sup>.

Pressure is mounting on construction to find ways to reduce emissions and help meet net zero targets. This is through the entire life cycle of a building, ‘from cradle to cradle,’ to reduce their impact on the environment from planning stages, through build and deconstruction.

<sup>1</sup> PM outlines his Ten Point Plan for a Green Industrial revolution for 250,000 jobs: <https://www.gov.uk/government/news/pm-outlines-his-ten-point-plan-for-a-green-industrial-revolution-for-250000-jobs>

<sup>2</sup> UK can’t fight climate crisis with austerity, warns expert: <https://www.theguardian.com/environment/2021/aug/14/uk-fight-climate-crisis-austerity-government-treasury-green-spending-net-zero-nicholas-stern>

<sup>3</sup> UKGBC’s vision for a sustainable built environment is one that mitigates and adapts to climate change: <https://www.ukgbc.org/climate-change/#:~:text=The%20built%20environment%20contributes%20around,do%20with%20their%20functional%20operation.>







## Building The Right Environment

By creating the right policy environment, incentives for innovation, and infrastructure, the government can encourage companies to seize the sustainable opportunities of new technologies and value chains linked to green sectors.

At the same time, they can accelerate the shift of current carbon-intensive economic and industrial structures onto greener trajectories, enabling the UK to meet global climate and development goals under the Paris Agreement on climate change and 2030 Agenda for Sustainable Development<sup>4</sup>.

<sup>4</sup> The Sustainable Development Agenda:  
<https://www.un.org/sustainabledevelopment/development-agenda/>

## Calls For Action

Every industry will be expected to engage, and pledge its support to achieve the significant deadlines.

The floor and wall material specification sector for one, is already working to lower the environmental impact of operations and offer the advantages of “greener” hard surfacing products. This is not only to analyse the impact of ‘ingredients’ used, supply chain or manufacturing alone, but also to consider the full lifecycle of our products from creation to end of life.

Here, whilst the sector targets are undoubtedly bold and all-encompassing, proactively supporting the Government aims to ‘transform life across our United Kingdom,’ and “make our nation, cleaner, greener and more beautiful<sup>5</sup>.’

In this white paper, we highlight the significant progress already being made in the floor and wall material specification industry in its sustainable revolution.

In this context, we reach out with the following question:

“How can innovation continue to pave the way for a more sustainable floor and wall specification sector, and support the green industrial revolution and urgent need to stop climate change?”

<sup>5</sup> Prime Minister's speech on the environment: 11 January 2018: <https://www.gov.uk/government/speeches/prime-ministers-speech-on-the-environment-11-january-2017>

By producing this discussion paper, we wish to stimulate debate and encourage contributions from many voices. We look forward to engaging with you and your colleagues in this dialogue and would be pleased to share additional points of view, information and insights.



## ABOUT THE AUTHOR

Dan Little is the Managing Director of the Commercial Business Unit at Topps Tiles Plc, offering renowned brands Parkside and Strata to the Commercial tile market.

Having established a career in property, rising to Director of Property for the FTSE 250 retailer, Dan specialises in strategic leadership, focussing on sustainability.

Dan has been pivotal in launching the company's green agenda to direct environmental, social and economic policy for the commercial tile market. He also chairs the Topps Group Sustainability Council.

Dan actively networks with eco agenda and property professionals, being an involved member of the retail Week Directors' Club, enabling him to forge relationships with other inspirational leaders and explore opportunities for growth.





## The philosophy of sustainability

The philosophy of sustainability considers the entire life cycle of a building as a holistic approach. In line with UK Government ambitions and Construction 2025<sup>6</sup>, the aim is for building the right environment to become the national standard.

Pushing the agenda forward are the ready-made universally agreed UN 17 Sustainable Development Goals. Also known as Global Goals, these are at the heart of the 2030 Agenda for Sustainable Development, adopted by all United Nation member states. This agenda is a plan of action for people, planet and prosperity.

## Sustainability and circular buildings

Sustainability is becoming part of the construction process and embracing the ideals of circular building. This encourages all in a supply chain to choose valuable materials that can achieve a long lifecycle. It's about approaching design, with the intention to recycle, reduce and reuse as many resources as possible.

Flexibility is planned into the very fabric of the building, reducing waste by accounting for adaptation, recycling and reuse from the outset. It considers not only a building's lifecycle, but also the lifespan of the materials beyond that, right through to the repurposing of a building and/or its deconstruction (rather than demolition.)

Manufacturers have already committed themselves to sustainable design and practicing the circular building philosophy. They demonstrate this through certifications such as 'Cradle to Cradle' and call in independent bodies to assess the environmental sustainability of their building materials and building products across the whole life cycle.

This enables the companies to gain transparency and acquire a material basis for a sustainable building culture – two aspects that play an essential role for the building's level of certification as a 'Green Building.'

<sup>6</sup> Construction 2025: strategy: <https://www.gov.uk/government/publications/construction-2025-strategy>



## Certification Systems

There are many certification systems in use around the globe that serve to recognize sustainable building projects. The most internationally recognised are LEED<sup>7</sup> (Leadership in Energy and Environmental Design) and BREEAM (Building Research Establishment Environmental Assessment Method.)

They allow for comparisons to be made and enables architects, planners, developers, and investors to establish the quality, value, and therefore the competitiveness of a new building beforehand.

For instance, green buildings generate fewer maintenance and operating costs. This means they can achieve higher market prices, as they offer a healthy and productive environment for employees and residents, in addition to a considerable image boost for property owners and operators.

At the forefront are commercial properties for which turnkey building concepts are being designed on the basis of the certification systems. These concepts include retail, offices, hotels, and restaurants.



BREEAM

<sup>7</sup> What is LEED? <https://www.usgbc.org/help/what-leed>

<sup>8</sup> BREEAM: <https://www.breeam.com/>





## Sustainable preference

Today, there is also a newly emerging consumer and investor focus on sustainability. Traditionally overshadowed by the cost of choosing more energy efficient products despite the lifestyle benefits offered by smart homes – convenience, aesthetics and prestige.

Today, things look a little different, with environmental concerns top of mind for many consumers. Trends such as Veganism, once considered a fringe notion is now growing in popularity and visibility. Likewise, the global sales of electric cars is growing exponentially, racing forward in 2020, rising by 43% to a total of 3.2m<sup>9</sup>.

Whilst more likely to incorporate energy efficient climate control technologies in their homes, post-covid homeowners are equally keen to ensure they are environmentally responsible.

Consumers have now learned to factor in the environmental impact of purchases and consideration for whether products are:

- **Energy efficient**
- **Long lasting**
- **Sustainably manufactured/ sourced**
- **Recyclable**

All sorts of industries are now judged against the criteria above. For example, the rise of deforestation has had a visible impact on the flooring industry; wood floor suppliers now go out of their way to demonstrate their green credentials, and many homeowners have turned to eco-friendly alternatives like bamboo instead of single use plastics

In business operations, many are offering hybrid and electric vehicle alternatives, and even adapting environments to incorporate bike storage and changing facilities to encourage alternative commuter options. Such simple changes that can make a significant difference to climate change and improving air quality.

How is the floor and wall material specification industry supporting sustainable practice? The ceramic and porcelain tile production itself is going through an evolving innovation process, with an aim to reduce any building's carbon footprint throughout its lifecycle.

As we think differently about our approach to market and consumer and commercial trends, we focus not only on its design and style, but also, our low-maintenance, easy-to-clean appeal, without compromising on a technical ability to suit all environments.

Suppliers are focussing on new ranges that incorporate zero-waste tiles and use natural materials with subsequent energy savings, adhering to the Cradle to Cradle philosophy, which helps make a positive contribution to our society, our economy, and our planet.

<sup>9</sup> Why electric cars will take over sooner than you think. Published 01 June 2021: <https://www.bbc.co.uk/news/business-57253947#:~:text=Global%20sales%20of%20electric%20cars,steep%2part%20of%20the%20S>.

Here are several ways in which the industry is making a difference.

### 1. Life Cycle

Ceramic and porcelain tiles are some of the longest lasting floor and wall covering products on the market. Unlike carpet, vinyl, or laminate flooring which have to be replaced periodically, properly installed tiles will last a lifetime. This longevity reduces time, money and resources spent on extracting raw material, manufacturing, transportation, installation, demolition and disposal requirements.

### 2. Indoor Air Quality

Volatile organic compounds (VOCs) contribute to a wide variety of health problems and are a significant cause of “sick building syndrome.” Since tiles are fired in kilns to extremely high temperatures, there are no volatile organics in the finished product that can be released into the air we breathe; literally zero.

In addition, there are adhesives and grouts available that contain zero, or very low VOCs. Some carpet, vinyl, and wood flooring contain low VOCs, but none can compare to zero. Ceramic tiles do not absorb or emit pollutants and when used with our high performance adhesives and grouts, your finished floor or wall can inhibit the growth of mould, mildew and fungus.

### 3. Modern Production Methods

Many tile suppliers' manufacturers are focussing on production from modern state of the art factories that adhere to sustainable and eco-friendly policies, such as using recycled card for their boxes, using recycled ceramics in the production process, and those who generate their own energy.

Modern tile factories today are “closed loop,” reusing water and materials. They send only negligible amounts of scrap to landfills and waste water to treatment facilities.







#### **4. Maintenance**

Ceramic and porcelain tiles can be cleaned using just warm water and pH-neutral cleaners. There is no need to use chemicals, waxes, strippers, solvents or shampoos that add to the level of toxic cleaning products being flushed into our ecosystem.

#### **5. Material Extraction**

Ceramic and porcelain tiles are traditionally made from 100% natural and plentiful raw materials that are usually found in close proximity to the factories, thus reducing fuel consumption and transportation costs.

Once step further upcycled content from quarry waste (stone powders), clays and plant fibres, means products produced use a patented low temperature process that reduces greenhouse gases and takes 90% less energy than conventional ceramics.

#### **6. Thermal Conductivity**

Porcelain tiles have a high thermal conductivity and are therefore ideal for storing heat in the winter, whilst also storing the cool night air in the summer to provide passive cooling, reducing energy requirements for heating and cooling.

#### **7. Transport Distance**

Raw materials where possible are being sourced predominantly from the UK and Europe, far less miles on average than suppliers who import large quantities from the Far East and South America.

#### **8. Partnerships**

Many industry leaders are now choosing to work with charities to support sustainability efforts within the UK and globally, alongside creating offsetting programmes to further reduce outstanding carbon emissions.

## What is Parkside's contribution to a sustainable future?

As the Commercial business unit of Topps Tiles Plc, offering the renowned Parkside and Strata Tile brands, we are a trusted floor and wall material specification source for specifying contemporary porcelain, ceramic, natural stone tiles and sustainable installation systems for every type of project.

From this position of influence, we are leading the way for a more sustainable sector, and in doing so, already proactively supporting the Government's ambitious targets for climate change, aiming to be net Carbon Neutral by mid 2022 through a combination of reducing emissions and quality offset.

For our social, inclusive responsibility we have worked hard right from our factory principles to achieve B Corporation status, demonstrating to the highest standards how we have balanced both purpose and profit for the benefit of our customers, workers, communities and the planet.

From an environmental perspective, we are facilitating a line of least resistance to sustainable choices to the wider architectural and design community via a wide and comprehensive sustainable product portfolio without compromise on aesthetic, budget or technical performance.

And we know that simple changes can make a significant economic difference to climate change and improving air quality. We have set the standard for environmental management systems, achieving ISO 14001, invested in switching company vehicles to electric options, and constantly reviewing our waste and recycling options.

## Sustainable product choices

We offer an expanding range of finishes inspired by natural landscapes that technically enhance the potential uses of architectural surfaces, and offer unique design opportunities all thanks to the use of state-of-the-art technologies.

We commit to constantly researching and developing new ways of designing, manufacturing, supplying sustainable tiles and use of recycled content, where we have pledged all our new ranges will feature 20%.

All of our materials are at the forefront of energy and water efficiency in production, are abrasion, chemical and heat resistant and are crafted to stand the test of time.







## Our sustainable innovation

We present innovative and sustainable designs, introducing new ranges such as Criaterra, a zero-waste tile made from 100% natural materials.

Using up to 70% upcycled content from quarry waste (stone powders), clays and plant fibres, Criaterra uses a patented low temperature process that reduces greenhouse gases and takes 90% less energy than conventional ceramics.

Thermally efficient (600% that of concrete), Criaterra provides energy savings in use. At the end of life, it can be recycled or degraded back into the earth as nutrients.

## Driving sustainability forward

Supported by a team of experienced and creative consultants, we deliver material specification assistance and present accredited sustainable innovations with RIBA Sustainability CPDs and training sessions at our dedicated Sustainability & Design Studios strategically placed across the UK.



## Our Sustainable Partnerships

We've established a partnership with WRAP to support sustainability initiatives that can offset our carbon emissions and have collaborated with the World Land Trust to establish the 40 for 40 programme.

This sees 40 pence for every square metre of 40% recycled content tiles go to the charity's Buy an Acre scheme. To date, this scheme has protected over 2million acres of habitat.

When these elements are brought together, the aim is to lead an innovative market sector approach.

This comes with a commitment to doing business differently, working from within and driving our partners on a sustainable journey forward. Our priority is as much about people and planet as it is embracing environmental, social and economic influencing within the floor and wall material specification sector, so that together, we can combat climate change.

