

“At Tarmac, there is a business-wide focus on sustainable innovation and solutions which help customers and clients deliver better outcomes for both the built environment and wider society. It’s important to remember that we are not alone in this ambition and that collaboration with our suppliers is key to meeting sustainable targets.”

Jonathan Harry, procurement director at Tarmac

*Solutions*

**NET ZERO**

## Responsible Supply Chain

### 2022 Supplier Innovation Challenge

In 2022, an innovative hydrogen fuel supplement system was named as the winner of Tarmac’s third Supplier Innovation Challenge, an initiative that encourages suppliers, organisations and individuals to submit ideas which can support the acceleration of Tarmac’s journey to net zero.

In total, 47 innovation ideas were submitted and scored against criteria including technology readiness, potential business impact and feasibility. The winning and highly commendable entries are then refined, developed and brought to life by Tarmac as part of the scheme.

The 2022 winning entry was submitted by Prior Power Solutions for a hydrogen introduction system. This system can be fitted onto new or existing diesel engines to supplement cleaner hydrogen fuel into internal combustion engines (ICEs), offering CO<sub>2</sub> reductions of 8%.

Rather than storing hydrogen in the vehicle, the gas is produced on demand from de-ionised water. This is then pumped into the ICE so that a lower volume of diesel-based fuels is required, resulting in an 80% reduction of diesel particulates and over 20% reduction of nitrogen oxides.

The reduced diesel content also means that engines remain cleaner and therefore require less maintenance over time, increasing the lifespan of vehicles with this innovative system implemented. In addition to the reduction in polluting emissions, the fuel efficiency and torque of



vehicles can also be increased, leading to ongoing cost savings for vehicle operators.

Jonathan Harry, procurement director said: *“The transition to net zero requires greater innovation as well as collaborative and behavioural change on a scale that we have never experienced before. It also calls for an improved appreciation of what effective supply chains and progressive procurement can achieve together.”*

James Rix, managing director of Prior Power Solutions, commented: *“We are delighted by this award which builds on growing interest and demand for more sustainable power solutions that are available now for existing assets.”*

*“We believe this hydrogen introduction system will contribute to a lower-carbon economy and we are excited by this award and partnership with Tarmac in bringing this technology to industry.”*

Previous year’s Innovation Challenge successes include a 100% recyclable, net zero carbon cement bag and the UK’s first e-mixer in partnership with Renault Trucks and TVSI, which was delivered to Tarmac’s Birmingham asphalt plant towards the end of 2022.