RailBusinessDaily

The future of sustainable construction

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Rail Business Daily talks to Sharon Meek, rail director north for Scott Parnell, about the role new sustainable construction products play in a zero-carbon future.

Most will agree that a green mode of transport must be supported by sustainably-built infrastructure.

When it comes to rail, the need to drive down the carbon footprint of civils projects has never been greater – the net-zero deadline of 2050 looms, and the need to slash 78% of carbon emissions by 2035 is, of course, much closer.

However, there is no room for compromise when designing a civils project. You can attempt to cut back on high-carbon materials like steel and concrete, but you cannot cut corners on the quality of a major scheme.

Innovation, then, Scott Parnell says, is the answer.

A partner from the start

Scott Parnell is more than a builders' merchant; it is a dynamic and advisory part of the supply chain. Understanding the need for more sustainably sourced products and materials, it sourced a UK-exclusive range of products, including Arco System elevated troughing, Techno-Crete, TouchSafe palisade fencing, TDS-400 and Flex MSE.

But you cannot simply swap an old, less efficient product or material for a newer, more sustainable alternative. Instead, designers must integrate it into a project from the outset.

Sharon Meek, rail director north for Scott Parnell, says that means a construction supplies specialist has to be at the table from the moment engineers start to draw up tender proposals.

"Our work with clients starts at the beginning," she says. "From the design phase, we help businesses develop turnkey solutions that will challenge the old way of doing things.

"We share our know-how of new, more sustainable products, both in terms of how they are made and the effect they will have on a project. Many of these are unique to us in the UK. We can supply accurate specifications, training and assistance so designers can determine how much time and money they can save. We can also set out how much longer the completed project will last using the more sustainable solutions and the extra good they will do for the environment.

"We have years of experience in the industry – everybody in our business has a first-hand understanding of the industries we work with. That means when we sit around the table with our customers, we're not just handing them a price list; we're having a real, meaningful exchange of ideas."

Keeping customers supplied

This industry know-how was crucial when the pandemic hit. Construction stopped across the country, only for many sites to abruptly re-open, with teams then dealing with substantial delays or belated start dates.

"We live in unprecedented times, and that meant we had to be there more than ever for our customers," Sharon said. "It wasn't just the pandemic: materials were being impacted by Brexit and even by the recent incident on the Suez Canal, when it was blocked for six days.

"If something is running out that is required in civils, that means all sectors will be chasing it. You need to act faster and be better connected if you want to protect your customer base in those circumstances.

"Even during more certain times, we always ensure we know what is in the pipeline for Network Rail, HS2 and tier 1 suppliers to keep our customers prepared, with the right product to hand at the right time."

Scott Parnell's sustainable products in action

A range of sustainable solutions

Scott Parnell has constantly championed sustainable products and materials, growing their global network to find the best answers for the rail suppliers that use them and the clients they serve.

These products include:

- **The ArcoSystem elevated cable management solution**. This is an environmentally-friendly cable management system that dramatically cuts back on installation cost and time. Materials, meanwhile, are reduced by about 30%. Using the ArcoSystem solution reduces the steel requirement because there is a dramatic reduction of nuts and bolts to connect the system, and support posts are reduced by up to 75%.
- **TDS-400** – a sustainable track drainage system. It is made from 95% recycled UK plastic, diverting a major polluter from landfill. The product is able to work in conjunction with and improve existing track drainage, and it lasts for 120 years.
- **Flex MSE**, a vegetated wall system that uses mechanically stabilised earth (MSE) to easily build block structures, such as massive retaining walls. It is built from geotextile bags that are then locked together, which means that it can be manually put into place and form structures as high as 75 ft. Its manufacturer says it often takes half the time to install compared to a concrete wall, lasts almost twice as long, is carbon-negative, and can be seeded to blend into the surroundings, promoting biodiversity.
- **Techno-Crete**, an environmentally friendly replacement for cement-based post mix – one of the worst offenders for manufacturing-stage carbon emissions along with steel. Sixty kilogrammes of concrete postmix can be swapped out for just 1.8 kilogrammes of Techno-Crete, a product which expands up to twenty times its package volume. The product is therefore much better for manual handling, and it is made from recycled vegetable oil or sustainably sourced material.
- **TouchSafe palisade fencing**, which is a GRP alternative to its metallic counterparts. It is low maintenance, fire retardant, and safer than steel, with no need to earth bond the system.

A greener future

What does the future hold for Scott Parnell?

“It’s about helping SMEs in their ambition to provide something truly innovative for their clients”, Sharon said. “Together with our customers, we need to create a paradigm shift right through the industry. Everyone needs to think about what they can do for the planet, reducing the use of high-carbon materials or plant machinery from the early design phase. The environment depends on it.”

She says there are signs this is beginning to happen.

“Recently, we got Techno-Crete approved as a foundation material for work on the Transpennine Route Upgrade. The process took two years, but TransPennine were on our side and were a real driving force for sustainability. It was hugely encouraging to see an innovative product as good as this approved on such a scale.

“Everyone involved on that project accepted that Techno-Crete was cost-effective, ensured a long legacy and that it was good for the environment. That’s a lot of highly qualified and experienced industry specialists.

“We’re seeing this innovative outlook begin to emerge everywhere, but we must support and encourage the industry to ensure this continues.

“If we do, we’re confident that Scott Parnell, together with our customers, will lead the way in sustainable construction.”