



## **Delivering Durability and Sustainability**

Designers and contractors responsible for the delivery of long-term rail projects are placing increasing focus on durability and sustainability.

Continuing growth in passenger demand has reinforced the need to ensure work to upgrade large sections of the UK network will stand the test of time.

And the requirement to deliver ever more efficient, effective and commercially-viable improvements has prompted a surge in the specification of a process that generates significant long-term benefits.

Hot-dip galvanizing is a highly-effective corrosion prevention treatment that creates long-lasting protection for any type of steelwork.

The versatile process, in which raw material is immersed in a bath of molten zinc, produces an easy-to-clean surface that will typically last more than 60 years.

And by reducing the expense, down-time and inconvenience of repeated maintenance, it's a procedure that has a substantial impact on whole-life costs.

Hot-dip galvanizing actually delivers durable, three-way protection for steelwork - whether it's used in major infrastructure initiatives or smaller-scale projects including safety fencing, signage and access equipment.

The coating created by the zinc weathers at an extremely low rate, but it also results in greater resistance to mechanical damage than any other finishing process.

Treated steel corrodes preferentially to provide cathodic (sacrificial) protection to small areas exposed during handling, storage, transport or construction, while scratches are also sealed by weathering products from the zinc.

In larger areas of damage, the sacrificial protection prevents the sideways creep of rust which can undermine paint coatings.

The process accelerates construction time by providing steel that's ready to use – with no additional site surface preparation, painting, touch-up or inspection necessary.

Tight controls, defined by a British Standard, ensure coating weights are regular, predictable and simply specified. While the practicality of the process ensures every part of a steel surface is coated – including awkward corners and narrow gaps which would be impossible to protect in any other way.

Importantly in today's environmentally-conscious society, hot-dip galvanizing is hugely sustainable too.

Not only does the process extend the lifespan of steel by protecting against rust and corrosion for decades, it's also extremely energy-efficient throughout its production and lifecycle.

It uses resources considerately to ensure a relatively low environmental burden, while finished steel can easily be recycled with steel scrap, re-galvanized, removed and reused elsewhere.

Wedge Group Galvanizing has links with many large contractors and specifiers across the rail sector from 14 plants nationwide.

The company has worked with Lundy Projects for more than a decade – playing a key role in on Network Rail initiatives including the modernisation of the Great Western Mainline.

It treated 200 tonnes of steelwork used in a £25 million project to transform Edinburgh's Haymarket Station and worked with Crossrail on the refurbishment programme at Liverpool Street.

Past projects also include a multi-million pound development on the Midland Metro line, the refurbishment of an iconic railway Bridge between Hull and Barnsley and treatment of steel used to create a complex double-flight passenger staircase at a busy London tube station.

Wedge hosts regular open days to showcase the true value of the process to rail professionals – providing inspectors, buyers and other core personnel with a chance to see how it works, learn how galvanizing fits in with CE Marking and receive best practice advice.

It is an approved audited supplier for the Railway Industry Supplier Qualification Scheme – a fact that assures rail companies of high-quality galvanizing backed by excellent customer service.

Perhaps it's no surprise after all that the Group has such a growing list of rail sector clients - demonstrating the burgeoning popularity of galvanizing in a highly competitive industry keen to deliver a network fit for the future.