



A NEW ERA IN CLIMATE CHANGE ADAPTION



TDS400 is a tough and durable modular drainage system for rail environments. Install drainage at the same rate as excavation.

The robust, open channel structure of the drainage panel system provides a path of least resistance for excess water to flow freely into new and existing drainage networks. Route infrastructure and asset resilience is massively strengthened, to keep the network operating in even the harshest weather conditions. Prevent costly delays, maintenance revisits, track flooding and issues like wet beds.

TDS400 is a sustainable drainage system developed in the UK for Network Rail. Made from 100% recycled tyre rubber - bonded with unique polyurethane chemistry. It uses a patent pending process and material.

Certified and PADS approved by Network Rail (PA05/07347) for use within route assets, structures, the track formation, ballast, earthworks and drainage assets.

International awards include: RailTech Europe 2021, PWI Climate Change Adaption and Decarbonisation 2022 and Rail Business Awards Supplier and Contractor Excellence 2023.



The demands of modern rail infrastructure necessitate safety by design, climate resilience and engineering that achieves a Net Zero future.

BENEFITS AT A GLANCE

- Install simultaneously with excavation (compatible with trench/bucket excavators and ballast vac machines).
- Drive Safety by Design in earthwork, cess, drawdowns, catchpit to catchpit and many other drainage applications.
- Reduce boots on the ballast, track work shifts, closures, blockades and possession times.
- Significantly reduce drainage maintenance and drainage repair costs.
- Prevention for drainage intervention revisits and for recurring maintenance issues.
- Extend asset life and deliver major capital / whole-life cost savings.
- Made from 100% recycled tyre rubber - bonded with unique polyurethane chemistry.
- Deliver on Net-Zero and strip out carbon footprint / CO₂e from your tenders, projects and maintenance activities.



HOW IT WORKS

Water follows the path of least resistance.

TDS400 provides a highly-permeable structure with immense compressive strength to keep this pathway open.

It enables excess water, silts and hydraulic pressure to flow freely into railway drainage networks.

Different to a pipe - and fully compatible - the unique drainage qualities of TDS400 enable persistent and passive, water control.

LAND BOUNDARIES & EARTHWORKS	RAIL ASSETS & STRUCTURES	TRACK & TRACKSIDE DRAINAGE	TRACK BED & FORMATION
<ul style="list-style-type: none"> → Interception → Overspill → Cuttings / Ditches → Herringbone → Counterfort / Cascade → Crest 	<ul style="list-style-type: none"> → Tunnels → Tunnel portals → Bridge abutments → Wingwalls → Back of wall → Confined spaces 	<ul style="list-style-type: none"> → Upgrades → Repairs → Cess, drawdown and channel drains → Catchpit optimisation → Interface trackside 	<ul style="list-style-type: none"> → Wet beds → Maintain water table levels below base of ballast → Standing water → Electrification

MAJOR COST SAVINGS

TDS400 Typical Install Example for Rail

- 650 m track drainage remediation project.
- Ballast shoulder interface.
- Completed in 7 shifts vs. 33 traditional.
- Installation rates increased by up to 60 metres per hour.



"TDS400 was straightforward to install and has provided a clean and non-contaminated pathway for water to enter the track drainage system, ensuring the long-term stability of both tracks and reduced track work interventions."

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